ARCHITECTURE IN TRANSFORMATION
The Case of Batak Toba

MOEHAMMED NAWAWIY LOEBIS

UNIVERSITI SAINS MALAYSIA
2000
# TABLE OF CONTENTS

Abstract ................................................................................................................. xi
Acknowledgement .................................................................................................... xii
List of Figures .......................................................................................................... xiii
List of Tables .......................................................................................................... xvii
Glossary .................................................................................................................. xix

## CHAPTER ONE

### INTRODUCTION

Table of Content

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>1</td>
</tr>
<tr>
<td>1.0 The Issues: Dialect notion of Architectural discipline</td>
<td>3</td>
</tr>
<tr>
<td>1.0.1 The Exotic Vernacular Architecture</td>
<td>3</td>
</tr>
<tr>
<td>1.0.2 Occidental Hegemony</td>
<td>7</td>
</tr>
<tr>
<td>1.0.3 The Failure of Modernism</td>
<td>12</td>
</tr>
<tr>
<td>1.1 The Emergence of Change</td>
<td>14</td>
</tr>
<tr>
<td>1.1.1 Transformation: An Overview</td>
<td>14</td>
</tr>
<tr>
<td>1.1.2 In Search of Architectural Transformation</td>
<td>16</td>
</tr>
<tr>
<td>1.2 Objectives of the Study</td>
<td>19</td>
</tr>
<tr>
<td>1.3 Why Batak Toba</td>
<td>20</td>
</tr>
<tr>
<td>1.4 The Scope and Justification of the Study</td>
<td>20</td>
</tr>
<tr>
<td>1.5 The Historical Background of the Region</td>
<td>22</td>
</tr>
<tr>
<td>1.5.1 Prehistory: The Origin of Race and Culture</td>
<td>22</td>
</tr>
<tr>
<td>1.5.2 The Beginning of Historical Period</td>
<td>24</td>
</tr>
<tr>
<td>1.5.2.1 Hinduism</td>
<td>24</td>
</tr>
<tr>
<td>1.5.2.2 Buddhism</td>
<td>27</td>
</tr>
<tr>
<td>1.5.2.3 Hinduism Exchange with Buddhism</td>
<td>27</td>
</tr>
<tr>
<td>1.5.3 The Coming of Islam</td>
<td>29</td>
</tr>
<tr>
<td>1.5.3.1 Religion and Cultural Exchange</td>
<td>29</td>
</tr>
<tr>
<td>1.5.3.2 Religion and Architectural Transformation</td>
<td>30</td>
</tr>
<tr>
<td>1.5.4 The Chinese Prospectors</td>
<td>31</td>
</tr>
<tr>
<td>1.5.4.1 Interaction with the Chinese</td>
<td>32</td>
</tr>
<tr>
<td>1.5.4.2 The Chinese in Colonial Period</td>
<td>33</td>
</tr>
<tr>
<td>1.5.4.3 The Chinese Architecture</td>
<td>34</td>
</tr>
<tr>
<td>1.5.5 The European Invasion</td>
<td>34</td>
</tr>
<tr>
<td>1.5.5.1 The Portuguese</td>
<td>34</td>
</tr>
<tr>
<td>1.5.5.2 The Spanish</td>
<td>35</td>
</tr>
<tr>
<td>1.5.5.3 The British</td>
<td>35</td>
</tr>
<tr>
<td>1.5.5.4 The Dutch</td>
<td>36</td>
</tr>
<tr>
<td>1.6 The Long History of Cultural Exchanges</td>
<td>37</td>
</tr>
</tbody>
</table>
CHAPTER TWO

METHODOLOGY

Table of Content

Introduction ................................................................................................. 42
2.0 The Nature of Architectural Discipline .............................................. 42
2.1 Hypothesis ......................................................................................... 45
2.1.1 Culture and Architecture .............................................................. 45
2.1.2 The Basic Hypothesis ................................................................. 46
2.1.3 Hypothesis on Architecture ....................................................... 47
2.2 Anthropology as the Supporting Discipline ....................................... 49
2.3 Research Approach ........................................................................... 52
2.3.1 Research Team ........................................................................... 53
2.3.2 Selection of the Study Areas ....................................................... 53
2.4 Methodology ..................................................................................... 55
2.4.1 Theoretical Frame of Reference ................................................... 55
2.4.2 Research’s Strategy ...................................................................... 55
2.4.3 Research Design ......................................................................... 57
2.5 Data collection ................................................................................ 57
2.5.1 Primary Data ................................................................................ 57
2.5.1.1 Questionnaire ........................................................................ 57
2.5.1.2 Structured Interview and Survey ............................................ 59
2.5.1.3 Sampling ............................................................................... 60
2.5.1.4 Mapping and Drawing .......................................................... 60
2.5.1.5 Photography Visual Survey ................................................. 60
2.5.1.6 Participation and Observation .............................................. 60
2.5.2 Secondary Data ........................................................................... 61
2.6 The Analysis Techniques ................................................................ 61
2.6.1 Quantitative Method .................................................................. 61
2.6.2 Qualitative Method .................................................................... 62
2.7 Contingencies ................................................................................... 63
Summary .................................................................................................. 64
CHAPTER THREE

ARCHITECTURE TRANSFORMATION
IN THE CONTEXT OF
THEORETICAL PERSPECTIVE

Table of Content

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>65</td>
</tr>
<tr>
<td>3.0 Theory in Brief</td>
<td>66</td>
</tr>
<tr>
<td>3.1 Architecture in Philosophical Context</td>
<td>66</td>
</tr>
<tr>
<td>3.1.1 Empiricism, Pragmatism and Realist</td>
<td>67</td>
</tr>
<tr>
<td>3.1.2 Rationalism</td>
<td>68</td>
</tr>
<tr>
<td>3.1.3 Structuralism and Post-structuralism</td>
<td>69</td>
</tr>
<tr>
<td>3.2 Cultures and Architecture</td>
<td>72</td>
</tr>
<tr>
<td>3.2.1 Culture and Cultural Theory</td>
<td>72</td>
</tr>
<tr>
<td>3.2.1.1 Evolutionism</td>
<td>72</td>
</tr>
<tr>
<td>3.2.1.2 Structuralism</td>
<td>74</td>
</tr>
<tr>
<td>3.2.2 Cultural Ideology and Mission</td>
<td>74</td>
</tr>
<tr>
<td>3.2.3 Architecture in the Context of Cultural Theory</td>
<td>75</td>
</tr>
<tr>
<td>3.3 Cultural Needs</td>
<td>75</td>
</tr>
<tr>
<td>3.3.1 Basic Human Nature</td>
<td>75</td>
</tr>
<tr>
<td>3.3.1.1 Man and Society</td>
<td>75</td>
</tr>
<tr>
<td>3.3.1.2 Man and Nature</td>
<td>77</td>
</tr>
<tr>
<td>3.3.1.3 Biological Urges</td>
<td>77</td>
</tr>
<tr>
<td>3.3.1.4 Cosmic and Natural Order</td>
<td>78</td>
</tr>
<tr>
<td>3.3.2 Cultural Needs and Preferences</td>
<td>78</td>
</tr>
<tr>
<td>3.3.2.1 Cultural Needs</td>
<td>78</td>
</tr>
<tr>
<td>3.3.2.2 Cultural Preferences</td>
<td>80</td>
</tr>
<tr>
<td>3.3.3 Cultural Based Architecture as Needs</td>
<td>80</td>
</tr>
<tr>
<td>3.4 Architecture and Cultural Change</td>
<td>81</td>
</tr>
<tr>
<td>3.4.1 Cultural Change and Transformation</td>
<td>81</td>
</tr>
<tr>
<td>3.4.2 The Origin of Change</td>
<td>82</td>
</tr>
<tr>
<td>3.4.2.1 Adaptation</td>
<td>83</td>
</tr>
<tr>
<td>3.4.2.2 Accomplishment of Cultural Needs</td>
<td>83</td>
</tr>
<tr>
<td>3.4.3 Mechanism of Change through Exchanges</td>
<td>84</td>
</tr>
<tr>
<td>3.4.3.1 Internal Exchange (Evolutionism)</td>
<td>84</td>
</tr>
<tr>
<td>3.4.3.2 External Exchange (Diffusionism)</td>
<td>86</td>
</tr>
<tr>
<td>3.4.3.3 The Integrated Exchange</td>
<td>88</td>
</tr>
<tr>
<td>3.5 The Theory of Transformation Applied in the Study of Toba</td>
<td>88</td>
</tr>
<tr>
<td>3.5.1 Cultural Mission and Strategy</td>
<td>88</td>
</tr>
<tr>
<td>3.5.1.1 Change as Manifestation of Cultural Mission</td>
<td>89</td>
</tr>
<tr>
<td>3.5.1.2 Transformation of Cultural Values</td>
<td>90</td>
</tr>
<tr>
<td>3.5.2 Transformation of Cultural Strategy</td>
<td>92</td>
</tr>
<tr>
<td>3.5.2.1 Migration</td>
<td>92</td>
</tr>
<tr>
<td>3.5.2.2 Land Ownership</td>
<td>92</td>
</tr>
</tbody>
</table>
CHAPTER FOUR
THE PAST CULTURE AND ARCHITECTURE
OF
BATAK TOBA

Table of Content

Introduction .................................................................................. 103
4.0 The Origin ............................................................................... 104
   4.0.1 Australoid .......................................................................... 104
   4.0.2 Mongoloid .......................................................................... 106
4.1 The Past Culture of Batak Toba ........................................ 106
   4.1.1 The Batak Culture in General ........................................ 106
   4.1.2 The Batak Toba as Rice Grower .................................... 110
   4.1.3 Kinship ............................................................................. 111
   4.1.4 Traditional Government ............................................... 111
   4.1.5 Religious and Ritual System ........................................... 112
      4.1.5.1 Religious Concept ..................................................... 112
      4.1.5.2 The Begu and Tondi ............................................... 119
      4.1.5.3 Sumangot ................................................................. 123
      4.1.5.4 Sombaon ................................................................. 124
      4.1.5.5 Sahala .................................................................. 126
      4.1.5.6 The Role of Food and Dining in Ritual .................. 128
      4.1.5.7 Talk, Rites and Spell .............................................. 131
      4.1.5.8 Purification ............................................................... 133
      4.1.5.9 Parbaringin and Datu ............................................ 133
      4.1.5.10 Supplication and Sacrifices ................................. 134
      4.1.5.11 The Cult of the Death .......................................... 136
   4.1.6 Religious Object .............................................................. 140
      4.1.6.1 The Batak Magic Wand and Bindu Matoga ............ 140
      4.1.6.2 The Jointed Doll (Sigale-gale) ............................... 146
      4.1.6.3 Ritual calendar (Parhalaan) ................................. 146
CHAPTER FIVE
THE CHANGING CITY

Table of Content
Introduction ............................................................................................................. 210

5.0 The Early History of the City ................................................................. 211
  5.0.1 The Establishment of Medan ........................................................... 211
  5.0.2.1 The People .................................................................................. 213
  5.0.2.2 Religion ....................................................................................... 214
  5.0.2.3 Language ..................................................................................... 214
  5.0.2.4 Economy .................................................................................... 264
  5.0.3 The Deli Sultanate Government ......................................................... 215
  5.0.4 The Traditional Malay Architecture .................................................. 215
  5.0.4.1 Settlement ................................................................................ 215
  5.0.4.2 Street Pattern .......................................................................... 216
  5.0.4.3 House Orientation ....................................................................... 217
  5.0.4.4 Traditional Malay House ............................................................. 217
  5.0.4.5 Anatomy and Transformation of Malay house ...................... 217

5.1 The Colonial Town of Medan ............................................................... 222
  5.1.1 The Beginning of Colonial Period .................................................... 222
  5.1.2 The Development of Plantation ....................................................... 223
  5.1.3 Labuhan Deli: The Old Capital of Deli .............................................. 224
  5.1.4 The Rise of Medan as the New Capital of Deli .................................. 225
  5.1.5 Architecture in the Beginning of Colonial Period ....................... 225
  5.1.6 Colonial Temporary Settlement ....................................................... 226
<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.1.7</td>
<td>Early Colonial Architecture</td>
<td>229</td>
</tr>
<tr>
<td>5.1.8</td>
<td>The Late Colonial Era</td>
<td>234</td>
</tr>
<tr>
<td>5.1.8.1</td>
<td>The Segregated Society</td>
<td>234</td>
</tr>
<tr>
<td>5.1.8.2</td>
<td>Town Extension</td>
<td>235</td>
</tr>
<tr>
<td>5.1.8.3</td>
<td>New Satellite Town of Polonia</td>
<td>235</td>
</tr>
<tr>
<td>5.1.8.4</td>
<td>Ethnic Segregation and Physical Development of the City</td>
<td>238</td>
</tr>
<tr>
<td>5.1.8.5</td>
<td>Street and Open Spaces as Segregation of Power</td>
<td>240</td>
</tr>
<tr>
<td>5.1.8.6</td>
<td>The Dutch Precinct</td>
<td>242</td>
</tr>
<tr>
<td>5.1.8.7</td>
<td>Commercial District</td>
<td>245</td>
</tr>
<tr>
<td>5.1.8.8</td>
<td>Government District</td>
<td>247</td>
</tr>
<tr>
<td>5.1.8.9</td>
<td>Traditional Settlement Clusters</td>
<td>249</td>
</tr>
<tr>
<td>5.1.9</td>
<td>Architecture in the Late Colonial Era</td>
<td>251</td>
</tr>
<tr>
<td>5.1.9.1</td>
<td>Dutch Architecture</td>
<td>251</td>
</tr>
<tr>
<td>5.1.9.2</td>
<td>Colonial Architecture in Deli</td>
<td>253</td>
</tr>
<tr>
<td>5.1.9.3</td>
<td>Chinese Shop-houses Architecture</td>
<td>257</td>
</tr>
<tr>
<td>5.1.9.4</td>
<td>Architecture of Malay House</td>
<td>257</td>
</tr>
<tr>
<td>5.2</td>
<td>Contemporary City of Medan</td>
<td>260</td>
</tr>
<tr>
<td>5.2.1</td>
<td>Social Setting of the City Dweller</td>
<td>260</td>
</tr>
<tr>
<td>5.2.1.1</td>
<td>Population</td>
<td>260</td>
</tr>
<tr>
<td>5.2.1.2</td>
<td>Religion</td>
<td>261</td>
</tr>
<tr>
<td>5.2.1.3</td>
<td>Language</td>
<td>261</td>
</tr>
<tr>
<td>5.2.1.4</td>
<td>Education</td>
<td>261</td>
</tr>
<tr>
<td>5.2.2</td>
<td>Economic Setting of the City</td>
<td>261</td>
</tr>
<tr>
<td>5.2.2.1</td>
<td>Economic Background</td>
<td>261</td>
</tr>
<tr>
<td>5.2.2.2</td>
<td>City Financial Resources</td>
<td>263</td>
</tr>
<tr>
<td>5.2.3</td>
<td>Economic Characteristic of the Population</td>
<td>265</td>
</tr>
<tr>
<td>5.2.3.1</td>
<td>Job and Employment</td>
<td>265</td>
</tr>
<tr>
<td>5.2.3.2</td>
<td>Income and Spending of Household</td>
<td>266</td>
</tr>
<tr>
<td>5.2.4</td>
<td>Population Segregation as a Manifestation of Cultural Needs</td>
<td>267</td>
</tr>
<tr>
<td>5.2.4.1</td>
<td>Ethnic Segregation</td>
<td>267</td>
</tr>
<tr>
<td>5.2.4.2</td>
<td>Religion Segregation</td>
<td>270</td>
</tr>
<tr>
<td>5.2.4.3</td>
<td>Income Disparity and Segregation</td>
<td>271</td>
</tr>
<tr>
<td>5.2.5</td>
<td>City Planning Policy of Medan</td>
<td>272</td>
</tr>
<tr>
<td>5.2.5.1</td>
<td>Planning Concept</td>
<td>272</td>
</tr>
<tr>
<td>5.2.5.2</td>
<td>Urban De-concentration in the Context of Anti Urban Policy</td>
<td>273</td>
</tr>
<tr>
<td>5.2.5.3</td>
<td>The Road Pattern</td>
<td>276</td>
</tr>
<tr>
<td>5.2.6</td>
<td>Cultural Incompatibility of Planning Policy</td>
<td>276</td>
</tr>
<tr>
<td>5.2.6.1</td>
<td>Actual Physical Development of the City</td>
<td>276</td>
</tr>
<tr>
<td>5.2.6.2</td>
<td>Segregation of Population and Urban Form</td>
<td>277</td>
</tr>
<tr>
<td>5.2.7</td>
<td>Contemporary Architecture Style of the House</td>
<td>277</td>
</tr>
<tr>
<td>5.2.7.1</td>
<td>The Transformation of Residential Architecture</td>
<td>278</td>
</tr>
<tr>
<td>5.2.7.2</td>
<td>The Architectural Transformation of the Shop-houses</td>
<td>282</td>
</tr>
<tr>
<td>5.3</td>
<td>Urban Housing</td>
<td>285</td>
</tr>
<tr>
<td>5.3.1</td>
<td>Housing Perspective in Medan</td>
<td>285</td>
</tr>
<tr>
<td>5.3.1.1</td>
<td>Housing Stock</td>
<td>287</td>
</tr>
<tr>
<td>5.3.1.2</td>
<td>Housing Supply</td>
<td>289</td>
</tr>
<tr>
<td>5.3.2</td>
<td>Architectural Style of Public Sponsored Housing</td>
<td>291</td>
</tr>
<tr>
<td>5.3.3</td>
<td>Spontaneous Settlement</td>
<td>294</td>
</tr>
<tr>
<td>5.3.3.1</td>
<td>The Spread of Spontaneous Settlement</td>
<td>294</td>
</tr>
</tbody>
</table>
5.3.3.2 Spontaneous Settlement as Manifestation of Cultural Preferences ........................................... \vspace{1mm} 296
5.3.3.3 Slums area is a Solution rather than Problems ................................................................. \vspace{1mm} 297
5.3.3.4 Architecture Transformation of Spontaneous Settlements ................................................... \vspace{1mm} 297
5.4 The Changing Pattern .................................................................................................................... \vspace{1mm} 299
5.4.1 The Former Sultanate Area ........................................................................................................ \vspace{1mm} 299
5.4.2 The Change on Outer Rings ....................................................................................................... \vspace{1mm} 300
5.4.3 The Change in the Core Area ..................................................................................................... \vspace{1mm} 301
5.4.4 Physical Changes of Houses in Public Sponsored Housing ....................................................... \vspace{1mm} 302
5.4.4.1 The Government Provision Housing .................................................................................... \vspace{1mm} 302
5.4.4.2 Private Housing Project ........................................................................................................ \vspace{1mm} 304
5.4.5 Indication of Further Changes ................................................................................................... \vspace{1mm} 306

Summary .............................................................................................................................................. \vspace{1mm} 306

CHAPTER SIX

THE CONTEMPORARY CULTURE AND ARCHITECTURE OF BATAK TOBA

Table of Content.

Introduction ........................................................................................................................................... 308

6.0 Spontaneous Settlement: Tegalsari ................................................................................................. 311
6.0.1 The Effect of Cultural preferences on Social Characteristics ................................................... \vspace{1mm} 311
   6.0.1.1 Ethnic Related Segregation and Cultural Preferences ......................................................... \vspace{1mm} 311
   6.0.1.2 Migration Pattern .................................................................................................................. \vspace{1mm} 313
   6.0.1.3 Language Among the Ethnic Groups ................................................................................... \vspace{1mm} 313
   6.0.1.4 Education and Knowledge .................................................................................................. \vspace{1mm} 314
   6.0.1.5 Religion ................................................................................................................................ \vspace{1mm} 314
   6.0.1.6 Kinship ................................................................................................................................ \vspace{1mm} 315
   6.0.1.7 Households Characteristic ................................................................................................... \vspace{1mm} 316
6.0.2 The Effect of Cultural Preferences on Economic Characteristic .............................................. \vspace{1mm} 316
6.0.3 Dwelling Preferences .................................................................................................................. \vspace{1mm} 320
   6.0.3.1 Mandailing, Toba and Karo ................................................................................................. \vspace{1mm} 322
   6.0.3.2 Javanese ............................................................................................................................... \vspace{1mm} 322
   6.0.3.3 Deli Malay ............................................................................................................................ \vspace{1mm} 323
   6.0.3.4 Chinese ............................................................................................................................... \vspace{1mm} 323
   6.0.3.5 Minangkabau ....................................................................................................................... \vspace{1mm} 323
6.0.4 Preferences on Selected type of Dwellings ............................................................................... \vspace{1mm} 324
   6.0.4.1 Shop Houses ......................................................................................................................... \vspace{1mm} 324
   6.0.4.2 Low-cost Multilevel Apartment .......................................................................................... \vspace{1mm} 325
   6.0.4.3 Conventional House ............................................................................................................ \vspace{1mm} 326

6.1 The Contemporary Culture of Batak Toba .................................................................................... \vspace{1mm} 327
<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.1.1</td>
<td>Urban of Culture Batak Toba</td>
<td>327</td>
</tr>
<tr>
<td>6.1.1.1</td>
<td>Language</td>
<td>327</td>
</tr>
<tr>
<td>6.1.1.2</td>
<td>Education</td>
<td>328</td>
</tr>
<tr>
<td>6.1.1.3</td>
<td>Ties with the Hometown</td>
<td>328</td>
</tr>
<tr>
<td>6.1.2</td>
<td>From the Rice Grower to Workers in Urban Sectors</td>
<td>329</td>
</tr>
<tr>
<td>6.1.2.1</td>
<td>Jobs and employments</td>
<td>330</td>
</tr>
<tr>
<td>6.1.2.2</td>
<td>Income and Spending</td>
<td>331</td>
</tr>
<tr>
<td>6.1.2.3</td>
<td>Domestic Jobs</td>
<td>331</td>
</tr>
<tr>
<td>6.1.3</td>
<td>Social Organization</td>
<td>333</td>
</tr>
<tr>
<td>6.1.3.1</td>
<td>Kinship</td>
<td>333</td>
</tr>
<tr>
<td>6.1.3.2</td>
<td>Birth and its ritual</td>
<td>335</td>
</tr>
<tr>
<td>6.1.3.3</td>
<td>Marriage</td>
<td>335</td>
</tr>
<tr>
<td>6.1.4</td>
<td>Religious and Ritual System</td>
<td>337</td>
</tr>
<tr>
<td>6.1.4.1</td>
<td>Religious Concept</td>
<td>337</td>
</tr>
<tr>
<td>6.1.4.2</td>
<td>The Begus and Tondies</td>
<td>337</td>
</tr>
<tr>
<td>6.1.4.3</td>
<td>Cosmology</td>
<td>338</td>
</tr>
<tr>
<td>6.1.4.4</td>
<td>The Role of Food and Dining in Ritual</td>
<td>338</td>
</tr>
<tr>
<td>6.1.4.5</td>
<td>Talk, Rites and Spell</td>
<td>339</td>
</tr>
<tr>
<td>6.1.4.6</td>
<td>The Cult of the Death and funeral</td>
<td>340</td>
</tr>
<tr>
<td>6.1.5</td>
<td>From Animism to Monotheism</td>
<td>340</td>
</tr>
<tr>
<td>6.1.5.1</td>
<td>Contemporary Religious Symbols</td>
<td>340</td>
</tr>
<tr>
<td>6.1.5.2</td>
<td>Hybrid of Religion</td>
<td>341</td>
</tr>
<tr>
<td>6.2</td>
<td>The Contemporary Architecture and Settlement of The Toba</td>
<td>343</td>
</tr>
<tr>
<td>6.2.1</td>
<td>The Settlement</td>
<td>343</td>
</tr>
<tr>
<td>6.2.1.1</td>
<td>Perception on the Settlement</td>
<td>343</td>
</tr>
<tr>
<td>6.2.1.2</td>
<td>The Settlement Lay-out</td>
<td>346</td>
</tr>
<tr>
<td>6.2.1.3</td>
<td>The Disappearance of Market Place (Onan)</td>
<td>347</td>
</tr>
<tr>
<td>6.2.2</td>
<td>Contemporary Architecture of Toba House</td>
<td>347</td>
</tr>
<tr>
<td>6.2.2.1</td>
<td>Plan Structure of Urban House</td>
<td>349</td>
</tr>
<tr>
<td>6.2.2.2</td>
<td>Space Allocation</td>
<td>355</td>
</tr>
<tr>
<td>6.2.2.3</td>
<td>Architecture Gradually Transforms to be a Secular Object</td>
<td>356</td>
</tr>
<tr>
<td>6.2.3</td>
<td>Preferences for essential rooms and Furniture</td>
<td>358</td>
</tr>
<tr>
<td>6.2.3.1</td>
<td>Living room</td>
<td>358</td>
</tr>
<tr>
<td>6.2.3.2</td>
<td>Bedroom</td>
<td>364</td>
</tr>
<tr>
<td>6.2.3.3</td>
<td>Kitchen</td>
<td>362</td>
</tr>
<tr>
<td>6.2.3.4</td>
<td>Bathroom</td>
<td>464</td>
</tr>
<tr>
<td>6.2.3.5</td>
<td>Family room</td>
<td>366</td>
</tr>
<tr>
<td>6.2.3.6</td>
<td>Terrace</td>
<td>368</td>
</tr>
<tr>
<td>6.2.3.7</td>
<td>Storage</td>
<td>368</td>
</tr>
<tr>
<td>6.2.4</td>
<td>Cultural Preferences Architectural</td>
<td>370</td>
</tr>
<tr>
<td>6.2.4.1</td>
<td>Type of Houses</td>
<td>370</td>
</tr>
<tr>
<td>6.2.4.2</td>
<td>House Orientation</td>
<td>370</td>
</tr>
<tr>
<td>6.2.4.3</td>
<td>Set back and Distance between Houses</td>
<td>371</td>
</tr>
<tr>
<td>6.2.4.4</td>
<td>Building Materials</td>
<td>371</td>
</tr>
<tr>
<td>6.2.4.5</td>
<td>Floor</td>
<td>371</td>
</tr>
<tr>
<td>6.2.4.6</td>
<td>Wall</td>
<td>372</td>
</tr>
<tr>
<td>6.2.4.7</td>
<td>Roof and Ceiling</td>
<td>372</td>
</tr>
<tr>
<td>6.2.4.8</td>
<td>Windows and Doors</td>
<td>373</td>
</tr>
<tr>
<td>6.2.4.9</td>
<td>Carving and Ornament</td>
<td>375</td>
</tr>
<tr>
<td>6.2.4.10</td>
<td>Fencing</td>
<td>377</td>
</tr>
</tbody>
</table>
CHAPTER SEVEN

CONCLUDING REMARKS AND RECOMMENDATION

Table of content:

Introduction ........................................................................................................... 405

7.0 Synthesis of the Research Findings ................................................................. 406
  7.0.1 Architecture Transformation of Cultural Change ........................................ 406
      7.0.1.1 Transformation Through External Exchanges (Diffusion) ................ 406
      7.0.1.2 Transformation Through the Growth from Inside (Evolution) .......... 407
      7.0.1.3 The Transformation as a Result of Interaction of Diffusion and Evolution 407
  7.0.2 The Protean Cultural Strategy ................................................................. 408
  7.0.3 Architectural Styles as Cultural Strategy .................................................. 408

7.1 Critical Issues Regarding Architectural Transformation ................................ 409
  7.1.1. Architectural Transformation is a Continuing Process ......................... 409
  7.1.2. The Drastic Transformation into New Form Create Tension ................... 409
  7.1.3. Unpredictable Direction of Transformation ........................................... 411
  7.1.4. Architect Versus Spontaneous House .................................................... 411

7.2. Consideration of a New Framework ............................................................ 412
  7.2.1. New Approach ....................................................................................... 413
  7.2.2. The Diversity in Design for Different Ethnic Groups .............................. 413

7.3 Framework for Understanding the Cultural Needs of the Dwellers .................. 413
  7.3.1. Determining the Cultural Needs ............................................................. 414
  7.3.2. Cultural Based Architectural Styles ....................................................... 415
7.4. Recommendation ................................................................. 416
  7.4.1. Recommendation for User .............................................. 416
    7.4.1.1. Socio-Cultural Aspects ........................................... 416
      a) The Cultural Based Architectural Styles ........................ 416
      b) Compartmentalized Spaces ........................................... 417
      c) The Compromise of Contradictory Needs ......................... 417
    7.4.1.2. Economic and Financial ......................................... 417
    7.4.1.3. Physical Aspects ................................................ 418
      a) Building Materials .................................................. 418
      b) Building Types ..................................................... 418
      c) Detached House ..................................................... 419
      d) The Role of Religious Building .................................. 419
  7.4.2. Recommendation for Providers ....................................... 419
    7.4.2.1. Socio-Cultural Aspects ........................................ 420
      a) Space Allocations .................................................. 420
      b) Anticipation of the Infinite Types of Transformation ........ 420
    7.4.2.2. Financial Aspects and House related Spending of the Dwellers .................................................. 420
      a) User Participation .................................................. 420
      b) The Role of Provider .............................................. 421
    7.4.2.3. The Physical Aspects ............................................ 421
      a) The Clear Guides to cater for Transformation .................. 421
      b) The Public Space .................................................. 422
  7.4.3. Recommendation for Policy Maker .................................. 422
    7.4.3.1. Policy and Socio-Cultural .................................... 423
      a) Institutional Framework ............................................ 423
      b) The Planning Guide Should be Continuously Revised .......... 423
      c) The Multi Cultures ................................................ 423
    7.4.3.2. Financial Aspects .............................................. 424
      a) To Promote the Spontaneous Houses ............................... 424
      b) The Flexible Building Standards ................................ 424
    7.4.3.3. Physical Aspects ............................................... 425
      a) Encouragement Rather than Limitation .......................... 425
      b) Building Materials .............................................. 426
  7.5. Areas for Further Research ............................................. 426

Reference
Annexes:
  Questioner
Seni Bina dalam Proses Transformasi
Kajian kes Batak Toba

Abstrak

Disiplin ilmu Seni bina, seperti takrif, menghadkan maupun teori teori yang mengazasinya selalunya berubah secara dinamis mengikut kecenderungan (Trend) perkembangan ilmu pengetahuan (Knowledge) dan falsafah (Philosophy).

Seni bina telah menjadi polemik yang semakin hangat dibincangkan terutamanya dalam masa terakhir ini, seperti dikesankan dalam perbincangan yang terjadi antara Modernisme dan Post-modernisme yang kemudian secara nyata (Physical) terlihat didalam lingkungan buatan manusia (Built environment) yang berubah secara berterusan (Continues).

Bahawa perubahan gaya seni bina (Architectural Style) yang sangat berkesan dan tidak tidak bersamaan (Conflict and Incompatible) dengan budaya local, telah mewarnai berbagai tempat di muka bumi ini dan selalu membingung dan timbul menjadi pertentangan sosio-budaya, alienasi, tegangan serta rasa bermusuhan dalam masyarakat.

Perlu ditegaskan bahawa permasalahan bukan terletak pada proses perubahan itu sendiri tetapi lebih kepada jenis dan intensitas dari perubahan yang telah terjadi, yaitu antara perubahan alami yang dipicu dari dalam dalam bentuk evolusi (Natural Evolution) maupun sebagai akibat kontak dengan budaya luar melalui proses diffusi dan perubahan yang dipaksakan dari luar.


Hasil penyelidikan itu mengukuhkan hipotesis yang telah dibuat, yang pertama, ialah penegasan bahawa perubahan terjadi melalui kontak dan pertukaran sosio-budaya baik secara dalaman (Evolution) dan eksternal dengan berselera (Diffusion) atau keduanya secara seremak. Yang kedua, ditemui bahawa dalam proses pertukaran sosio-budaya ini, penerima budaya (Cultural Recipient) akan memilih dan hanya mengambil unsure-unsur luar yang sesuai dan memiliki kesamaan akar dengan ideologi (Ideology, Worldview and Culture) yang dimilikinya tanpa boleh dipaksakan, sehingga terjadi bentuk campuran (Hybrida) yang berbeza dengan budaya luar tempat unsur itu bernama yang disebut budaya pemberi (Cultural Donor) dan juga beza tetapi boleh diterima oleh sipenerima budaya. Ketiga, dengan demikian boleh dirumuskan bahawa perubahan itu ialah fenomena alam yang tidak boleh dielakkan dan selalu akan menghasilkan suatu campuran dengan arahan serta bentuk yang sangat sukar untuk diramalkan.

Penyelidikan ini dilakukan dengan pendekatan ‘synchronic’ dan ‘diachronic’ dengan kaidah kualitatip dan kuantitatip secara serentak.

Diharapkan hasil penyelidikan ini boleh memberikan sumbangan bagi teori seni bina pada kaitan teori transformasi yang semasa ini hanya mendesakakan peran serta pengaruh luaran dari budaya pemberi terhadap penyesuaian (Adaptation) yang dilakukan oleh si penerima budaya.
Abstract

Architecture discipline, its definition, scope and basic theories have dynamically changes following the development of the main trend of the grand theory of knowledge and philosophy.

The subject has become the tense polemical issues as was reflected in the critical dialog between Modernism and Post-modernism, which is widely discussed and directly manifested in the physical built environment which have underwent the continual drastic changes in the last decades of 20th Century.

However, the drastic change of architectural styles very often are in conflict and incompatible with the local culture and has colored the entire parts of the world, inevitable has lead to the confusion, social conflict, alienation, psychological tension and hostile feelings in the society.

It is needed to confirm that the crucial problem is not the change itself but its nature, intensity and magnitude, whether the changes is caused and underlie by the natural internal factors in the form of evolution or peaceful cultural exchanges through diffusion process or brought about by enforcement of alien external power.

The purpose of the study is to find the reason, cause, direction and mechanism of architectural transformation within the context of the dynamic cultural change. In line with this aim, the study is focused on architectural transformation of Toba House during the period 1850-1998 in two different locations; the first is Jangga Dolok, a hamlet in the shore of lake Toba in the rural area, on which can be found the reminiscence of traditional architecture from the past, The second is Tegalsar, a spontaneous housing of urban character in the core of Medan, the largest city in outer Java, which is occupied by the Toba migrant.

The study finding had verified the hypothesis; firstly, the change is processed through the cultural exchanges either internal (Evolution), external (Diffusion) or both ways.

Secondly, in this cultural exchanges, the recipient cannot be forced and only adopted external elements which is compatible or have the similar roots with their own ideology, worldview and cultural values give birth to the hybrid form which is different with the donor culture and the recipient but accepted by the recipient.

Thirdly, it can be concluded that changes is unavoidable phenomena of nature that inevitably and continuously creates the hybrid form of architecture, whose form and direction not always can be predicted prior to its change.

Synchronic and diachronic approaches are simultaneously applied alongside the qualitative and quantitative method of research.

The research findings is expected to contribute to the architectural theory in the context of architectural transformation which currently have exaggerated the role of external factor and donor culture in process of architectural adaptation instead of the internal factors and recipient culture which in fact are interdependent.
Acknowledgements

Many peoples have contributed to this dissertation, either directly or indirectly and I may not be able to identify each by name. However there are a few I would like to mention for their valuable time, knowledge and inexhaustible support. First of all, I would like to express my deepest gratitude to Professor Dr. Julaihi bin Wahid and Professor Dr. Zulkifli Hanafi respectively my supervisor and co-supervisor for their guidance and expert advice, without which, I may not complete this thesis. I have to admit that Dr. Julaihi not only a supervisor to me but much more than that.

I also express my appreciation to Professor Dr. Ibrahim Wahab (The former Dean of Housing Building and Planning) who encouraged me to conduct this work for the first time and give the endless support since and also my appreciation to Professor Dr. Ghani Salleh (Dean of H.B.P).

Special thanks go to my students who help me to carry out the field survey and preparing the figures and drawings and the entire Indonesian students in USM for their invaluable supports.

A special thanks is extended to all the member of staff of School of Housing, Building and Planning, Universiti sains Malaysia for being helpful whenever I need them during my period of study.

I also would like to thanks the respondents in Tegalsari and Jangga Dolok who un-tiredly answer the entire unusual long questionnaire and satisfied my curiosity.

I am indebted to Universitas Sumatera Utara who gives me the chance to enhance my trivial knowledge.

Finally, I dedicated this work to my lovely wife Pristiwani Mei Hilda, who take care my position as breadwinner and the head of the household of the family during three years of my absence and to my late parents who teach me how to walk.

Moehammed Nawawi Loebis

Penang, December 2000
List of Figures

Chapter One:
Figure 1.1  Occidental Hegemony (1) ....................................................... 10
Figure 1.2  Occidental Hegemony (2) ....................................................... 11
Figure 1.3  The Exchange of Local and Indian Culture ................................. 26
Figure 1.4  The Exchange of Buddhism and Hinduism ................................. 28
Figure 1.5  Transformation Architecture .................................................. 40

Chapter Two:
Figure 2.1  Research Strategy Diagram .................................................... 56
Figure 2.2  Research Diagram ................................................................. 58

Chapter Three:
Figure 3.1  Adaptation of Cultural Strategy and Its Response to the Changing Environment ................................................................. 91
Figure 3.2  The Roles of Host Population in Adaptation Strategy of the Migrant ................................................................. 97
Figure 3.3  Adaptation Strategy .................................................................. 98
Figure 3.4  Splitting of Cultural Association of Toba in the Context of Transformation ................................................................. 100
Figure 3.5  Mechanism of Transformation ................................................ 101

Chapter Four:
Figure 4.1  Migration of Australoid and Mongoloid in Southeast Asia ............... 105
Figure 4.2  The Toba Land and its Vicinity .................................................. 108
Figure 4.3  The Toba Land ....................................................................... 109
Figure 4.4  Batak Toba Family Tree .......................................................... 116
Figure 4.5  Naga Padoha and Pane Nabolon (1) .......................................... 117
Figure 4.6  Naga Padoha and Pane Nabolon (2) .......................................... 118
Figure 4.7  Jambar ................................................................................. 130
Figure 4.8  Debata Idup .......................................................................... 132
Figure 4.9  Stone Sarcophagus ................................................................. 139
Figure 4.10  The Head of Magic Wand ..................................................... 142
Figure 4.11  Bindu Matoga ..................................................................... 145
Figure 4.12  Parhalaan ......................................................................... 147
Figure 4.13  Village layout (1) Photograph ............................................... 153
Figure 4.14  Village Fortification ............................................................... 154
Figure 4.15  The Village Layout (2) ........................................................... 155
Figure 4.16  The Village Cross section ........................................................ 156
Figure 4.17  Architecture Style of the Toba traditional House ....................... 160
Figure 4.18  Cross Section of Toba House (1) ............................................ 161
Figure 4.19  Cross Section of Toba house (2) ............................................ 162
Figure 4.20  Cross Section of Granary (1) .................................................. 163
Figure 4.21  Cross Section of Granary (2) .................................................. 164
Figure 4.22  Division of Space in Toba Traditional House for Daily Activities 166
Chapter Five

Figure 5.1 Malay Architecture, Anatomy of the Traditional Malay House ........................................ 219
Figure 5.2 Malay Architecture, Anatomy and Transformation of Malay House ................................ 220
Figure 5.3 Malay Architecture, A Transformation of a Mosque ......................................................... 221
Figure 5.4 Architecture in the Beginning of Colonial Period,
The Colonial Temporary Settlement .................................................................................................. 228
Figure 5.5 Architecture in the Beginning of Colonial Period,
Early Colonial Architecture ........................................................................................................... 230
Figure 5.6 Architecture in the Beginning of Colonial Period,
Esplanade Urban Square .................................................................................................................. 231
Figure 5.7 Architecture in the Beginning of Colonial Period,
Earlier Shop-houses Architecture .................................................................................................. 233
Figure 5.8 The New Satellite Town Polonia,
Implementation of Garden City in the Colony .............................................................................. 236
Figure 5.9 Colonial Architecture, Architecture of Colonial House
after 1920 .......................................................................................................................................... 237
Figure 5.10 Segregated Society, Ethnic Segregation and Physical
Development of the city in 1930 ...................................................................................................... 239
Figure 5.11  Planning as a Mechanism of Segregation of Power, Ethnic Segregation and Urban Network in 1945 .............................. 241
Figure 5.12  Dutch Precinct, Block Pattern and Building Type in European Quarter in 1950 .................................................. 244
Figure 5.13  Commercial District, Block Pattern and Building Type in Commercial District in 1950 ........................................... 246
Figure 5.14  Government District, Block pattern and Building type in Government District in 1950 ........................................... 248
Figure 5.15  Traditional Cluster, Block pattern and Building Type in Indigenous Settlement in 1950 ............................................. 250
Figure 5.16  Colonial Architecture in the Late Era in Deli (1) .................................................. 255
Figure 5.17  Colonial Architecture in the Late Era in Deli (2) .................................................. 256
Figure 5.18  Architecture in the Late Colonial Era, Chinese Shop-houses ........................................... 258
Figure 5.19  Architecture in the Late Colonial Era, Typical of Malay House ........................................... 259
Figure 5.20  Ethnic Composition and Settlement Formation in Medan 1994 ........................................... 269
Figure 5.21  Development plan 1974 for Medan-Belawan Corridor ........................................... 274
Figure 5.22  Planning policy 1974, De-concentration of the City into Satellites and the Roads Pattern ........................................... 275
Figure 5.23  Architectural Style of a House in 1940-1950s .................................................. 279
Figure 5.24  The Style of Spontaneous House in the End of 20th Century ........................................... 281
Figure 5.25  The Style Shop-houses in the End of 20th Century ........................................... 283
Figure 5.26  The Shop-houses in the City Core .................................................. 284
Figure 5.27  Housing Supply and Segregation .................................................. 292
Figure 5.28  Architecture Style of Public Sponsored Housing during 1980-1998 ........................................... 293
Figure 5.29  Architecture Transformation of Spontaneous Settlement ........................................... 298
Figure 5.30  The typical Change of Public Sponsored Housing ........................................... 303
Figure 5.31  Change of Finished House built by Developer ........................................... 305

Chapter Six

Figure 6.1  The Study Area in 1930, The Pattern of the Settlement ........................................... 309
Figure 6.2  The Study area in 1998, Segregation Clusters of Ethnic Groups as a Reflection of Preferences ........................................... 310
Figure 6.3  From the Rice Grower to the Urban Workers; The Relationship of Cultural Needs and Income ........................................... 332
Figure 6.4  The Kinship ties; the Traits of Donor Culture are adopted to strengthen the Recipient Culture in a New Format ........................................... 334
Figure 6.5  From Animism to Monotheism; The Effect of Religion Transformation ........................................... 342
Figure 6.6  The Settlement Pattern; The Function of Mother Village which is partly taken over by the Church Institution ........................................... 345
Figure 6.7  The Settlement Pattern; Transformation of Traditional Market ........................................... 348
Figure 6.8  Plan Structure of Contemporary Dwelling; Transformation of Psychological Division of Traditional House ........................................... 351
Figure 6.9  Plan Structure of Contemporary Dwelling; Transformation of Essential Rooms Configuration ........................................... 352
Figure 6.9  Plan Structure of Contemporary Dwelling; Transformation of Essential Rooms Configuration (Continuation) ........................................... 353
Figure 6.9  Plan Structure of Contemporary Dwelling; Transformation of Essential Rooms Configuration (Continuation) ........................................... 354
<table>
<thead>
<tr>
<th>Figure Number</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.10</td>
<td>Design Method of Contemporary Toba Urban House</td>
<td>357</td>
</tr>
<tr>
<td>6.11</td>
<td>The Typical of Living Room</td>
<td>359</td>
</tr>
<tr>
<td>6.12</td>
<td>The Typical of Bedroom</td>
<td>361</td>
</tr>
<tr>
<td>6.13</td>
<td>The Typical of Kitchen</td>
<td>363</td>
</tr>
<tr>
<td>6.14</td>
<td>The Typical of Bathroom</td>
<td>365</td>
</tr>
<tr>
<td>6.15</td>
<td>The Typical of Family Room</td>
<td>367</td>
</tr>
<tr>
<td>6.16</td>
<td>The Typical of Terrace</td>
<td>369</td>
</tr>
<tr>
<td>6.17</td>
<td>The Typology of Windows</td>
<td>374</td>
</tr>
<tr>
<td>6.18</td>
<td>The Typical of Ornaments in Contemporary Toba house</td>
<td>376</td>
</tr>
<tr>
<td>6.19</td>
<td>The Transformation of Fences and Greenery Follows the Main Trend of Cultural Changes</td>
<td>378</td>
</tr>
<tr>
<td>6.20</td>
<td>The Typology of Fences</td>
<td>379</td>
</tr>
<tr>
<td>6.21</td>
<td>The Typology of Greenery</td>
<td>380</td>
</tr>
<tr>
<td>6.22</td>
<td>Traditional House and the Level of Preferences</td>
<td>383</td>
</tr>
<tr>
<td>6.23</td>
<td>The Synthesis of Local and European Architecture and Level of Preference</td>
<td>385</td>
</tr>
<tr>
<td>6.24</td>
<td>The Colonial Architecture and Level of Preference</td>
<td>387</td>
</tr>
<tr>
<td>6.25</td>
<td>The Low Cost House and Level of Reference</td>
<td>388</td>
</tr>
<tr>
<td>6.26</td>
<td>The Apartment and Level of Preference</td>
<td>390</td>
</tr>
<tr>
<td>6.27</td>
<td>The Government House for Staff and Level of Preference</td>
<td>392</td>
</tr>
<tr>
<td>6.28</td>
<td>The Shop-house and Level of Preference</td>
<td>393</td>
</tr>
<tr>
<td>6.29</td>
<td>The Luxury Contemporary House Style and Level of Preference</td>
<td>395</td>
</tr>
<tr>
<td>6.30</td>
<td>The Conventional Detached House and Level of Preference</td>
<td>397</td>
</tr>
<tr>
<td>6.31</td>
<td>The Conventional Compound House and Level of Preference</td>
<td>398</td>
</tr>
<tr>
<td>6.32</td>
<td>The Modern Architecture and Level of Preference</td>
<td>400</td>
</tr>
<tr>
<td>6.33</td>
<td>Deconstruction and Level of Preference</td>
<td>403</td>
</tr>
</tbody>
</table>
List of Table

Chapter One:

Table 1.1 Schematic of Race Evolution in Nusantara ............................................. 23

Chapter Two:

Table 2.1 Theoretical Frame of Reference .......................................................... 55

Chapter Four:

Table 4.1 Slices of Sacrificed Buffalo and Its Portion ........................................ 129
Table 4.2 Selected Furniture and Utensils in the Traditional Batak House ........... 159
Table 4.3 Element of Front and Sidewall ............................................................ 174

Chapter Five:

Table 5.1 The Real Income Growth of Local Government ..................................... 264
Table 5.2 The Growth of Financial Cash Flow of Medan Local Government ......... 264
Table 5.3 Employment of Population per District in Medan 1997 ....................... 265
Table 5.4 Employment According to the Type of Jobs and Sectors in 1997 .......... 265
Table 5.5 Expenditure and Consumption per-Capita in 1997 ............................. 266
Table 5.6 Household Incomes in 1977 ................................................................. 267
Table 5.7 Ethnic Growths and its Composition .................................................... 268
Table 5.8 Composition of Devotee of the Main Religion in Medan in 1997 .......... 270
Table 5.9 The Growth of Population and Households per-District during 1990-1997 ................................................................. 288
Table 5.10 The Growth of House stock during 1990-1997 in Medan ................... 288
Table 5.11 Housing Supply Sponsored by Central Government during 1980-1996 ................................................................. 289
Table 5.12 Housing Supply Sponsored by Local Government during 1980-1996 290
Table 5.13 Housing Supply by Local Private Developer during 1985-1994 .......... 290

Chapter Six:

Table 6.1 Ethnic Segregation .............................................................................. 312
Table 6.2 Cultural Preferences on Social Aspects .............................................. 312
Table 6.3 Religion Segregation .......................................................................... 315
Table 6.4 Cultural Preferences on Economic Aspects ....................................... 317
Table 6.5 Employment Diversity ....................................................................... 319
Table 6.6 Income Level ....................................................................................... 319
Table 6.7 Cultural Preferences on Housing related Aspects ................................ 321
Table 6.8 Income and Preferences to live in Shop-houses ................................ 324
Table 6.9 Employment and Preferences to live in Shop-houses ....................... 324
Table 6.10 Income and Preferences for Multilevel Low-cost House ................ 325
Table 6.11 Job and Preferences for Multilevel Low-cost House ....................... 325
Table 6.12 Income and Preferences to live in Conventional House ................. 326
| Table 6.13 | Employment and Preferences for Conventional House | 326 |
| Table 6.14 | Type of Employment | 330 |
| Table 6.15 | Spouse Criteria among the Batak Toba | 336 |
| Table 6.16 | The Event that use Traditional diet as Ritual | 339 |
| Table 6.17 | The Level of Belief in Traditional Magic | 339 |
| Table 6.18 | The Good House According to Christian | 341 |
| Table 6.19 | Reason to Renovate the Building | 349 |
| Table 6.20 | Type of the Roofs | 372 |
| Table 6.21 | Window Types in Contemporary Houses | 373 |
| Table 6.22 | Window Preferences | 373 |
Glossary

Batak Language

Abit Ragidup-A special textural clothes
Abris sous roches-The race belongs to the Austro-Melanesoid or Papua-Melanesoid that similar to the Australian aborigine (Australoid) that somehow had mixed with the Mongoloid race. These are the ancestors of the present population that widely known as Malay, who occupied the Nusantara in general and Northern Sumatera in particular.
Adat-Traditional custom
Alaman-Front yard
Andung-The Song of lamentation
Angkang-anggi-The placenta, it is usually buried under the house is and is regarded as the persons guardian spirit
Aru-aru-Throat
Asom-Lime juice
Architect-derives from the Greek word mean builder making and chief builder
Ati siporhas-A magical book
Australoid-The race originating from Sunda plateau, who came before the glacial worm, as a direct evolution descendant of the first Indonesian man which called Pithecanthropus Erectus which exist around 1 000 BC
Austronesian-A race that have evolved from the first founding man along with their cultures into the present population of Nusantara (Kuncaraningrat: 1970)
Baba-The doorway of the house is colloquially called the mouth of animal
Bajonggir-A carved wooden ornament depicts the lizard and represents a god
Banebane-A sweet smelling plant
Batak Karo-The population that occupy the hilly and mountainous that bordered with the Malay Deli territorial.
Batak Simalungun-The population that occupy the hilly and mountainous in the South that bordered with the Batak Karo territorial
Batak Toba-Lived in relatively isolated area around lake Toba
Batara Guru-The god of justice
Batara Guru, Sori Pada, and Mangala Bulan-The three sons of supreme God
Bauta Nihuta-The assigned a death soul to guard the new village
Begu-Death soul
Begu Nitano-The soul of the Earth
Begus and Saitans-The evil death soul or creature
Bindu Matoga-The magic traditional compass
Bius-The geographically area of a political leader
Bona nipasogit-The existing territory
Bona niranto-The new territory
Bonggarbonggar-The gallery of the house
Boraspati Nihuta-The fertility god in his role to protects the village that appeared in mythology as a lizard that appeared in mythology as a lizard
Boraspati Nitano-Fertility or an Earth god that appeared in mythology as a lizard he is the son Mangala Bulan or sometime regarded as Mangala Bulan himself
Boraspati Nirumah-The fertility god in his role to protects the house that appeared
Borobudur-The greatest ancient monument Buddhist art of Syailendra in central Java
Borotan-The sacred pole
Boru-Families to whom one’s family has given woman in marriage (wife taker)
Boru naholi-The infertile woman
Boru Namora-A spirit of a woman who died childbirth
Boru Saniang Naga: A snake goddess of water recognized as a daughter of Sori Pada in mythology as a lizard probably originated from the Sanskrit words Sang Hyang
Botohon-Leg bones
Burangir A sacrifice of betel
Cacti- The magic power the immortal
Confucianism-a main philosophical thought that believed of knowledge was the key to happiness
Datu-The medicine man
Datu Pandudhu-The medicine man who knew the entire secret of the sacred staves and musical custom
Datu Panggana-The medicine man He who carves sacred statue and magic wand
Datu Porsil-The medicine man who practice exorcism is called and
Debata Asiasi-The other name of supreme God, the creator of the World
Debata diginjang-The upper world god who govern the heaven
Debata ditonga-The middle world god who govern the human world
Debata ditoru-The underworld god who govern darkness and underworld
Debata mulaji nabolon-The supreme God
Debata na Tolu-The three sons of supreme God consists of Batara Guru, Sori Pada, and Mangala Bulan

Debata idiup-A carved wooden effigy depict and represents the supreme god

Dengke-Fish

Dinding Parginjang-Supporter of the wall’s middle planks

Dilapaung or Santungsantung-Tongue like upright plank symbolize the umbrella on the upper facade with the painted decorative board pointing downward from the roof is a called buffalo tongue

Dondon tua or Sampe tua-The valuable object

Dorpi Jolo-A small piece of vertical plank in the middle of facade

Dorpi Sandesande-Movable middle plank that stand on Pandingdingan

Dongan sabutuha-Close agnate of patrilineal descendant

Gagaton-The piece of cotton or linen that hanging out the mouth of the buffalo head called grazing grass which eaten by animal

Gajah Dompak-The staring Elephant

Gondang-The drums in the traditional music orchestra

Gondang sisada-The single drum

Gonting-Waist

Guru Mangantar Porang-The god of war

Guriguri-Stone barrels

Habinsaran-The East

Hagabeon-The great children and large number of offspring and descendant

Hala-The Scorpion

Halang gordang-Drum support at the balcony

Harajaon-territorial hegemony or the kingship

Halang Ulu Jabu Bona-The part of the house nearest to the main entrance

Hariara or Baringin-Banyan Tree (Ficus Benyamina)

Hariara, Pinasa, Pokki, Bintatar, Baringin and Maranti-The type of timber
Hamoraon—Authority of power, prosperity, wealth and richness
Hasangapon—Noble respectable and dignity
Hau Tanggurung—Back bones
Hulahula—Wife givers
Homitan—An animal or peculiar shape objects such as unnatural growing bamboo, a piece of stone of unnatural shape, a piece of cloth, tree bark or beautiful rare plate
Hodahoda—The head mask depicted the horse’s head
Horja godang or Turun—The great festival
Hosahosa—The window on the rear wall of the house opposite the front door is called the breath
Hula-hula—Families from whom one’s family has received brides (wife giver)
Hunik—Saffron
Huria Kristen Batak Protestan (H.K.B.P)—The Curia of Christian Protestant of Batak
Huta—The traditional Toba village
Ilur—Tail
Ijuk—The palms fiber
Itak Sigarguron—Traditional cake made of rice flour
Jabu Bona—The most important space located on the rear-left
Jabu Soding—The space on the periphery, which is closest to the edge
Jabu Suhat—Part of the house provided for brother or descendent of the head of the household.
Jabu tampiring or Sitakkap Piring—The room provided for the wife giver
Jahu—House
Jambar—The parts of the slaughtered animal
Jambu Barus Mulajadi—A mighty tree grows in the upper world by high god
Joro—The grave house
Kampung or kampong—The settlement develops from the appropriate continuation of local traditions and sensitivity toward local condition well adapted to the larger social and economic unit of the village or spontaneous settlements.
Lage Natjar—The clean mat
Langgatan—An elevated altar
Lanting-The plant leaf of a three
Lais-lais-Range lath
Lingga Payung-All points of the traditional compass
Manampe raga-raga or Manghuntal raga-raga-reaching up the scaffolding sacred rack of ancestor's death soul
Malay Deli-The population that occupy the entire coastal trip of Sumatera extending to interior as far as thirty to fifty kilometers
Mendailing-Lived farther to the South bordered with Minangkabau
Mendudu-Warding off the bad omen
Mangala Bulan-The evil God, which is depicted as Gajah dompak, Singasinga and lizard
Manguras-To takes bath for purification using traditional shampoo
Manuk patia raja-Chicken or its and eggs probably related to the myth on the origin of human
Manulangi-Feeding by Hand
Marga-The other family member of the same clan
Margogo-The donation
Marmangonang Nipina-The premonition and advice through dream
Martua Sombaon-A guardian deities
Medan-The capital of northern Sumatera
Meganthropus Paleo Javanicus-The first founding man in Java.
Nadangol-The misery
Naga Padoha-The mighty dragon of the underworld with horn likes a buffalo that lived in the water
Namargota-The name of each portion of the slaughtered animal
Nampunasa-The owner of the village
Naholi-The infertility woman
Napogos-The poverty
Niggor or Bungkulan-Ring beam
Ogung-The cymbals in the traditional music orchestral
Ompu parsadaan-The honorable elder or ancestor of large descendants
Onan-Market place
Onggongganggang-The head mask made of hornbill
Pabidang Panggagaton-Increase the livable area for the will be growing descendant
Paddy-A type of cereal (Oryza sativa) husked into rice
Pagar pareme-The protective role of Debata idup on paddy field
Pagar parorot-The protective role of Debata idup on childcare
Pagar panutupi-The protective role of Debata idup on security
Pamoltoki-The length wise of the roof spars is called stomach where the rice is stored
Panamboli-The slaughters of sacrificed animal
Panamboli-Lower neck
Pandanus-Type of shrub, which leaves, is woven into mats
Pandia-The shrub
Pandingdingan-Two massive wooden planks of wall, the thickest and most significant
          part of the wall that stand on the ture-ture
Pandoadi-Cymbal player
Pangaraksaon-Secret language called giant’s tongue
Pangaranangan-Chest bones
Pangir-Traditional shampoo
Pangkat-The status associated with white collar
Pangulu balang-A medicine man
Pangumbari-Main beam
Pangkesehi-Traditional violin player
Parapara-The scaffolding rack hanging into the high ceiling decorated with leaves and
          traditional sacred cloth, tight with the rattan ropes
Parharingin or Pandita -A priest and political leader of an area or King priest
Parbue santi-santi-The ceremony of rice offering and present a dance
Pargonsi-Drummer
Parhalaan-Traditional calendar
Parholian-The tombs or a place of bones
Parhongkom-Horizontal plank as the based of Dorpi jolo
Parpuaha Ditolonan-The medicine man He who mastered the sacred book
Parsarune-Flute player
Pat-Foot
Patrilineal-affiliation from the father
**Peripe**-The other clan outside the village founder will became the commoner

**Pinahorbo**-The upper third of the structure is called as representation of a buffalo

**Pinggan Sitto Sora**-A good plate

**Pisang Sisungsangdhuri**-A special kind of bananas

**Piso**-The knife

**Poda**-Terms used in the language of religion

**Porstli**-The wood sculpture represented the sick man who seeking for healing

**Pustaha**-The sacred and superstitions books

**Pupuk**-The dreadful magic broth

**Pusuk Buhit**-The tip of a mountain on the western shore of Lake Toba, where the couple of gods settles in the human world for the first time

**Raja Nihuta**-The local King or head of the region and the first settler in the compound

**Raja Nihuta, Tunggane Nihuta, or Suhut**-The village chieftain

**Raoan**-Bowels leg

**Rassang**-Inserted planks into the column

**Rendang**-Local recipe food

**Rombu Siporhur**-The magical cord use in ceremony in attempt to secure the favor of deities by propitiatory sacrifices

**Sagusag sitompion**-The offering cake

**Sahala Habeguan**-The higher position of one’s live soul enforce by the ancestor’s death soul indicated in bravery, charisma and the ability to gain the prosperity in life

**Sahala Hamoraon**-The higher position of one’s live soul indicated by the wealth and richness

**Sahala Harajaon**-The higher position of one’s live soul indicated by leadership, kingship, and authority

**Sahala or Tua**-The higher position and the advance status of live soul

**Sahan or Naga Marsaran**-The barrel made of a horn of buffalo

**Sacompu**-Descendant from the particular ancestor or agnate affiliation

**Sapala**-The spell

**Sawah**-Irrigated paddy cultivation

**Sasap**-Shoulder blade bones

**Sendal-sendal**-Canopy beams

**Sianjur Mulamula**-The first village found in the human world by the couple gods
**Sibaso**-The medicine man that established the contact with the spirit of the dead

**Sibaso nabolon**-A medicine woman

**Sibiaksa**-The dreadful magic broth

**Sibodak**-Jack fruit which grown upside down

**Sibombong Ari or Sibombong Anting**-Day shield or rafter in the form of triangle gable structure

**Siboru Deak Parujar**-The daughter of Batara Guru

**Sibuk Nijuhut**-The rest of the meat without bones

**Sidari Mangambat or Siupar Mangalele**-The little poisonous serpent

**Sigalegale**-Jointed doll represent an or imaginary son of a childless deceased

**Sigodang Botobotoan**-The medicine man who mastered the auspicious day

**Sihatamon Bunti**-This group may be called as the offering performer

**Sijujur Ari**-Medicine man who tell the good day for the festival

**Singasinga**-Is a mythical creature, whose form is a synthesis of several creature namely elephant, buffalo and human head in distortion composition, probably it is imaginary depiction of the dreadful Mangala Bulan

**Singasinga**-Mythical creature ornament

**Siparjahajaha dibibir**-The medicine man who can read the sign and forecast of the future

**Sipelebegu**-Paganism that worship and venerated the death soul

**Sipungka Nihuta**-The real founders of the new village usually a direct descendant of the ruler of the previous village

**Sipungkar Huta**-Descended of the founder of the village

**Siraja Batak**-The grandson of the high god who is the mythological ancestor of the Toba

**Sisanggar Meoleol**-The stick called the waving reed

**Sitindangi**-Upright plank, to keep the front gable structure frame upright

**Sitorop Ututian**-The magical formula

**Songsong Boltok or Pamoltoki**-Main support beam symbolized as Stomach

**Songsong rak**-Horizontal beam of the balcony

**Somba-somba**-Rib

**Sombaon**-the ancestor respectable death soul
Soit-Upper leg
Sopo-communal granary building
Soripada-The god of mercy
Sufist-The ascetic professional Islam preacher
Suhut-Initiator of festival or the founder of the village
Sumangot natarrimas-The angry living soul
Sundalap-Cross beam
Suvarnadvipa-The former name of the island of Sumatera
Syailendra-The short brief ruler of in Java (760-820)
Talaga-Means tail of creature down stream
Talaga Jabu Bona-The part of the house farthest to the main entrance opposite to jabu bona
Talaga Jabu Suhat-The part of the house farthest to the main entrance opposite to jabu suhat
Tambatamba Nihuta-The Village’s border expansion
Taoism-interpreted to mean the road to individual happiness defined usually in material terms
Tapa-The rattan ropes
Tegal Sari-The study area located in the core of Medan
T’ien-A prominent deity that translated as heaven
Tondi-The live soul can also be advance into higher position
Tondung Bujur or Tondung Ranggas-The long sticks of a very black hard wood for telling future
Tonga Nijabu-The middle of a house
Tonggo-tonggo-Traditional prays
Tomboman Adopado-Front plank posited behind Dorpi Jolo
Tunggal Panahuan-The magic wand cut from a special kind of hard wood
Tuktuk-The upper part of chest bones
Tukan-Lower leg
Ture-ture-The upper inserted planks where the floor beam rests on, its shape is similar with traditional rowboat
Tondong-The lose relatives
Tortor-The dances

Ulak Niampang-The compensation for the participant’s donation

Ulos-The traditional shawl

Ulu-Means head of creature or upstream

Ulu horbo-The buffalo head decoration on the front gable

Upa-offering made of food particularly chicken or its eggs perform to keep the life soul satisfied

Upa-upa-The offering food to the gods

Upa parhobas-Male helpers

Upa Parik- This reserved land provide for the ruling family

Urur Hodahoda-Rafter

Malay Language

Alang Pendek-Cross beam where the rafter rest on

Alang Panjang-Beam that support alang pendek

Atap-Roof Material Originally made of Thatch

Bomoh-Malay spiritual leader

Bumbung-Roof Ridge

Dapur-Kitchen

Guling-Purlin

Kasau Jantan-Main Rafter

Pelupuh-Bamboo Woven Panel

Perabung-The Cover of Roof Ridge

Rasuk-Tie Beam

Rumah Ibu-The main House

Sampan-Canoe

Serambi-Verandah

Silang Gunting-The Crossing of the Main Rafter

Tiang Ibu Rumah-Columns of the Main House

Tukang-Worker or Crafter

Tulang Perabung-Beam that support roof ridge

Tunjuk Langit-King Post
# CHAPTER ONE

## INTRODUCTION

Table of Content

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>1</td>
</tr>
<tr>
<td>1.0 The Issues: Dialect notion of Architectural discipline</td>
<td>3</td>
</tr>
<tr>
<td>1.0.1 The Exotic Vernacular Architecture</td>
<td>3</td>
</tr>
<tr>
<td>1.0.2 Occidental Hegemony</td>
<td>7</td>
</tr>
<tr>
<td>1.0.3 The Failure of Modernism</td>
<td>12</td>
</tr>
<tr>
<td>1.1 The Emergence of Change</td>
<td>14</td>
</tr>
<tr>
<td>1.1.1 Transformation: An Overview</td>
<td>14</td>
</tr>
<tr>
<td>1.1.2 In Search of Architectural Transformation</td>
<td>16</td>
</tr>
<tr>
<td>1.2 Objectives of the Study</td>
<td>19</td>
</tr>
<tr>
<td>1.3 Why Batak Toba</td>
<td>20</td>
</tr>
<tr>
<td>1.4 The Scope and Justification of the Study</td>
<td>20</td>
</tr>
<tr>
<td>1.5 The Historical Background of the Region</td>
<td>22</td>
</tr>
<tr>
<td>1.5.1 Prehistory: The Origin of Race and Culture</td>
<td>22</td>
</tr>
<tr>
<td>1.5.2 The Beginning of Historical Period</td>
<td>24</td>
</tr>
<tr>
<td>1.5.2.1 Hinduism</td>
<td>24</td>
</tr>
<tr>
<td>1.5.2.2 Buddhism</td>
<td>27</td>
</tr>
<tr>
<td>1.5.2.3 Hinduism Exchange with Buddhism</td>
<td>27</td>
</tr>
<tr>
<td>1.5.3 The Coming of Islam</td>
<td>29</td>
</tr>
<tr>
<td>1.5.3.1 Religion and Cultural Exchange</td>
<td>29</td>
</tr>
<tr>
<td>1.5.3.2 Religion and Architectural Transformation</td>
<td>30</td>
</tr>
<tr>
<td>1.5.4 The Chinese Prospects</td>
<td>31</td>
</tr>
<tr>
<td>1.5.4.1 Interaction with the Chinese</td>
<td>32</td>
</tr>
<tr>
<td>1.5.4.2 The Chinese in Colonial Period</td>
<td>33</td>
</tr>
<tr>
<td>1.5.4.3 The Chinese Architecture</td>
<td>34</td>
</tr>
<tr>
<td>1.5.5 The European Invasion</td>
<td>34</td>
</tr>
<tr>
<td>1.5.5.1 The Portuguese</td>
<td>34</td>
</tr>
<tr>
<td>1.5.5.2 The Spanish</td>
<td>35</td>
</tr>
<tr>
<td>1.5.5.3 The British</td>
<td>35</td>
</tr>
<tr>
<td>1.5.5.4 The Dutch</td>
<td>36</td>
</tr>
<tr>
<td>1.6 The Long History of Cultural Exchanges</td>
<td>37</td>
</tr>
<tr>
<td>1.7 Theses Framework</td>
<td>37</td>
</tr>
<tr>
<td>Summary</td>
<td>39</td>
</tr>
</tbody>
</table>
CHAPTER ONE

INTRODUCTION

Introduction

Recently, the architects and public alike became more conscious of their immediate surrounding especially the matter related to physical development. So much so, that the vagueness of such consciousness were not materialized in the statement of academician and without a concrete visualize images of the physical environment especially on the issue of housing which commonly terms as dwelling. Despite the concerned on shelter is beginning oblivious with the intrusion of various trendy alien architectural style the local architect and those in similar discipline wish to turn to their own “roots” and try to shift the attention to regionalism, vernacularism and spontaneous “everyday” architecture and get these intention cannot be forced or implemented unless culturally accepted by the population.

The fact clearly shows that spontaneous houses are still the most dominating producer of house building in the entire world particularly in developing world. However, the proper attention is hardly given towards the spontaneous architecture. Discussions on architecture and academic researches are very often concerned with monumental architecture and its master architects. Until quite recently, the history was about the kings and queens, emperors, the legendaries hero, and dynastic domination rather than that of society and common peoples who comprise the huge number of the population that without them the dynastic domination cannot be performs.

Eventually, the history has been largely liberated and is now much more concerned with the changing nature of society as an integrated whole (holistic approach). It is now giving attention to the life of the common people, who were engaged in as actors in those great battles and victimized by the overlords.

On the contrary, architectural histories are still largely concerned with the monumental buildings that housed the prime actors through formal history, which was designed by great architects in spite of the building built by architects that was often rejected by the society. In fact, spontaneous architecture (very often exchange with
vernacular architecture) that harmoniously matches with the people’s cultural needs is often neglected.

Spontaneous architecture or vernacular architecture as it is commonly known although not built by architects but the terminology is likely to remain throughout history (Oliver; 1969). A spontaneous architecture develops from an appropriate continuation of local traditions and proof its sensitivity toward local conditions, therefore, the result hardly denied by the society. Consequently, a large number of housing typologies are still produced in the form of spontaneous architecture. The tradition in this case is not necessarily a static condition but it has undergone a dynamic transformation throughout history.

In formal architecture, the study of buildings mainly has been concerned with the works of individual master architects. The architects have been spoken through the language of formal design, where the architect seen the building formation as a personal creativity rather than society. This approach has set apart the building formation from the society, which actually produce it. Therefore, the results are very often rejected by the society. Consequently, the formal architecture has neglected spontaneous architecture as was seen in monumental building throughout the world. Sadly, this formal architecture has been dispersed into developing countries by the powerful developed ones either directly through colonialism or indirectly through the current political, economic and cultural hegemony. Since the formal architecture is mainly transferred by force, power and hegemony, accordingly the result are most clearly seen in the colonial buildings or the current empower monumental buildings such as banks, shopping centers and airports. However, the fact has shown that the alien culture cannot dictate the recipient culture solely by force and power, unless the recipient deliberately took it up. Society will pick up either what its need the society decides to be picked or simply what can be picked by the society. More specifically, the people will pick up what they can afford from another culture, in term of investment, effort, skill, time, material, risk, money or culture.

In contrast, the spontaneous architecture developed and transformed in its own way that led to the formation of vernacular architecture. The pressure of formal architecture toward vernacular architecture only slightly released due to the failure of international style in the 1970s.

By recognizing the significance of spontaneous architecture and vernacular architecture, it is reasonable to conduct the researches on the subject. Accordingly, this
thesis emphasizes on the transformation of housing in spontaneous settlement in the process to form vernacular architecture. The transformation can be regarded as a means of adaptation of the previous vernacular architecture in facing the changing world.

Although much of this topic has been talked and discussed among the academics and publics but there is no specific study on such matters. Hence, with the effort made by author, this study helps to contribute to an architectural discipline in general and northern Sumatera in particular.

This chapter will mainly elaborate historical background, the identification of issues and problems of the region where the study will be carried out.

1.0 The Issues: Dialect Notion of Architectural Discipline

1.0.1 The Exotic Vernacular Architecture

In Latin, vernacular means native. In a broad definition vernacular is a language or dialect of a country or region. The notion of the vernacular architecture is an application these linguistic metaphor to the theory of architecture. This concept has gain momentum or popularity in the 18th century and has persisted to present time. Consequently, it has a metaphoric appropriateness when applied to the architecture idiom (Summerson: 1964, Collins: 1965, Oliver: 1969). Vernacular buildings as were identified as architecture and whose forms are based on local culture does not employ an academic trained architect. It has been variously referred to as traditional, indigenous, folk, primitive, anonymous, regional, rural and spontaneous architecture or as architecture without architect (Powel: 1994, Rudofsky: 1964, Oliver: 1964).

Therefore, a spontaneous architecture develops from the appropriate continuation of local tradition and sensitivity toward local condition (Heyer: 1967). It can be concluded that the spontaneous architecture is vernacular of local and regional building forms, especially of domestic buildings which altering with cultures and the physical environment of the area concerned. Hence, the spontaneous architecture used to identify the traditional and largely anonymous forms of domestic buildings.

Although, spontaneous architecture referred specifically to local architecture that are not designed by architects, but since those types of architecture is better than the common buildings, therefore fine, excellent example of anonymous architecture must be
also classified as architecture (Oliver: 1969). In spite of the disadvantages of those terms but in this writing, spontaneous architecture will be used throughout widely.

Although a largest number of spontaneous buildings have been communally constructed by unknown artisans (tukang), but the sufficient number of them were known by name, make the term anonymous unsuitable. Similarly, the term indigenous implying native intact by contact with outside culture is also inappropriate. Since, many architectural forms are determined through cultural exchanges with other culture. At this point, many of the architecture occurred in urban area (as in the case study area of this thesis) lead to the term rural architecture is also considered inappropriate. It would be misleading to assume a world without change, evolution, transformation, adaptation or decline to develop, so that its static state will make the society and their architecture later to be called as primitive which is also misleading.

Vernacular architecture is handed over from generation to generation spontaneously and it’s become a tradition after many future generations. Vernacular architecture and settlement patterns, which are based on traditional models, may be suitable for a wide range of income levels. As in the tropics, the traditional timber framed house that implies many modern features has offered a near perfect solution to climate, multi functional use of space, flexibility in design and sophisticated prefabricated system that can be extended with the growing needs of the family. (Lim: 1987)

Each society in the region of Asia has a rich and varied past, which produced magnificent structure such as vernacular architecture of Batak, Mandailing, Nias, Minangkabau, Malay, Toraja or monumental building such as Borobudur in central Java. The influence of distance past forms the heritage and legacy of these societies, which directly connected into its present architectural form.

The typical of traditional cultures provides a good example of one-to-one relation between cultural structure and spontaneous built-form. The house is well adapted to the larger social and economic unit of the village (Kampung in Malay, Huta in Batak or Desa in Javanese) or spontaneous settlements, to the lifestyle, to the single-family unit, and to the local climate, affordability and ecology.

Furthermore, The traditional architecture also have the physical advantages such as the Malay house that stand in small cluster which dispersed among tall coconut palm trees, vegetable bushes and fruit trees seems like a random informal arrangement. The houses, which are framed and clad with local timber, are raised up off the ground
on the stilts that refers as legs for symbolic purpose that also that also function as its mainframe supports. Since the house are mainly located in the hot seashore, so that the random spatial distribution serve to encourage cooling breezes to flow without interruption between the fenceless dwellings. The lack of surrounding barriers and raised form of the dwelling further maximize the effect of the slightest breeze. The breeze is carried into and through the interior via the opening and shading on the floor to roof, window openings, vents underneath, roof overhangs and gaps on internal partition (Lim; 1981, Wan; 1984). Likewise, the coconut palm trees that have no lower foliation provide shade from above but present no obstacle to the movement of the air at the ground level. In addition, their foliage provides the traditional thatch roofing material for Malay house and the other trees provides the domestic consumption.

While the traditional Toba house that is located in the colder climate is arranged more closely and the raised up off the ground in order to prevent the house from the damp ground.

All of the above features might be regarded as a response to the tropical climate and ecology of the region. Furthermore, a single or extended family use of detached houses that lack of strict barriers and the external and internal openness or space arrangement are all closely related to the specific cultural and social stratum involved. (Osborne; 1979. Kuhiba et.al; 1979, Winsted; 1947, and Abel; 1997).

It can be sum up that all of traditional architecture forms are based on the user need and its transformation mainly a means of adaptation to the changing environment in order to form an alternative vernacular forms.

1.0.2 Occidental Hegemony

Western cultural hegemony, which is widely believed as a main cause of the devastation of the vernacular architecture in non-western culture region such as Nusantara in general and northern Sumatera in particular has started since 17th century i.e. when the first European colonial landed in this region. By enforcement, the Colonial had brought along the system to penetrate the sensitive local institutions, lead to the confrontation between the existing local and the colonial culture.

In line with imperial motivation, historically, colonial culture isn't functioned as an alternative to the local culture, which, it needed to dominate up to a point for the purpose of economic exploitation. Although the colonialist taught local people that the
colonial's culture is superior to local culture, but they let for the most part, the local cultural relatively intact for probably two main reasons, firstly, it is too costly to educate the local people, secondly, the educated natives will turn to be the potential enemy. The Dutch colonial administration's strategy in Indonesia was to disturb local tradition as little as possible and to maintain local autonomy through working with the Sultans (see chapter 5). The British also applied the similar strategy in Straits settlement (Geertz; 1963 and Tan; 1975).

On the contrary, the Christian missionaries who are part of colonial institution insist to change the local culture in their attempt to eliminate the local religion. According to the missionaries, the paganism among the local people can only be eliminated by change their culture. Despite this, the acquisition of Western value and lifestyle by the Western educated local elite eventually served to push the post independence leadership inexorably in direction of their former colonial masters that effect to the continuation of the importation of alien culture and architecture.

Accordingly, the architecture of Nusan Tara had long been neglected and was regarded primitive and unhealthy place to live in. The Colonial for instance were astounded by the absence of physical internal partition and furniture which demarcated the households territory in the communal house and claimed the house have no privacy, dark, smoky, overcrowded, dirty, damp and unhygienic (Waterson; 1990). In fact, there is a very strong cultural partition that only knowledgeable by its occupant. The missionaries have prevented the Batak Toba to build vernacular house for hygienic reason, while the truest reason is the effort to destroy the house which also the place of their gods. The missionaries done a similar thing to the Bororo, who were encourage to transform the lay out of their vernacular round village into a rectilinear plan, in attempt to convert them to Christianity (Choay: 1997).

The devastating of local architecture had give way to development of the alien Western or at least the hybrid architecture, which fills in the former space left by vernacular architecture.

Because of western cultural hegemony, for a long time, developing countries have misinterpreted their own progress for measures it according to the western standard, hence, they have been misleadingly trying to close the gap between themselves and the western and lessening the distance equates with success.

However, due to various reasons, in case of architecture, the colonial has to
build in local style in the beginning only gradually started to blend and compromised their architecture with local style in the early days of colonial.

Only after formally took over Indonesia from its trading company (VOC) in 1799, the Netherlands had began to adapt local architecture by emulated an image of its homeland. Those adaptation has lead to the formation of hybrid style called Neoclassical-Indigenous that widely used as a model for domestic architecture, however that model began to abandon in the beginning of 20th century into a more progressive style.

Alongside the development of International style in Europe, the situation in the colony drastically changed in the beginning of 20th century. Embedded by the modern spirit, the Dutch has formulated the style so called Dutch colonial architecture. The Colonial houses in the colony that applied the local styles in 18th Century started to desert. Although The Colonial built in places that remote from those of their own tradition but there is a clear connection between their ideas for the colony and the modern movement in Nethelands.

The Independence of Indonesia brought a need to express a cultural freedom from the Colonial domination by proclaiming the new-cultural identity. The desire to express a cultural identity has lead to the founding of a monumental and national architecture. However, this national architecture still cannot be properly defined until now. The influence of modern movement and international style brought by western trained architects had a strong impact on domestic architecture. This situation also imply another format of the Western cultural hegemony on the newly independence countries. This hegemony imply in the tendency to bring the Western architecture, its method and all its consequences into this country, more closely related to opinion about this matter held by Cross (1983; 179) which stated that’

... the tendency to import Western forms of architecture brought with it the worst aspect of Bauhaus educational ideology and method. According to this legacy, the ideal state of mental preparedness for the beginning studenis of architecture is assumed, in line with the clean sheet theory of creativity. That early state of childhood has to be innocence yet uncorrupted by historical awareness or any other cultural or educational persuasion. So it is not a coincidence that Joannes Iten's Basic Course at the Bauhaus owe much to kindergaten theory’ (Cross: 1983).

Consequently, this method has separated the architecture from its user and the total ignorance on local traditional architecture. Its influence is still strong among the teachers of school of architecture in Nusantara who picked up this method during their
education either in western Universities or in the local Universities of western syllabi, with strong impediment of any sensitivity toward local culture. The fall of colonialism along with the homogenous modern industrial culture that it supported has replaced by modern neo-colonials that commonly called developed countries has lead to the emerge of a quite different global culture. This postwar neo-colonial system of economic exploitation not only requires that developing countries of the former colonies continue to export their natural resources to the same centers of empires as it used to be but also necessitates being the product consumers as well. In this case, the former colonial system, which let the local culture relatively intact, no longer suffices for the purpose of total exploitation. Consequently, according to Whilstone (1982), the neo-colonialist attempted to eliminate the local culture entirely and to replace it with a consumer culture and western lifestyle that aimed at creating the social and psychological attitude required for mass consumption not only of western’s goods and products but even their dumps.

Therefore, the greater difficulties still lie ahead in identity formulation of architecture in developing countries. The new imperialism disguise form of domination and exploitation present a far greater danger to the culture of weaker developing countries than the outmoded and inefficient overt forms of historical colonialism. The Neo-colonial architecture of the global consumer society therefore underlying by modern unified culture of the value of commerce to which all other values are made subordinate. This is partly the spirit that underlying the International style.

The power are retains in the hands of the industrialized developed nation, whose notorious popular culture have exert throughout the developing countries, this implied the western cultural domination in politic, economic as well as architecture is persist. This domination can be clearly seen in monumental architecture designed by westernized educated elite in any developing countries. As a result of this domination, The architects in developing countries who were most productive from the 1950s through the 1970s were generally influences by the then declining international style (Khan; 1997). The later generations of post-modernism, who have attempted to return to the traditional architecture, were often embedded by realization that they were ill equipped to understand their own culture. Therefore, they don’t know how to respond to it, hence have to take a time consuming and difficult process of reeducation with blurred
defined goals but have a realization that they must somehow attempt to be both local and global architectural cultures at the same time.

The approaches to these matters are many and varied but apparently lead to a conflicting demand and commonly have a profound effect on architecture and adoption of required technology, especially in design spaces if they are to be function effectively and accepted culturally. The contemporary technology such as glass very often confronts the lifestyle dictated by the tropical climate and local cultures. The key questions is whether non-western countries should resist this global zing culture or to find alternatives to compromise with it. One among the alternatives put forward by Kurokawa (1999) is a compromise between these oppositions, contradiction, competition and tension in order to form a new creative relationship of form called symbiosis. He added that:

*Symbiosis maintains the positive relationship in which the participants necessarily understand each other despite mutual opposition. Therefore, refer to a relationship and that level of creativity, which is impossible for one party to achieve alone... All the sciences, technology, philosophy, art and architecture are based on European dualism. Of course, dualism is closely related to Christianity and the ideas of Kant and Descartes (Kurokawa 1999: 21).*

Furthermore, Hall (1991) put forward another possibilities by argues that globalization has its own unanticipated imperatives and that the very process which typify global economic and cultural activity carry within themselves their own tension and contradiction. In fact, in order to extend their market into new independence developing countries Multinational Corporation is increasingly finding it necessary to adapt to the particular cultural demand of local consumer rather than eliminate its culture. Therefore, they have to bend their activities and production lines to suit local cultures as well as other regional factors. The adaptation can be clearly be seen in car design to carry the family of ten person of three generation in order to accommodate the close family relationship among the consumer in Indonesia (Figure 1.1). The adaptation can also be seen in Mac Donald franchise that produces burger with local recipe (Rendang) for the local taste (Figure 1.2). Therefore, it is still arguable whether the dominant culture of the powerful countries can entirely dictate the changes of local culture in developing world, unless they readily accepted, as will be proposed in this thesis. It is a lot easier for global culture to adapt to local culture rather than change it to suit to their imperialistic needs.
1.0.3 The Failure of Modernism

The modern architecture has widely penetrated into the entire parts of the world unexceptionally to the developing countries. As was discussed in section 1.1.2, modern architecture had introduced either by the colonial or neo-colonial in order to dominate and to impress the local people of western cultural superiority that lead to devastating of the local culture and architecture to be replaced it with secular building in attempt to convert the native to Christian.

The western-educated local elite and architects exacerbated this condition; they have consciously adopted the modern architecture for a symbol of progress and for a new national identity according to their westernized mind and modern formal standard. As indicated by Khan (1997: 46) by stated’ The great number of architect in ex-colonial countries who were most productive from the 1950s through the 1970s was generally influences by the then declining modern movement’. The spirit of anti-historicism that underlying the modern movement provide a justification for them to live out their traditional root, which is regarded primitive and substandard by the western viewer.

Unfortunately, the drawbacks of the modern architecture is came to fore only after enthusiastically adopted and implemented in the entire parts of the world in 1970s. Since then, it is incessantly criticized for its incompatibility with the character of cultures that each have its own uniqueness as further stated by Khan (1997: 46) that’... the credo of modern movement toward universally applicable solution broke down in the face of great cultural and economic differences’. Furthermore, the attempt to disconnect the past and the modern era or in other word to bring to a halt the continuation of history was regarded as amnesia and unnatural. While, the ubiquitous buildings of modern architecture in the entire parts of the world had created the monotonous similar environment cause the natural uniqueness of places has disappeared, hence, the dwellers are easily confused and disoriented.

Therefore, the critics of modern movement warn against the habit to impose modern architectural models and standard onto buildings of developing countries. Although some of them may look superficially and physically similar to the modern cities, but in fact, they have culturally functioned very differently, as stated by Fraser (1969: 16) that, ... even among the traditional communities, the morphologically similar plan could have an entirely different function. The economic characters of modern cities, for example, are underlying by the impersonal nature the capitalistic
firm, which treats its employees simply as tools in the economic process (Marx; 1867 as quoted by Ritzer; 1996), where the work and family life are entirely separated. By contrast, the cities in developing countries are not based on dualism of modern and traditional as once believed, but on a hybrid economics systems; a modern cooperation system whose operation are based on tradition that consist of a complicated kinship relationship, where, the family life and work are all intimately interconnected (McGee; 1967, McGee; 1971 and O’Connor; 1983). Hence, imposing the former system to the latter will create the disadvantageous conflict.

Another example is the detached house and its space division that superficially indicated the importance of individual privacy and individual house ownership in traditional Malay society, as if in contrast to the open pattern of the settlement of amorphous boundaries that reflect the past tradition of shared land use between the dwellers. Hence, to the westerners, the traditional Malay house seems places upon individual privacy in favor of intimacy at least refer to the modern architectural standard. However, the similar arrangement of the ambiguous private territory would cause serious problems for western family who accustomed to maximum privacy even among members of the same household.

It can be summarized that to discuss the traditional architecture merely in terms of modernism formal arrangement is virtually meaningless and mislead to make the deduction from physical similarities. Since, The settlement is not solely based on utility function but the symbolic function that attribute to the concept of cosmos. Therefore, the symbolic natures of vernacular forms are likely to be deceptive when observed by the outsider unless by the society that created them. These conditions are entirely overlooked by modernism.

Similarly, the modern architectural standard, technologies and the notion of progress that have been broadly applied to vernacular forms very often have created undesirable tension between realities and ideals or the user and the architect (Khan; 1997, Kurosawa; 1999). The death of modern architecture were finally pronounced in 1970s as put forward by Trachtenberg and Hyman (1994: 553) who stated that,

"Modernism was pronounced death, the obituaries was read over its unburied corpse by proponent of a new architectural wave that embraced overt historicism, garish symbolism, vivid ornamentation and humble vernacular models".

However, was it really death? If we agree to that false opinion, we would repeat the modernism mistake for refusing the continuation of history.
Above all, after the modern architecture has been regarded incapable to develop any further in mid of 1970s, the traditionalism has become the main topic of discussion in many parts of the world that given way to the issues of local cultural identity that is later known as regionalism. In spite of the absence of knowledge required to creatively reinterpreting the local architecture (Khan: 1997) that previously regarded as primitive and worthless. Hence, the idea that architecture is a material culture drastically increases and some of the local architects have attempted to return regional architecture in various idiosyncratic and contradictory ways.

To concluded, in spite of the indiscriminately critics on modern architecture, these tradition were continued to certain extent. The obvious mistake of modern architecture and modernist in the most part, lay on the expectation toward modernism as an applicable universal solution to any problems. In fact, it has an obvious advantage as a universal lingua franca in architecture; where every socio-cultural group can communicate in the similar language without losing their identity and still conform to their own culture in an attempt to achieve the universal mutual understanding.

1.1 The Emergence of Change

1.1.1 Transformation: An Overview

Transformation is a term that is closely related with measurable change of either character of objects or the concept of idea, perception and culture. The rapid change over a short period with an extensive effect is called revolution while the steady, slower process over a longer period called evolution. The mechanism of idea and cultural transformation can be diffusion, evolution or both.

Ashby defined the transformation in a more physical sense in 1956 (Broadbent: 1973; 375-376) as follows’

Transformation is a term that is closely related with change. Change is measurable whether it is change in position of earth as it moves through space, or change in the color of sunbather’s skin as it darkens after exposure. The original pale skin that it is going to be acted upon is called the operand. While, The agent or factor of change which in this case the sunlight, is called the operator. The change itself from pale skin to dark skin is called the transition and the final state of the skin that which it is transform to is called transform. In practice, A particular operator will induce a number set of transition i.e. cold water change into warm, colored curtain into faded and pale and sickly plant into healthy plant. Such sets of transition are called a transformation.
In semiotic, the transformation is a change of basic pattern of words in sentences, which takes one string of symbols and converts it into another by process of addition, deletion, elimination, subtraction and permutation. (Chomsky; 1965, Levy-Strauss; 1967. Propp; 1968 and Montgomery; 1994).

According to Childe, the transformation is a change of relatively rapid far-reaching result, where the food producing, the formation of urban and the industry are the greater among the others forms of transformation. The word revolution has substituted into transformation since changes in the latter isn’t only exclusively involving the technological order but also the moral order (Childe 1941, 1946 in Redfield: 1971). Furthermore, Redfield (1971; 21) put forward that,

The technological is defined as the order that result from mutual usefulness, deliberate coercion, or mere utilization of the same means. In this sense, men are bound by things, or are themselves things that organized by a particular necessity and expediency (Redfield: 1971).

While moral order refers to the organization of human sentiments and value judgment (Cooley and Park in Redfield: 1971). Hence, the moral order in the first place, always arises within the groups where people are intimately associated with one another in particular cultural context. Therefore, the notion of transformation need not be restricted to syntactic rules of sentences or to the physical changes of objects. It can be specifically applied to folk tales, myths, dwelling and architecture or culture in general, and propose that their diverse heterogeneity is really the result of transformation that being worked upon a previously simpler underlying structures or formulae.

In this case, the architectural transformation that resulted from cultural contact is produced the hybrid architectural forms. Hybrid as a genetic concept can be traced back to Aristotle on his perception to the origin of certain species as the result of spontaneous cross breeding. Related to this concept Kaplan (1985; 4) put forward that,

Building, in a sense, have also been “crossed” like plants and animals, to produce hybrid architecture. The permutations of strain are infinite, as reflected in the diverse and eccentric examples...

It is the nature of dweller to change their dwelling in keeping with the changing lifestyle and lifecycle (Moore et al: 1985, Tipple: 1991 in Wahid; 1996). The family cycle changes, the children grow toward maturity, marriage and child rearing, thus the small dwelling is subject to alteration and addition in order to support the growing number of
the occupants (Tipple; 1991 in Wahid: 1996). Consequently, the structure will be changed as the economic situation of the households improves. The improvement of socio-economic condition lead to a rise in living expectations and the existing living environment that is considered inappropriate to the changing life style, later lead the user to do the dwelling transformation. Furthermore, Wahid (1966; 43) put forward that transformation is a form of change that is commonly term as incremental development, subtraction or attrition and total alteration or rebuilding.

These descriptions do not explicitly mention the underlying cultural motivation of the transformation; cover a brief period and related to individual user rather than society. Therefore, here, the terminology is applied to the culture of the society, it should be emphasized that transformation is motivated by a set of deliberately cultural aim or mission and not solely determined by the economic situation of the population. In other word, the transformation is one of human basic instinct that can be defined as a set of transition of society in its effort to conduct adaptation in the changing world according to a certain cultural aims or mission that obviously reflected in the architectural style and dwelling form. In accordance, architectural transformation is evolution of the architectural styles over a relatively longer period in relation to the physical and symbolical changes that arise within the groups where people are intimately associated with one another in particular context.

1.1.2 In search of Architectural Transformation

As already discussed in section 1.1.2, there is a growing overwhelming interest among the local academic in searching alternatives for western dominated architecture, in spite of prolonged brainwashed into thinking that occidental is the best and superior. Among the widely known alternative is revitalization of vernacular in the context of regional architecture, which focused on the formation of cultural based architectural identity.

However, until now, the disguised form of domination of the developed countries in their attempt to extend market for their product has been continued and ambiguously accepted by developing countries. On the one hand, they welcome the benefit of modern technology, foreign investment and international trade. On the other hand, many of the local elite has insisted to return totally to their local roots and hopelessly resist the entire aspect of Western culture. This ambivalence attitude has lead
into the typical consensus that clearly reflected in their hybrid cultural concept (Powel; 1993, Abel; 1995, Kahn; 1997). Accordingly, it is hoped that cultural based architecture may able to counteract the excessive domination of western architecture, although, as was frequently mentioned that they were ill equipped to creatively interpret their own tradition and incapable to propose the positive respond.

Return to local culture in seeking the regional architecture is not simply referred to the nostalgic emotional sentiment to the archaic vernacular forms or arbitrary selected the supposedly the purest elements of vernacular culture. The proper definition of local cultural identity is arising out of understanding and appreciation of the creative process of cultural exchange in accord with creative interpretation of local tradition.

The exchange with outside culture that leads to transformation is not mere substitution of local culture forms for imported cultural traits, but arising of a new and original product that commonly called the hybrid form. This new product is not exactly like any of the previous existing elements neither the local forms nor the imported forms but an entirely new form, which may be called an architecture innovation. This transformation very much based on the cultural aims and mission of the recipient. In other word, the transformation seems the unavoidable cultural process, which cannot resist. Its scale either depend the intensity of contact with other culture through highly organized contact or just through eventual contact as reflected on both end of the scale of intensity.

It is used to believe that western architecture and urban histories are incompatible with local architecture, since the former very often neglected the relationship between space and local culture, but to some of the proponents of cultural based architecture the dichotomies of local vernacular and western or global culture either in the past or in the future are false. The future age of simultaneous realities is unavoidable and the spirit to co-exist in an eclectic and sincerity manner is steadily growing, as reflected in the varying degrees of successful attempt of many architects to synthesize these multiple cultural strands.

The early endeavor to be indiscriminately modern, as a thesis, has given way to attempt to be local as antitheses. This condition encompassing many different levels of cultural exchange and transformation, which has lead to a wide degree of consensus that produce the eclectic expression as a syntheses in the form of hybrid architecture.

The transform architecture, which is underlay by the concept of transition in the context of adaptation, is a natural phenomenon that has taken place in many parts of
the world. The transformation had experienced by the elements of classical architecture, which evolved since its origin in Greece to the unanticipated way as using for multi story Coliseum in Rome. The classic language also being used in shop-houses, which accommodate the entirely different social activities as appear in the street architecture (see chapter 5). The similar transition also appear in traditional architecture of Batak Toba which frequently undergo transformation, from the earlier culture into the subsequent hybrid forms as a result of cultural exchange with Hindu, Islam and Christian. Presumably, before the contact with Hindu, a Toba house depicted as sailing ship that symbolized the travel to eternity according to the local believes. After that cultural contact, the houses had transformed into the symbol of sacrifice or offering to the syncretic gods while the previous element of the house that depicted the sailing ship is retained.

The contact with the Christian colonial has eliminated the house on stilts to be replaced with the house that directly built on the ground.

The result of such transformation is an authentic series of hybrid architecture that can be viewed as a happy marriage between oriental and occidental as clearly reflected in the spontaneous architecture (see chapter 6). By then, those transformation has brokered by practical craft (Recycling), who learn the formal western arrangement through practice and local tradition by hereditary.

The above statement implied the believing that cultural exchange with outside heterogeneous culture can thus be regarded as inevitable, so not necessarily need to be put into dualism, dichotomy or even conflict. Therefore, The cultural based architecture that has many other synonyms names can be defined as a synthesis of local vernacular with western. It implies the utilization of sophisticated western technology whilst simultaneously maintaining link with traditional forms and practices in attempt to develop the latter. Here, the unavoidable synthesis that appear under the name of the transformed architecture has generated the present architectural forms and imply what have achieved in the past and forecast the possible future hybrid architectural forms. It is possible; therefore, to look upon such architecture resulted from of a process of cultural exchange wherever two or more potential cultures meet in the context of creative interpretation of local tradition, which produce the culturally accepted hybrid architecture.
1.2 The Objectives of Study

The main objectives of the study are focused on the transformation of spontaneous architecture within a certain relatively long period, in order to research why it has evolved from a typical form to another. The holistic approach is applied to highlight the subject lead to the prepositions that architecture is a cultural material that should be analyzed in the context of culture and its changes is conformed to the user’s cultural needs. For that purpose, the transition of the past vernacular architecture into the present contemporary architecture of the Toba house in Northern Sumatera is comprehensively studied. As a consequence of this objectives, the study propose:

1. To examine the culture of traditional society i.e. the worldview, cultural perception, cultural mission, social organization, kinship relationship, believes, and cosmology, in order to see how the vernacular architecture was affected and interrelated to the broader context of native culture. Thus, the principles and concepts of traditional architecture are clearly described. The past vernacular architecture will be used as a point of departure in elaboration of the process of transition of architecture that has transformed from rural vernacular into urban spontaneous architecture.

2. To examine the culture of urban contemporary society i.e. the worldview, cultural perception, cultural mission, social organization, kinship relationship, believes, and cosmology, in order to see how the urban spontaneous architecture was affected and interrelated to urban contemporary culture and to the broader context of global culture. Thus, the principles and concepts of urban spontaneous architecture are defined. The contemporary urban spontaneous architecture will be used as end point of elaboration of the transitional process of architecture, that has transformed from past rural vernacular into to the present form of urban spontaneous architecture that in time are going to appear as urban vernacular.

3. To review the function of ideology and culture, orientation of the cultural theory, the process of cultural change and continuity or stability, the causes of change. Furthermore, appraise the mechanism of change with special reference to the evolution and diffusion emphasizing the intrusion of outside cultural trait and its selection process, and finally, to explore the effect of cultural change on
the transformation of architecture by comparing the rural vernacular architecture with urban spontaneous architecture.

4. To analyze the architectural transformation and its adaptation to the cultural needs of the user because of the cultural change. Hence, the understanding of architecture that based on local cultural and user cultural needs can be established, in accord with the unavoidable cultural contacts at the global level. Consequently, unnecessary conflict, tension, cultural hegemony and dualism in the development of local architecture can be avoided.

1.3 Why The Batak Toba

The Batak Toba is one among the dominant ethnic group in study location beside Minangkabau, Malay Deli, Mandailing, Karonese, Chinese and Javanese. The Toba has been selected for the following reasons. Firstly, they have experienced drastic changes and successseed to acquire the prominent position among the urban population less than forty years, precisely after the Dutch Colonial allowed them to move into urban fringe such Medan in 1920s, although the Sultan strictly outlawed them to stay in Malay sultanate area until the collapse of the Sultanate in 1940s. Secondly, there is an abundant literature about the traditional of Batak Toba written by the European missionaries in an attempt to convert the Toba to Christian, in contrast to the other ethnic group who have been Muslim already. Thirdly, The author used to live among the Toba since the childhood until eighteen years old in one of the urban area in the Southern region.

1.4 The Scope and Justification of the Study

The study is taken place on two different settlements in Northern Sumatera, and focused on architecture of Batak Toba, these two places represents the transformation of two Batak Toba houses. The first location situated on the district of Jangga Dolok in the Toba land, which represent a traditional settlement of important historical values, for although the settlement had underwent the changes but still retain the significant number of the high quality traditional buildings. All the information collected from the remnant of the physical traditional architecture together with
availability of an excessive literature that supported by the interview with local people are used to reconstruct traditional culture and architecture of Batak Toba. The large literature the early culture and society of Batak Toba has been written by the missionaries in their effort to eliminate paganism among the Toba. Jangga Dolok and its surrounding are situated alongside the through access which connected two main seaport in northern Sumatera and the whole part of Sumatera. Therefore, These settlement have the intense cultural contact with outside world. However the vernacular building in those area are still kept in relatively good condition reflect the strong resist against the changes. This phenomena required further research.

The reconstructed the early vernacular culture will be used as the early state of Batak Toba that will compare to the further development of settlement in spontaneous area of Tegal Sari as the second location.

The second location to be found in the core of Medan urban area. The transition from early state (traditional) into the further development state (spontaneous) will describe the process of cultural and architectural transformation.

Spontaneous settlement of Tegal Sari are relatively free from architects intervention as was traditional settlement. Nearly all of ethnic group in Northern Sumatera can be found in this location reflected the very typical of urbanized society of developing world. Each ethnic group to a certain degree develop their own cultural identity. The Batak Toba is one among the ethnic group who intent to settle permanently on this location as was reflected in type of property ownership that mainly freehold. In contrast with Minangkabau ethnic group that mainly rent the property and have a higher mobility.

In spite of the adaptability of the population to the settlement, the local government regard Tegal Sari as slum area that should be eliminated. The government attempt to carry out urban renewal and build the low cost multi level apartment in order to pack the population in a number of building blocks of small area. So more than half of the previous location will be left vacant to be sold to the private developer as a compensation to build the low cost apartment. This project is viable from the economic point of view, in spite of the failure of such building that notoriously mismatch with the cultural need of its user. The local government launch the proposal in 1991 which strongly rejected by the population, however the authority are insist to implement the project through enforcement. The political situation after the falls of Suharto seem not appropriate for enforcement at least temporarily.
This study is expected to contribute in searching the solution for afore mentioned problems, in seeking the compromise between global and local issues, particularly adaptation of the available architectural styles to the cultural needs of the user due to the unavoidable cultural exchanges. Furthermore, related the result to the general theory of architecture transformation in the context of the cultural change.

1.5 The Historical Background of the Region

1.5.1 Prehistory: The Origin of Race and Culture.

Archeological founding have shown that the region of Medan have been occupied in prehistoric period. This was conformed by the founding of Sumatera-lith or stone axed (Callenfels; 1920) in Saentis and the heap of seashell in the seashore of Medan. It is believed that the artifact originated from Mesolithicum era (9000-2500 BC). Their culture called Bacson Hoa Binh as proposed by Colani in 1931 (Kuntjaraningrat; 1970), who found the similar artifact in the province of Hoa Binh in Vietnam. In analog, the population of Medan at that time should have been living by fishing, hunting and to a lesser degree grown tube roots (Diascorea esculanta and Colocasia antiquorum) in a very rudimentary technique. They settled slightly longer in a particular area than the hunting culture, before moved to the next place, and very often occupied the caves around estuary of the river, which is called ‘cave dweller.’ This race belongs to the Austro-Melanesoid or Papua-Melanesoid that similar to the Australian aborigin (Australoid) that somehow, had mixed with the Mongoloid race. These are the ancestors of the present population that widely known as Malay, who occupied the Nusantara in general and Northern Sumatera in particular.

Although the oldest man has been found in Nusantara, but some scholars claimed that they are already extinct at the time another wave of racial migration, which consist of Paleo Melanesia, Negrito and Mongolia, arrived in Nusantara from the Asian continent during the very long period (Heerken; 1972). This hypothesis based on racial theory developed by Eickstedt in1934, who convinced that the middle Asia is the only center of evolution of Homo sapiens, who dispersed from that center to the other places in a numbers of movements of different routes and different periods. Each new
evolution will pushed the settlers of earlier race into the remoter area in the edge so the coming new race will occupy the center.

On the contrary, Coon (1965) put forward a more reasonable argument, according to him, there are a number of centers of evolution from where the population dispersed and various races diffused each other and produced a new type or races. Based on that, Kuntjaraningrat (1970) developed a theory of race and stated that the continuous evolution has taken place in Nusantara, where the first founding man called Meganthropus Paleo Javanicus along with their cultures have evolved into the present Austronesian race as shown in the following schematic table 1.1.

<table>
<thead>
<tr>
<th>Un-recorded Culture</th>
<th>Pre-historical Culture</th>
<th>Historical culture</th>
</tr>
</thead>
</table>

Table 1.1: Schematic of Race Evolution in Nusantara

These arguments conform to the theory of change as will elaborated in chapter 2, where both of the cultural mechanism and of process i.e. evolution and diffusion are experienced simultaneously in the cultural process.

Eastern Sumatera is the homeland of Neo-Malay race that simply called Malay who descends from Austronesia stock. They didn’t arrive in the island until the first second millennium B.C. following the previous settler Proto Malay such as Batak Toba.

The Malay occupy the entire coastal trip of sumatera extending to interior as far as thirty to fifty kilometers, bordered with the hilly and mountainous area occupied by the Batak Karo and Batak Simalungun in the South, Mandailing is farther to the South that more easily reach from Natal, Sibolga seaport or Barumun River. While, Batak Toba lived relatively in isolated area around lake Toba in the center of the island.
1.5.2 The Beginning of Historical Period

1.5.2.1 Hinduism

From about the beginning of Christian era to the year of 1500, nearly all the local culture in Nusantara has a contact with Indian notably Sumatera, consequently, was enriched rather than influenced or dictated by the Hinduism (Bosch; 1946).

The Hinduism at that time had encouraged the transformation of the local culture. The interaction of both cultures had produced a particular new hybrid cultural form as was reflected in the social system and consequently architecture as a material culture.

In fact, the local culture never had been fully taken up the Hindu culture such as caste system. Although the caste was recognized but there is no indication that the real social separation was ever performed in daily activities as was reflected in dining ritual, religion and architecture (Bosch; 1947, Soekmono; 1973). Another case, instead of a place for worship the Hindu’s gods, the Nusantara Hindu temple was built as a mausoleum, commemorate structure or monument for the deceased local kings. This is clearly a sort of continuation of the ancestor worship of the local believe. Hence, the Nusantara Hindu temples are mausoleums of kings while the similar temples in Indian continue to be used as worshiping place.

Since Nusantara was an important crossing point alongside the silk route between China and India and the rest of Asia continent and even Europe, it was attracted the interest of Indian, China, Arab and European seafarer. At that time the island of Sumatera is known in India as the fabulous island of gold (Suvarnadwipa), while the Chinese chronicle shown that the trade with Nusantara has exist before the sixth century.

Sriwijaya kingdom succeeded to rule almost the whole Nusantara and flourish in the 7th Century. It heartland located near the present town of Palembang in the South Sumatera. Sriwijaya were linked with the Straits Malacca by semi nomadic Malay seafarer and organized the trade and exported spices and forest product such as camphor, benzoic, resin, precious stone and presumably gold. Since the Eastern Sumatera was abundance with those products so unavoidable, it must be integrated into the world trade network (Sibet; 1991). Consequently, the seaports alongside the Malacca strait were also prospering. In the period of Sriwijaya, the Hindu culture were
spread into Malay kingdom in the Southern Sumatera, Minangkabau in the West Sumatera and Panai kingdom in Padanglawas where the Hindu temples complexes can be found.

Excavation carried out in Kota China in Medan covered the settlement dating from 12-14th Century AD, This settlement turned to be the Tamil trading station (Kinnon and Sinar: 1974). Foundations of three stone buildings with religious function also uncovered. Some of the inhabitants of Kota China were Hindu of Shivatic sects and another some are Buddhist.
1.5.2.2 Buddhism

Buddhism was appeared as early as 5th Century in Sriwijaya. The Sriwijaya were ruled by the Syailendra dynasty. The title used for the first time by the ruler of Java only later by those of Sriwijaya of Sumatera.

The attempt to patch together this insufficient and scattered information and to explore their later interrelation into meaningful sentences has produced different result.

The short brief rule of Syailendra in Java (760-820) coincided with the building of the greatest ancient monument Buddhist art of Borobudur (Vlekke: 1960). The Syailendra of Java must have been rich and powerful ruler that they could build monuments of the size and perfection of the Borobudur. This sudden flowering of culture and particularly of the arts suggests that they were not restricted to the resource of their kingdom in Java alone.

Having become the most powerful king in Nusantara, king Samaragravira or Samaratungga Mahayana Buddhism married the princess of heiress of Sriwijaya. The combined wealth of Java and Sumatera enabled him to erect magnificent shrines such as Borobudur, Pawon and Mendut. After the death of Samaragriva one of his descendant, Balaputra became a king of Sriwijaya of Syailendra and the other Pramodawardhani married with the king of Mataram Rakai Pikatan. With them the Buddhist period came to end and Shivaism regained the first place although in the syncretism form.

1.5.2.3 Hinduism Exchanges with Buddhism.

The Hindu gods living like human being, they have the family, married and quarreled each other only immortal. Since they immortal they couldn’t experience the mortal life themselves, it is the magic power called cakti, which experience the living like human. The Cakti indicated as the wifes of these gods who experience the real life in the human world as the representation of the Gods himself. Therefore, Durga has gradually worship as representation of Shiva among the Hindu cakta sect. The contact of Buddhism and Shivaism Cakta lead to the cultural exchange that resulted in the worship of Tara as the wife of Buddha (Soekmono: 1973). The interrelationship in the form of syncretism among the Hinduism, Buddhism and local believed is reflected in the ancient religious life that manifested in architectural monument such as Candi.
1.5.3 The Coming of Islam

The dawning of Islam indicated by the birth of Prophet Muhammad in 570 AD. The Caliphate lead the Muslim after the prophet died in 633 AD. Ummayyah formed the dynasty and ruled during 661-750, and then the power goes to Abbasiyah dynasty until destroyed by the Mongol in 1258.

1.5.3.1 Religion and Cultural Exchanges

The first Muslim king ever recorded in Nusantara is Malikussaleh the king of Islam kingdom of Samudera Pasai. King Pasai annals (after 1350), told, that Ismail, an Arab Muslim sheikh coming to Pasai through Malabar and converted the local ruler Merah Silau to Islam and changed his name to Malik al Shalih or Malik al Shalih. He died in 1297 and his grave stone is decorated with ornament that depicted of Hindu shrine, similar with the gravestone in Cambay, Gujarat, on the South India. Based on the similarity of those gravestones, it is assumed that these gravestones were imported from Cambay. Therefore, Historians postulated that Islam coming to Indonesia through India (Hugjirnye; 1924, Winsted; 1935, Bousquet; 1938, Vlekke; 1943, Kern; 1947, Gonda; 1952, Schrieke; 1955, Hall; 1964, Soekmono; 1973)

However, a number of researches has revealed that the connection between Middle East and Nusantara had begin since the ancient Phoenicia and Saba period, long before Islam (Bradle; 1857, Tibbets; 1956 and Hourani; 1963).

On the contrary, Arnold (1913) and Marrison (1951) revealed that Cambay in Gujarat was still a Shivaism kingdom on the death of Malik al Shalih in 1297, which converted to a Muslim kingdom on the same year. Arnold further stated that Islam could be coming from Coromandel in Malabar or even directly from Arab brought by the Arabian traders. He quoted the Chinese source, which mentioned that, the Arabs had intermarried with the local women to form the Muslim community that living on the coast of Sumatera in 7th Century. Quennel (1928) also supported the existence of Muslim community in Buddhists Srijaya kingdom. This Arab hypothesis also supported by Crawfurd (1812).

Therefore, It can be assumed that Islam coming to Nusantara directly from Arab brought by the professional preacher and Sufis in the beginning of 7th Century.
The intensity of their preach only reached its peak in 12th and 13th Century and success to convert the ruler and the king in Nusantara. Consequently, Samudra Pasai of Aceh, Majapahit and Malaka were the centers of Muslim in Nusantara during 13-14th Century. The other region such as Kampar, Indragiri and Riau has been converted to Islam by Malaka, while Minangkabau, Bengkulu and probably Deli by Aceh (Soekmono: 1973) but not a single literature mentioned of Batak Toba.

Ma Huan, a Chinese Muslim traveler recorded on 1413 that Muslim population has been accepted by the Hindu Majapahit kingdom in East Java.

Prameswara a Majapahit prince of Blambangan founded Malaka, but according to the sixteenth century Malay annals he was an Sriwijaya prince, so in fact, he could be a refugee from Malayu Java kingdom. He and probably the whole kingdom convert to Islam in 1414. According to Malay annals, he was converted by Al Aziz, an Arab from Jeddah and called Sultan Muhammad Syah. Malaka was an Islam kingdom when it visited by the Portuguese for the first time in 1509 prior to it conquest in 1511.

The Haru also was claimed as an Islam kingdom on 17th Century as recorded in Malay annals. However, Due to its location at the periphery of the Muslim main center of Mekkah, and high intensely level of adaptation of Islam to local tradition, so the Nusantara Islam is not regarded very often as the true Muslim. (Azra: 1994).

1.5.3.2 Religion and Architecture Transformation

The sufist and professional preacher have a great success in transforming the local religion into Islam after 12th Century. This is mainly because their capabilities to make the new religion look attractive and most of all to ensure that Islam is a mere continuation of the local believed rather than a radical change.

For that purpose, they teach the complex syncretism theosophy. A synthesis between the widely known local traditional religions that superficially fit into the Muslim believes. Consequently, magic, medical spell, pre-Islam terminology and traditional cultural aspects were regarded as continuity of the past in the context of Islam (John: 1961). This condition is clearly retain until now, where the Muslim religion and the local believe has exchanged and transformed into a hybrid forms that also reflected in the architectural forms of mosques, where the combination of dome and the local pitch roof has applied.
1.5.4 The Chinese Prospectors

During Shang period (1400-1027 BC), The Chinese worshipped many natural object and forces such as earth, rivers, winds and compass direction (East, West and South). To these Gods they performed sacrifices and offering burnt animal flesh, millet wine and beer in Temples. There is gruesome evidence that they also practiced human sacrifice of the captive enemy taken in battle. The principal deity is Shang Ti who concerned primarily with rainfall, the crops and war. The king was not a divinity but he became an object of worship and sacrifices performed to his departed spirit after death. Ancestor worship was already exist, since it is believed to posses the power of helping or hurting their descendants and yet they depended upon their living representatives for nourishment in the form of offerings.

In Chou period (1027-249 BC), religion was fundamentally the same as it had been in Shang times. Many deities were worshipped, ranging from local spirits and nature gods to majestic divinities as Earth and Heaven. Worship did not necessary include prayer which some time written out and burned with the sacrificial offering. A prominent deity from Chou times is T'ien translated as heaven. Although of separate origin, this divinity was similar to and became practically identical with the earlier Shang Tie and was thought of as representing the supreme spiritual powers collectively or even as an underlying impersonal cosmic force. In spite of the strong faith that the soul outlived the body (residing in heaven although capable of returning to earth), the notion of reward and punishment in an after live was almost entirely lacking. The worst fate is to be deprived of the nourishment supplied by sacrificial offering.

During the Tang dynasty (618-907 AD), China had practically became a Buddhist country by about 500 AD although the Buddhism was met with a mixed of enthusiastic interest and repugnance. Taoism that originated in Chou dynasty mainly proposed exalts nature sometimes in the sense of impersonal cosmic force the boundless or absolute, its spirit is romantic, mystical and anti-intellectual. The Taoism (6th Century BC) later greatly affected by Buddhism and incorporating with previous beliefs, expounded the Way (Tao), which was interpreted to mean the road to individual happiness defined usually in material terms. Confucianism (551-479 BC) emerged, as a main philosophical thought in Chou period believed that knowledge that knowledge was the key to happiness and successful conduct and more concerned with sincerity and intelligence than with appearance.
Confucianism never became a religion in the strict sense of the term. In fact, the typical Chinese would be a Confucianist as a matter of course, but might also be a Taoist, a Buddhist or a combination of both in the form of syncretism.

1.5.4.1 Interaction with the Chinese

The relationship between Nusantara and China had existed since the ancient period, since the trade between Middle East and Chinese had performed as far as the Phoenix era circa 2000 B.C. Since Nusantara located along the way connected both of end destinations, it was placed as a stop over trading ships. These trading ships very often carried the Chinese traveler who recorded the condition of Nusantara. It was mentioned that Tang dynasty of China received the Arab ambassador in 651, the second ambassador send by the Caliphate Usman in the year 656. The high intensity regular and sailing has been recorded not only by the Tang dynasty but also by Buddhist pilgrims who transit in Nusantara on their way to the Buddha religion center in India. I Tsing and Chou Ch’u Fei (Takakusu: 1896) visited Sriwijaya respectively in 671 and 1178 (Nakahara: 1984). While Fah Shien, a Chinese Buddhist theologian visited Java in 1414 and Ma Huan, a Muslim traveler visited Malaka in 1413 in one of the admiral Cheng Ho’s expedition. After the collapse of the Tang dynasty in the end of 9th century, the first Emperor of Sung dynasty (960-1279) restored order throughout the country and re-opened the port of Canton for foreign trade. Nine of Sriwijaya, one of Java and one of Bali embassies immediately sent to China. Sumatera envoys also paid regular visits to Canton, where they requested bells for their temples.

The Mongol far reaching conquest has changed the course of history in Europe and Asia at the end of 13th Century. In 1206, Temujin had been proclaimed as Chingiz Khan. Twenty-one years later, his empire extended from Russia to Chinese Sea. In 1258 penetrated Tonkin and pillaged Hanoi and 1279 the last Chinese forces were annihilated. The grandson, Kublai Khan, was proclaimed as supreme emperor in 1260, he transferred his residence to northern China and became the first Yuan Emperor who ruled until 1368. The pressure of the Mongol had quickened the pace of another invasion that upset the traditional political pattern of Nusantara. Islam had spread widely in China during the Mongol dynasty, which provided the trading privilege for Muslim denied to the other Chinese.
Many Chinese who came to the Nusantara were Muslims and enjoyed considerable prestige. In the 13th Century, the ancient Hindu kingdom of Burma and valley of Menam and Mekong River were overthrown. Kublai Khan undertook a series of attack on Japan and Southeast Asia countries with great success between 1280-1290 caused great alarm throughout the World. After a series of mission, Kublai Khan, the Emperor of China sent Meng Kie to Singosari in 1289 to ask the obedience, which rejected by Kertanegara and cutting the ear of the messenger and sent him home to China. Kublai Khan sent the army of 20,000 personal on 1000 ships to punish Singosari, which had been defeated by Kediri before the fleet arrived. Raden Wijaya, the first king of Majapahit defeated the whole Chinese Mongol army through a tricky strategy.

Instead of collecting tributaries, Chuti, the third Ming emperor decided to trade directly with Nusantara by sending out the first of a series of official trade mission in 1403. The Chinese admiral Muslim Cheng Ho had made seven voyages between 1405-1431; on the third voyage in 1413-1414, he visited Majapahit, Sriwijaya and Tuban. The expedition often comprised more than 50 ships carrying up to 37,000 men (Turnbull: 1981). On the other side, the Nusantara local kingships very often send their ambassadors to China, in order to obtain the legitimization of their status. Sriwijaya sent missions in 10-11th Century, Malaka in 1409 and 1481 in effort to gain confirmation of his title from the emperor and settle the diplomatic problems, which he inherited from his predecessor.

The cultural exchange between local and the China is less significant comparing the exchange with the Indian, although evidence of trade with China goes back to the beginning of Christian era or even further to the Phoenicia era.

1.5.4.2 The Chinese in Colonial Period

Plantation in Nusantara was drastically grown, particularly in the end of colonial era, lead to a very high requirement for workers. Eventually the plantation in Sumatera concentrated in northern region where the labor was insufficient.

At the outset, Chinese and Indian workers were imported from Straits Settlement until the British government forbade the exportation of workers in 1876. Consequently, the Deli’s planters had to imported workers directly from China and Java, since the local Malay not interested to work in Plantation. In contrast to Java, The local population of North Sumatera was not drawn for estate. Since they were having
enough land and freedom while their number quantitatively insufficient, so psychologically disobedient, instead the first Chinese and late Javanese workers were brought in as fully proletarized indentured labor force (Geertz: 1963).

Nearly all the Chinese immigrant came from Southeast China notably Kwangtung province, Teochow, Cantonese, Hakka. The numbers of imported Chinese were fluctuated from 4,476 workers in the year of 1874, 53,806 in 1890 and 58,616 in 1900.

The very bad condition in Plantation environment forced the great number of Chinese coolies fleet and terminated their contract with the Company. However rather than left the region, some of them preferred to stay and spread to the nearby new cities which came to being as a consequence of the plantation development notably Medan. It is important to mention, that the Colonial provide them a degree of privilege and their status was regarded higher than indigenous population. They rented the land from Malay, occupied the trading business such as shop keeping, money lending, wholesaling and contractor, retailer, supplier and distribution, and lately, succeed to monopolize any strategic economic position until present days.

1.5.4.3 The Chinese Architecture

The Chinese buildings are embedded by the symbolism of the cosmic pattern, the directions and orientation, the seasons, the winds and other constellation of nature that reflected in Feng Shui principles (Needham: 1971). However, these principles have taken different forms in various regions. The prolonged cultural contact between China and local people have created a specific cultural exchanged, as was reflected in architectural style in Nusantara, notably the shop houses and other architectural detailing of local houses.

1.5.5 The European Invasion

1.5.5.1 The Portuguese

The European's experience of the Crusade determined the attitude of Portuguese and Spain toward Muslim. Therefore, they had come at least with missions,
which are firstly. They strongly intent to push the Muslim as far as possible follow the fell of Granada in 1492. Secondly, spread the Catholic among the pagan as the holy missions and thirdly, to develop the trade by finding the origin of spices from the first hand farmer in order to cut the role of the middlemen Muslim trader.

The first Portuguese trading ship arrived at Malaka in 1509 and took it over in 1511, where they found a great fortress called a Fomosa on the site of the sultan palace on the hill above the river. They enclosed the town and built St Paul Church, government building and housing for the Portuguese community inside the fortress while the local people live outside the compound. They sailed further and found the base in Ternate in 1522.

1.5.5.2 The Spanish

The Spanish arrived at Tidore shortly after the Portuguese and had a conflict of interest with them. They settled the dispute in 1629 by giving the Philippines to Spanish while Portuguese retained in Moluccas. Consequently, the cultural contact between the local peoples and the Spaniard is insignificant to raise the potential cultural transformation through the cultural exchange.

1.5.5.3 The British

Long after the founding of the EEC in the year of 1600, The British sent an expedition in search of pepper to Nusantara particularly Aceh, Jambi and Bantam in 1647,. The major concern of the EEC was trade among Britain, India and China where its activities focused on building up its economic and political interest in India and hold monopoly trade over China, however, the EEC activities in Nusantara only started later in 18th Century.

In their search for eastern base, British avoid the clash with the Dutch, Spaniard and Portuguese, thus, attracted to northern Borneo, which fell outside the sphere of any other European, but also lay on a new route to China. The governor of Madras dispatched an official mission in 1759, to investigate the north coast of Borneo and made an agreement with sultanate Sulu to establish the trading post in 1761. The EEC couldn’t withstand the pressure of its counterpart; the Dutch trading association
that backed the government. As a result, the British withdrew from Ambon and Patani in 1623, but kept the tenuous hold in Banjarmasin until 1651, Makassar in 1667, Jambi in 1679 and Bantam in 1682. Finally, only able to keep a foothold at the remote Bengkulu and transferred its major attention from Southeast Asia to India.

The French overrun the Netherlands in 1795 and insist the right to use the Dutch port in the East. The British countered this intention by made an agreement with the Dutch government in exiled and temporarily take over control of strategic Dutch possession in Nusantara. Consequently, the EEC occupied Malaka in 1795, Maluku in 1796 and Java in 1811 the British control is ended. By an Anglo-Dutch convention in 1814, both agreed to restore of Dutch colonies in Nusantara in 1818.

Furthermore, the treaty of London in 1824 had consolidated the Anglo-Dutch friendship in Europe by settling all the points of dispute in the East. Netherlands surrendered Singapore, Malaka and Malay Peninsula to British; in return, the Dutch obtained Bengkelen and authority over Singapore Strait.

The British EEC united Penang, Malaka, and province Wellesly and Singapore under the strait settlement government with headquarter in Penang. Consequently, the treaty of London has fragmented Nusantara and steadily cut the Malay Peninsula off from Sumatera, where it had derived its culture and architecture.

1.5.5.4 The Dutch

The Dutch was colonialized by Spain during 1515-1558, until they proclaimed the holy war following by its independence. In 1580 the Portuguese fell under Spain sovereign, caused the Dutch no longer obtained the profitable Nusantara’s spices from Lisbon to be distributed to Northern Europe, forced them to obtain their requirement directly from its resources. The Dutch mission led by Cornelis de Houtman arrived in 1596 in Batavia, but failed to trade. In order to settle the dispute among the Dutch trader, The Dutch trading organization (VOC) was founded and appointed its first governor general in 1602 and built the base in Ambon, Banda and Batavia, and subsequently took over Malaka from Portuguese in 1641.

Since the 17th Century, The Dutch attempt to conquer Sumatera. In order to defeat the Aceh, it helps the Minangkabau to free from Aceh and found the base in Padang in 1665. Subsequently crusaded Riau in 1783 and defeated Kalimantan in
1786. The Minangkabau has been defeated after sixteen year of war (1821-1837), following the Achehnese after 21 years of war (1873-1904) and Batak Toba after sixteen years war (1878-1907).

The Dutch almost colonialized the whole country in the end of 18th Century until defeated by Japan in 1942. The Dutch tried to get its colony back after the Second World War in 1945. Unfortunately; the Indonesia fought to keep their Independence and pushed the Dutch out of the country in 1947. The extensive cultural exchanges that significantly affected the architectural style have taken over during the Dutch colonialization. These issues will be discussed in chapter 5.

1.6 The Long History of Cultural Exchanges

The long history of the region had indicated the dynamic process of cultural exchanges through the cultural contact with another culture. These change process does not necessarily progress in peaceful, but some time in is happened in turbulences and chaotic situation that created the great tension experienced by the population. The present cultural exchanges were more crucial than previous situations and will be increase in the future to be due to the sophisticated communication technology, but very often, also produce the greater tension and problems.

1.7 Thesis Framework

The thesis begins with a chapter about the central issue, which focus on cultural identity with special reference on transformation of vernacular into spontaneous architecture. This issue has been widely discussed at the last quarter of 20th century. This chapter also proposes on the hypothesis, which is expected to contribute to the central issue. It is widely believed that the western culture and global issue will affect the whole aspects of space forming in any place of the world, particularly in the weaker developing countries. The new imperialist countries will enforce further architectural transformation as the colonial violently did centuries ago. The proposed hypothesis argue these common believes, the domination of the global culture on the Developing world is not necessarily “a must” but ”probably” lead to the architecture transformation. The role of the worldview and cultural mission of the local society is more significant in
the process of cultural transformation. Furthermore, the methodology of research is described in the next chapter two. The description is starting with explanation of the involvement of anthropology on the research of architecture transformation. Next, the discuss is directed into the description about the research strategy, model of research design, the locus of research, mode of comparison, structure interview, sampling and the method of proposition verification and hypothesis testing.

Chapter three is referred to the theoretical perspective. The discussion began with the role of cultural mission and worldview on cultural changes, and fit in the architectural transformation to that context. In addition, one of the sections in this chapter elaborated the cultural need and preferences and cultural based architecture. In chapter the theory of adaptation and origin of change is discussed and its channel mechanism as well as the consequences. The endogenous and exogenous approach of change is elaborated in the end of this section.

Chapter four deals with the description of culture and architecture of Batak Toba in their traditional condition, apart from their worldview and cultural mission. The observation covered the whole aspects of culture refer to the classification of element of culture as put forward by Kluckhohn (1961), which are language, knowledge system, social organization, technology, tools an equipment, work for living, religion system and art. Traditional Architecture is described in the separate section. The primitive culture and architecture of Batak Toba is placed as the base line or point of departure for comparative purpose. In the last section, it will analyze the indication of cultural change and architecture transformation of the Batak Toba. The data in this chapter mainly based on interview, literature study and field survey.

Chapter five describe the establishment of Medan as the effect of cultural exchange that motivated its formation. The role of Medan is very significant as a model of reference that modified the transformation for its surrounding area including the study area. The history has recorded that various cultural contact has taken place in this region namely Hindu, Buddha, Islam, Chinese and European colonial together with Christian missionaries. This chapter emphasizes on the historical development of the city its planning and architectural style until the colonial period.

Chapter five will also elaborated the present condition of Medan city as the setting of Batak Toba spontaneous settlement. In one of the section will describe the historical transformation of architectural style in Medan urban area. This chapter will
elaborate the economic background of the city, population, urban housing characteristic and condition of spontaneous settlement.

The study area is discussed in chapter six referring to elaboration of physical, social and cultural characteristic of its population on the study area. This also emphasizes cultural preferences of the household and dwelling characteristic in the study area. This chapter also clarifies in depth investigation dealing with architecture trend that begin with cultural change and adaptation, architectural transformation of the Batak Toba in the study area, extracting the principle, ideas, norms, cultural trait, user need and aspiration. All discussion is focusing on hypothesis testing.

The content of chapter seven is the concluding remarks of the study and summary of the finding and hypothesis testing. The findings are used in making recommendations and suggestions as well as the related result to the general theory. Further research is also identified in this last chapter.

Summary

These changing process does not necessarily progress easily, but very often is happened in turbulences and chaotic situation that covered the entire aspects of life including architecture that created the great tension experienced by the population. The crucial present cultural exchanges cause by the sophisticated communication technology that very often caused these great tension and problems should be properly harness.

The history of the region had indicated the process of cultural exchange through the cultural contact with another culture as reflected in Architecture transformation. The transformation from house to house temple has signaled the arrival of major architectural language, which with appropriate invention and sensibility might be drawn upon for virtually any social function, this language can be observed in any local Nusantara architecture. The colonial villas and Chinese street architecture of Colonial town in developing world embody an original form of architecture, born out of the same fusion of interacting culture-form which demonstrate the result of a genuine creative act. Although superficially similar, the modern architecture in developing country are obviously not the modern style of anywhere in developed country, let alone the variation of the same theme.
These buildings are modern architecture which may be called indigenous local architecture, in spite of its hybrid forms but it cannot be found anywhere else.

But very often this synthesis is misunderstood by the pastiche in the shape of superficial vernacular element that placed atop of contemporary building that applied the formal standard of international style. This is very often regarded as the only answer that put forward by the educated architects to re-express the lost regional character and identity.

The degree of ambiguity increases when it comes to monumental recent urban building types, for which vernacular architecture does not offer such clear models. Most of the types that now characterize cities in the developing world were originally imported from elsewhere as either part of the colonial era, or of later modern development patterns. Essentially, modern monumental buildings types such as Universities, hospitals, government buildings, offices, hotels, and so forth are the outcome of growing complexity in the social order of an evolving society through the exchange with other culture.

To conclude, the synthesis between formal architecture of developed world and spontaneous architecture of vernacular form of developing world seems unavoidable. Although the debate around the need for authentic regional or national architecture eventually assumed an important place within the architectural discourse, it remains an issue to be resolved as underlying of the theses.
# CHAPTER TWO

METHODOLOGY

## Table of Content

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>42</td>
</tr>
<tr>
<td>2.0 The Nature of Architectural Discipline</td>
<td>42</td>
</tr>
<tr>
<td>2.1 Hypothesis</td>
<td>45</td>
</tr>
<tr>
<td>2.1.1 Culture and Architecture</td>
<td>45</td>
</tr>
<tr>
<td>2.1.2 The Basic Hypothesis</td>
<td>46</td>
</tr>
<tr>
<td>2.1.3 Hypothesis on Architecture</td>
<td>47</td>
</tr>
<tr>
<td>2.2 Anthropology as the Supporting Discipline</td>
<td>49</td>
</tr>
<tr>
<td>2.3 Research Approach</td>
<td>52</td>
</tr>
<tr>
<td>2.3.1 Research Team</td>
<td>53</td>
</tr>
<tr>
<td>2.3.2 Selection of the Study Areas</td>
<td>53</td>
</tr>
<tr>
<td>2.4 Methodology</td>
<td>55</td>
</tr>
<tr>
<td>2.4.1 Theoretical Frame of Reference</td>
<td>55</td>
</tr>
<tr>
<td>2.4.2 Research’s Strategy</td>
<td>55</td>
</tr>
<tr>
<td>2.4.3 Research Design</td>
<td>57</td>
</tr>
<tr>
<td>2.5 Data collection</td>
<td>57</td>
</tr>
<tr>
<td>2.5.1 Primary Data</td>
<td>57</td>
</tr>
<tr>
<td>2.5.1.1 Questionnaire</td>
<td>57</td>
</tr>
<tr>
<td>2.5.1.2 Structured Interview and Survey</td>
<td>59</td>
</tr>
<tr>
<td>2.5.1.3 Sampling</td>
<td>60</td>
</tr>
<tr>
<td>2.5.1.4 Mapping and Drawing</td>
<td>60</td>
</tr>
<tr>
<td>2.5.1.5 Photography Visual Survey</td>
<td>60</td>
</tr>
<tr>
<td>2.5.1.6 Participation and Observation</td>
<td>60</td>
</tr>
<tr>
<td>2.5.2 Secondary Data</td>
<td>61</td>
</tr>
<tr>
<td>2.6 The Analysis Techniques</td>
<td>61</td>
</tr>
<tr>
<td>2.6.1 Quantitative Method</td>
<td>61</td>
</tr>
<tr>
<td>2.6.2 Qualitative Method</td>
<td>62</td>
</tr>
<tr>
<td>2.7 Contingencies</td>
<td>63</td>
</tr>
<tr>
<td>Summary</td>
<td>64</td>
</tr>
</tbody>
</table>
CHAPTER TWO

METHODOLOGY

Introduction

This chapter is dealing with the elaboration of the methodology applied in the study in line with the aim and the issues about the subject of the thesis that have been discussed in previous chapter. The proper methodology is required for collecting, sorting out and building up the information, that also essential for analysis and hypothesis proofing in an attempt to clarify the cause and the process of architectural transformation in the broader context of cultural transformation. This could only be achieved through spotlighting on the cultural pattern of the target group that will provide information for understanding the shaping of the future architecture of the region. The research is directed towards investigation of spontaneous architectural transformation made by the society according to the understanding, needs, perception, and aspiration and above all the cultural preferences of the target group. In keeping with the objectives of the study and to reveal the phenomena of architectural transformation, a major technique of extracting primary and secondary information are employed in order to achieve a fruitful result.

Hence, the main objective of this chapter is to explain an application of different analysis tool used in collecting, compiling, analyzing and verifying the data as indicated in this study. The chapter is concluded with a discussion of the contingencies and resume of the research design.

2.0 The Nature of Architectural Discipline

The meaning of architecture has transformed and evolved through time. The term could be originated from the word arch meaning the ancient structural system of curve. But it is also said that the word architect derives from the Greek word architecton, which composed of the word archi and tekton, the first word means chief and the latter is builder. In that sense, architecture implied the building that is organized by the architect as chief builder. Hence, a definition of architect was
emphasized on the organizer of the erection of the structure; therefore, the architect may or may not be the designer. Vitruvius, a Roman architect in the first century B.C. and Palladio in 1570 had extended the term by included the whole range of example of civil engineering in their conception about architecture.

In the early modernism, the architect is ordinarily consider as an independent artist who design functional buildings and supervises the work involved, rather than one who is himself concerned directly with its erection as reflected in the following description. Le Corbusier (1927; 16), a proponent of modernism, stated that architecture is arrangement and order of forms, which is the pure creation of the architect that cause the viewer experience the sense of beauty. The nearly similar idea has put forward by Pevsner (1943), who define a barren bicycle shed as a building, while a fine ornamented cathedral is a piece of architecture. He stated that, nearly everything that encloses spaces on a scale sufficient for a human being to move in is a building. The term architecture only applies to building designed with a view to aesthetic appeal (Pevsner 1943; 15). Accordingly, architecture suggests the aesthetic sensations that produce by the treatment of surfaces, details and the totality and its relationship to the exterior masses and the organization of enclosed space. However, he added another characteristic by stated further that, this aesthetic superiority is, moreover, supplemented by a social superiority (Pevsner 1943; 16). At the modern time, nearly all agree that architecture is the combination of building engineering and art, in spite of the ambiguity of that description, due to unfilled gap of dichotomy between art and utility or function underlying the building engineering. Due to the ambiguity of the description, the relationship between art and utility is not clearly defined; nevertheless it had omitted the experience of the reality and the real meaning of architecture (Connay and Roenisch; 1994).

Those common description caused the architecture property have to be interacted with other disciplines and had put it in the sort of limbo. In order to redefine the unique properties of architecture, the attempt has been carried out to separate those supporting disciplines; the location analysis and putting things in the most appropriate zones is given to the planner and geographer, judgment over cost to the quantity surveyor, interior design to the artist, building structure to the engineer, phenomena of nature to the climate scientist and finding the user's needs to sociologist and psychologist. Surprisingly, it will reveal that architecture are uniquely dealing with spatial forming, where according to Broadbent (1973; 25), the architect concern with
spatial ability in particular with his capacity for visualizing, or otherwise generating the three dimensional forms of buildings, interior space and space about the buildings.

Furthermore, the crisis of definition of the nature of architecture has emerged, which is mainly bring about by the arguments about the personal and impersonal, and the widespread refusal on anonymity, anti-historicism and universality put forward by the modern movement.

Consequently, the vernacular or spontaneous building, which previously wasn’t regarded as architecture can also be fitted into the terminology of modern architecture, since they have architectural solution, full of life, intelligent, economical, constructive, painstaking, sound, amiable and polite. Its also performs the qualities which can be considered to be the stuff of architecture that is to say the art of buildings (Le Corbusier; 1947). Contrary to the definition of the unique discipline of architecture as proposed by Broadbent, Rykwert (1996) stated that although architecture has been connected with all sorts of disciplines and all those discipline has contributed to architecture, but the architecture could not tell any discipline anything specific in return, so their territory lay in the gap between the disciplines. Therefore, there was no specific architectural discipline. The concern of modern architecture on spatial properties has lead to the objectified quantified and measurement of space. This is most clearly manifested in the use of perspective as a prime mode of spatial presentation that purposively stripped of its cultural content. Hence, the critics of modern movement have reversed the phrase “space in architecture” to the other way around that “architecture is inescapable part of space”. This proposition has significantly alternated the presumed authority of the architecture discipline (Jeremy; 1996). Consequently, the modernism utopian of totally sweeping away and omitting existing communities, cultural need’s of the user and regional identities determined by natural physical conditions, that put forward by the proponents of modern architecture has to be reviewed. Architecture, which is based on understanding upon regional identities, should immediately be initiated. The broad meaning of the architecture is aroused in the end of 20th century, as seen in the following description,

Architecture is not just an activity or an event or a collection of artifacts. It is not even simply an art. Architecture is fundamental to all human affairs; it stands at the very beginning of civilization, for without it there would be no possibly of civilization or culture. Architecture is inescapable, universal, endless and continuous. It is also elementary (Nuttgens 1993: 4).
Above elaboration, clearly describes that architecture were subject to history and cultural evolution, therefore couldn’t possibly be eternal but always in the state of continuous transformation.

2.1 Hypothesis

2.1.1 Culture and Architecture

As was mentioned in the previous chapter, this thesis focused on the transformation of architecture of the Toba house in the context of the cultural changes in a specific continuum since the primitive era to the present day in the gap of 148 years, precisely from 1850 – 1998. The intensive cultural contact with European had brought about the significant cultural change of the Batak Toba. Particularly after the Toba land fell under the jurisdiction of Dutch colonial in 1907. Although the contact has actually been started since 1860, with the arrival of European in the area, either German Protestant missionaries or Dutch administrator.

However, Christianity introduced by the missionaries cannot totally wiped out the traditional culture and religion of the Batak Toba, as was indicated by the retaining of paganism ceremony and worship of the death soul (Sipelebegu) and traditional kinship. Moreover, unlike the common and widely accepted proposition that ethnicity is supposed to decline in urbanized society, Bruner (1963) had found out that the kinship among the Batak Toba seems to increase in the city region, as was reflected in their sense of ethnic identity. It is clearly shown that the physical appearance of the Toba houses has radically changed during that same period particularly in the city region.

If we referred to Rapoport (1969), who asserted that the house is not simply the result of physical forces or any single causal factor but the consequence of a whole range of social and cultural factors seen in their broadest term. The physical condition of the environment only makes something is more encouraging than the others. While methods of construction, available material and technology are the modifying factors for achieving a desired result of the architectural forms.

Consequently, if the proposition is analogically employed to the case study which will be covered in the following chapter, the transformed architecture of the Toba house in the urban area is only produced by the transformation of the elements of their
culture, however, each elements of culture is not always changed in same intensity, as was clearly seen that the kinship among them have drastically increased while the traditional believe superficially decreased, and therefore, it can be assumed that it's effect on architectural form not necessarily one to one relation.

Even so, the discovery on anthropology focuses on cultural property, which emphasize the ritual aspects of cultural life and very rarely on dwelling architectural forms. Consequently, the anthropologist have tended to ignore the spontaneous common house that accommodated ordinary group of people with their day-to-day affairs, sharing consumption and living in the collective spaces of a domestic dwelling. These everyday activities is carried on with ritual, reflection of desire and, significantly, often dominated by woman, for whom the house is symbolically built.

Hence, this thesis would emphasize the need for further research on anthropology of architecture that accommodate the everyday life, which might eventually be able to be incorporated into the study of culture. Since the culture is a very broad concept that consist of a number of cultural factors or elements (see chapter six). Hence, it would be helpful to select out the prime element from the whole range of the cultural elements, which significantly affect the house form and its architectural transformation and it has became one of the objectives of the study.

2.1.2 The Basic Hypothesis

The basic hypothesis underlying the thesis implied that the culture is focused on the specific cultural orientation, ideology and worldview of particular society, which is attempted to reach by a set of cultural mission through particular cultural strategy. Those cultural strategies are manifested in a number of cultural preferences namely architectural forms.

The cultural orientation and cultural missions are more static and difficult to change than cultural strategies and preferences which are subject to undergo cultural adaptation due to internal interaction of the cultural components (evolution) and to external cultural contacts (diffusion) in order to fulfill its mission in keeping with the cultural ideology.

Consequently, the culture or its elements (Language, Knowledge system, Social organization, Technology, Artifact, Employment, Religion system, Art and
Architecture underwent transformation through the mechanism of diffusion and evolution.

The intensive contact among the cultures lead to the exchange of its elements, in this case, not any single donate culture can influence another culture unless accepted by the recipient. The elements of alien culture can only be accepted if it compatible or have the recognized similarities with the content of the recipient culture. The cultural contacts give chance to cultural exchange and in turn lead to the cultural transformation that forming new structure that different with the previous culture.

The cultural transformation will affect the applied cultural strategy and cultural preferences and consequently dictated the transformation of architecture style that very often indicated by the formation of the new hybrid architectural style that entirely different with the previous style.

2.1.3 Hypothesis on Architecture

Cultural orientation of traditional Batak Toba is to preserve and improve the environment of their ancestor in the afterlife by increasing the common status of the soul (begu) of these ancestors to be the highly respectable soul (sombaon). In return, only the respectable soul of the ancestor could give the blessing to the living descendant for their prosperous and happiness without which these descendant would be in misery.

The higher status of the death soul can only be achieved through the excessive offering that required the great of funds. Consequently, they have to be rich and encourage owning the abundant agricultural land and having the large offspring to cultivate those lands. The excessive agricultural land and its product are the indication of the great wealth. Accordingly, the cultural orientation is clearly manifested in their trinity cultural missions, which are: authority of power by own more land (Hamoraon), the great children (Hagabeon) and dignity (Hasangapon) that continue to be the guide of their daily live until now.

Conversion of religion from Animism to Christian gives rise to the alternation of the cultural strategy but not the cultural orientation. The changes of cultural strategy became a significant factor that dominantly affects the whole process of architecture transformation of Toba house.

Hence, the architecture as an offering in ancient period endows with venerated of the spirit and souls, so in the house forming, the secular aspects cannot be separated.
from the myth and traditional believe, in other word the separation between house and shrine is not known since the ritual activities always intermingle with everyday activities.

The conversion of Toba from Animism into Christianity has indicated the cultural transformation, which also reflected in the shifting of cultural strategy that lead to the abandonment of traditional architecture. The traditional house should be deserted, since it is no longer functioned as the symbol of faith and in contrary, was regarded the representation of heathen to the new religion for the previous believe was firmly attached it.

However, the new religion, somehow appear as syncretism of the European Christianity and the local believe. The Christian Toba still retain the old believes, they even have given the names and personify their old primitive gods to monotheism god of the new religion. In the new religion, the separation of ritual activities and daily life is very clear, the former take place in the Churches building while the latter in the secular place i.e. house. They have substituted the old ritual place into the new one with the similar intensity of faith; therefore, the number of churches in the region is very impressive and outnumbers the real requirement and they visit these places more often than any other Christian.

Even though, the house no longer uses as a ritual place according to the new religion, but somehow it still hold its previous symbolic function although far less than it used to be in the past. The new religion, which is more tolerant toward the form of the house, has superficially given chance to the increasing of the utilitarian function of house. In fact, the accomplishment of the old and rigid concept of trinity cultural mission that underlying the process forming of the house is perfectly retains.

As a manifestation of authority over power, the Toba is keeping on expanding their space and territory in order to expand their hegemony as was happen in the primitives era and still happen in the present day. The Toba will retain the ownership of house where he used to live. Even though he has to move to a far place and by any means have no chance to be back, since the lost of the house means the decline of the cultural territory.

It is clearly seen that architectural forms has been used as a mean to accomplish the trinity cultural mission. Hence, the architectural changes accords to the protean cultural strategy. The correlation of architectural forms and cultural strategy has clarified the recent revival of traditional house in the Toba land. Previously, a great
number of traditional houses in Toba land have been demolished and replaced with modern house since the latter has been accepted as a symbol of status that indicated the accomplishment of trinity cultural mission. However, it is lately found out that the modern house has a significant cultural drawback. The modern house doesn’t clearly shows the royal status of the owner or his honorable ancestor as it was perfectly represented by the traditional house; therefore, the recent building have revived to imitate the traditional Toba house. Although, those recent artificial traditional house is no longer used as a religious symbol, but it is functioned as a perfect fulfillment of worldviews and cultural mission. On the contrary, that status symbol of traditional architecture is not recognized and accepted in urban area, so it is not an effective tool for fulfillment of the cultural mission. Therefore, for the similar purpose, the different new symbol has been creatively produced by synthesized the local architecture with imported that obtained through cultural exchanges in the form of hybrid contemporary urban house. The new architectural elements are obtained through external cultural exchanges, and selected according to its compatibility with the cultural preferences of the recipient covering the architecture styles, floor plan, window types, building materials, colors, ornament, etc.

To conclude, it can be proposed, firstly, that cultural missions and cultural strategies which underlyng by the cultural ideology are very significant in the architecture transformation and house forming even in the modern period. Secondly, architectural exchanges among the society are seems unavoidable. Thirdly, architecture elements of particular society cannot be donated to the other, unless the recipient society readily adopts the donation. This proposition will be tested in the analysis on the following chapter four, five and six.

2.2 Anthropology as the Supporting Discipline

The association of culture and contemporary architecture and how both are related to anthropology was briefly discussed in part 2.1.1. Anthropology is the study of the culture (learned behavior) of the human being. It derives from the Greek word anthropos meaning man and logia meaning study. Culture refers to learned behavior, acquired by experience as opposed to inborn and genetically determined behavior. Cultural anthropology concerned with human cultures or ways of life both in present
and in the past.

The relationship between Anthropology and Architecture has been recognized since 19th century but only in the end of 20th century are widely discussed. Previously, the relationship of conventional architecture and anthropology is very absurd since the conventional architectural works, particularly modernism are mainly focused on personal, functional and physical aspects of dwelling especially on environmental conditions, resources, technology, techniques of construction, types of building, spatial organization, symbolism and aesthetic value of buildings but rarely discussed the social organization of the people who lives inside. As responses to the consequences of modernism, anthropology appeared as alternatives in illuminate the ambiguity of architectural terms and help to extend the nature of architecture discipline, hence, the association of culture to architectural theory is began to examine.

Prior to the period of awareness in the end of 20th Century, some architects have been fully aware of the wide gap that has separated the culture and architecture but they don’t well equipped to understand the reasons. This was implied in the remarks “that after all life was right and the architects wrong” (Le Corbusier in James 1966; 25).

In this case anthropology can help the architect to fill the gap between architecture and society and to show the nature of relationship. Furthermore, Anthropologist can also enable the architectural historian to illuminate the role of society in the making of history instead of focus on monumental architecture that housed the kings and the rulers. Moreover, to question the obsessions of the architects in over-treatment of the outer surface of the buildings that very often refers as architectural style instead of a deeper understanding of cultural needs of the user.

A number of discussions that appeared in this period mainly explore the basis of architectural theory beyond the purely functional and formal arrangement but has extended to cover cultural aspects and vernacular architectures in many parts of the world. This lead to a number of seminal publications, which resulted in very diverse effect: on the one hand they lead indirectly into the rise of conservative traditionalism, historical pastiche, community architecture, and post modernism during 1980s. But on the other hand, The anew awareness did raise on the cultural dimension of architecture which has certainly enriched theory and practice since then, and made it more receptive to the insight of other disciplines (Melhuish 1966:7).

This new awareness is mainly regarded that the architect is not capable to provide the spaces solely by using his spatial ability and aesthetic superiority as was
previously defined (Pevsner; 1943, Broadbent; 1973, Khan; 1991. The architects must be supported by other related disciplines namely sociology, psychology and anthropology. Therefore, it is rarely justifiable for them to study the subject solely in the narrow conventional term of their own discipline, for there are only forms not habitable spaces that have resulted from the application of solely utilitarian architecture. Therefore, the contemporary architecture has to be opened for dialog with other disciplines and be extended to include the deeper understanding of culture and society, which is the property of anthropology.

The relation of architecture and anthropology has put forwarded by James in 1874. He asserted that architectural forms often serve as means for symbolic reflection of society, which may transform those represented by the house as a whole.

Levy-Strauss produced a seminal works on the potential theoretical significance of the house in 1963 that revealed the relationship of a specific society and house. Furthermore, he emphasized the significance of the house in the study of systems of social organization through kinship analysis. This proposal has supported by Oliver (1969; 19) by put forward that the mystical quality of vernacular communities lies partly, in the summation of the symbolic values of the culture, which are embodied in the structure shaped from land resources. Conclusions as to the symbolic nature of the vernacular forms are likely to be deceptive when observed from without the society, which created them. This is difficult to base on internal information without the skills of anthropologist.

The study of architecture has no need to be confined to the isolated vernacular societies but also to the exposed urban societies, though the former may be best illustrate the model of structure, which seek by the traditional anthropologist. In anthropology, the social life regards as a system, where all aspects are organically connected and govern the architectural forms. Hence, there is a close relationship between architecture and anthropology. These relations imply in the relation of architecture to the societies that produced them. Every different society had their own unique forms, produce by their own mode of expression, feelings and aspiration. Hence, the study of forms consequently affords a means as important as language, to analyze societies or the other way around.

Therefore, it is a real need for architecture to engage imaginatively with the pattern of culture as it is live in different situation at everyday and ritual occasion, both underlying by the cultural ideology and orientation. It needs to acknowledge that human
life consists of more than simply a series of functional and utilitarian needs to be met. It must bear in mind that the worldview and cultural ideology of human existence are absolutely integrated to each individual’s capacity for satisfaction. Anthropology unlike psychology or sociology holistically embraces these dimensions of culture, and that is why it is important for practice and theory of architecture. In term of methodology, it seem clear that the concepts of fieldwork and participate observation, which are central to the anthropological discipline, are widely accepted as a necessary preliminary for any architectural research. In contrast to the making process of the abstract form that based on historical precedent, which has determined architectural production in the past.

These above conditions has given risen of a type of architectural theory that based on observation of cultural practices that emphasized on the relationship between space, society and culture. Only a study of architecture in relation to the culture that produce it may eliminate the drawbacks of conventional architectural discipline. This study should be supported by internal information that hardly understood unless by the support of anthropology, so that interrelationship between forms, space, society and culture is intensively analyses.

2.3 Research Approach

This research is guided by the objectives that have been discussed in chapter one. The interaction between culture and architecture in the process forming of the dwellings provide a deeper understanding of role of cultural strategy and adaptation in shaping the environment. The architectural forms are always under pressure of change; the dynamic aspect of such change is mainly related to evolution through exchanges of inner cultural traits of the group and cultural exchange through external contact with outside group. This change is underlying by cultural ideology and mission as reflected in the cultural needs that attempts to accomplish by apply the appropriate cultural strategy. Hence, this dissertation attempts to examine the cultural changes and its consequence on the architectural forms corresponding to the user’s cultural needs. In order to focus the finding in detail, two settlements of different location and time but dwelt by the similar ethnic group that each group has experience a different cultural progress were investigated, accordingly, to capture the diversity of information needed, a survey was drafted to achieve the following tasks: Firstly, to evaluate the usage and utilization of spaces (internally and externally) of both the settlements (traditional which
is relatively stagnant and contemporary which is relatively change) in order to examine various elements pertinent to the architectural forms. Secondly, the cultural characteristics of the dwellers are recorded on both of the settlements. Thirdly, to investigate the process, the nature and mechanism of cultural exchanges between the dweller and outside groups through the intensive cultural contact that contribute to the cultural change that further have dictated the architectural transformation.

Fourthly, the agents of cultural change are highlighted, with special reference to the architectural style. Fifthly, the sequences of changes are examined by comparing architectural styles in both of the settlements. Such question as why and what the changes are and how the changes take place needed to be examined in depth.

In attempting to cover the above tasks, the strategy of the data collection, will apply a sample survey using a questionnaire together with interviews, local history and secondary information gathering. The questionnaire will provide the information that will be used for statistical analysis to describe the settlement characteristic. The interviews, including local history look into a deeper anthropological background of the ethnic group.

2.3.1 Research Team

The field research team consisted of the author and two research assistants and thirty surveyors who are familiar with the people and the place in order to established a good relation with the respondent and to have a good rapport with the resident. All of the surveyors are the fourth year architectural students and mainly are the similar ethnic group with the target population. Their tasks are mainly assisting the author in guiding the respondent to fill the questionnaires

2.3.2 Selection of the Study Areas

In keeping with the selected approach and the objectives of research the areas for case study is appointed. This study case serve as a focus of discuss in order to provide a deeper insight and in depth investigation into the context of issues. Corresponding with the selected approach, the synchronic and diachronic comparison are applied in attempt to capture the aims of the study at the smaller scale, consequently, architectural forms on two settlements of different rate of progress have put into focus
for comparison purpose. Firstly, the traditional architecture of houses on traditional settlements in Toba land is concentrated around Jangga Dolok about 180 kilometers from Medan, which have the relatively very limited exposure to outside cultural contact until the coming of the European Christian missionaries. Secondly, the spontaneous contemporary architecture of houses in urban settlement that relatively of have free of intervention and have the sufficient exposure to the external cultural contact, which is represented by spontaneous settlement of Tegalsari in Medan.

Those two settlements are chosen as the basis for study because of the following characteristic:

1. They provide examples of architectural type that required for comparison by the study.

2. The author is familiar with both of the location and has carried out inventory survey in Jangga Dolok in 1991 and Tegalsari in 1991 and 1994 assigned by the local government under the program of urban renewal.

3. Furthermore, Jangga Dolok represented a traditional settlement that bear the priceless historical artifact, for although had underwent the changes but the traceable significant culture and architecture have retained.

4. Spontaneous settlement of Tegalsari are relatively free from intensive intrusion and intervention of westernized educated architects and short sighted government who have enforced the alien planning rules in the other parts of the city. Therefore, the houses and settlement in Tegalsari has relatively spontaneously grown similar to the traditional settlement, in spite of its intensive contact with others cultures. The location can be regarded as a miniature that represents the city of Medan, since nearly all the ethnic groups in the region included the Toba and various level of income can be found in the study area that similar to the population, which occupied Medan and other city in the region. Moreover, The dwellers of the settlement have exposed to outside cultural contact and have the high chance to experience the cultural exchanges. Consequently, the built forms have significantly undergone the architectural transition that represented the contemporary architectural style of the urban area.

5. The availability of secondary data and accessibility to the area are also of great advantage of the study area.
Both of the areas to be presented as a comparative study that conform with the selected approach and methodology in order to achieve the objective of the study.

2.4 Methodology

2.4.1 Theoretical Frame of Reference

Theoretical frame of reference is summarized in the following description, while the justification and elaboration of terminology is elaborated in other section of this chapter.

Table 2.1: Theoretical Frame of Reference

<table>
<thead>
<tr>
<th>References of theory</th>
<th>Description of reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>General theory</td>
<td>Cultural change</td>
</tr>
<tr>
<td>Additional feature</td>
<td>Probabilistic view of causal relationship between culture and architecture.</td>
</tr>
<tr>
<td>Locus of research</td>
<td>Architecture of small scale primitive communities in isolated area and architecture of contemporary civil community in relatively exposed urban area</td>
</tr>
<tr>
<td>Topic research</td>
<td>Architectural Transformation</td>
</tr>
<tr>
<td>Mode of comparison</td>
<td>Two cases in two localized region by combination of synchronic and diachronic comparison of two different period in the same area and two different area and different period, both of the region inhabited by the similar ethnic group</td>
</tr>
<tr>
<td>Cultural data assumption</td>
<td>Emic complemented by etic, the former is based on how the local population perceived their culture and the latter is based on how the outside viewer perceived them.</td>
</tr>
<tr>
<td>Quantitative/Statistical style</td>
<td>Mix of quantitative and qualitative research</td>
</tr>
<tr>
<td>Fieldwork style</td>
<td>Key informant supported by structure interviewing and other quantitative data gathering, helped by a team.</td>
</tr>
<tr>
<td>Supporting field and data</td>
<td>Anthropology</td>
</tr>
</tbody>
</table>

2.4.2 Research Strategy

The Research strategy is described in the diagram on figure 2.1 and implemented in the following steps, Firstly, codification of the system of general proposition concerning architectural change in the context of cultural change. Secondly, Adopt architectural transformation by comparing two settlements of different rate of evolution or progress as a particular subsystem of proposition, which is more specific in content and applicable to a specific context. Thirdly, development of general hypothesis is to be tested. Fourthly, concretizing of general hypothesis in relation to the known condition in study area either in Tegalsari or in of Jangga Dolok and its surrounding.
Fifthly, to operate the variables of the hypothesis by specifying the field observation that will produce empirical data use to test the hypothesis and to collect data and test the hypothesis. Lastly, Relate the tested result back to the higher order theory.

2.4.3 Research Design

Two comparative models widely applied for research in cultural changes and transformation. The first is *diachronic comparative model*, which focus on study of a single community in two different periods, where the changes are observed during that specific range of time. The second is *synchronic comparative model*, which focus on study of two communities of the similar ethnic but living in a different period and different area (Kuntjaraningrat: 1994). Those two communities living in a range of variation, from most isolated, homogenous and primitive community to least isolated, heterogeneous and relatively exposed community. The research design is describe in the diagram on figure1.2.

This thesis applied the combination of synchronic and diachronic comparative as design approach of the research. That focused on a traditional Batak Toba community in the surrounding area of Jangga dolok around 1850s, its condition before the intrusion of European is diachronically compared to its present condition 1998; this community is regarded as a base line or starting point of the of continuum. At the end of the continuum lies a contemporary community of Batak Toba in Tegalsari, who live in the relatively urbanized neighborhood of Medan in 1998, the former and the latter is synchronically compared.

2.5 Data Collection

2.5.1 Primary Data

The team of surveyor lead by the author carried out the field survey in June 1998 until February 1999. The surveys were conducted both in Jangga Dolok and in Tegalsari. The data obtained on the field survey in 1998-1999 have complemented with previous survey conducted in 1991 and 1994.
2.5.1.1 Questionnaire

The questionnaire were designed in comprehensive anthropological format contained the whole aspects of culture written in Bahasa Indonesia, which is the lingua franca among the target population and translated into English by the author. There is an attempt to interview the entire family members at the same time in order to avoid the subjective answer but if not possible, the interviews were represented by the head of the household accompanied by his or her spouse. The questionnaire design was guided by the objective of the study, research strategy, and the selected anthropological approach that required the in depth investigation on culture and preferences of the dwellers and their built environment in the changing setting of the urban area. In order to obtain a comprehensive (holistic) intended answers, the questionnaire are systematically divided into Language, Knowledge system, Social Organization, Technology and artifact, Employment, Religion system, Art and Architecture and finally the perception of the target population on the built form (see appendix).

2.5.1.2 Structured Interview and Survey

In order to obtain the most effective result, the question in interview is designed in a mixture of open ended and alternatively fixed questions. In the first place, the open-ended questions open the possibilities to obtain a wide range of reactions from respondents. Furthermore, the responses shaped by the people were considered being more important than by categories provided by interviewers. However, open-ended questions required a time consuming considerable work in the form of coding and contents analysis. Analysis is hardly possible to be done unless by the proper quantification of responses, in addition the answer to open-ended question may fall into several topics of different discussions so that comparability among different respondent is hardly possible to define. Some times open-ended question offer the opportunity for the respondents for avoidance through vague and indefinite answers. If the surveyor is quite clear about the range of specific responses, he is recommended to apply the second type of question that will be most useful, since they are certainly much easier to tabulate and analyze. In this research both the type of questions are used, consequently, for completing one form at least required three times visits in three days. The question of structured interview applied for this research is attached in the appendices.
2.5.1.3 Sampling

The sampling on the field survey is taken by stratified, so that, each household has represented a variable. The total population of case study area is 2,895 households, where 510 households of which are Batak Toba, out of which 60 households has been stratified sampling. The number is defined to represent the founded variation in order to maintain the degree of accuracy. The number of sample is taken by referring to Krejcie and Morgan, while the random is based on the Rand’s table (Bernard: 1994). The sample is codified in order to make the quantification.

2.5.1.4 Mapping and Drawing

Mapping is required to clarify the location and to provide the orientation in the settlement, describing the pattern of the outdoor spaces and visual physical condition and arrangement of the dwelling units. Therefore, the physical condition of the neighborhood is clearly described from macro to micro level. The detailed drawing of anatomy of the houses and furniture arrangement were benefited to enhance the information obtained from other technical and social survey. The combination of detailed drawing, mapping and information obtained through interviews enabled the researcher to collect and interpret the information systematically (Wahid: 1996).

2.5.1.5 Photography and Visual Survey

The photograph and video film are used to captured the visual image of the architectural form and recorded the event and activity of the dweller that others techniques are not effective. These media also complement the other techniques that have been used in the survey. The detailed drawings are used to measure the dimension of buildings while the photograph techniques is useful to visualize its appearance, both techniques are applied in combination to make the images more clearly (Wahid: 1996)

2.5.1.6 Participation and Observation

Participation is a matter of degree of involvement in order to capture the available non-verbal material and to see elements of casual daily life. However, the
researcher required much more than simply watching what the action of the people are about but must investigate a great deal about worldview and motivation that underlying their action that can be observed firsthand. So that, the observation are structured and systematically revealed the relationship among different events – through interviewing and participation in order to convert the observation into scientific use. This information is used to compliment other selected techniques in order to gain insight of the subject under study in line with the applied methodology.

2.5.2 Secondary Data

The secondary information is required to complement the primary information. This information obtained from local government’s official and its publication and archives concerning the policy, historical development of the city, the statistical data on population index, physical and economic development, and town planning and policies.

In this respect documents that related to the subject of study in the form of report, research studies, regulation and photograph were examined and some of them attached in the theses. These information help to give the general overview of the town and other related issues within the scope of study. The result of the investigation on the secondary information appears in chapter five.

2.6 The Analysis Techniques

Each of the selected research tools and scientifically techniques has their own limitation. Interviews, questionnaires, participation and many others direct instrument involved, confronting individual with somewhat artificial stimuli, and the awareness of being studied may produce distortion in people’s responses. On the other hand, various unobtrusive observations often have an artificial and indirect character that consequently has biased the result. Therefore, examining cultural behavior with variety of different approaches greatly enhances the credibility of research results (Pelto and Pelto: 1978; 135). The same thing goes with the system of analysis, so the several of techniques of analysis employed in this study either qualitative or quantitative.

The proposition of the study is to examine the architecture transformation of the Toba house that hypothetically underlying by changes in cultural characteristic of
the dweller. Two types of architectural styles on settlement in two study areas of two different times will be synchronically compared. The first is the traditional settlement of Toba in Jangga Dolok in their hilly hometown (circa 1850 and 1998) and the second is the contemporary urbanized spontaneous settlement of Toba in Tegalsari-Medan on 1998. Data and analysis of these two settlements will be treat differently and appear in separate chapter.

2.6.1 Quantitative Methods

The quantifiable information is collected through quantitative questionnaires is processed by using SPSS (Statistical Package for Social Sciences) and the descriptive and inferential statistic results are used for further analysis. The degree of relationship between independent and dependent variables will be tested by “test independence ” (chi square test) and “measure of association” (multiple regression analysis) of variables. It is necessary to note that cause and effect relationship between two variables exist if the two variables associated with one another and these association must not be artificial. Furthermore, the presumed causal variables must have always precedes the other in time. The mechanism is required to explain how independent variables cause the dependent. In addition the analysis must be conducted in a context of a theory. These variables are then used to analyze the subject at a more detailed scale particularly the interrelationship of the architectural style and the cultural needs of the dweller. In this respect, the method is employed to analyze the transformation of the architecture style and its interrelationship with cultural needs of Toba in spontaneous contemporary settlement. The analysis will also reveal the cultural changes experienced by the Toba. While the information obtained through structured interviews and participation observation was analyzed through a cross-case analytic technique and outcome is combined with the previous analysis in order to probe the phenomena successfully. The result of this analysis will appear in Chapter six of this thesis.

2.6.2 Qualitative Methods

In this study, qualitative methods were mainly used to collect information on secondary sources of information and historical sequence and development of the population and its built environment. The qualitative data collected is processed through
qualitative method. The passage over time is an integral part of qualitative method. The sequence of events is emphasized in order to detect process and causal relation between dwellers and architectural form of its dwellings. The interpretation presented in visual presentation of photographs, diagram and maps in order to show the relationship of the ideas of culture and architecture style and its transformation. The data interprets by finding out the worldview of the target population, how they find the situation and what it means to them. Thus, the first step is examining the historical documents and to learn it’s meaning to the population that so called first order interpretation while the next step is to discover and reconstruction of this previous step first interpretation into the next subsequent step. The second order interpretation underlay the comprehensive meaning of the data, where the human action of the target population places in the universal behavior. The qualitative data and analysis method employ on chapter four, five and the concluding remarks, particularly in comparing the traditional and contemporary culture and architecture of Toba in chapter six.

2.7 Contingency

In conducting research of this typical nature, the collection of primary information collecting is slightly difficult due to the long structured questionnaire that covered nearly the whole elements of culture, so required at least five time visits in three days works to complete the form of each household. Beside, the employed methodology required the presence of all members of the household so the interview is appropriately conducted in the evening. Furthermore, The majority of target population is more fluently in their native language than Malay, so the surveyor should also be able to speak the Toba. Above all, the target population is haunted by the prejudice and the feeling that the settlement is going to be cleared under the urban renewal project. There is also financial problem due to the expensive travel cost from the university to the area of study case. The political instability in Indonesia following the monetary crisis in 1998 cause the area of case study is difficult to reach and most of all, my personal budget which is allocated for the study no longer enough, due to the monetary difference between Indonesia and Malaysia that increased from Rm 1 to Rp 900 into Rm 1 to Rm 2300.
Summary

As a response to the extensive global network that lead to the rapid cultural exchanges, there is a growing awareness among the architects and academics to formulate local identity which based on the local culture in order to avoid the cultural conflict, tension and unnecessary inefficiency.

However, history has proved that changes and transformation either through contact with other culture (diffusion) or simply by internal drives (evolution) is unavoidable. Therefore, the appropriate approach is required to settle down the matter. This nature of approach can be supported by Anthropology. Moreover, cultural dimensions of human existence are absolutely integrated to each individual capacity for welfare. Anthropology embraces these dimensions of culture more than any other discipline, so architecture need it as supporting discipline in order to understand the social aspect of the people who live inside.

In this respect, the basic hypothesis propose that cultural strategy and cultural mission, which have been underlay by ideology, believe, myth and faith are the significant factors that dominantly affect the architecture forms and its transformation. The cultural strategy also has determined which element of other culture that should be adopted or rejected in unavoidable process of cultural exchanges.

Consequently, there is a real need for architecture that previously was mainly focused on material aspect of building to engage with pattern of culture as it lives, since architecture isn’t simply a provider of a series of functional needs.

In keeping with the objective, the selected approaches and methodology, this research refers to a combination of diachronic and synchronic comparative model that focuses on two communities that dwelt by the similar ethnic group but living in different period and different location.
CHAPTER THREE

ARCHITECTURE TRANSFORMATION IN THE CONTEXT OF THEORETICAL PERSPECTIVE

Table of Content

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>65</td>
</tr>
<tr>
<td>3.0 Theory in Brief</td>
<td>66</td>
</tr>
<tr>
<td>3.1 Architecture in Philosophical Context</td>
<td>66</td>
</tr>
<tr>
<td>3.1.1 Empiricism, Pragmatism and Realist</td>
<td>67</td>
</tr>
<tr>
<td>3.1.2 Rationalism</td>
<td>68</td>
</tr>
<tr>
<td>3.1.3 Structuralism and Post-structuralism</td>
<td>69</td>
</tr>
<tr>
<td>3.2 Cultures and Architecture</td>
<td>72</td>
</tr>
<tr>
<td>3.2.1 Culture and Cultural Theory</td>
<td>72</td>
</tr>
<tr>
<td>3.2.1.1 Evolutionism</td>
<td>72</td>
</tr>
<tr>
<td>3.2.1.2 Structuralism</td>
<td>74</td>
</tr>
<tr>
<td>3.2.2 Cultural Ideology and Mission</td>
<td>74</td>
</tr>
<tr>
<td>3.2.3 Architecture in the Context of Cultural Theory</td>
<td>75</td>
</tr>
<tr>
<td>3.3 Cultural Needs</td>
<td>75</td>
</tr>
<tr>
<td>3.3.1 Basic Human Nature</td>
<td>75</td>
</tr>
<tr>
<td>3.3.1.1 Man and Society</td>
<td>75</td>
</tr>
<tr>
<td>3.3.1.2 Man and Nature</td>
<td>77</td>
</tr>
<tr>
<td>3.3.1.3 Biological Urges</td>
<td>77</td>
</tr>
<tr>
<td>3.3.1.4 Cosmic and Natural Order</td>
<td>78</td>
</tr>
<tr>
<td>3.3.2 Cultural Needs and Preferences</td>
<td>78</td>
</tr>
<tr>
<td>3.3.2.1 Cultural Needs</td>
<td>78</td>
</tr>
<tr>
<td>3.3.2.2 Cultural Preferences</td>
<td>80</td>
</tr>
<tr>
<td>3.3.3 Cultural Based Architecture as Needs</td>
<td>80</td>
</tr>
<tr>
<td>3.4 Architecture and Cultural Change</td>
<td>81</td>
</tr>
<tr>
<td>3.4.1 Cultural Change and Transformation</td>
<td>81</td>
</tr>
<tr>
<td>3.4.2 The Origin of Change</td>
<td>82</td>
</tr>
<tr>
<td>3.4.2.1 Adaptation</td>
<td>83</td>
</tr>
<tr>
<td>3.4.2.2 Accomplishment of Cultural Needs</td>
<td>83</td>
</tr>
<tr>
<td>3.4.3 Mechanism of Change through Exchanges</td>
<td>84</td>
</tr>
<tr>
<td>3.4.3.1 Internal Exchange (Evolutionism)</td>
<td>84</td>
</tr>
<tr>
<td>3.4.3.2 External Exchange (Diffusionism)</td>
<td>86</td>
</tr>
<tr>
<td>3.4.3.3 The Integrated Exchange</td>
<td>88</td>
</tr>
<tr>
<td>3.5 The Theory of Transformation Applied in the Study of Toba</td>
<td>88</td>
</tr>
<tr>
<td>3.5.1 Cultural Mission and Strategy</td>
<td>88</td>
</tr>
<tr>
<td>3.5.1.1 Change as Manifestation of Cultural Mission</td>
<td>89</td>
</tr>
<tr>
<td>3.5.1.2 Transformation of Cultural Values</td>
<td>90</td>
</tr>
<tr>
<td>3.5.2 Transformation of Cultural Strategy</td>
<td>92</td>
</tr>
<tr>
<td>3.5.2.1 Migration</td>
<td>92</td>
</tr>
<tr>
<td>3.5.2.2 Land Ownership</td>
<td>92</td>
</tr>
<tr>
<td>Section</td>
<td>Page</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>3.5.2.3 Cosmology</td>
<td>93</td>
</tr>
<tr>
<td>3.5.2.4 The Settlement in the Hometown</td>
<td>93</td>
</tr>
<tr>
<td>3.5.2.5 The Settlement in Urban Area</td>
<td>94</td>
</tr>
<tr>
<td>3.5.3 Cultural Needs and Preferences</td>
<td>94</td>
</tr>
<tr>
<td>3.5.4 Cultural Adaptation</td>
<td>95</td>
</tr>
<tr>
<td>3.5.4.1 Migrant Population Position</td>
<td>95</td>
</tr>
<tr>
<td>3.5.4.2 The Role of Host Population in the Process of Change</td>
<td>96</td>
</tr>
<tr>
<td>3.5.4.3 Religion and Ethnicity</td>
<td>96</td>
</tr>
<tr>
<td>3.5.4.4 Secular Ethnic Association</td>
<td>99</td>
</tr>
<tr>
<td>3.5.4.5 Solidarity</td>
<td>99</td>
</tr>
</tbody>
</table>

**Summary** .......................................................... 99
CHAPTER THREE

ARCHITECTURE TRANSFORMATION

IN THE CONTEXT OF

THEORETICAL PERSPECTIVE

Introduction

The dynamic nature of architecture as a branch of knowledge or discipline was discussed in chapter two. The drawback of the narrow earlier architectural description has recognized and clearly lead to a trend toward making technology as a final end instead of a means and limiting architecture to an aesthetic experiment that will detached architecture from daily life.

As a response, there is attempt to put the architecture in the broader cultural context reflected in Nuttgens (1993) following statement, ... Architecture is not just an activity or an event or a collection of artifacts. It is not even simply an art. Architecture is fundamental to all human affairs; it stands at the very beginning of civilization, for without it there would be no possibly of civilization or culture. Architecture is inescapable, universal, endless and continuous. It is also elementary (Nuttgens 1993: 4). Accordingly, the recent description that placed the architecture in the context of theory of culture has required a new holistic approach, as was discussed briefly in the previous chapter.

It is not peculiar therefore that a number of architects have taken the uncertainty or pessimistic principle of indeterminacy, as a basis for considering strategies to cope with growth, change, flexibility and ageing in buildings, however, in spite of the transmogrified of the meaning of the architectural term, nearly all the theorist agreed that architecture will modify and be modified by, certain culture climate-social, politic, economic, aesthetic, and so on (Broadbent 27-71: 19677).

The most appropriate supporting discipline and theory in this context is anthropology since it is the most broad discipline among the social sciences that covers the whole aspects of culture (holistic) by exploring kinship, social organization, politic, technology, economy, religion, language, art architecture and mythology. Moreover,
Anthropology is probably the only discipline that attempts to investigate both of physical and cultural aspect of the human being that refers on two crucial interrelated questions; firstly, how those different physical forms and cultural systems work and secondly, how it proceeds to its present forms. Therefore, its main objectives are to elaborate the differences and similarities of physical forms and cultures and their changes through time.

3.0 Theory in Brief

Similar to the dynamic nature of architecture terminology, the theory is also determined by the shift philosophical attitude. In general, theory can be defined as a statement or a group of statements established by reasoned argument that based on known fact, intended to explain particular fact or event, explanation for which certain proof is still needed but which appear to be reasonable. However regardless the philosophical disagreement about the terminology, the theorist agreed some part of the theory. Theory characterized by important criteria and function, firstly, to elaborate in depth the fact already known (Kaplan and Manners: 1976) by accurately describes a large class of observation according to Hawking (1989) as a mathematician, secondly, it is expected to answer the question why and how the regularity of nature takes place, therefore it has to explain the mechanism and interrelationship among the variables within the phenomena of the object under observation (Hawking: 1989, Kaplan and Manners: 1976 and Lang: 1987), thirdly, to open new horizon in order to make definite prediction about the result of future investigation (Popper: 1959, Hawking: 1989, Kaplan and Manners: 1976 and Lang: 1987), hence, it is only hypothesis that exist in the mind that can never be proved but could be disproved by observation (Popper: 1959, Hawking: 1989). In the similar essence, a pragmatist such as Dewey (1929) has asserted that the true test of a theory lies not in its absolute truth but in its ability to achieve some desirable end.

3.1 Architecture in Philosophical Context

Architecture is determined by shifts in philosophical attitudes, which in fact are not exclusively happen solely to architecture, but pervade the whole aspect of culture
and have a profound effects on knowledge discourse. The selected theoretical philosophies that have the significant relation to architecture and the thesis will be elaborated in the following paragraphs.

3.1.1 Empiricism, Pragmatism and Realist

According to empiricists the knowledge is based on sense experience that acquired from the sight, hearing, smelling, tasting and feeling. The objects in the external world consisting primarily of something called substance that never be seen or felt. However, its qualities that consist of primary qualities that also called physical properties such as mass, density, three dimension and secondary qualities such as sound, odors and colors and tastes. The proponents of this philosophy are Locke (1632-1704), Berkeley (1684-1753) and Hume (1711-1776).

There are the direct link of empiricism and architecture, where the architect concerned with the ways in which, architecture, landscape and building stimulated the human’s senses. Architecture developed from empiricism is known as the picturesque, sublime and association, which are based on subjective and emotion. Repton (1775-1860), Nash (1752-1835) and Loudon (1783-1843) were among its greatest exponents.

Centuries later the empiricism has transform into behaviourism in association with psychology as demonstrated by Pavlov, Skinner and Ryle, which exemplified for most people by the experiment, which is of course the empiricist device (Broadbent 1975:62). Behaviourist empirically observes behaviour as opposed to invisible mental process such as thought, feelings, memories and emotion. The major feature of the behaviourism is their continual reference to individual and to controlled observation. Saunders (1994:29) stated that ‘because the strict procedure of research, the desire for experimental control and for replicable data, it has lead not only to isolation of the individual from daily life but also to the generalisation from the behaviour of rats or pigeon to that of human being’. Like other reductionism doctrines, behaviourist have difficulty of providing workable analysis notably because of the holism of the internal world of mental; moreover, individual who behave as a function of a whole field or network of believes and desires are considered unique.

Philosophy of pragmatic supported by Peirce (1839-1914), James (1842-1910) and Dewey (1859-1952). Peirce concerned with the intimate relation between theory of
philosophy and everyday life practice. Philosophy in this relation was represented by truth that obtain by using the scientific method, the laboratory method of experiment and the field method of close observation. According to Peirce what is true will work.

Pierce’s epistemology emerges from theory of sign, for him knowing is a kind of sign relationship. While Dewey proposed instrumentalism, which asserted that ideas are the instrument for social action. Society and truth, which is the product of collective thinking is in a state of continual changes because they are process. He was not concern with the past but what holds true today.

Realism as philosophy mainly based on philosophy of Plato and Aristotle, however, unlike Plato, Reid (1710-1796) asserted that we perceive directly the real object in the external world, moreover that we perceive them as they actually exist not as copies of them in our minds, we should accept this in theory since we already accept it in practice. Among the followers of neo-realist in architecture are Ventury and Moore.

3.1.2 Rationalism

Rationalist based the knowledge on reasoning alone without appealing to the evidence of practice as proposed by Descartes (1596-1650). In only to be answerable only to reason, it would necessary to clear the mind of all belief, to start over, as it were, with a blank page and to write on it only what could be denied. According to him reality derived from the way in which we learn about it and we learn about it by thinking about it. He referred to the material world, denied what Plato has asserted according to him universal only exist as the thoughts and in matter as its forms. The proponent of rationalist, Descartes, Spinoza (1632-1677) and Leibnitz (16461716) are believed that the senses give a distorted image of reality.

But the word empiricism is also used by the philosophers scientist to indicate what they experienced led to experimental method of learning about nature, while the sense experience philosophers used the same word to indicate how they experienced led to learning about themselves that produced private perception and sensation. Surprisingly, both are claiming to be empiricist.

The philosopher have the ambiguity attitude towards rationalist, the philosophers that applied science methodology is called positivist while the philosopher that rejected science and retreat into subjectivity is called subjective by pass (Feibleman 1973). Rationalist attitudes were brought by directly into architecture by theorists such
as Laugier (1753), through such romantically classical architects as Schinkel (1781-1841), to der Rohe (1886-1969) and developed by Neo-realist such as Rossi and Krier (Frampton in Alan Colquhoun: 1995).

After centuries the subjective by pass has transform into Phenomenology, linguistic philosophy of Wittgenstein and Existentialism founded by Kierkegaard (1813-1855) and his follower Sartre (1905-1980), Heidegger (1889-1976) and Jaspers (1883-1969). According to Kierkegaard truth is subjective and the only authentic existence is individual existence. It combination with experience of choice and the obscure of rational understanding of the universe suggest emotional tone (Blackburn: 1996).

In his early work Sartre focused on individual, especially individual freedom. At that point he adhered to the view that, what people do is solely determined by them not by social laws or larger social structure. However later in his career, He was more drawn to Marxian theory and while he continue to focus on the free individual but now situated in a massive and oppressive social structure which limit and alienates his activities (Craib 1976: 9 in Ritzer 1996: 457)

Phenomenology is a clear development of rationalism. Husserl (1859-1938) was the first stated its precepts, where he tried to reduce philosophy into the exact science. Phenomenology has had a profound effect on the foundation of later philosophies and theories notably existentialism and Gestalt psychology developed from personal insight proposed by Kohler as to the ways in which the brain structure conceive the information.

Among the existentialist, Heidegger is probably the most coherent by considering that the essential difference between object and men is that the former merely are subject to the laws of science, whilst the latter are free to become what they will. The phenomenology brought into architecture theorist by Schulz (1965), Vesely (1988), Gomez (1992) and his follower such as Peter Carl, Marco Frascari and recently Daniel Libeskind (Hays: 1998)

3.1.3 Structuralism and Post-structuralism

Structuralism is an inter-disciplinary movement that has sought to transcendent the limitation of earlier interpretation of universe by grounding analysis in universal system and initially was a reaction against French humanism, especially existentialism of Sartre. Structuralism obviously involved a focus on linguistic structures that emerged
from diverse development in various fields. However, the work of Saussure (1857-1913) stands out in development of structuralism. Who stated that meaning, the mind and ultimately the social world are shaped by the structure of language. Thus, instead of existential world of people shaping their surrounding, here, a world, people, as well as other aspects of the social world, are being shaped by the structure of language that can be reinterpreted as signs. The concern of structuralism has been extended beyond language to study of all sign system that labelled as semiotic that encompasses other sign and symbol systems, such as facial expression, body language, literary text, architecture and indeed all forms of communication.

For Levy-Strauss, the focus is on the structure of the mind while structural Marxist emphasize on the underlying structure of society, however both reject empiricism and accept the underlying invisible structure of society. Levy-Strauss argued that both phonemic system and kinship system are the product of the structure of the unconscious mind, thus social systems are the product of the unconscious, logical structure of mind (Levy-Strauss: 1969).

Structuralism has obvious application to the world of architecture through the discipline of Semiology that offers a mechanism by which the built environment can be read, code and decoded. The work of Umberto Eco (1980) and Greimas (1970) has exposed the limitation of previous attempt by architects to read the architecture, the best example of which has been provided by Lynch (1979), who focused on the legibility of architectural features rather than any semantic understanding of them. Structuralism theory gradually decreasing of favour as its limitation emerged. Post-structural theorist criticized its tendency to universalise and represented a rigid system that could not account for the specificity of time and place.

Barthes (1968) stresses how reading as put forward by Derrida (1978) are always provisional and continually shift with time, while Lefebvre argued’ that the world should be perceived not as a text but as texture and that to understand the environment as a codified system of meaning is to privilege the eye over the other senses’ (Lefebvre in Leach 1999:163-4).

Thus, Post-structuralism emerge as a response to the structuralism implied in the proposal put forward by Derrida (1978) and Foucault (1966, 1969 and 1980), but could be seen as its supplement.

In contrast to the linguistic structuralism, the post-structuralist reduced language to writing, which doesn’t constraint its subject and sees language system as
disorderly and unstable where different contexts give words different meanings instead of order and stability as proposed by structuralist. As a result, the language system cannot have the constraining power over people as claimed by structuralist, furthermore, it is hardly impossible for scientist to search for the underlying laws of language.

Thus Derrida offer the deconstruction of language and social institution, particularly deconstruction of the logo-centrism, which dominated the Western thought in an attempt to search for universal system of knowledge that could reveal the truth and reality, although very often lead to the historical repression and suppression of writing. However Derrida doesn’t intent to offer an answer, in fact there is no single answer.

Since, the search for answer, the search for logos has been destructive and enslaving, so what is left is the process of writing, of acting, with play and with difference (Ritzer: 1996).

Foucault not simply adopted other theories but transformed and integrated it into an unusual theoretical form. Namely, Weber theory of rationalization, Marxian ideas power at the societal level but instead he focuses on a range of institution and micro politic of power. He applies hermeneutics to analyse the social phenomena. As was Derrida, Foucault has no sense of ultimate truth. There is a phenomenological influence, but he rejects the idea of an autonomous, meaning giving subject. Structuralism also contributed to his theory but no formal rule-governed model of behaviour. Finally, He has the interest in the relationship between power and knowledge as was Nietzsche, but the links is analysed much more sociologically.

Finally, it can be said that post-structuralism sought to correct the mistakes of the universalising tendencies of structuralism by introducing the specificity, notion of time and difference into discourse.

The tendency for correction can be detected in Derrida’s description on Tschumi’s follies at the Parc de la Villette. For Derrida the follies in their folly became the site of play meaning, of the meaning of meaning. In effect Derrida reads his own philosophical project into the forms of Tschumi architecture. Throughout the primacy of the text is stressed. The world became treated as “text” to be read inter-textuality (Leach 207-8: 1999). However, post-structuralism has yet to be fully utilized by the architectural theorist particularly semantic potential of semiology in architecture.
3.2 Cultures and Architecture

3.2.1 Culture and Cultural Theory

The terms culture is multi-discursive, it could be use in a number of different discourse, that means cannot be imported as a fix definition into any and every different context and expected it to make sense rather than to identify the discursive context itself. In this study, the term is fit into the discursive of anthropology in line with the approach of the research.

Culture is about a group of people who share a set of values, beliefs, and a worldview and symbol system, which are learned and transmitted. These create a system of rules and habits, which reflect ideals and create a lifestyle, guiding behavior, roles, manner, the food eaten, as well as built form such architecture (Parson and Shils: 1962, Rapoport: 1977). There tend to be greater similarities within cultures than among them. The regularities within culture relate lifestyle and built environment in every scale. Further stated, that the nature of the rules embodied or encoded in environment has distinguished one environment from another.

Accordingly, there are three widely known cultural theories, which are evolutionism, structuralism and history. However, according to Freeman (1960) these theories postulated the same hypothesis, the only differences are its language and methodology assumption, in fact they are the similar theory of cultural change and pattern. Using one of above approaches, unavoidable will involve the others.

3.2.1.1 Evolutionism

Spencer (1820-1903), Durkheim (1858-1917), Tylor (1832-1917) and Morgan (1818-1881) are the prominent supporter of evolutionism theory in 19th Century. In spite of its contribution in replacing the domination of supernatural to natural evolution explanation of cultural phenomena in 19th Century, it was criticized as ethnocentric for regarded the British Victorian is the highest civilization ever reached by the mankind. The evolutionists were accused to produce the speculative and subjective theory that based on unreliable data, which collected by adventurous missionaries, trader and travelers. Furthermore they were blamed for believing that culture universally develops
in unilinear process. In 20th Century, White (1900-1975) and Steward (1902-1972) attempt to restore the evolution theory. Following his predecessors, White asserted that man has the capability to describe speculatively the past and the future due to his ability to use sign and symbol such as language. White also proposed universal evolutionism that focused mainly on universal cultural evolution as a mechanism for adaptation of the human race regardless the differences of the geographical, local and psychobiological factors of the species. Steward proposed multilinear evolution process of culture that focused on specific culture groups. He postulated that cultural process have the similar mechanism, consequently the similarities and differences among the groups of cultures can be analyzed by comparing the parallel sequence of cultural development.

Evolutionism has been extended to cultural ecology by some of it exponents namely White, Frake, Vajda, Smith, Leach and Edgerton. The cultural ecology has emphasized the concept of adaptation by defined that culture is a basic mechanism in exploitation of environment (Leach: 1970).

The ecology in this respect is not physical environment but a set of perception, therefore can’t be defined objectively but through verbal categorization of its user.

Neo-evolutionism, unlike classic evolutionism is making a serious attempt to explain the causes and mechanisms of changes. Furthermore, all culture has the similar stages of development that widely recognize as universal evolution that can be divide into two type of theories which are unilinear or general evolution as proposed by White (1949) and multilinear or specific evolution as proposed by Steward (1955) in the process to reach the highest point so called civilization. In contrast with cultural relativism, that proposes that each culture have its own path and developed in a different direction, hence incomparable (Boaz: 1924 and Radcliffe-Brown 1957)

According to Sahlin and Service (1960), the difference between general and specific evolutionism, may amount in particular instances to outright conflict. Specific evolution implies increasing adjustment to an environment, while general evolution increasing autonomy from and mastery over an environment. Specific evolution may actually lead to what Geertz (1963) termed ‘involution’, a counter evolutionary trend. The culture in involution may become so adapted through specialization to its environment and so well adjusted in its ecological cave, thus, no longer adaptable, no longer able to leap forward.

Multilinear, specific or partial evolution put forward by Julian Stewart (1955) was concerned only with development of particular cultures in their ecological setting,
these cultures were viewed as discrete entities, each of which faced peculiar problems of adaptation to its environment. It was, in fact, through increased adaptation to its environment that a given culture assumed its distinctive form and the wide variety of ecological cave explained. While at the beginning of history, cultures in different areas might develop along similar lines because of a rough similarity in their ecological setting, as time went on cultures become more specialized, and hence more variegated, because of changes in their environment to which they were forced to adapt.

3.2.1.2 Structuralism

Structuralism or functionalism is cultural theory that emerged as a reaction against evolutionism. This theory also called relativism is supported by Malinowski (1884-1942), Boas (1858-1942) and Brown (1881-1955). They agreed to a certain extent that the institutions of the society are related and inter-dependable in a typical structure to form the specific cultural system, analogically like a living organism. The existence and continuation of this cultural system depend on the accomplishment of its social need (Brown: 1957) or its biological individual needs (Malinowski: 1922), failure to fulfil this cultural needs will lead to disintegration of the structure or transform it to the other cultural system. In structuralism view, the cultural system or its institution is work and properly functional if it can provide the mechanism for self-adaptation.

3.2.2 Cultural Ideology and Mission

Cultural mission is a set of goal, which is expected to achieve by the member of particular society (Pelly: 1994), which is based on the dominant values of their worldview in the critical framework, in keeping with the their cultural ideology. As put forward by De Tracy (Kaplan and Manners: 1963) the ideology is value laden terminology consist of values, norms, philosophy, believe and religion, sentiment, ethnic, knowledge, worldview and ethos of particular society. The terminology of ideology, which is used in this thesis following what defined by de Tracy as ideas that covered the values, norms, philosophy, religious believe, sentiments, ethical concepts, knowledge and world view, rather than the narrower meaning put forward by Manheim and Marx.
3.2.3 Architecture in the Context of Cultural Theory

As was discussed previously, semiology that closely related with culture offers architects a semantic potential of architecture. Thus, if architect intent to fulfils the cultural needs of society by change the public taste as was attempted by modernism. The communication between architect and the society should be performed in an accepted language. If the language and message are changed at the same time, then the communication will block. This is precisely what happened with modern housing estates such as Pruitt-Igoe by Yamasaki (1950) and Chandigarh by Le Corbusier (1950). Jencks (1987) suggested that architects and social interventionists need to study the popular house in all its variety in order to see how it signifies a different way of life for different taste of cultures and ethnic group, who share preferences of meaning, a life and continuity of their own, which is only lightly coloured by socio-economic background.

3.3 Cultural Needs

The cultural needs are not always can be accomplished, however not necessarily lead to the cultural disintegration as was discussed in section 3.2, because they are transformed into various forms as a strategy for survival. The following elaboration will discuss the nature of situation where the adaptation and transformations of architecture are required.

3.3.1 Basic Human Nature

3.3.1.1 Man and Society

According to Gibson (1979) and Lang (1987), the social environment is the domain of human and other animals. Human play a vital role in stimulating various activities through cultural contact that lead to a complex social relationship. Thus, social behavior is a basic ingredient of life for man. Human behavior cannot be understood without reference to its cultural system. Mackensen (1986) argues that the quality of life depend heavily on the quality of social relation in society. For people living in the city,
their evaluation of urban life seems to be affected more by their social relation than by their physical environment (Shihembetsa: 1995). Thus, the process of socialization is a core of tension and conflict but also its relieve all abound in man’s cultural contact. Consequently, the aims of socialization are the creation of a relatively autonomous, self-regulating and responsible individual (Einstad: 1981) that led to several tensions, including the process involves accomplishment of cultural strategies that tend to conflict one another. The point of focusing on socialization is based on premises that individual express and exercises the different and contradictory relationship in societies and it is the interplay of them that lead to the dynamic role of ideology in society.

Every society has worldview and ideology that generates a body of rules, cultural mission and cultural strategy to ensure some continuity and predictability in social life. There are rules governing distribution of basic resources like land, the division of labor and marriage. These rulers have another component, legitimised, considered right, and proper based on some principle. The problem is that individual and group tends to restrict these rules and seek further advantage.

The conflict between the social roles and position, which separate human beings from one another, is called as tension between ‘structure’ and ‘anti-structure’ (Turner 1974). These tensions contained and expressed in several traditional practices. Temporary anti-structural values are stated in rite of passage, which indicated the transition from childhood to adulthood, similarly expressed also in pilgrimages, while the more permanent anti-structure expression can be seen in certain mystical movements. The point about these practices is that they attempt to encompass these tensions within a larger framework of meaning, thus releasing some pressure. Moreover, the main source of this tension can be traced in the cultural ideology. However, this tension can never be resolved with finality.

The relevance; any, architectural object contained the tension of competing interest, and the structure of these interest will have to be ascertained before one can understand the preferences of the society. For example the interest of various group such clans, families, ethnic group, and other specific groups which sharing characteristic such as locality, or a specialization, may restrict access to resources or convert one resources into another such as prestige (see also cultural mission and its cultural manifestation).
3.3.1.2 Man and Nature

Although nature provides man’s need, but he cannot fully control its capricious state, therefore compelled to use his best ability to fulfill these essential needs. It is likely, that religious desires to stop the forces of nature will be powerful, especially where natural forces are more dangerous and easily change at sudden.

In the past, when the dwellings are frequently ravaged by natural calamity, it cause will tend to be associated with the location, orientation etc that remedy will seek in ritual, rules and taboos

Similarly, in order make adaptation with natural phenomena, there will be a tendency to naturalize cultural artifact, as shown in the phases, sequence of construction and type of building which frequently associated with human gestation or life cycle, or parts of the building that associated with parts of the human’s body or sacred animals.

Religious patron may play a part in critical phases of building construction such as selection of site, purifying a dwelling before inhabitant move in. Whatever the ultimate source of the faith of a man or a group may be, it is indisputable that it is sustained in this world by symbolic form and social arrangement (Geertz: 1968). It is true, even without architectural form in the modern terminology, the difference between interior and exterior, closed and open space, darkness and light, private and public space, all can be sensed psychologically and socially, however, this kind of sense is not fully physically formed. A simple hut that surrounded by clear empty ground created the sensation of built environment that also clarified social roles and relation. Thus, people know better whom they are and how they ought to behave when the arena is humanly designed rather than in nature’s raw stage (Tuan: 1979). In short, strong feeling may be held about certain spaces, which may be express society’s characteristic, either sacred, considered taboo, or require to be cleaned.

The relevance of these description is that architectural object contained the degree of consensus, symbolic form and social arrangement that relatively related man and nature.

3.3.1.3 Biological Urges

Men have instinctual urges to emotional and biological self-satisfaction. However, man has to control himself and develop rules to regulate biological urges in
keeping with the worldview of the society. These rules tend to cover a wide range of matters such as: incest taboo, forbidden reciprocity communication between a man with his daughters in law, reciprocity of gifts and services, elaborate ritual on the onset of puberty, elaborate kinship pattern, enormous exchange at every step of life cycle.

All these unique activities that related to the fulfillment of man's biological urges included the rules to control these urges needs spaces that in turn will affect the pattern of residence, location and settlement configuration. Finally, there is threshold of privacy in every society varying over time in accord to their culture and the nature of the environment

3.3.1.4 Cosmic and Natural Order

Religious beliefs are likely to continue to play a significant role in social life. It is universal in human society for a man to be conscious to the existence of metaphysic realm, of death and anxiously aware of its suddenness. Almost all societies elaborate ritual around after life, be it express in ancestor worship, the notion of a soul, spirit, ghost, or a shade. This awareness is not only a metaphysical urge to comprehend after life; it also charges man’s participation and responsibilities in social life with a certain degree of anxiety.

This is a predicament because the after life retains in mystery and death cannot be conquered even though the ways in which death can be understood. Implication of death and ultimate goals of life provided by religion involve a wide range of matters including the existence of another realm, God, the higher power, a notion of resolution the problems due to the human fallibility, as well as the basis of cultural identity.

Building and site arrangement particularly in traditional society often regarded as microcosms that represent the macrocosm in traditional society, while creativity is regarded as metaphysic by the modern society.

3.3.2 Cultural Needs and Preferences

3.3.2.1 Cultural Needs

The word need applied differently by cultural theorist as shown on the following description. Needs are those requirements that are always found when the
behavior of human being is analyzed irrespective of culture, ethnic, language, creed, sex or age. Needs do not depend on the value system of specific social structure, nor are conditioned by the natural environment in which community evolves or by its degree of technical and social development (Malinowsky: 1944, Mallmann: 1973).

Kamenetzky (1992) separated needs and desires, the former cannot be programmed or modified by the will of conscious mind, but desires can instead be modified, even suppressed by acts of will because they are the products of the interaction of the conscious mind with subconscious behavioral programs. Desires not only differ from one society to another and among individuals in the community, they also change within a given society as the technological alongside the cultural pattern that in particular society also in state of continuous change.

Max-Neef (1992) put forward that fundamental human needs are finite, few and classifiable and these needs are same in all cultures and in all historical periods. He stated that, what changes both over time and through cultures is the way or means by which the needs are satisfied. Further, he distinguished human needs from wants in that continuous failure to satisfy needs result in progressive and sometimes irreversible human malfunction, whereas unsatisfied wants lead to little worse than frustration.

Ware et al (1990) argued that needs consists of two components, which are absolute and relative needs and further stated that needs are different from wants, since wants are relatively subjective. A person may need something he does not want and want something he does not need (Ware et al: 1990 in Shihembetsa: 1995).

All description of need as mentioned above is categorized as biological or physical need in this study, and is believed that it also impinge on culture and together with social need embedded in cultural needs. Cultural need is determined by cultural ideologies and values, which on any given society are not static, since culture is dynamic, continuous changing with time and being modified in the process to suit with time and place. Within a society, the cultural needs of individual vary, because people do have different experiences of different environments. Even if the experiences of people are based on the same environment, people’s ways of looking at things is different. It is noteworthy that culture and cultural needs subject to change with experiences and exposure to other culture. The unfulfilled cultural needs, either social needs (Brown: 1922) or biological individual needs (Malinowsky: 1944) will lead to cultural disintegration. Cultural needs have a primary influence upon architecture, as put forward by Lawrence (1988),
that the design and use of the houses reflects certain cultural needs and ideas. Hence, houses are the material expression of cultural needs. Cultural needs are ordered sets of normative and meanings: they encompass moral and aesthetic principles, as well as encompass the existential being of people, the patterned process and actuality of their daily life and it’s surrounding, and the interpretation of ideology.

3.3.2.2 Cultural Preferences

Design can be seen as process of elimination among a set of generated alternatives where the generation and elimination process are based on the application of certain criteria, which may be explicit but are commonly implicit and unstated. So that, many alternatives are never considered at all, as it is being practically eliminated through major cultural constraints, which termed as preferences. Similarly, the style can also be defined as a system of consistent choices based on culture of particular ethnic group.

Thus, cultural preferences, which in this thesis associated to architectural style is closely related to culture. This concept is far from easy to define, but since nearly all theorist accept that definition culture, in some way is involves a group of people who have a set of values and beliefs which are learned and transmitted, which create a system of rules, habit and lead to a lifestyle. Accordingly, as put forward by Rapoport (1977) that cultural preference is a matter of choice in resources, time allocation, housing, leisure and preferences, which in general are reflecting the cultural ideology.

Thus, it can briefly state that preference is a certain specific choice, which constrained and affected by cultural ideology and cultural mission that in turn will determine the architectural style and form as a strategic cultural choice.

3.3.3 Cultural Based Architecture as Needs

This research attempts to elaborate the transformation of architecture in the context of cultural structure and historical context in which they were built and used. The meaning of architectural form can be achieved through examination of either social or physical structure of society, which not only affected the past but also still contains meaning for the generation today and the future.
Interaction and exchange among cultures, have changing them in a subtle way and creating a new synthesis with what existed before and allowing an extension with period in which to evolve and find new expression in response to interaction with the current of external culture. Cultural manifestation interacts, enrich and create new synthesis with existing culture and produce new architectural forms through transformation.

This is the concept which underlying the current architectural movements known as regionalism that refers to contemporary interpretation of architecture that based on local culture. Ozkan (1997) stated that and is not limited by scale, building types and technology. Regionalism does not necessary exclude any specific form of architecture such as modernism, rather it present another view of architecture that reject the idea of universalism and logo centrism and seek architectural significance through relating cultural need to aesthetic organization, technology and materials in a certain place and time. The changing culture has produced a protean architectural form as a response to the cultural needs (see section 3.3.1). As was mentioned in section 3.2.4, any architecture intervention, which is intended, as fulfillment of cultural needs of a society should be translated into the similar language that they used, otherwise it will be ill performed.

3.4 Architecture and Cultural Change

3.4.1 Cultural Change and Transformation

In the view of structuralism, the cultural changes are defined as a natural process due to the changes of structure and change of function of the social system within the society. Structure is a cultural pattern, which is used as a basis of measurement in a particular social system, while function is an implication of integration of a structure with another in a particular new system.

In language, transformation is a particular syntactic rule or basic pattern of words in sentences, which takes one string of syntactic categories or symbols and converts it into another string by process of addition, deletion or permutation specified by a set of transformational rules. The notion however can be extend to folk tales and myths dwelling or architecture propose that their diverse heterogeneity is really the
(Durkheim in Gouldner: 1962). This view described structures and process of cultural change as system of mutually dependent parts, each of which fulfils its function for the maintenance of the system. System are in perpetual motion, a state of dynamic equilibrium in which the parts or roles are continually readjusting to each other and to change in the subsystem of which they form new parts. Hence, a system always contains a drive toward achieving new states, a disposition to change.

The interest of this view is largely confined to an innate response of individual or society to external or internal forces.

3.4.2.1 Adaptation

Following the evolutionism view, adaptation is a process and mechanism that connect cultural system and universe. The process of adaptation unlikely success, unless through the achievement of it’s cultural mission, accordingly, the society mobilizing the resources and keeping on its cultural pattern in attempt to create the dynamic equilibrium.

Thus, according to Parson and Shills (1962) these condition cannot be strictly regarded as static, since the system have the high potential to stimulate and carry out the changes and adaptation, in keeping with the tendentious goals of cultural mission of the society.

Although adaptation is a crucial factor, but it is not sufficient in analysis the process of change and transformation since it not take into account the active role of the external factor, that in fact work perfectly together as will be shown throughout the thesis.

3.4.2.2 Accomplishment of Cultural Needs

As was described above, cultural needs is not only physical needs or biological needs as put forward by Malinowski (1944) and Mallmann (1973) but also desires (Kemenetsky: 1992), wants (Max-Neef: 1992) and social need as was stated by Radcliffe-Brown (1922). Cultural need is a sort of dynamic interaction of biological needs and materialized ideology.

Therefore. It is determined by cultural ideology, which accomplish through cultural missions that achieve by applied certain cultural strategies. Thus, cultural need
is also subject to change and transformation an attempt to perform adaptation for human survival.

3.4.3 Mechanism of Change through Exchanges

3.4.3.1 Internal Exchanges (Evolutionism)

The evolutionism theorist believed that the process of cultural change shows the orderliness and the innate tendency of every cultural pattern to undergo change.

This innate tendency also implicitly described in the view of other theorist such as Hegel’s dialectic either as away of thinking and image of the world. Dialectic approach offered a kind of evolution theory of the world in idealistic terms, which emphasizes the importance of mind and mental products rather than material world as implied in the social definition of the physical and material world. Dialectic approach is based on a dynamic conflict, which developed between what people were and what they intent to.

The resolution of this contradiction lay in dynamic change of an individual’s awareness in the broader context of society. Individual came to realize that ultimate fulfilment of their needs lies in the dynamic change and the expansion of the spirit and pattern of the society as a whole. Ritzer (1996) stated that ‘Individual in Hegel’s scheme evolve from an understanding of things to an understanding of self and to an understanding of their place in the larger scheme of things, to Hegel, process of evolution was occurring beyond the control of people and their activities’.

While, Marx’s ideas and ideologies express the goals and perception of men as they consciously interact with the world and with each other. Ideas and conception has no independence origin or causal force but arise only in conjunction with the activities. The insistence on creative practical consciousness mans essential characteristic have separate Marx historicism view of social change from a purely materialist doctrine.

The fusion and synthesis of thought and action by men change the pattern of society in two main ways; through productivity or work and through political activity or revolution. The revolution will temporarily abolish the contradiction between the class structures. Therefore, the social evolutions will cease to be political revolution only if class antagonism can be eliminated. Weber put forward the view that ideas are simply the reflection of material (especially economic) interest and it is the material interest,
which determines ideology. Rather than seeing ideas as simple reflection of economic factors, he saw them as autonomous forces capable of profoundly affecting the economic world; he was especially concerned with the impact of religious ideas on the economy.

Weber agrees with Marx that man is essentially, creative being, but he is creative in a special sense; not in his material production but in his creation of values, with every decision he makes, man affirms one set of values and denies another.

Nevertheless, decisions, in turn, which form the basis of behaviour, are explicable largely in terms of conception of the world, images of existence held by the actor. Values then are the product of freely chosen beliefs about the world and our place in it. Of course, men do not choose any set of beliefs, nor is their choice free from limitation. In fact, there are a number of factors, which influence a man’s choice.

Smith (1976) argued that cause of change depends in the final analysis on three analytically of factors which are: firstly, the constellation of material interest of the society. Secondly, ideology that embedded in the worldview and finally the ideal interest of a cultural group.

The evolutionism stated that change is channelling through the processes of differentiation, integration and increasing rationality. This is not to say that neo-evolutionist do not distinguish the external and internal cause of change. Whether the source of change is internal or external to a cultural pattern, it is much less important than its mode of response to any stimuli and its direction. Apter argued that non-western modernization differ from western version in sequence rather than in causes or direction (Apter: 1965 and 1968).

Evolutionism asserted that differentiation is a universal and continuous process. The structures of society are always becoming more specialized, their parts increasingly growing unlike each other. Groups, norms and institution are always becoming more diversified, and so there is more likelihood of conflict over goals and resources. Hence, the parts of the system are always in danger of becoming disintegrated, of producing tension and clashes. Conversely, the more strains and tensions in society, the more heterogeneous in values and interests does that the society become: and the more heterogeneous, the greater the likelihood of individual specialization. And so on, until we a state of atomization and dissolution is reached; or until the strains produce such a state of anomie that people panic and succumb to some religious or ideological movement which promises a better life through social unity
(Smith: 1976). Hence, as stated previously, that evolutionary analysis consists in an uneasy combination of equilibrium models and assumption of immanent growth.

Why some structure of culture underwent differentiated while the other not, has become a crucial question. According to the assumption of immanent growth, every structure possesses this capacity, while the history quite clearly contradicts the notion of equivalent capacities. They response to the argument by saying that culture which have in fact become differentiated, they argue, posses the capacity, while the rest incapable of differentiation from within, and it becomes necessary to appeal to some external source of change to overcome the deficiency.

Both weaknesses, over determination and explanatory inadequacy, spring from the same source, an insistence on the immanence of change to the pattern of culture undergoing it. Change is viewed as growth, interrupted perhaps, but always reaching forward and upward, transforms from the simple, rigid into the complex, and flexible. Nevertheless, as widely known, only certain kind of changes has followed this ideal pattern and that is mainly quantitative indices of change. In fact, much change results from the impact of the cause external to the culture undergoing it; and in certain circumstances the state of that cultural pattern is less important than the nature and channels of external impact. Accordingly, the distinctive institution and groups within the third world are today what they are, more because of the external impact of other neighboring institution and groups, than a result of some unseen, innate potentiality, as proposed by evolutionist.

The failure of evolutionism is its inability to take seriously the radically discontinuous processes and event sequences revealed in the historical record. Systematically neglected the significance of such intrusive events, the role of chance factors, relegates to the margin of theoretical interest the human response and initiative, and fails to grasp that the manner in which changes occur influences the resultant change. This last factor rules out the possibility of predicting, not merely the rate and intensity of changes, but also their resultant forms.

3.4.3.2 External Exchanges (Diffusionism)

Diffusion can be seen as a response to the innate internal source of change as propose by evolutionism. The term is defined as migration of cultural elements from one culture to another.
The empirical study of diffusion reveals that the process is not one of indiscriminate out migration element of the donor culture and accidental in migration element to the recipient culture but is directed by define forces and pressures on the side of donor culture and well determine resistance on the part of recipients (Smith: 1976). In fact, the change, either directed or not by the forces from the side of donor culture but any alien cultural elements hardly able to infiltrate into another culture unless readily accepted by the recipient culture. Diffusion between cultures above all does not simply mix or fuse unless accepted by recipient culture and modify them in much more complicated and dynamic way, lead to the hybrid form.

This view vaguely supported by Malinowski (1945) who implicitly stated that the impact of donor culture mission, influences and active agencies is not a mere fusion or mixing, but something oriented on different lines with define purposes. They are not quite integrated with each other and which therefore don’t act in any simple manner.

Diffusion cannot be studied at all in the fieldwork unless can be defined that elements undergoing transformation are not a loose cultural element but an organized systems.

The nature of cultural change is determined by factors and circumstances which cannot be assessed by the study of either culture alone or both of them. The clash and interplay of the two cultures always produce new things.

As in the case of adoption of colonial houses style, particularly by educated and christianized natives, who had trained in colonial manner, on the contrary, their house could never be like its origin but produce a new hybrid type.

Diffusionist believed that changes originate mainly outside the recipient culture, and that researcher duty is to locate the peculiar, if recurrent, channels through which a change exerts its influence on a particular recipient culture.

The reference of diffusionism is clearly evolutionism, just as classical evolutionism constituted reference point for classical diffusionism. Recent diffusion theories vary; however in the closeness of their ties with neo-evolutionism, and classification can be made according to the degree of proximity to neo-evolutionism and functionalism (Smith: 1976). The exchange process through diffusionism posses far greater relevance and attraction in the analysis of historical processes in the age of communication today than in earlier eras of more isolated culture and more fragmented world, as seen in the frequency and effects of war, trade fluctuation, terrorism, international monetary system changes in styles and fashion.
However, the failure of diffusionism as external exchange mechanism is easily spotted. The main drawbacks of diffusionism are; Firstly, it tend to assume that all change is qualitative and thus overlooks the role of quantitative changes of size, scale and frequency, secondly, they also tend to neglect the role of active 'selection' by individuals and groups as was detected by Malinowski. Thirdly, it fails to provide criteria for isolating the kinds of external historical event sequences, which are likely to produce significant change.

3.4.3.3 The Integrated Exchanges

Diffusionism has been criticized for treating culture too hermetically and above all neglected the role of environment either social or physical. It also tends to neglect the role of active selection by individual and individual. Thus, it strict to focus on external cultural exchange and not take into account the effect of internal cultural exchange and local environment in the process of change and transformation. On the contrary, the evolutionism asserted that internal differentiation is a cause and continuous process, and its entire theory of change is based on internal specialization, furthermore, it insist on immanence cause of change within pattern of culture. Thus, evolutionism tends to neglect the change result from impact of external cultural exchange as proposed by diffusionist. The integrated cultural exchange as proposed in this thesis attempt to show that process of cultural exchange is the main cause of transformation where external (diffusionism) and internal (evolutionism) cultural exchanges are actively involves either alone or simultaneously. The internal cultural exchanges is cause by the exchange of cultural elements within a particular culture undergoing the change (internal diffusionism), while the external cultural exchange is cause by the exchange of cultural elements of different culture (external evolutionism).

3.5 The Theory of Transformation Applied in the Study of Toba

3.5.1 Cultural Mission and Strategy

The Traditional society in many cases is obsessed by ideal life, which could only be achieved through the accomplishment of cultural mission. The cultural mission
are based on tradition that has been deeply socialized and significantly influenced the life style. Although external factors such as Christianity and Western education, or colonial architecture have deeply diffused into their culture, however, these usually unable eliminate the cultural ideology, which have clearly reflected in the ethnic identity. On the contrary, these external factors have been effectively used to enhance their traditional identity and transform their architectural style.

Cultural change and transformation is the manifestation of cultural strategy in attempt to accomplish the cultural missions, which among the members groups of Batak Toba (see Chapter 4) consists of attempting of; firstly, an effort to achieve prosperity, wealth hand richness (hamoraon). Secondly, is to produce a large number of offspring (hagabeon) and thirdly to become noble respectable and dignity (hasangapton). The cultural strategy in the missions generally determines the behavior pattern, which is used to concretize its cultural mission. The implication of these particular cultural strategy had produced the excessive pragmatism of the Batak Toba that in turn produced materialistic, arrogantly and individualistic behavior compare to the other ethnic group in the region as implied in the phrase” The Land hunger Toba”. These complexes of behavior crucially had encouraged the process of changes either socio-cultural as well as material. As put forward by Pelly (1994: 18) that ‘the tendency to migrate is one of the manifestations of obsession to accomplish the cultural mission in the framework of pragmatism.

3.5.1.1 Change as Manifestation of Cultural Mission

On the one hand, the Batak Toba in urban area have radically adapted to the process of modernization and exclusively accepted the changes of technology, material culture (architecture is regarded as one of the material culture) and modern education. On the other hand, they are very conservative in maintaining their traditional cultural values system, although the format has been transformed, in order to suit these values with the contemporary situation both can be seen as cultural strategy. Bruner (1974:24) put forward that ‘these conservativeness phenomena partly caused by the following reason: Firstly, Urbanized Batak Toba purposely has been maintained their tradition in order to enhanced the solidarity among the ethnic and Christian minority and subsequently increase their struggling power to face the very hard urban life. Secondly, Ideology of the urban Batak Toba, which is more persistent, have a close relationship
with the people in the Toba land, the relation that is deeply based on their worldview. Thirdly, The alternatives of change are not available for the Batak Toba so they are imposed to maintain tradition as the base of the moral system. In other word, tradition is postulated as the only way to keep the moral order in the society. Furthermore, Tradition is highly required to express their personal and cultural identity in line with their cultural missions, which in turn are used as an instrument for struggles to impose their existence in the hostile urban world.

3.5.1.2 Transformation of Cultural Values

As was previously mentioned that cultural mission directly manifested in architecture as a cultural strategy, where both subject to continuous change. However, the cultural ideology is relatively more resistance than cultural strategy, cultural preferences, mission and architecture. Architecture tends to transform due to its function as a mean of strategy to accomplish the mission. While, the cultural strategy is consistently modified in order to cope with the nature of living condition. The traditional cultural strategy reflected in the phrase ‘get more children and more land’ among the Toba encourage them to mobilize every resources to obtain children as many as possible and to acquired land as wide as possible. These cultural strategy is functioned as implementation of their cultural mission, which demanded the Batak Toba to be rich, lot of descendant, noble and full of dignity so that they can perform the grand expensive offering ceremonies in order to enhance the position of the death soul ancestor and their incoming status in the afterlife.

Although these adagios have been transformed a few times but the essence of its mission is retaining, which is formation of the higher social status.

The Transformation of these cultural values and strategies can be clearly seen among the younger generation in the end of 19th century. Most of them, particularly those who has been trained in missionaries school are readily accepted the change, which introduced by the colonial and rejected the agrarian traditional life style.
3.5.2 Transformation of Cultural Strategy

Since the Batak Toba have Christianized and educated in the middle of 20th century, they have appeared to be a more developed ethnic group in the region, who have the greater opportunity chances and acquired jobs outside agriculture. The missionaries drastically increase the number of population due to the medical improvement they carry out. The family of 10 children or more is very common; these children are required to cultivate the land. Land and children are the traditional instruments to accomplish the cultural mission, but too many children created a new problem since the fertile land to be exploited is very limited. The old traditional adagio ‘more children and more land’ as an instrument of cultural mission no longer conform to contemporary condition, as a consequence they have to substitute the old strategy and create a new paradigm, while the adagio is transformed to ‘more children for the best position in the government’.

3.5.2.1 Migration

The Migration of Toba is based on genealogical territorial expansion; they performed a new territory as a satellite of the greater Toba land domain, while children are the significant source of manpower to support these migration. Both the territorial and children are focused to form territorial hegemony called the kingship (harajaon). Dignity complex (hasangapon) stemming from kingship (harajaon) from where subsequently derived the obsession to be the number one. According to Kramer (1957), the dignity complex is a sort of psychological drives, which motivates the Batak Toba to migrate, in order to expand the existing territory (Bona Nipasogit) to the new territory (Bona Niranto). The dignity complex although have been justified by Christian, however its origin can be traced back to its source in original ideological of animism worldview, and totally does not have any relation with these new religion.

3.5.2.2 Land Ownership

The impact of colonial and missionaries strategy to enforce cultural transformation has significantly affected land ownership in the new territory.
Where the land is individually owned, can freely be sold and transferred, in contrast to the traditional land ownership, where all the land belong to the community (Purba et al: 1997). The individual ownership has encouraged the individual life and individual house, instead of communal house as it used to be.

These transformation of land ownership is mainly experienced by the younger generation whose father and all their ancestor, for the benefit of their offspring, have struggle to die to get more land, in order to accomplish their cultural mission, which are; richness; large descendant and full of dignity, in accordance with their worldview. They instead have been attempted to concretize by transform the traditional adagios ‘more children and more land’ to ‘more children and gain the good job’. Consequently, as previously stated, in the last two-decades, these younger generations are no longer interested, either in land or to live in rural area, even strongly avoid to work in agriculture sector. They migrate to the urban area, and get any available jobs, which are regarded, as more promising than cultivate the land, beside; living in their hometown is a kind of humiliation to the family that will decrease its social status.

3.5.2.3 Cosmology

The transformation of culture of the Toba are also affected their cosmology. The macro-cosmos that has a square shape (mandala) as was indicated by its four corners in four compass directions as was reflected in the square shape village and embedded in the micro-cosmos in line with the philosophy of totality (Tobing: 1977) are no longer employed in the new concept of cosmology.

3.5.2.4 The Settlement in the Hometown

Cultural mission of the Batak Toba has determined preferences and pattern of the settlement. One of the implications of the cultural mission, that the village is regarded as the manifestation of genealogical concept, which based on kinship and affinity relation in the territorial framework (Vergouwen: 1986). The migrant territorial is an expansion of macrocosm homeland and will be perpetually be part of it as microcosm. Both should be treated equally, either in reality or symbolically, based on that, their settlement and houses relatively more permanent compare to other ethnic settlement, consequently, they will refuse to transfer any of their land. Cultural mission
also affect job preferences, trading related job that mainly centralized in the city’s core was avoided since it incompatible with the mission, not until the mid of 20th century the Toba accepted these type of jobs. These attitudes have determined the settlement selection, which are urban fringe where the land cost is relatively cheaper instead of urban core.

3.5.2.5 The Settlement in Urban Area

Since colonial period, Malay sultanate refused the Christian Batak Toba (Cunningham: 1958; Langenberg: 1977) to migrant to their authority, until they lost the legitimization in the end of colonial period. In the beginning, the Toba bought the marshy land from Javanese or Malay in urban fringe such as Labuhan district, which gradually converted into the productive paddy field. Shortly, they domesticated the dogs, pigs and built churches, which effectively are used as instrument against their Muslim neighbors. They successfully have pushed the others Muslim ethnic and extended their territory. However, this strategy is put to end by Indonesian government.

As was expected by the missionaries and colonial, the Christian Batak Toba migrant has become the second largest ethnic group in Medan, their number have drastically increased from 1.07 percent in 1930 to 14.11 in 1981 (Pelly: 1994). Their settlement disperse and dominates a number of districts particularly Medan Timur, Medan Sunggal, Medan Johor, Medan Denai, Medan Area, where study area of the research situated.

3.5.3 Cultural Needs and Preferences

As a cultural strategy, there is a continuous change of job preferences among the Batak Tobas, they were doing their utmost to get more land and became the good farmer in pre-colonial period. Later on, as a consequence of the colonial and missionaries plot, they strongly pursued the western education.

Education is effectively treated as a means for social mobility to reach the better position (Castle: 1972), the parents readily sacrifices any available resources in order to provide the best affordable education for their children (Aritonang: 1988). They believed that education not only will directly increase a person dignity and nobility as one among the objectives of the cultural mission, but also will facilitate the effort to
obtain the better job, which in turn, improve the status of nobility (Tobing: 1957 in Purba et al: 1997). Preferences for education and job placement in the government bureaucracy, rather than territorial expansion, clearly describe the transformation of instruments of cultural missions. Achievement of education among the Batak Toba has became the guiding principle (Keunig: 1958) and golden plough (Bruner: 1961) in other word, education have directly affected the social status and can be used as a strategic leap to reach the higher target of cultural mission.

Western education among the Batak Toba was introduced by colonial in the mid of 19th century, since then their job’s preference changed from subsistent agriculture to clerical works, teachers and church related job. However, in the beginning of 20th century these jobs lost its attractiveness and once again, their job’s preferences changed for the position in government bureaucracy. The job preferences have undergone change for relatively the similar drives, which reflect in the cultural mission.

They realized that particular types of job for particular period are more efficient in fulfillment of cultural mission (Tobing: 1957 in Purba et al: 1997). By and large, the job preferences is closely correlated with contemporaries values accepted and recognized by the public in the broader context and subject to change with time.

3.5.4 Cultural Adaptation

3.5.4.1 Migrant Population Position

The Batak Toba is familiar with aristocracy environment upon which all the children are upbringing. The kingship and custom hold the authority upon the population (Castle: 1972, Langenberg: 1977).

The populations respect the local ruler and other formal institution, which is form a social background. The job preferences and religious association have to be conformed to the latter. Initially, the Batak Toba prefers manual work and agriculture, but because of education, progression brought by the collaboration of colonial and missionaries the choice of job preferences such as, civil servant, military educational staff and church becomes priority. Job preferences and migration pattern in turn determine the settlement selection. Furthermore, their religion has the crucial role in ethnic identity expression, where the moral of religion and ethnic status is integrated in the form of isomorphic (Nagata: 1982).
Religious associations are used to express ethnic identity and further to support ethnic existence. Ethnic identity is always reflected in either formal or informal communities, interrelationship or social activities (Pelly: 1994).

3.5.4.2 The Role of Host Population in the Process of Change

The degree of assimilation of the migrant in the host society cannot be explained by the inherent factors in the migrant’s culture, but should be explained by the nature of the host population (Skinner: 1960). However, this study proposes that both of these factors have the crucial roles as an integrated cultural exchange.

Batak Toba ethnical expression and cultural strategy in two large different Indonesian cities of Medan and Bandung which is very diverse in the context of urban sociology, demography, local culture and power structure, due to the differences between host population and migrant (Bruner: 1974). Where, ethnical persistence and cultural strategy are based on interaction among the communities; therefore, they focus on demarcation among the communities (Barth: 1969 in Pelly: 1994).

The proponent of the host population roles is neglecting the significant role of cultural mission of the migrant. In fact, cultural strategy as the method of adaptation of the migrant is not solely influenced by domination of host population but also by cultural mission of the migrant. Cultural mission as has been described highly probably determines job preferences, type of settlement, association characteristic and social community relation of the migrant including relation with the host population in the city context. Thus, adaptation strategy is not only determined by the attitude of the host population either to reject or to accept the migrant as put forward by Pelly (1995) but also by the cultural ideology of the migrant.

3.5.4.3 Religion and Ethnicity

The Batak Toba specific traditional custom, although does not always meet requirement and conform to the church dogma, but on the other hand it is justified in Christian theological sense. Pelly (1994) stated that they believed that Christ asked them to be the good Toba rather than virtuous Christian; in other word, Christian has fitted into their cultural ethnic framework. Consequently, Christianity has been used as weapon to fight better in the harsh modern world.
3.5.4.4 Secular Ethnic Association

The most important function of ethnic association is to provide a forum for secular activities in the context of ethnnical expression, particularly those activities, which cannot be accepted by the new religious association. However, the secular and religious association is fused together as far as possible to support the ethnic identity.

3.5.4.5 Solidarity

Socio-economic and natural setting of the Toba region had created an exclusive solidarity among the community members but somehow, the relative autonomy of the society and the village as well. The same setting also had produced many weak isolated small communities whose existence crucially depends on the solidarity of its members. The intense social integration had contributed to the development of a strong solidarity among the members of the traditional community.

The most obvious social integration was taking place at the community level on traditional village (huta), while the higher can be found on the clan level of the similar great grand father, in fact both of this level present as an overlapping, since the villager belong to the same clan and having the genealogy relationship. Fortified village had a dual functions, beside from shunning the enemy outside, it is also safely keeping the villager inside and facilitated the intensive physical integration, lead to the strong social integration and in turn increased the solidarity among the community members (Siahaan: 1985). These structures also conform to their employment as rice grower that required a group of strong social cohesion and organization system.

This solidarity has transformed in among the Toba in urban area in facing the common enemy, which is the harsh urban community.

Summary

So varied are the types of theory of change, that it will always be impossible and illegitimate to select a theory which are amenable for analysis. The argument here has concerned the importance of integrated cultural exchange in the historical record, not only of a sudden cataclysmic intrusion.
But of a broader and more lasting differentiation within a pattern of culture, which form the essential setting for analysis of human responses and innovations in the light of unique ideology. It is in this dialogue between, on the one hand, human synthesis and initiatives in the ever changing context of internal cultural exchange of evolutionism, on the other hand, the external cultural exchange result from external impact of diffusionism.

Bruner (1974) and Skinner (1960) respectively stressed the role of the host population and external cultural exchange approach, consequently, bear the drawback inherent in that theory, which tends to neglect the role of active selection by individual or specific group. On the contrary, Pelly (1994) emphasized on cultural mission, and basically used internal cultural exchange approach which based on evolution theory, this approach tend to neglect the role of diffusionism and unable to take seriously many radical discontinuities process and event sequences, as was reveal in integrated cultural exchange as propose in this thesis.

In addition, culture and cultural mission as postulated also subject to change, only more resistance compare to cultural strategy, however its implementation through cultural strategy is continuously undergoing transformation.

Both of these approaches have postulated that observed society and culture are in total isolation. On the contrary, this study applied an approach that regarded the culture are in inclusion where interaction among cultural elements in the broader context is likely to happen, hence, evolution and diffusion were work together in the spirit of structuralism.
CHAPTER FOUR
THE PAST CULTURE AND ARCHITECTURE OF BATAK TOBA

Introduction

The aim of this chapter is to elaborate on the outset of the Batak Toba culture with reference to the Toba land in order to study the Toba migrant society in urban areas. The main contention of the discussion is to trace the path of architectural transformation of the Toba house in the past until the spontaneous architecture of their contemporary houses in urban area at the present moment. The study will highlight the social concept of the society such as religion and life style, which is reflected in the Toba architecture. On the other hand, their social concept can be read through the house architecture.

Supposedly, architecture and village planning in vernacular society is merely discussed in terms of formal arrangement will be meaningless, however, in a number of instances village plan and building shape are morphologically identical but they are functionally widely apart.

The mystical qualities of totally cohesive vernacular communities lies partly in the summation of the symbolic values of the culture which are embodied in structure, architecture and ornamentation which is shaped from available resources. Elaboration of the symbolic nature of vernacular form is likely to be deceptive when observed from point of view of the society that created them. Yet it is difficult to base on internal information without the approach from anthropological and sociological disciplines (Fraser 1969). Understandably, the change of the society has led to the transformation of its material culture such as architectural style. However, it is interesting to note the changes of formal appearance of vernacular architecture during the last two century. That has been underwent radical transformation, but in some cases has return to its original form in spite of the continuous cultural change of society.
Elaboration of the past culture of Batak Toba is expected to give a clear picture and the background of the formal shape of its vernacular architecture. That will be used as a starting point of comparison between the vernacular and spontaneous architecture of Batak Toba in attempt to investigate the path, the direction, and the caused of its changes through times.

4.0 The Origin

Physically the population of Southeast Asia where Sumatera is one of the islands belongs to the two main phenotypes: the Australoid and the Mongoloid. The Australoid life style was one of hunting, fishing and food gathering, whereas Mongoloid were cultivator.

4.0.1 Australoid

The Australoid originating from Sunda plateau, who came before the glacial worm, as a direct evolutioned descendant of the first Indonesian man which called Pithecanthropus Erectus which exist around 1 000 BC. Pithecanthropus Erectus that was founded in the valley of Bengawan Solo river has transformed by evolution in hundred of years into Homo Soloensis. This human, in turn has evolutioned into the present physical form known as Australoid or Homo Wajakensis. The name has given since the fossil has been founded in district of Wajak. The Australoid, which predominantly colonialized islands of Melanesia, was called Austro-Melanesoid.

The Australoid migrated to the East, settled in Papua region and to the west, and settled in northern Sumatera, Malaysia and northern Vietnam. In Papua, the ancestor of Australoid settled on the Rivers mouth in the small groups, living by fishing, hunting, and gathering.

They lived in the settlements that consist of lean-to structure made of light materials. The lean-to has been placed in the caves or between the rocks and used only for a limited functions particularly for sleeping and protection, while cooking, living, playing and ritual fiesta normally take place in the open space (Koentjaraningrat: 1982).
4.0.2 Mongoloid

Broadly speaking, the Mongoloid people speak Austronesian language; reconstruction of their language and vocabulary gives the important indication of the lifestyle of the speaker. It appear that Mongoloid population, probably originating from a homeland in Southern China, which have moved Southward to displace an earlier Australoid population that have started to settle as early as 1000 BC. The Languages spoken in most of island of Southeast Asia, has formed as part of the world largest language family known in linguistic as Austronesian. Altogether, there were estimated 700-800 Austronesian languages spoken today. These has been classified by linguists in nearly over fifteen districts sub-group of Proto-Austronesian language, which probably existed by at least about 4000 BC. The evidence found in the field of linguistic, which confirmed by physical anthropology and archeology gave a picture of early migration through archipelago in the Neolithic Era (Belwood 1978 and 1985). Reconstruction of Proto-Austronesian language strongly pointed to Taiwan as their homeland, from Taiwan the speaker of Proto-Austronesian languages highly probably began to move to Philippines around 300 BC and thence into Western and Eastern Indonesia. The Colonization of Ocenia by Austronesian speaker only began some time after 2000 BC. According to the most recent estimates, the Malay Peninsula and Vietnam were reached in a movement back from the Western island of the Archipelago presumably after 1000 BC, and Madagascar was reached considerably around 400 AD.

4.1 The Past Culture of Batak Toba

4.1.1 The Batak Toba culture in general

The Batak Toba can be grouped into Mongoloid stock, who speak Proto Austronesian, the lifestyle described by their language and vocabulary indicated that speaker initially cultivating the colder climate species such as rice, millet and sugar cane. However, as they moved the South into a tropical zone, they began to cultivate taro, yams, and other tubers, breadfruit, bananas, coconuts and sago. These plants appear in ancestral Malayo-Polynesian languages but not in the Formosan language, which split off
at the early date to form a separate sub group within the Austronesian family. They have pigs and probably dogs, and chickens and they supplemented their agriculture activities with hunting, fishing and collecting shellfish.

They had tools made of wood, bones and shell and had mastered a number of fishing techniques as well as making of pottery and sailing of out rigger canoes (Pawley and Green: 1975; Blust: 1976; Bellwood: 1985). Many of these plants which became the most important cultigens in Polynesia-such as breadfruit, banana and taro-all have their wild distribution within Indonesia, and must have been introduced into the Pacific island in domesticated form by Austronesian settlers.

The Batak Toba occupied the mountainous high plateau area around lake Toba. Some researcher postulate that they are in splendid total isolation from foreign influence. However, this proposition is difficult to prove. They have a close relationship with coastal region, which is occupied by the Malay Muslim in the estuary of main rivers as Asahan and natural harbor such Sibolga. The Batak go to the coastal city to exchange their agriculture, farming and forest product with salt and domestic goods. Where they had get clothes that are more expensive than their own traditional weaving clothes of their own technology.

As it was widely known, the Toba are the warriors, who keep the deathly fighting among themselves, particularly among the villages, particularly in competition to expand their territory, the people are kidnapped and to be killed for the black magic. The defeated enemy is taken as prisoner who’s frequently sold as slave in the city port to be exported to the foreign countries.

Although stone, metal and wood had been used as equipment, it doesn’t necessarily indicate that they are in certain period of Stone Age or Iron Age. The horse is the only mean of land transportation. This is most suitable for the hilly area. They grow paddy (Oryza sativa) and cassava as the primary food produce, as supplementary the dogs, pigs and chickens were domesticated, moreover they fishing, hunting and collecting forest products. The canoes made of chiseled tree trunk are used for fishing, these canoes are considerable small for only two passengers, and these canoes are also used as water transportation to cross Lake Toba. Their real life basically are manifestation of the cultural missions, which among the Batak Toba consists of attempting of firstly an effort to achieve prosperity, wealth and richness by acquired more land (Hamoraon).
Secondly, to produce a large number of offspring to exploit the land (Hagabeon) and thirdly to become noble respectable and dignity (Hasangapon) in the present life so afford to conduct the ritual offering in attempting to increase the ancestors status in the afterlife where in return it will help his descendant in the living world. The cultural values generally determine their behavior pattern, which is used to concretize their cultural missions. The tendency to expand the territory is one of the manifestations of obsession to accomplish the cultural missions in the framework of pragmatism. Wealth (Hamoraon) can only obtained by increasing and expanding the land for agriculture that also means a territorial expansion. This expanded territorial cannot be exploited unless by having more children (Hagabeon) as human resources. The obtained wealth will be used as a means to get a respectable position (Hasangapon) in the human world and in the world of the death. All of these cultural mission accord with their belief, ritual and the concept of cosmos of the Batak Toba as will be described in the following sections.

4.1.2 The Batak Toba as the Rice Grower

The basis of food production of the Batak Toba is irrigated rice cultivation called Sawah. The availability of Sawah is one of the primary reasons to determine a new location for settlement. Sawah frequently became the object of dispute among the villages, and the villagers themselves. Sawah usually has a stable production, which is able to support a permanent settlement. Cultivation of sawah required a standard knowledge, which reflected the social organization of the cultivator due to the complicated process of cultivation. Cultivation is started from preparing the land, irrigation or controlling of water supply, menuring, weeding, harvesting, transporting, storing, drying, pounding and distributing. This process frequently required more people, and hardly carried out by a nuclear family, probably the number of the households in the traditional house is closely related to the peoples which required to cultivate certain area of paddy field that in return able to support their living. The land of irrigated paddy field (Sawah) belong to the founder of the village (Suhut), he hold the right to control the land while the other member of the villagers only hold the right to use. Each family has its own land and cultivates the land individually, however they help each other to work on the harder job. The number of heathens in the traditional house indicated that each household consume their product individually, since the cultivation is also carried out
separately, it highly probable that they also store it separately in the communal granary building called Sopo. They applied the similar procedure to build a traditional house. The system of food production significantly contributes to development of their life style, since they have a relatively more spare time between the cultivation periods.

4.1.3 Kinship

The Batak Toba ideas of ascent, allows person to conceptualize his or her society as a bounded unit by patrilineal descent. Patrilineal descendant means that children acquired their clan affiliation from their father, and a married woman takes the same legal identity and kinship obligation as their husbands. It assumed that close agnate group of sibling and of agnates who trace descent from a common grandfather (dongan sabutuna), wife giver and wife taker fit into the total view of Toba society. Descent is by no means the dominant organizational principle in Toba life: affinity principles are of equal if not greater importance. In contrast to the egalitarian nature of agnate relation, inequality of status characterizes affinity relation. boru families to whom one’s family has given woman in marriage (wife taker) and Hula-hula families from whom one’s family has received brides (wife giver) are of superior status. The woman is priceless for Toba, for her procreative potential to continue the life, which is determined her status in the society. The ideal marriage is between mother-brother-daughter and father-sister-son. Because of the worth of a woman cannot be reciprocated in any kind, so the debt of wife taker (boru) to the wife giver (his hula-hula) is perpetual. The latter therefore hold the upper hand in the relationship and are able to command the former a lifetime of work and honor, which even will pass to the future generation.

Ideally, agnate ties and affinity ties should remain strong through endless generation. The relationship position inherited by birth should be stronger than relationship by marriage, since the former regarded came from God.

4.1.4 Traditional Government

A political leader of an area is called Parbaringin, while his area geographically called bius, a kind of autonomous political region. The population of bius is not
necessarily has a close agnate or affinity relationship. Although the close relationship is more preferably, since it is believed that they descend from the same Debata mulajadi nabolon as the supreme God. Parbaringin has its own organization; where a supreme parbaringan lead a number of the heads (rajas) of the clan (marga). While a raja leads four smaller rajas, and each smaller raja lead another four smaller rajas and so on. Bius and Parbaringin are purely secular in the beginning but gradually mixed up with religious matters and dominate the religious believes.

4.1.5 Religious and Ritual System

4.1.5.1 Religious Concept

The various influences had affected the Batak through their contact with Hindu, Hindu-Buddhist or Hindu-Javanese traders who settled in the Southern Batak land, or the East and West coast near Barus city and the region of Tapanuli. These contacts have taken place many centuries ago and it is difficult to reconstruct just how close they were at the time and how deep the Hindu ideas were diffused and reworked to the Batak. Many elements of Batak religion go back to these contacts as can be seen from the names of gods, oracular methods, technical terms used in the language of religion (Poda) etc.

Voorheve (1958: 247) and Parkin (1978; 18) that’ many Indian Sanskrit words have entered the Batak languages, though not by a direct route but by way of a South Sumatera language’, which was an ancient Hindu kingdom. Stöhr, a theologian with a deep knowledge of ancient Indonesian religions, postulated on the possible Hindu origin of many old Toba religious concepts and have fused together with pre-Hindu of Toba religious system and so became Toba Batak concepts (Stöhr: 1965 and 1967).

The Bataks believe in the existence of one Supreme Being, the creator of the World, whom they named Debata Asiai. Since completing the work of creation, he has remained perfectly quiescent, having wholly committed the government to his three sons, Batara Guru, Sori Pada, and Mangala Bukan. Three of them are called Debata Na tolu, who do not, however, govern in person, but by proxies. They are supposed to station over different divisions express the departments over which their principals respectively preside. Which are, the upper world god (Debata diginjang) who govern the heaven, the
underworld god (*Debata ditoru*) who govern darkness and underworld, and the middle world god (*Debata ditonga*) who govern the human world. *Batara Guru* represent as the god of justice; *Sori Pada* as the god of mercy; and *Mangala Bulan* as the original source of evil, and the constant instigator to its commission.

These three gods seem originating from Hinduism trinity gods (*Trimurti*). While the *Debata Asias* could be the local god, in the later report the creator of the world is called *Debata Mulajadi Nabolon*, which confusingly regarded as a different god rather that a same god with to different name. *Mulajadi Nabolon* represents by *Debata idup* in physical world, which was very often depicted as a carved wooden effigy. Each protective roles of *Debata idup* was known by distinctive name such as *Pagar pareme*, *Pagar parorot* and *Pagar panutupi* (Hasibuan: 1982)

*Debata Mulajadi Nabolon* supposed to have the principal share in the management of human affairs, and to be able at any time to thwart the good intentions of his brethren. Consequently, in whatever circumstances the Toba may be placed, they are most anxious to secure this prime god's favor. Considering good in general, is the absence of evil, so it matters little to them how *Batara Guru* or *Sori Pada* may regard them, so long as they secure the will of *Mangala Bulan*. *Batara Guru* (as his name denotes) is the chief teacher of wisdom of men; and when he is supposed by *Sori Pada* to be dealing too harshly with them, the later expostulates with him on their behalf.

What all the gods so far mentioned have in common is that they play a minor role in ritual. They do not receive any sacrificial offerings from the faithful and no places of sacrifice are built for them. They are merely only called on in prayers (*Tonggo-tonggo*) for help and assistance.

All the beginning of the time there was only the sky with a great sea beneath it. In the sky lived the gods and the sea was the home of a mighty underworld dragon. The earth and human beings did not exist yet. All the surviving myth recorded that at the beginning of the creation stands the god *Debata Mulajadi Nabolon*. His origin remains uncertain. A rough translation of the name is the great of "beginning of becoming". The creation of everything that exists can be tracked back to him. Mulajadi the great lives in the upper world, this is usually thought of as divided into seven levels or stories. His three sons, *Batara Guru*, *Mangala Bulan* and *Sori Pada* were born from eggs laid by a hen fertilized by Mulajadi. Two swallows act as messengers and helpers to *Mulajadi* in his act of creation. Their functions are varying in the different versions of resources.
Mulajadi begets three daughters whom he gives as wives for his three sons. This marks the appearance of a motif that we shall come across again concerning the magician priest's magic wand: incest between brother and sister. Mankind is the result of the union of the three couples.

The origin of the Earth and of Mankind is connected mainly with the daughter of Batara Guru, named Siboru Deak Parujar (deak derived from Sanskrit word dyang means fairy, parujar means puberty while boru means female), who is the actual creator of the earth. She flees from her future husband, the ugly son of Mangala Bulan, and lets herself down on a spun thread from the sky to the middle world, which at that time is still just a watery waste. She refuses to go back but feels very unhappy in the watery waste. Out of compassion, Mulajadi sends his granddaughter a handful of earth so that she can find somewhere to live. Deak Parudjar is ordered to spread out this earth and thus the earth become broad and long. However, the goddess is not able to enjoy her rest for long. The earth has been spread out on the head of Naga (dragon) Padoha (derived from word Paduka mean majesty), the dragon of the underworld with horn like a buffalo lives in the water. He groaned under the weight and attempted to get rid of it by rolling around. The earth was softened by water and it had threatened to be utterly destroyed. With the help of Mulajadi and by her own cunning, Deak Parudjar was able to overcome the dragon. She thrusts a sword into the body of Naga Padoha up to the hilt and laid him in an iron block. Whenever Naga Padoha twists in the fetters an earthquake is occurred (Stöhr: 1967).

After the lizard-shaped (Bajonggir) son of Mangala Bulan, the husband of the gods intended for her, has taken another name and another form, Siboru Deak Parujar marries him. This marriage too, offends the marriage rules of the Toba, for he is her paternal uncles son, or her parallel cousin, a union strictly prohibited by all Batak as incestuous. Siboru Deak Parujar becomes the mother of twins of different sexes. When the twins have grown up, their divine parent returned to the upper world leaving the couple behind on the Earth. Mankind is the result of their union, again incestuous. The couple settles on the tip of a mountain (Pusuk Buhit), a volcano on the western shore of Lake Toba, and found the village of Sianjur Mulamula. The mythological ancestor of the Toba named Siraja Batak is one of their grandchildren. After the creation of the earth and mankind, the gods withdraw to the upper world. The underworld dragon Naga Padoha is under control, and mankind spreads over the Earth. Besides the fabled deity
Naga Padoha, which they represent with horn like a buffalo supporting the earth. They also imagine that every village has a spirit of a woman who died childbirth (Boru Namora). A snake goddess of water called Boru Saniang Naga, recognized as a daughter of Sori Pada. Martua Sombaon or guardian deities is superintending its interests and overruling its affairs. Lastly, is Rombu sipo. The Batak Toba attempt to secure the favor of those deities by propitiatory sacrifices. Besides this particular interference in the public affairs of the community, they suppose that every individual is constantly attended and watched over by a number of genies, that both good and evil called Begus and Saitans. These are chiefly the souls of their departed ancestors, whom they look upon as possessing extensive power over the living, either to protect or to afflict them. Embedded by this various orders of divinities and subordinate spirits, the superstitious Batak are held in such perpetual dread. That it is not without the most harassing apprehensions they leave their villages, even for a journey of no considerable distance or apparent danger.

In their apprehension, indeed, dangers prove nonetheless real for being invisible: the path to others may seem open, clear, and safe: but their imagination, ever crowded with Begus and Satan, pictures to them a demon at every turn. Every village has its own Boru Namora and Rombu Sipo, protecting its interests and avenging its injuries, besides a host of ghosts and spirits wandering in its vicinity. If the human or their ancestors would insult to any of them, they might avenge.

The ruler of the under world such the primeval sea, is the serpent dragon Naga Padoha. This dragon has existed before the beginning and it seems to be the opponent of Mulajadi. As ruler of the under world Naga Padoha also regarded as the astrological god Pane Na Bolon we shall encounter this serpent dragon again in the oracular tradition of the magician priests. Mangala Bulan is also interchangeably with Naga Padoha and Pane Nabolon so probably the same person.

However, living near the humans is other god whose relationship to the gods of the upper world and the underworld dragon Naga Padoha is not quite clear.
The snake shaped goddess Boru Saniang Naga is a water goodness that is home in all rivers, in the sea and in lake Toba.

She is variably regarded as the sister of Batara Guru or the daughter of Sori Pada (Warneck: 1977), but since living in the water, she is closer to Naga Padaha. She is called on for help and protection by fishermen, working in the fields, launching a new boat, or making a journey by boat across Lake Toba. Being a water goddess, she also dwells in springs. These are ritually purified by the presentation of offerings. The serpent dragon-shaped god (Pane Nabolon) who is so important in oracles also lives in the underworld.

An earth god to whom sacrifices are brought and whom stands at the head of the list of deities invoked in prayers is a fertility god (Boraspati Nitano), which has already appeared in mythology as the son Mangala Bulan. He is imagined to have the form of a lizard (Bajonggir). Sacrifices are made to him at the beginning of work in the fields. At every intrusion into the earth, sacrifices are made to pacify him and to beg his blessing. As Boraspati Nihuta he protects the village and as Boraspati Nirumah protects the house.

This means that in venerating the lizard, three different nature deities are being venerated. Boraspati Nitano is represented on the facades of traditional houses, on the doors of rice granaries and on various objects belonging to magician-priests.

4.1.5.2 The Begus and Tondies

The Batak Tobas call themselves as veneration of begu (Sipelebegu). They regard that begu and tondi intensively influence their life more than those primary gods. The begus has a similar society and life style as human but in the opposite way, if the men carry out their activities in the daylight, the begus during the night, they also walk up side-down. The begus lives in a large rock, an old three, in a peak of mountain, and in the deep valley, and in the isolated area inaccessible by human. The begus could be the soul of the death, or natural objects, that could be either harmful or friendly. In the religious world of the Batak Toba the gods, cosmogony and the creation of mankind are far less significant than the complex concepts connected with the term tondi. It is very difficult to find an adequate translation for tondi.
Consideration of the possible translations of *tondi* and *begu* has led to the conclusion that probably the most useful translations of the terms are 'life-soul' and 'death-soul'. Since they are the least explicit and leave room for all aspects of the two concept of soul. A Dutch theologian (Leertouwer: 1977) has recently reexamined the concept of soul of the Toba Batak, basing his work on an intensive study of concepts of soul in Oceania (Fischer: 1965). In his dissertation, he states that 'what Stöhr calls the "life-soul" would be called in Fischer's terminology the "dream ego" or "spiritual double"' (Leertouwer: 1977: 48). Fischer himself defines the two terms as follows: "dream ego' and 'spiritual double' are the same thing seen from person himself and as an optical phenomenon for others". (Fischer: 1965). Since Fischer regarded these two terms as merely two aspects of the same idea, it seems more justified to use Stöhr's terminology of life and death soul. Over the last hundred years numerous works on the history of religion have dealt with the Batak idea of the soul. The ideas expressed here are mostly based on theories that are valid or current in this period (Leertouwer: 1977). All the works agree that to the Batak "life-soul" and "death-soul" are in the forefront of religious thought and that the world of the gods is largely insignificant in religious practice. Since the *tondi*, is the essence of religious thinking and the center of daily life, the Batak have been told to have "*tondi cult" (Stöhr: 1965 and 1977).

A person receives his "life-soul" (*tondi*) from *Mulajadi Nabolon* even before he is born. The destiny of the individual *tondi* is decided by the *tondi* itself before birth. Various myths are woven around manner in which, the *tondi* chooses its destinies from *Mulajadi*. What significant is that the *tondi* itself is responsible for its destiny. Warneck recorded two particularly expressive myths in his major work on Batak religion. Both are concerned with the choice of destiny: "God presents him with all kinds of things to choose from. If the *tondi* asks for ripe pepper, then the person whom he animates will be a poor fellow; if he asks for flowers, then he will live only a short time; if he asks for a hen, the person will be restless; rags indicate poverty, an old mat, lack of fame; a gold piece, wealth; plate, spear, medicine pot indicate that he will become a great chief or understand magic arts".

*Mulajadi Nabolon* grows a mighty tree called *Jambu Barus* in the upper world, the concept that is perhaps originated from Islam. God has written on all its leaves. On one's leaf is written number of children, on others wealth or respect and so on.

Contemptible life, poverty, wretchedness are also written on the leaves. Whatever is
written on the leaf chosen by him will be his destiny in the middle world". (Warneck: 1909).

Among the Toba there are sometimes widely diverging versions of where the *tondi* dwells and how many *tondi* there are. According to the Toba a person has seven *tondi* (Leertouwer: 1977). However, the number can be reduced to two, since five of them are merely aspects of the second. In another interpretation, these represent character traits of the Tondi's owner (Warneck: 1909). The second interpretation, Tondi is found in the placenta of the newborn baby. Accordingly, the afterbirth is given special attention. After the birth of a child the placenta called *angkang-anggi* is usually buried under the house is and is regarded as the person's guardian spirit. All Batak regards the loss of *tondi* as a signifying of a great danger for "body and soul". Tondi can be separated from their owners through inattentiveness, or because of black magic by a magician-priest with evil intentions. In other words, the *Tondi* is not permanently tied to the body, it can also live for a time outside the body. The *tondi* leaves the body when one's sleep. The final loss of the *tondi* inevitably results in death. There are varieties of ideas about where exactly in the body the Tondi dwells. It is present in certain parts of the body, especially in the blood, the liver, the head and the heart. Sweat too is described as rich in *tondi*. It is believed that illness is connected with the absence or struck of *tondi*, and the bringing back of the *tondi* or solace is a main method of healing. Respectively for instance to provide gifts, called offering (*Upa*) to the *tondi*, it will make the *tondi* willingly stay inside the body. These gifts may consist of a knife, a cymbal, a particular piece of clothing, a water buffalo, a small holy place, or food particularly chicken or its eggs. Chicken (*Manuk patia raja*) and eggs probably related to the myth on the origin of human, the gifts are carefully cared for in order to keep the Tondi satisfied. It must be emphasized that only the magician-priests are in a position to interpret and influence people's *tondi* correctly. If their endeavor is unsuccessful, then clearly the *tondi* have chosen another destiny for itself.

When somebody died, it is thought that Tondi vanishes and the "death soul" (*begu*) is set free. There is a fair amount of confusion about this point too. For a long time, discussions of Batak religion are dominated by the question whether Tondi become *begu* on death. Whether *begu* is just an aspect of *tondi*, which carries on living in the land of the dead, while the rest of Tondi dissolves into nothingness. It is certain, however, that after the death of any human being only the *begu* continues to exist.
People believe that the begus continues to live near their previous dwelling and has the possibility of contacting the bereavement and descendants. This can be made apparently in both positive and negative ways. The bad dreams, particular misfortune and such like may be sign that the begu of an ancestor is not satisfied with the behavior of its descendants. Any individual can attempt to pacify an enraged begu by means of food and drink offerings and prayers. If this does not work, a magician-priest or a medium must be called in to establish the responsibility of the begu and to define what it is desired from its descendants. In the land of the dead, Batak Toba recognizes a hierarchy. A begu of a dead man has the same social status as he was when alive. In other words, the begu of rich, powerful and influential people also has a prominent place in the land of the dead, if their descendants contributed to this by sacrifices.

The death of a Batak affects not only his close family but also the clan (Marga) and the other inhabitants of the village. Death at a great age, and particularly with numerous progeny is no less painful to the Batak. However, as a rule, that an old person who has achieved those goals in life (Hasangapon, Hagabem and Hamoraun) is necessary to be happy his life after death. Ideally, he has provided his male descendants, who will continue his marga and above all to ensure that he is buried in accordance with the traditional custom (Adat) and ancestor-worship after his death. He has also through the marriages of his daughters further strengthened the ties of kinship with the wife-takers (Boru) or has entered a new boru-nilahula relationship. A sudden death at a young age, death in childbirth or a similar "bad death" is difficult to accept, although the idea that the Tondi has chosen its own inevitable destiny is in a way a consoling one. The death souls of those who have died suddenly or at early age are regarded as dangerous. The begu of a woman who has died in childbirth is called Boru Namora and she is among the most feared of spirits of the death (Winkler: 1925). At death, the life-soul (tondi) leaves the human body and the death-soul (Begu) is set free.

The cult of the dead starts immediately after the death and may continue over many months and even years. Its main purpose is to offer farewell to the deceased and to make it clear to the begu that it is free and its world is quite different now. Attention is also paid to the legal problems connected with death; all relatives with a claim to be part of the estate of the deceased come together to settle the questions of inheritance. If the deceased was rich, or even the Raja of the village, negotiations over the division of the estate and the succession to the office can be drawn out over a long period.
The man without a male descendant was regarded as a very great misfortune. Since the *begu* of a man who died childless could only occupy a very sub-ordinate position in land of the dead and its *begu* could be very harmful.

4.1.5.3 *Sumangot*

* Begu could advance to a higher status of a *Sumangot*, if a rich male descendant raises it to that status by means of a great ceremony and substantial sacrifices. A vast number of pigs, cattle or even buffaloes are slaughtered, and the drums and cymbals orchestra provided to accompany to this great festivals (*Horja*), which could last up to seven days (Warneck: 1909 Stöhr: 1965). This feast festival is also the occasion of the formation of a new kinship group, descended from the particular ancestor (*Saompu*) thus to be honored. The bones of the ancestor were exhumed for the ceremony and reburied at the end of it. On the one hand, the ancestor *sumangot* is needed to venerate and required offering. On the other hand, they will help to increase the welfare of their descendant by the affluent harvest, excessive and growing of cattle, a large number of children and disaster prevention. On the contrary, many children will die, the harvest fail, the cattle is sick and disappeared that will exacerbate by calamity if the descendant doesn't pay attention to their ancestor's *sumangot*. The guidance from the medicine man (*Datu*) will be asked, in order to decide the type of ritual, which should be taken for preventing the disaster. The medicine man through their magical vision will explain the cause of disaster whether caused by the angry spirit (*Sumangot Natarrimas*), evil *begu* or by *tondi* of the bad living creature. The great festival (*Horja godang* or *Turun*) will be provided for the burial and reburial of the honorable elder of large descendants (*Ompu parsadaan*). That very often will take for days and even months. His death soul will be highly respected as he was during his life in the middle world. The whole lineage members are invited to attend the festival, include close relatives (*Tondong*) or the respected leader of other families (*Bonaniari Nanialap*). The participants readily come even from distance places. A number of buffaloes together with other life stock are slaughtered as an offering in such occasion. The excessive food also provided, since the food is not only a source of energy for the living creature but more than that it is regarded as a source of energy for *tondi* so has a sacred and mystical function. The music orchestral of drums (*Gondang*) and cymbals (*Ogung*) dances (*Tor-tor*) lamentation
(Anchung) is played sometime accompanied by the firing gun. The wife giver (hula-hula) of the deceased hand over a traditional shawl (Ullos) and the wife taker (Bro) hand over the knife (Piso). Everyone will receive the part of the slaughtered animal (Jambar) in return. The slaughtered buffalo should be sliced in a certain way and each part gives a particular name (see section 4.3.5.6 the role of food and dining in ritual process), which imply the rank of its sacramental. Everyone receives his equal Jambar according to his position in the custom. The intensity of ceremony in the festival will affect the position of sumanggot. The greater ceremony will increase the position of a sumanggot of the deceased to the higher level in the death land. For that purpose, the sacred ceremony can be repeated, where the bones of the honorable ancestor will be exhumed and reburied again in order to increase its status in the death land.

4.1.5.4 Sombaon

The next higher level up from the sumanggot is the sombaon, who is numerically much fewer than the sumanggot, since it is the spirit of important ancestors who had lived ten to twelve generations earlier. They often live in uncanny places and people dedicated offerings to them if they went near its abodes. To raise a sumanggot to a level of sombaon necessarily require another great festival called santira. This santira often lasting several months, the inhabitants of the whole districts come together. Animals sacrificing and the reburying of the ancestor's bones also played a central part in the ceremony (Warnecke: 1909).

The highest level of sombaon is close to position of gods. The sombaon lives in the sacred places such as the peak of the mountain, in the virgin tropical forest or in the large rivers. The sombaon's blessing is frequently asked in order to bring the harmony in to the human world.

The festival advances the status of death-soul into sombaon carries out in a particular permanent place such as market or communal space in the middle of the town. A day before the festival a sacred pole (Borotan) is stuck in the ground for tying the animal that will be slaughtered as sacrifice in the next day. A medicine man (Datu) or a priest (Parbaringin) will lead the ceremony. On the days of festival, the Medicine man brings with him ceremonial rice (Parhue santi-santi) as offering and presents a dance to worship the soul of the Earth (Begu Nitano), gods, and honorable ancestor. The
decorated buffalo put forward and tied in a pole, the _datu_ retreat and each group of the clan and guest alternately performs dance according to their rank as announced.

All the participants are present and readily joint in the festival in order to fulfill a similar goal (Hasahatan), in a similar rhythm of orchestra and instructed by single drum (_Gondang sisada_) showing a total unity and harmony. When the participants finish the dance, once again, the Medicine man takes over the arena and being with him the offering cake (_Sagusagu sitompion_), which is covered by a shawl and tied with the customary clothe on his back. This offering is dedicated to honorable ancestor called _sisombaon_. When the Medicine man finished the offering ceremony, the slaughters (_Panamboli_) come forward to ask his permission. By the formal permission of the Medicine man, the animal is stabbed and its blood is collected in a container that will be used as the cooking sauce (see section 4.3 5.6 the sacred food). When the animal died due to drying up of its blood, it is sliced into parts (_Jambar_) and distributed among the participants according to their rank. Some part of the slaughtered animal particularly heart, and kidney will be cooked and spare as an offering. At the end of the festival, the slaughtered pole is only allowed to push by the wife taker (_Boru_), subsequently the wife taker collects the donation (_Margogo_) from the participants. Dining together ends the festival.

The relation between the living men and their death ancestor are characterized by a sense of closeness. The house of the dead and the living may even be found side by side within the boundaries of the village itself. Barbier (1983) suggests that Toba tombs were sometimes placed in the middle of villages: as a number of graves sites have shifted, this is now apparent only in a very few cases. It is possibly true only of the most important tombs.

The tombs are called a place of bones (_Parholian_). The Toba, formerly constructed a more elaborate miniature houses of wood for some graves, this structure called Joro. These miniature houses built on piles had a tiny ladder leading up to the upper part and inside this house installed a miniature hearth. This joro takes the shape of a boat representing the death soul traveling to the land of the death accompanied by chicken (_Manuk-manuk_) which were supposed to protect the soul on its journey.

The dead soul place in the after life on the land of the death is very important. However, The dead souls were also supposed to take up residence in the grave house (_Joro_) or in the scaffolding rack (_Para-para or Sibaso Nabolon_) inside house of the
living. The rack hanging into the high ceiling decorated with leaves and traditional sacred cloth, tight with the rattan ropes in the middle of the raga-raga.

The variety of reasons to ask the blessing of the sombaon is numerous. The sombaon can be asked to help the infertility family, especially when the childless couples are very large among its descendant. Where they are hopelessly expected an offspring. A medicine man or a medium woman called Sibaso can also led this ceremony. For this purpose, an infertile woman (Boru Naholi) is suggested to perform a ceremony called reaching up the sacred rack of ancestor's death soul (Manampe Ragaraga). In this case, the infertile woman is required to perform dances to encircle the sacred scaffolding rack (Para-para) by offering the cake that is covered with a traditional shawl and tied on her back. While she performs the ritual dances, she is splashed with lemon (Citrus hystrix) juice and it is also very often the animal to be slaughtered as an offering to the sombaon. The climax of this ceremony is to shake the scaffolding rack of the death soul (ManghunatalRagaraga) where the sombaon lives. The infertile couples should reach the rattan ropes of the rack, while asking the blessing of the dignified dead soul ancestors (Sombaon). The ceremony is finalized by giving the food (Upa-upa) to the childless couples.

4.1.5.5 Sahala

Fischer (1965) described sahala and tondi as two different aspects but have a close relationship, sahala is closer to the live soul, while tondi is regarded as similar with Manu in Melanesia believes. According to Warneck (1909) sahala is a particular attribute of tondi, while to Vergouven (1933) regarded sahala as a particular force or energy of tondi. Those perspectives have the similarity, all regarded that sahala have a close relationship with tondi. Tondi transforms into begu on the death of person and the condition of the begu closely reflected by the former status of tondi in the middle world. The status of begu can be advanced into sumangot and further into the highest status called sombaon.

If analogy is applied, the status of tondi can also be advanced into the higher position called sahala and to the highest status called Tua. However, there is a good sahala and an evil sahala. The existence of sahala is reflected in the ability to gain the prosperity in life, brave, charisma all of these implied the present of sahala, which is
enforced by the ancestor’s begu (Sahala Habeguan). The wealth and richness implied the present of sahala hamoraon, while leadership and kingship implied the present of sahala harajaon etc.

Datu and Parbaringan are among the persons, who have a tua lead to possession of the supernatural power. A possessor sahala is naturally respected by the society. The possessor sahala can be used it to protect a clan descendant, close family and the people who have weak Tondi. That is the reason why the ceremonies, the festivals and offering parties always beg the tondi to stay on in its place in the human body or to be back if it has gone. Communication with Gods, begu and sombaon perform by the medicine man (Datus) or king priest (Parbaringin). The Tondi can be influenced by the evil begus, lead to the poverty (Napogos), misery (Nadangol); infertility (Naholi), or permanent sickness; this will affect the tondi around him and the community as a whole. Giving object, to the people who ask for it, can transfer sahala. The process of transfer conducted in a ceremony similar to the one performed to venerate sombaon. The person who has excessive sahala can pass it over to another person of less sahala by giving a valuable object (Dondon tua) such as a piece of land. The receiver will obtain the luck alongside the gift without reducing the Sahala of the giver. There is another valuable gift that similar to dondon tua called sampe tua, which is given to the occupier or owner of the new house, hoping the luck and happiness will always present in the house. This gift is given on the first visit to the new house, that implies the purification or sanctification of the place, the gift normally consist of small item such as traditional shawl (Ullos) or knives (Piso). The people who are regarded as misfortune or misery will not be allowed participate in sanctification event such as the widow and childless couple since they will bring the bad luck.

As it is briefly mentioned above, tondi is not permanently tied to the human body. The tondi is able to live outside the body usually when someone fall asleep. The Tondi will wander as well as meet and communicate with other creatures, which is reflected in dreams. The Tondi can be asked to mediate the premonition and advice through dream (Marmanonang Nipina). The premonition is required particularly before carrying out the opening and clearing the forest for agriculture or choosing a matrimonial mate and other crucial activities. What one’s has to do is to isolate oneself from the rest of the member of the household and sleep on one’s own mat, wearing particular clothes.

The sacred rice, part of magical trees and magical objects should be put under one’s
pillow and the rites (Tonggo-tonggo) should perform. He needs to ask the blessing of his honorable ancestor and gods and begu and giving the reasonable advice that suit for one’s tondi through the dream. Hoping, nobody will disturb his sleep at sudden otherwise his Tondi will not join his body on time and the evil begu will put his tondi in custody that will harm his soul and in turn his body.

The great fear also will cause a tondi leaves the body even while someone in full consciousness cause the personal disharmony and mental imbalance lead to sickness even death. Therefore, it is necessary to keep tondi in peaceful harmony and to keep the tondi firm inside the body. When the tondi left the body the ritual to call back, the tondi (Mangari-ari tondi) should be performed. Where the sacred food, normally hot rice and chicken’s egg is offered to the missing tondi by feeding the person who lost his or her tondi. The ritual could be accompanied by musical drum. The blessing of the ancestor and the gods are also asked in the ritual.

A ritual to call the tondi back can be conducted by burning the old knife. The glowing burning knife is put on the water inside a container produces the hissing sound. The rite is spelt during the hissing sound of the burning knife until it is cold. The burning object and the container is moved alongside the body of the sick person at the same time with the hissing sound and the spell. Another ritual required to keep a tondi stays firmly inside its place (Padiruma Tondi) is by splashing the yellow rice onto a person who is going to travel or who has just returned back from a journey.

4.1.5.6 The Role of Food and Dining in Ritual

Food and dining has an important role in Toba religious life, food contains energy required by tondi as well as by physical body. A ceremony and ritual are always accompanied by dining. The rice and meat for sacred events should be purified by rites and spells (Dihathom). These foods are called (Nahatinabean). Moreover, the slaughtered sacred buffalo should be sliced in a particular way into particular portion called jambar and each portion has its own name (Namargota). This meat should be cooked in its own blood; otherwise, it is regarded as ordinary meat.

A buffalo that is sliced down into portions called namargota are named as should distribute to follows:
Table 4.1: Slice of sacrificed buffalo and its portion

<table>
<thead>
<tr>
<th>No</th>
<th>Portion of slice</th>
<th>Distributed to</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Tail (Ithur)</td>
<td>Initiator of festival (Sihur)</td>
</tr>
<tr>
<td>2</td>
<td>Head (Ulur)</td>
<td>The wife givers (Hulahaui)</td>
</tr>
<tr>
<td>3</td>
<td>Rib (Somba-somba)</td>
<td>The wife givers of the wife giver</td>
</tr>
<tr>
<td>4</td>
<td>Upper neck (Runghang)</td>
<td>Descendant and wife taker (Bori)</td>
</tr>
<tr>
<td>5</td>
<td>Lower neck (Pamamboli)</td>
<td>The agnate (Samipa)</td>
</tr>
<tr>
<td>6</td>
<td>Upper leg (Sof)</td>
<td>The head of the region (Raja Nihuta)</td>
</tr>
<tr>
<td>7</td>
<td>Lower leg (Talur)</td>
<td>The closest agnate (Dongam sabutatu)</td>
</tr>
<tr>
<td>8</td>
<td>Bowels leg (Ranor)</td>
<td>The cook in the festival</td>
</tr>
<tr>
<td>9</td>
<td>The common meat (Santuk Niput)</td>
<td>The Villager as a donation (Ujak Niampang)</td>
</tr>
<tr>
<td>10</td>
<td>Chest bones (Pangaranagan)</td>
<td>The chief of the village</td>
</tr>
<tr>
<td>11</td>
<td>Back bones (Hau Tanggurangan)</td>
<td>The male helpers (Upa parhabas)</td>
</tr>
<tr>
<td>12</td>
<td>Waist (Gointing)</td>
<td>The drummer (Pargoni)</td>
</tr>
<tr>
<td>13</td>
<td>Throat (Asa-asa)</td>
<td>The flute player (Parsarune)</td>
</tr>
<tr>
<td>14</td>
<td>Leg bones (Botohom)</td>
<td>The cymbal player (Pandoadi)</td>
</tr>
<tr>
<td>15</td>
<td>Foot (Pat)</td>
<td>The traditional violin player (Pangkesshi)</td>
</tr>
<tr>
<td>16</td>
<td>Upper part of chest bones (Tuktuk)</td>
<td>The medicine man who tell the good day (Siyutur Atri)</td>
</tr>
<tr>
<td>17</td>
<td>Shoulder blade bones (Serap)</td>
<td>The descendant the village founder of (Sipungkur Huta)</td>
</tr>
</tbody>
</table>

Source: Field survey 1998

The rigid portion of this tribute and its distribution among affinity reflect the pattern of Toba belief and its relation to food and offering. Appropriate slice of offering buffalo should be given to the correct person and the correct rank, otherwise his tondi is not satisfied and uneasy due receiving the incorrect portion of the offering food. Meat (Juhur) should be provided for the wife giver on his visit, while wife taker is fish (Dengke). The large and fat fish implies the prosperity, so to consume it will lead to long life and happiness. Fish can also be served as offering in the first day to grow paddy in the field, finding the grazing pasture, celebrate the moment when the paddy start to produce grains, harvest, even when a man visit his fiancé for the first time, also when his father came to deliver the wedding gift. In this case, fish is cooked in juice of lime (Asom), saffron (Hunik) and other spicies. The bride is also asked to consume fish (Dengke) on her wedding day. The fresh water fish also will be brought by a mother for her married daughter on her pregnancy and perform the dining ritual (Upa-upa) to keep a tondi. Feeding the visitor is the normal custom either in the daily life in ritual, in festival or in ceremony. The food served at the present of the guest is a symbolical mean to obtain the blessing of gods and begus. It can be sacred food (Namargocar) or not, either consumed in situ or taken home as jambur. Beside as an expressing of honor to the guest, hoping their tondi is satisfied calm and firm in its place and in turn will lead to the happiness of the host's tondi, the begu as well as the gods. The food can also functioned as a symbolical stamp in an agreement; the agreed parties should be dined together after the parties having the consensus.
The food has a power to bring the harmony back whenever it broken by any means. Any fighting can be terminated by bringing food and dining together, the offender is punished by bringing food to the insulted person. The Ceremonial dining activities are always conducted in most sacred space. If the ritual is taken place inside a house it should be performed in the middle of a house (Tonga Nijabu) on the clean mat (Lage Natiar) and using a good plate (Pinggan Sitio Sora). Feeding by hand (Manulangi) is a way to feed a person whose tondi has been disturbed. It can be a person who managed to escape from a great danger, or even a person who is in a happy mood simply to make tondi stronger. The ritual offering dedicated to the tondi is very often accompanied by feeding by hand (Manulangi). A younger person could feed the honorable older man by his bare-hand. Hoping the older person’s sahala will disperse to his surrounding particularly to his close relatives, on the contrary it can also be done to the younger man by the older person of the higher rank. Feeding by hand is not limited to the living man but can also applied to the objects such wood sculpture (Debata idup) represents the high God (Debata Mulajadi Nabolon), which is regarded as a manifestation of the high god (Debata Mulajadi Nabolon). That particular veneration normally is carried out by the infertile married couple, asking for a child, or it can be done to the wood sculpture (Porsili) which represented the sick man who seeking for healing or even applied to the bones of the death ancestor on reburial ceremony.

4.1.5.7 Talk, Rites and Spell

A Talk, rites and spell has a very significant role in the religious life of Toba, since the rites is able to summon gods and begus either good or evil. Consequently those begus respectively could bring with them the luck and disaster. Talk, rites, spell and dining have a close relationship and they are always performed together. The spell (Sapala) which perform by a man of a great sahala can be focused on a man, lead to his infertility or permanent sickness, the effect of this spell can continue to his incoming descendants. Supernatural power will not effective unless complemented with rites. All the sacred events require talk and rites for perfection. The talk is also regularly practiced in any situation particularly in the dialog form where every participant should be given a chance to talk consecutively according to his or her rank in affinities network, this talk can take many hours or even days.
4.1.5.8 Purification

The man should be continually purified in order to keep his tondi clean, health and strong. The infertile woman who is regarded as unclean is purified by splashing the juice of lime all over her body in a ceremony. Followed by shake (Manampe Ragaraga or Manghumal Ragaraga) the scaffolding rack in the upper part of kitchen in center the house (see also section 4.1.5.4). The participants should be purified before joining the sacred ceremony by bathing with ingredient (Pangir) that consists of limejuice mixed with seasoning grass, flowers, coconut milk and white of egg for symbolic purpose. An offender of moral ethic also has to bath (Manguras) with the similar participants and they should be purified before joining the sacred ceremony by bathing with in order to eliminate their sin. This custom is probably originated from Hindu tradition.

4.1.5.9 Parbaringin and Datu

Parbaringin sometimes called Pandita is a political leader of an area, which is geographically called bius, a kind of autonomous political region. The population of bius is not necessarily has a close agnate or affinity relationship, since it is believed that they are descended from the same ancestor which is Debata Mulajadi Nabolon; However, the close relationship is more preferably Parbaringin has its own organization. A supreme parbaringin leads a number of the heads of clan (raja) and a raja leads four smaller rajas and each smaller raja leads another four more smaller rajas and so on. The great periodic festival where the whole population of this political region involved also called Bius. In the beginning parbaringin and bius were purely secular but gradually mixed up with religious matters and dominate the religious events, which asking for the blessing of gods and sombaon, for instance when the harvest fail. Although the Parbaringin is not practicing medicine man (Datu), but as a secular leader, he has to symbolically lead a religious ceremony frequently, as a consequence he is regarded to possess the religious magical supernatural power and turn into king-priest. The Parbaringin has a specific personal appearance, such as not smoking, letting his hair grows, wearing the twig of Hariara or Baringin tree (Ficus Benyamina) on their head (Parsanggul Baringin or Sijungjang Baringin) and possessing a very high self- control. Parbaringin has an unlimited authority over the people and the region.
Datu is a medicine man or priest who leads the religious ceremonial festival, ritual magical, medical practices, fortuneteller, exorcising etc. The priests are required as the deities presiding over villages and men are supposed to manifest their approbation or disapprobation by remarkable appearances in various objects. The principal qualifications for the office of the priesthood consist in knowledge of the appropriate articles used in sacrifices, and the suitable times for offering them, together with an adequate skill in signs and omens. There is generally one priest in every village. Priest is selected from amongst those who are best acquainted with sacred books (Pustaha) and superstitions. Since the ability to read is mostly confined to the families of the chiefs. It frequently happens that the office of raja and priest are united in the hand of the same person so called king priest. He expounds all their religious books, and according to his interpretation, a day is chosen as favorable to their object. The villager will not engage in any undertaking however trifling, nor make the smallest alteration in their domestic economy, without first consulting with him.

4.1.5.10 Supplication and Sacrifices

When the Toba in the full enjoyment of health, prosperity, and peace, their Gods are wholly neglected and no offerings of gratitude will be provided, since having nothing to ask from them. It is only when entering on some hazardous situation, threatened with war; a long train of misfortunes, suffering from severe trouble, that they ask the blessing of their ancestors, and offer sacrifices to their gods.

Therefore, in any of the circumstances mentioned above, and particularly the latter, the Toba applies to the medicine man to learn the cause and the remedy of his sorrows. He takes with him a hen and a bucket of rice as a present. Having opened the fowl, the Datu is immediately selected, from the great variety of distinct intimations, which it gives to his enlightened mind, a prescription precisely adapted to the circumstances of his dejected applicant. His affliction, he is commonly told, is a visitation from one of the begu for the misconduct of some of his ancestors, and he must make a feast in honor of his father or grandfather, and performs his intercession.

The Medicine man then discovers from his sacred books the proper creature to be killed on the occasion, which is generally a buffalo, kid, pig, or fowl, according to the circumstances of the individual supplicant. Every requisite is being provided and the day
is fixed, the supplicant calls together with his friends and relatives, who feast and dance with him for a few days according to the trouble, but occasionally three successive days and nights. On the third day, the ritual dancing is carried out, where one of the company in a trance. The *begu* and *sombaon* of his departed ancestor has entered into him, attracted by the sound of the cymbals from the adjacent mountains and sacral places in vicinities He subsequently falls down fainted and apparently almost senseless. When recovering, he seems to be no longer himself, but possessed by his deceased ancestors, who come to meet them and join in his ritual. The company then present him with such fare as which the person who has given the ritual, addressing the spirit of the departed, informs him of the particular troubles which have induced them to call him. Concludes by request that if these troubles have been sent by either the gods or the demons, he would interfere for their removal. The possessed man then returns such an answer as that will be best pleasure for his host, or it will be most likely to prove prophetic, and becoming again apparently, insensible, soon recovers himself. Supplication may be regarded as an act of religious worship, addressed to the deities through a meditation to their ancestors. This, however, is not the only way in which the gods may be approached. Supplications may be preferred immediately to make offerings to any of them separately, or collectively, without the assistance of the Priest, care is being taken that everything is done according to the directions given in their religious books.

The only religious ceremony of universal interest, and in which the entire village unites, is that celebrating the eve of commencing hostilities. The day proper for this solemnity having been fixed by the medicine man, a temporary shed is erected in the midst of the village, where all the inhabitants assemble. In the middle of this shed, the Medicine man spreads a sacral green traditional shawl. In the center of which are fastened two pieces magical cords of two feet long, having a knob of wax at one of their ends intended to represent a human head. These cords are called *Rombu Siporhas*, they are considered as the representatives of the two hostile parties. On the other end of the cords are beads, depicted of the different members of each community; the upper ones of the chiefs, the under of the warriors etc. After feasting and dancing accompanied by the cymbals for some time, the Medicine man takes in his hands on the magical cords in the presence of all the people. He invokes the wrath of the gods and of their ancestors upon their enemies. He drops the cords afterward. The medicine man discovers by translating
the position and peculiar appearance of the cords, what may be expected as the result of an attack at present, if it is found favorable, they immediately will commence operations.

4.1.5.11 The Cult of the Death

For the Toba a death is not only an individual misfortune for a small nuclear family but for all the members of the various kinship groups. The burial, ancestor worship and reburial of bones are ceremonies through which they can give combined expression of their loss. At the same time, these social ceremonies serve to strengthen the reciprocal obligations and dependencies of the three kinship groups (*Dorang sabutuha, Hulahula and Boru*).

News of the death of a relative, neighbor etc quickly travels around the neighborhood. All the people affected by the death pour into the village where the deceased lived to take part in the lamentation (*Andung*) of the dead. The death ritual can last up to seven days or more for wealth families during which all the participants are looked after at the expense of the bereaved.

The deceased person has to be measured before burial. This measurement is not just to obtain the precise coffin and the grave but also to prevent its *begu* to grow enormous and become a malignant called *begu murmur* (Warneck: 1909). During the burial ceremony, an animal is slaughtered each day and the flesh is sacrificed to the *begu*, otherwise the *begu* of the newly death person does not obtain entry to the circle of the respectable dead. The offering meat is shared among the relatives and villagers and the bones of the slaughtered animal placed on the grave when it is filled in. The poles on which the coffin was carried are stuck into the foot of the grave and on them is hung the cooking pots in which the funeral meal is cooked. The wealthy dead had their personal jewelry put into the grave with them, and their burial places could be marked with roughly carved sculptures in stone or wood. Song of lament (*Andung*) accompanies all stages of a burial. For a few days food and drink offerings are brought to the grave for the *begu* of the newly death man, which is thought to remain there until the process of decomposition ceased. Thereafter, people no longer bothered about the burial place.

The procedure of the burial and the treatment of the corpse depend on social status and family membership of the deceased. The procedure can be consists of
determining the type of coffin and the location of the grave, the extent and duration of the ceremonies.

Earth burial is customary among the Toba. In the past, the coffin was made from a tree trunk, which the more foresighted Toba would arrange to have made while they were still alive. The ready-made coffin is stored by the house under the eaves or on the open area of the rice granary (Sopo), until the day it is needed. In the past, it was customary for the Toba to keep the coffin with the body of an honorable man as a raja for example on the gallery of the house (Bonggarbonggar). Alternatively, it can be placed on the open area of the rice granary until the process of decomposition was completed. Burial in mats was mainly used for those Toba who could not afford a massive tree trunk carved coffin (Winkler: 1925).

The first burial is in a suspended woven mat and second burial after a few years is in stone sarcophagus (figure 4.9) or a stone urn in ossuaries, finally the remains are kept in the family house, in some cases the ashes of the death are sent on a soul-boat to the land of the dead. The Batak have dealt with the dead in the past days in some instances still do so today in these ways.

In the past, mask dances were often performed during the funeral ceremonies. Masks appeared at the burial of honorable persons. Usually there were two masks, one representing a man and the other a woman, which were accompanied by a hornbill (Onggangonggang) or a horse's head mask (Hodahoda). It is lack of information concerning the cultural and religious origins of these mask dances. The masked dancers make their appearance during the lamentation and perform their dances in front of the deceased's house to drums accompaniment. They carry roughly shaped wooden hands with moveable fingers. The mask-wearers then escort the coffin to the cemetery where they finally take off their masks and lay them on the grave. Presumably, they were to keep away evil spirits and to accompany the death-soul of the deceased on its way to the land of the dead.

The large masks of the Toba are made from a tree trunk and pulled over the head of the dancer. Historical photographs often show a colorful confusion of masks and costumes originating from a variety of Batak groups, which suggests that by that time (in most cases in the 1930s) these dances were already assumed as "folk" characteristics. However, the lamentation, mask dances and burial did not mark the end of the cult of the dead.
A second dead ceremony follows at least for those who are held in honor by their descendants and whose family has the necessary financial mean to undertake the reburial of the ancestor's bones. This usually takes place after one or more generation. This form of ancestor veneration is still practiced by the Toba today. In a ceremony lasting several days the bones of the particularly honored ancestor and those of these descendants are exhumed, cleaned, mourned and finally laid to rest again in bone houses.

Formerly large stone sarcophagi and round stone urns also served as grave houses. But these stone containers were not used throughout the Toba region, only on the Samosir peninsula and the area immediately around Lake Toba.

It is difficult to know how old this custom is. Attempts of scholars since the 1930s to relate this regional use of stones sarcophagi to a presumption thoroughly megalith culture of Toba seem not very convincing, when the evidence on which the assumption is based is examined more closely.

The large blocks of stone used for these stone sarcophagi, called the bones container (Parholian), were broken from the cliffs and hollowed out, provided with a lid which could consist of one or more parts.

A female figure is usually seated on the lid holding a bowl in her hands. The lower part of the sarcophagi is carved at the front with the massive head of a mythological creature, with its tail hanging down at the back, and it is therefore thought of as Lion (Singasinga). Probably it is presentation of Mangala Bulan, the god of underworld in whose body the bones of the ancestor found their last resting-place.

The sarcophagus could even stand on large paws (Stöhr et al: 1981). Below the open mouth of the creature and under its protection stands a male figure possibly representing the male primeval ancestor of the clan. In this case, the woman on the lid is probably the female half of the primeval parents.

Stone urns, found in the immediate vicinity of the sarcophagus and possibly made at the same time, can sometimes be as tall as a man and are occasionally decorated with a squatting figure in stone on the round lid.

More common than these stone sarcophagi called Joro were made of the little wooden houses built in the style of the traditional house that could contain the bones of one or several ancestors.
4.1.6 Religious and Magical objects

4.1.6.1 The Batak Magic Wand

The Batak’s magic wand (*Tunggal Panahuan*) cut from a special kind of hard wood (*Hayu Tunggalaun*). The stick has a length of about 1.70-m and 5cm in diameter; figures of human beings and animals are often artistically carved in a row above each other. The wand ends in an iron point, with which it is driven into the ground during ceremonies. The iron is said to be made by people (*Lingga Payung*) from all points of the traditional compass and coming from the four princess, seven times forged and seven times melted and made into a deadly iron.

The topmost figure bears as a rule a helmet; in a little cavity of the head, the dreadful magic broth (*Pupuk*) is deposited, and round the head, red, white, and black threads are wound diagonally. On this three-colored turban is stuck a plume of human hair, horsehair, or cock’s feathers.

On most wands, seven figures of human beings are seen, also the figures of a snake and of a buffalo. As one knows, the number ‘seven’ plays an important part in Toba religion. According to the Toba, every human being possesses seven souls. The Toba origin of the Toba’s magic wand is generally recognized by the Bataks. Although the country near the legendary mountain peak Pusuk Buhit in the island is accepted as the place where the first sacred sticks came from, the magic wand is found in the entire region. The usage of the magic wand is varied. The magic wand is mystically made from the thorny three (*Hayu Dapdap*). The Three has been swallowed a vigorous incestuous twin of different sex together with a dog, a serpent, a buffalo, and a number of wizard, so at least conform seven souls. This wand is implanted at a consecrated place; there are some reasons to suppose that formerly this custom existed among the Bataks. It is believed that (*Tunggal Panahuan*) was originally a symbol of the demon of initiation, which swallowed up the initiates. At the same time, it was the mystic body of the *totemistic* forefather, with whom his descendants must remain in touch. Such wands are already depicted on the bronze drums of Dongson. The *tunggal panahuan* is probably similar with the pendant of the Australian *Nurtunjia* and *Wananga*, *Totemistic* poles with feathers and human hair at the initiation, the young men must embrace them. The wand is used for several functions some of them are selected as follows.
Firstly, Sometimes it is necessary that the rain shall be conjured, for example on a feast, during the cultivation of the soil, for a journey, and such-like events. If rain has to be conjured by means of the magic wand, the stick should be wrapped up in a white cloth. Round the top of the stick, a sweet smelling plant (Banebane) should be wounded. The figures of the stick should be rubbed with the yolk and white of a hen's egg and certain traditional cake (Itak Sigurguron) should be offered to eat. While cake is offered to the wand, the offering is addressed to the female begu of the stick. Rain shall not fall before the feast is over, the agricultural work shall be finished, the journey made, etc. During this action, no formulae need be said. At the end, the wand must be held upside down, 'the legs against the rain', by which the rain will take to flight.

Secondly, It is used for rainmaking; the stick gets a bush of red flowers and wraps from top to bottom in strips of red material. Salt, ginger, and fish are given to the wand and it is addressed to the male begu of the stick. Then it is plunged into water from the sacred spring, dwelling place of honored spirits and in which a special kind of cut stone is laid. When the stick is moistened in this way, it is going to rain. It can be used for causing disease called Sanggapati Nabolon.

Thirdly, for consultation in matters of governing when a raja wants to talk over matters of great importance relating to the governing of the country, he must sacrifice first to the magic wand. The sacrifice shall consist of a special kind of bananas, a bunch of jack fruit which grown upside down (Pisang Sisungsangduri and Sibodak). The stick is addressed as 'Sangkar Pangururan'. The raja goes to his meeting, leaning on the wand. The meeting will then be a peaceful one. In the same way, the stick is used as support when a proposal of marriage to a girl is made. A sacrifice of betel (Burangir) is made. The stick is decorated with a string of beads and wrapped in a special textural clothes (Abit Ragidup) while on the eyes of the images on the stick are stuck the fiery red pips of the shrub (Pandia). In this case, the stick is called the waving reed (Sisanggar Meoleol).

Fourthly, ceremony on waging war before going to battle, sacrifices are made to the wand consisting of fresh palm wine, fish, salt, ginger, and roasted meat. The stick is afterwards entirely wrapped in red, white, and black stripes of clothe and it is addressed as the god of war (Guru Mangantar Porang). During the battle, the commander holds the stick, leans on it, and holds it in front of the attacking enemy to cause fright.
Fifthly, causing of diseases and death, for this aim, the stick can only be used together with dreadful magic broth \((\text{Sibiaksa})\) that obtains in the following way. An enemy taken prisoner in war or a kidnapped kid is killed, cut to pieces, roasted in iron pots, adding several herbs by a medicine man \((\text{Pangulu balang})\). The substance is kept in bottles; pots and stone barrels \((\text{Guiguri})\) or a horn of buffalo \((\text{Sahan or Naga Marsarang})\) and a great magical effect is ascribed to it. Sickness and destruction, or causing of bad luck in general cannot be done unless the assistance of this magic broth. The magic broth that supposed to contain the soul of the dead, can also brings good luck to its owner and wards off ominous powers, being bound to the owner's will, submitted to his power and altogether subservient to him. Sacrifices are regularly made to the magic broth. The required sacrifice consists of a dog with spots like a tiger, a red cock whose spurs have just come, seven roasted little fishes, seven little red flowers, seven traditional cakes, a fish pasty, a roasted fowl, a bottle of palm wine, a calabash, a cucumber, a stalk of sugarcane, and a ripe banana. All these thing are sacrificed, that is to say offered as food to the stick and its magic broth. While this sacrifice is brought, the ill-omened wishes are uttered. If, for example, one wishes an enemy's sickness or death, the stick is addressed as, the little poisonous serpent \((\text{Sidari Mangambat, Siuper Mangalele})\) that averts. The spells to destroy are spoken: To cause a thief to be ill or to make him die, related with a track he has left behind. When the track of a thief has been discovered, some earth of the track is taken and wrapped in a leaf of a three \((\text{Lanting plant})\). This packet is brought home and put in the \text{sibiaksa} pot, uttering the wish that the thief may fall ill or even die.

Sixthly, the warding off \((\text{Mandudi})\) the bad omen and the obtaining of happiness and bliss should accord to the medicine man regulations. The qualifications of medicine men are summarized in a secret name formula, which reflected their function. A Medicine man who mastered the magical formula and prayer is called \text{Sitorop Utituan}, who mastered the auspicious day called \text{Sigodang Botobotoan}, who can read the sign and forecast of the future called \text{Siparjahajha dhibir}, he who mastered the sacred book called \text{Parpustaha Ditolonan}, and \text{Sibaso} who established contact with the spirit of the dead, he who carves sacred statue and magic wand is called \text{Datu Pangggana}, who practice exorcism is called \text{Datu Porsili} and \text{Datu Pandudu}, who knew the entire secret of the sacred staves and musical custom.
If anyone wants to raise these secret powers, several preparations will have to be made. First, the magic figure is drawn on the ground in yellow, white, and black flour close to the entrance of the house, where the mandulu is to be held by the Medicine man (Datu). The magic equilateral figure (Bindu matoga) is drawn on the earth. Bindu Matoga is probably derived from the Hindu Mandala. The sides of this magic figure are 1 meter long. In the center of the drawing is put an axe and a fowl's egg. Point 5 is directed to the East (Habinsaran). The line joining the points 5, 6, and 7 must be parallel to the front of the dwelling of the man, where the ritual takes place. An elevated altar (Langgatan) is erected near to point 1.

To the altar is tied a reddish brown dog, a cock, a spade, a rake, a plough, a yoke, a comb, and weaving tools. The Medicine man arranges dishes on a banana leaf on the altar. The dishes are consist of rice, fowl's eggs, sugar-cane, roasted paddy, kneaded cakes, cucumber, roasted fish, boiled fish, fresh palm wine, a red and a white cocks, boiled in its blood and cut into small pieces and lime juice, and then a basket of paddy on which a fragrant plant (Bane bane) are scattered. When all these ingredients have been exhibited, they begin to play the musical instruments.

The datu rubs the magic wand with a raw egg and pushes it before point 1 into the ground. Beforehand, the white, black, and yellow flour with which the bindu matoga was made is kept in readiness. This black, white, and yellow flour is put in a basket and by holding this basket; the medicine man begins to perform a dance, using secret language then so-called giant's tongue (Pangaraksaon). He invokes the highest deity, the tutelary spirit of the soil and the crops (Boraspati Nitano), the serpents of the holy places (Naganaga Somhaon), the female water spirit of boru santangnaga. Then he calls upon the lightning of the eight points of the compass and slowly walks around the bindu matoga. The Medicine man takes the magic wand and takes his stand on the seventh point. He begins to hum and to sing. He pretends to give birth to the wand, to feed it with rice finally chews the rice himself. He carries it on his back and on in his lap, and he caresses it as a mother to her baby. The laments are sung on these occasions slightly differ. Everyone should be able to improvise the laments, with the intention that happiness should be obtained, bad luck warded off. Then the Medicine man shoves a piece of reed (Arung) across his fingers. Thereupon he cuts off the head of the dog at one stroke, after which he bites an ear from its head and offers it to all the figures of the magic stick.
Then he kills the red cock, the head of which he likewise offers to the wand. He pretends to feed the stick with all the dishes on the altar. After the sacrifice, the medicine man drags the dog and the cock over the lines on the ground, until the bindu matoga is quite wiped off. Then the dog and the cock are given to the host. Finally, the medicine man drags the scaffolding altar with all the things on it to the entrance of the village. The host may take back from there everything he wishes for himself. The same bindu matoga figure may be used for causing ill luck (Manurungi) to an adversary. This black magic is only used at night, towards midnight. All sorts of similar rites take place, stated invocations are made likewise and mysterious formulae pronounced.

4.1.6.2 The Jointed Doll (Sigalegale)

A man who dies without a male descendant is regarded as a very great misfortune, since his begu could only occupy a limbo or a subordinate position in the land of the dead. The effectiveness of the performance, the lamentation and burial ceremony for him in accordance is put in question. In the all-important area of ancestor worship, it even meant that the deceased would never be able to rise to the higher ranks of Sumangot or even Sombaen. Similarly, it is considered a great misfortune if all the sons have died before their father. In order to perform the burial in accordance with the custom it is permissible for the Toba to substitute a son with jointed doll (Sigalegale), to be dressed to represent a predeceased or imaginary son. It is believed that the practice originated in the mid of 19th century in the region of Balige (Tichelman: 1950). The Doll is moved by an operator pulling strings which are passed through the body, by means of these strings the figure can turn or nod its head, stick out and even execute dance movements with its arms and hands. Sometime it has moistened eyeballs of moss inside its head to shed tears.

4.1.6.3 Ritual Calendar (Parhalaan)

Ritual calendar is an instrument of a medicine man. It consists of twelve horizontal lines representing the months of the year. This crossed by thirty perpendicular lines dividing each month into so many days. The combinations of lines are producing in all three hundred and sixty small squares, reflecting the days in their year.
In this square table are also drawn four diagonal lines, on which are painted hieroglyphics marks, being representations of two constellations, the Scorpion (*Bentang Hala*) and Pleiades, of which the former is considered the most ominous. *Parhalaan* may be derived from Hindu word *kala* (time) or it may be from local word *hala* (scorpion). The scorpion covers four days, one covers the head, one covers the tail and two cover the body. Those days covers by its body are considered fortunate, while the other is unlucky so no new engagement can be successfully carried out. Besides this ritual calendar, the medicine man is furnished with two 1,2 meter long sticks (named *Tondung Bujur* and *Tondung Ranggas*) of a very black hard wood. The head of which is cut to represent beast’s face and every part of them engraved with significant marks. To complete these instruments there is a magical book (*Ati Siporhas*) and a cord (*Rombu Siporhas*). The former wills determine the best time to attack the enemy, and by the latter measures the comparative strength of the two parties. It will not be sufficient without the verses in the interpretation of an egg, a dog, or a pig that bring by the client.

The medicine man must be acquainted with more than one hundred different omens exhibited by the inside of fowls. He must also repeat readily from memory the various forms of prayer (see also section 4.3.5.10).

4.1.6.4 Amulet and Mascot

As it was described in the preceding part, objects as well as living creatures possessed either evil or good *begu*. By the help of a medicine man, this *begu* can be governed and it (*Homitan*) can be used at free will for one’s own goods by keeping it at hand. This *homitan* can be an animal or a peculiar shape object such as an unnatural growing bamboo, a piece of stone of unnatural shape, a piece of cloth, a tree bark, a beautiful rare plate, or a pet animal. The objects should be kept and regarded as a sacred mascot, if a fortune coincided with it’s obtaining. The communities also have *homitan* whom dwells scaffolding rack (*Ragaraga*), inside the house for ceremony (*Ruma Pasanitan*) and a magic wand (*Tunggal Punaluan*). It can be taken shape in a corpse of a young boy who is murdered by pouring the boiling lead into his mouth on a ceremony; his subdued *begu* is used for the welfare of the community.
4.1.6.5 *Singasinga* and *Gajah Dompak*

It is probably of Hindu origin since the Lion (*Singa*) is not a local indigenous animal. The beast is reflected in the ornament appears in sarcophagus and traditional house. This engraving could save guard against flood, earthquake, and fire. It is also intended as a repellent against harms caused by invisible being. In certain areas, it was called staring Elephant (*Gajah dompak*) due to its resemblance to the head of elephant.

*Singasinga* or *gajah dompak* is a mythic creature, whose form is a synthesis of several creatures namely elephant, buffalo and human head in distortion composition. Some *singasinga* clearly has identifiable legs beside the face. Its form varies in each location. However, it has the similar appearances, which are the lengthened face, the round bulging red impressive eyes, highly developed eye brows and painted in black, white and red color. Based on its symbolic function, appearance and his power upon the dead by its presence in the sarcophagus, probably the *singasinga* is imaginary depiction of the dreadful god *Mangala Bulan*.

4.2 The Past Architecture

4.2.1 Architecture and Settlement

4.2.1.1 Settlement (*Huta*)

The Batak Toba is a religious society where their real lives are mixing up with the magical world, while their ritual objects closely interrelated with the utilitarian daily life, thus, utilitarian function and symbolic function cannot be clearly separated.

They believe that *Siraja Batak*, their first human ancestor is a direct descendant of the high God (*Debata Mulajadi Nabolon*). He came from the upper world and landed in the peak of mountain Pusuk Buhit, consequently, they regard Pusuk Buhit as the center of the earth and an access to the upper world (Macrocosms). Furthermore, all the Toba regard their villages as the navel of their world or the center of their own micro cosmos. As far as the matters of the clan are concerned the larger political units (*bius*)
described in the previous section is only secondary and less significance. The significant business in daily life is personal affair, but the most important is the relationship of a family with the villagers, where the position of individual is determined by the relation to the ruling family which is the founder of the village that lead to the access to land ownership, or as free citizen of formerly slaves and the migrant. This status, in turn will determine the rights and duties of each person in inseparable daily and religious life. Reciprocal obligations are regarded as a desirable institution for maintaining and constantly reinforcing the network of social relationship in the village. This obligation defines the right and option that one has in deciding and choosing one's house and settlement whether one has to move out, to build a new house or to stay in the existing house. If a village (Huta) is growing too crowd and the arable land in the surrounding area to support its inhabitant are limited, the village chieftain (Raja Nihuta, or Tunggane Nihuta, or Suhut) will encourage the opening of a new village (Bona Niranto). However, the strongest motives to find a new village is the fulfillment of the cultural mission to expand the authority and power (Hamoraon), accordingly increase the livable area (Pabidang panggagaton) for the growing descendant, increase the power to defense the territory and settle the highly probable dispute among the heirs in the old village (Bona Nipasogit) by distributed territory and promote a new chieftainship.

Decision to build a new village, followed by the offering ceremony to ask the blessing of the high God (Debata Mulajadi Nabolon) and fertility god (boraspati nitano) in order to prevent the bad luck and disaster caused by their anger. In this case, the gods will be asked to assign a spirit (begu) to guard a new village; this guard is called Bauta Nihuta. As the place of origin, the older village is always be respected by the newer villages, particularly if it keeps growing and encouraging the development of a number of another new villages. These newer villages are regarded as the extension of territory of the old ones. The people who participate in building a new village can be categories as follows: The real founders of the new village usually a direct descendant of the ruler of the previous village. This group may be called as the village founder (Sipungka Nihuta), offering performer (Sihatanon Buniit) or inspirer of the village (Suhut). Their family holds the authority over as the owner of the village (Nampunasa), where one of them is assigned as the local king (Raja Nihuta).

In fact, the community rules the village together, however, in some respects, the king, who will administer the daily business of the community, represents them. The task
of the Raja includes to arrange religious ceremony, marriage ritual for his community member, to build a new house, to determine land division, to administrate justice and trade, and even to decide which tree is allowed to grow and to maintain the fortification of the village. Some other family of the same clan (Marga) with the founder of the village had moved out frequently together from the old mother village and participated to build the new village with the ruling family. They are given the exclusive privilege to stay in the new village as long as they like and the founder of the village will not ever allowed forcing them to move out by any reason. The other clan outside the village founder will become the commoner (Peripe). The commoner cannot own the land, but, on particular condition, could be awarded the right to use the land in the territory. The land cannot be transferred in any other way whether as inheritance to their descendant, as marriage gift or as collateral for debt, this right will be finalized when the commoner move-out to other village. Only the clan of the founder and their wife giver (Hulahula) who participate to build the village is permitted to own the land. The villager of the same clan with the founder, who migrates from other village but has a loose connection with the old village, is treated as commoner.

4.2.1.2 The Village Layout

The smallest territorial unit is the village (Huta) and most of the Toba villages are the permanent settlements, which only possible to exist by the support of intensive cultivation of irrigated rice field (Sawah) and fertile vegetable garden (Ladang or Uma).

The fertile irrigated regions in Toba land that produce better yields to support a larger population are very limited. Consequently, the village is so dense that some of them are only within a hailing distance each other. A village usually has no more than twenty dwellings and it is very often only between six to ten houses, thus, use the minimum area for housing by built close together so as to keep the area for cultivation as large as possible. It is also difficult to obtain the relatively flat and arable land that suitable for cultivation, so it can be said that the habitable land is very limited in this mountainous region. In part of the region of non-irrigated agriculture, it is only possible to build a very small village of a handful of houses. Accordingly, it is common to find a single settlement in the immediate vicinity of the dry field. The villages are always located as close as possible to the field and to a watercourse. The supplying of the
household with drinking water and washing are among the most important task given to young girls. If the land is available, the reserve area of nine meters surrounding the village is necessary provided to anticipate the expansion of the Village (Tambatamba Nihuta). This reserved land can use by the ruling family (Upa Parik) but cannot be transferred. The outside edge of this reserved land also functioned as demarcation line to the neighboring village. Since the fighting and feud is a normal practice among the neighboring village besides, many other security reason the village is normally fortified as it was mentioned. The political situation in a particular region has a great influence on the site and layout of a village. In trouble regions with frequent or long lasting wars, the fortification surrounded the village is stronger and it is built it in a strategically favorable location. While, in remote and economically disadvantaged region's the fortification were change into a simple fence to mark the boundary of the village.

In the densely populated regions with irrigated rice cultivation, a village's security precaution against nighttime attacks had to be greater than those are villages of isolated strategically superior site. The buildings of massive stone walls of the high ramparts of fortification can be found in the fertile area situated in the populous Toba region, indicated that, security is highly needed as mentioned above.

However nearly all the Toba villages were strongly fortified, consist of earth ramparts of more than 5 meters in height set with thorny bamboo fences, fruit trees trenches and suchlike, formed an impenetrable wall around the villages. There were only two entrances and these could be closed in case of emergency. In some regions, the layer stone of large ashlar blocks were built around the village.

The passages made of layered stone, that link neighboring villages is founded near Bakkara on the shore of Lake Toba (Helbig: 1938). Thus, there is no universal rules can be applied to village fortification; there are records of rectangular and round examples, made of earth, stone or dense bamboo hedges, or even simple woven bamboo fences. The reason for fighting and war among the villages are varies namely land disputes, robbery and kidnapping. The boy can be kidnapped and to be killed for offering to the begus, while, young man is kidnapped then sold as slaves and other magical peculiar reasons as in preparation of magic powder for the magic wand (see section 4.6.1). Therefore, the fortification for a village is also very crucial to keep the evil begus and enemy outside the village besides to control the flow of people and breeding animal in and out of the village.
More important than differences between fortifications are the differences between the arrangements of houses (Jabu) in the villages. Toba houses ideally stand side by side in a row, where the front gable facing the open space that also used as a main road. On the opposite of each house beyond the open space road, stands the rice granary (Sopo) that consequently is also in a row, which belonging to a house in the front. The rows of buildings that shaped the communal space are always facing to the East (Habinsaran) while the houses facing to the sacral peak of the mountain (Pusuk Buhit). A traditional Toba village thus has the outward appearance of a linear alongside the elongated public space. The open area between the houses (Jabu) and rice granaries (Sopo) is called front yard (Alaman). It is used as a multipurpose open space to accommodate daily public activities such as drying paddy, street, working area, and performing ritual activities. The whole daily activities nearly take place inside the village, except grazing the cattle, growing the paddy and marketplace (Onan).

It can be said the villagers spend their lives from birth to death inside the fortified village, so the village is normally provided with the burial place. The breeding animals such as pigs, buffalo, chicken, dogs, and horses all are kept around the houses inside the village.

4.2.1.3 Market Place (Onan)

In spite of the continuously fighting among the neighboring villages, the whole member of society and the neighboring villagers even among disputed village who at war are all agreed to keep the market place (Onan) as a neutral zone. The war and fighting should be kept away from the market place due to the belief that it has become the peaceful place, to guarantee the security of people who came and go attending the market activities at certain time. The market is conducted once in a week, during that time, the disagreement should be forgotten and the war postponed particularly on the night before and after the market the day.

4.2.1.4 Architecture of House

The typologies of Toba traditional house (Ruma or Jabu) are considerably varied from place to place, however they have some common features. The size of the
house is determined by a number of factors, which are Firstly. A number of families that should be housed, normally a traditional Toba house can accommodate four to six families. Secondly, the availability of the required length of tree trunk use particularly for plank and pillar. Since material for these component should be unimpaired and should not be connected by any joint. Consequently, the number of pillars varies from six to eight in length of the building that reflected the length of the planks required. The type of timber that can used for plank are limited namely Hariara, Pinasa, Pokki, Bintatar, Baringin and Maranti. Thirdly, The availability of the labor force that requires building the traditional house.

The Toba houses were not divided into separate rooms by a permanent physical barrier, although more than one family uses it. The communal living space was an area running through the middle of the building. While the area on both sides are allocated for each family which temporarily subdivided during the night by hanging mats or cloth which ensured the individual family have their privacy. However, during the day the whole house space is open free.

The traditional dwelling house of the Toba is a rectangular building on stilts, which is reached by five or seven steps from below. The house is locked in the evening by means of a trap door set into the floor, which, can be bolted from the inside. In some houses, a door is placed at the rear. The substructure of the house consists of massive wooden pillars, which, rest on flat stones provides an effective protection against damp.

The number of pillars varies from six to eight lengthways while on its width varies from four to six. On the front side of the house, stand two transverse rows of pillars to support the entrance trough the trap door. The pillars are linked together by inserted planks, which is tight by pens, which not only give stability to the vertical pillars but also form an enclosed substructure, which, beside its symbolic functions, it is traditionally used for various utility functions such as, keeping livestock, storage for fire woods and garbage collection from the kitchen in the upper part of the house. Between the two middle posts of the front is found the stairs for access to the house. At one of the longer side, the cross-planks can be removed to allow the water buffalo to enter the stall (Boer: 1920, Domenig: 1980). The elevation of the house is physically divided into three parts. The lower part, which is used as stall, the middle part for living area and roof as the upper part for keeping sacral belongings. This partition reflected the concept of Toba cosmology. Typical of the Toba houses is the steeply rising roof with eaves that extend
below the upper line the substructure. Compare to its substructure, the enormous thatch roof of sugar palms fiber (Ijuk) is in the shape of a saddle back with sharply projecting gables, so that the roof extends beyond the substructure not only at the sides but also at the front and rear. The front gable projects longer and higher than the rear. The space under the roof is closed off with triangular gables.

The floor of the living area is placed about half way up the highest pillars. Part of the wall made of two massive wooden planks (Pandingdingan) are decorated with elaborately carved planks and painted in red black and white figures or elements. Pandingdingan depicted the boat shape symbolized the travel to eternity probably originated from the earlier mythology. While, two similar transverse beams (Parhongkom) are forming the framework for the floor - they too are similarly richly carved. The sides and rear of the house traditionally have only small windows apiece, which means that the interior of the house is very dark. The living room is about two meters in height.

Table 4.2: Selected furniture and utensils in the traditional Batak house

<table>
<thead>
<tr>
<th>No</th>
<th>Furniture and utensils</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Scaffolding (Parapara)</td>
<td>Above each hearth, there is scaffolding (para-para). Originally, this scaffolding rack is made of tree trunk of 1.00 m x 1.00 m x 0.25 m. It is chiseled out into the shape of an open box of 2.5 cm thick and decorated with mythical carving such as fertilizes god (Boraspadi Nitano), Bindu Matoga, etc. It is hanging up on its Four Corners by rods. These four rods meet in one point at the roof of about 14 meters high, on the middle of this scaffolding a fish is hanging, down on the rope. That fish will be kept there as long as possible.</td>
</tr>
<tr>
<td>2</td>
<td>Earthen pots</td>
<td>Every family owns from three to six</td>
</tr>
<tr>
<td>3</td>
<td>Bamboo water reeds</td>
<td>The size is from 0.90 m to 1.20 feet long, in which the drinking water is kept, the smaller size is served at the same time as drinking cups</td>
</tr>
<tr>
<td>4</td>
<td>Small knives</td>
<td>Provided with wooden handgrips, whose blades are inserted two wooden fangs and fastened with string</td>
</tr>
<tr>
<td>5</td>
<td>Small conical baskets</td>
<td>Made of woven fine split bamboo serving as containers of cooked rice</td>
</tr>
<tr>
<td>6</td>
<td>Rice pounding</td>
<td>Made from tree trunks has one or two holes in which rice is pounded with wooden rods to free the husk</td>
</tr>
<tr>
<td>7</td>
<td>Mats</td>
<td>The entire floor of the house usually is covered with mats with the exception of the cooking place. Mats also are hung along the walls and smaller mats are used as cover for sitting area. Only the wealthy have chests or trunks, others roll up their possessions in mats. Mats are woven from pandanus leaves or rattan.</td>
</tr>
<tr>
<td>8</td>
<td>Torches</td>
<td>Banana woods are used for lighting the house</td>
</tr>
</tbody>
</table>

Source: Field Survey 1998
Access to the space under the roof, which is used as a storeroom for provisions of sacral or valuable objects, is by a stepladder made from a tree trunk and occasionally given figural decoration. In the roof space, of some houses is hung up the scaffolding rack (Ragaraga) as a place for offerings to the ancestors and the high God (Debata Idup). Among the important furniture and utensils, which can easily be found in any traditional are described in table 4.2. Above crude furniture, which is used functionally or symbolically can be found inside the Jabu, as it has been shown, none of the tool and furniture purely utilitarian function but also possesses the symbolical ritual function (see religious concept in 4.1.5.1).

As it was mentioned previously, the large traditional houses have no physical division, but cultural demarcation in the form of imaginary lines. However, Allocation of the rooms for each family unit is very clear, each family has its own hearth at the front of their space in the living room. The smoke from these hearths is permitted to find its way out through the roof, since there is no window, the houses are very dark inside and covered with soot. Functionally, windows are not required, since they spend nearly the whole day outside the house either working in the field or in the communal space.

The head of the household along with his married eldest son and the married daughters, each with their own family can also live in the same traditional house. In other word wife giver, wife taker and the house owner, who represent the structure of Toba society are accommodated in the same house as an extended family.

The rectangular plan of a Toba house can be divided by imaginary line according to its usage. This division is not arbitrary but it is a reflection of the religious and cultural concept of the Toba. In fact, this division is slightly varied from location to location but for sure, position of Jabu Bona in any variation is similar which is placed on the right far end of the Jabu. Jabu Bona is regarded as the most sacred place on the floor level of the house. The following description are represented a concept of division on the Toba’s house. Based on its daily use the Toba house space is at least divided into four parts (see figure 4.22), these are:

1. *Jabu Bona*: The most important space and only provided for the head of household who also a Raja or the person who holds the highest customary rank in the house. Literally, *Bona* is the lower part of the tree particularly after growing for years.
It implies the strongest part of the tree where its upper part originated; the term is also used for a hometown (Bona Nipasogiti). Accordingly, the timber, which is used as building material placed on that arrangement, the roots are placed at Jabu bona.

2. **Jabu Soding**: The space located on the periphery, which is the closest to the edge (Soding) on the opposite of Jabu Bona. This space is provided for the wife taker (Boru) or daughter of the household either before or after marriage.

3. **Jabu Suhat**: This space is provided for the head of household’s brother or his male descendant of his clan (Dongan Sabutua). Literally, **Suhat** is a measurement but it can be also a sort of tuberous plant (Colocasia Antiquorum), which grows and expands very quickly to cover the large area. Its tube is used to be one of the significant foods among the Toba. Symbolically, the male descendant is expected to grow and expand. He is expected to lead the expansion of the tribes territory cover the vast area.

4. **Jabu tampiring**: This space is also called Stakkap Piring. The room is provided for the wife giver (Hulahula). It is also functioned for weaving the mats or cloth. Otherwise, it is used for storage of paddy (Eme) grains for daily consumption or storage for agricultural tools. The same house is used differently on a social activities and event (see figure 4.23) such as receiving the guest as follows:

1. **Halang Ulu Jabu Bona**: The far end part of the space where the most important person should be posed, which is suitable only for Raja, or descendant.

2. **Talaga Jabu Bona**: This space is provided for the wives of the inhabitants.

3. **Halang ulu Jabu Suhat**: Ulu means head of creature or upstream of a river, the space is provided for the males of the wives giver and the wives takers.

4. **Talaga Jabu Suhat**: The wife taker and the wives giver will be accommodated in this part of the house (Talaga means downstream of a river).

The division of house space for ritual and religious purpose (see figure 4.24) is slightly different compare with division for social activities. Where two different name of space are presented, which are central part (Jabu Tonga) and front part of the house (Jabu Jolo). The central part is the most sacred part of the house. The religious ceremony is always performed in this part of the house, while the front part is the space for transition. Another variation of Toba traditional house, which is observed during the fieldwork, is described in the following section. The plan of the building shows that it has already undergone transformation. However, the structure stays intact.
The Toba traditional house, which is observed in this study (see figure 4.25), is situated in the districts of Lumban Julu and Lumban Binanga around Lake Toba.

The space arrangement of this house has been undergone some changes in the last decade. Only one hearth can be found instead of six as it used to be, and the house is occupied by a family instead of six in the form of extended family.

The structure of the house is original and reliable as a typology for observation. This house is situated at Jangga Dolok, Lumban Binanga about 25 km of Parapat around the Toba Lake (see map on figure 4.3). The house is built ca.1790 AD and the roof has been replaced once in twenty years.

However, the division of space is not radically changed except the following items, firstly, the number of hearth is significantly reduced refer to the family to be housed and the kitchen is placed on the left in the far end of the house. This house is inhabited by one family instead of a number of families as it used to be. Secondly, there is a compartment to storage of valuable things such as gold, shawl for ritual, silver and ceremonial cloth. The arrangement of the space of the house at Jangga Dolok (figure 4.26) has been divided as follows:

1. **Jabu Bona**: The most distinguished area of all the space provided for the householder and his wife, which is used as a bedroom

2. **Jabu Soding**: Sleeping area for girls before they get married or a moment after they got married before her husband affords to have a house. These areas are also used as a guest area provided for the wife taker

3. **Jabu Tonga**: Sleeping area for boys and used as guest bedroom for the participant who attends a religious ceremony and on that ceremonial day, the wife taker is placed in this part of the houses.

4. **Hobung**: The space is for storage to keep the valuable things.

5. **Jabu Jambur**: Sometime called *Sitakkap Piring* the space provided for king descendant or the wife giver.

6. **Jabu Suhat**: This space is used for sleeping area and also provided for boys

7. **Dapur**: A kitchen for the whole family.

Although it is rarely applied consistently, but it is clear that the occupants have been using the similar terms and the divisions of the spaces as the traditional house in the past.
4.2.1.5. Structure of Jabu

The substructure of this house consists of 28 massive round wooden pillars. This rests on flat stones on the ground. The number of pillars is eight lengthways. Two transverse rows of pillars stand on the front of the house to support the entrance, that can be entered through the trap door at the end of recessed stairway. Sixteen of these pillars will go up through the middle part of the house to support the roof structure while another twelve pillars stop at the floor level to support the floor structure. The pillars are linked together by inserted planks (Rassang). The floor beam rests on the upper inserted planks (Ture-ture). The inserted planks integrate all the pillars not only to give the stability but also together with pillar enclosed the substructure, which is traditionally used for various functions but now allocated for cattle. Between the two middle post on the front is placed the recessed staircase, while at the side, the cross planks can be removed to allow the water buffalo to enter the stall. The Toba traditional building utilizes a wide range of locally available material. The structures are entirely held together by means of a variety of joining and mortising techniques, sometimes reinforced by pegging, wedging or binding. In some cases, Timber components are simply lashed together rather than jointed, using rattans or fiber cord. This method is particularly important in roof construction, where, some of the structure members are ingeniously shaped, notched or scoped to form a joint. The wall of Toba’s house is curtain wall in the modern terminology. It consists of prefabricated panels attached to the main structure of posts and beams that carry the load of the floor and roof. A heavy ring beams top off the system of post and beam, which carries the load to the foundation. The actual inhabited space of the house (including the roof structure) supported by foundation that simply consists of the flattened stone where the whole structure sits on top of this almost like a box. The proportion of roof height to the lower part in the Toba house is about 3:1. The extent to which the gable triangles can be made to slope outward and upward as an integral system to the way the whole building is put together. The highest exterior columns of the Toba house carry the longitudinal beams (Labe-labe), which run the length of the house at head height. The walls are light and lean outwards have added stability to the whole structure. The top of the wall and its plank that join it with supported rafters is hanging from Labe-labe beam by means of rattan ropes.
While the bottom of the walls rest on a huge beam at floor level, its upturned ends projected like the prow and stern of a traditional boat. According to its structure and the type of ornament used, and its place in the wall element of structure can be divided as follows:

<table>
<thead>
<tr>
<th>No</th>
<th>Element of front wall</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Tureture</td>
<td>Supporter of the floor planks, it rest on this beam</td>
</tr>
<tr>
<td>2</td>
<td>Dorpi jolo</td>
<td>A small piece of vertical wood called middle plank</td>
</tr>
<tr>
<td>3</td>
<td>Tomboman Adopadop</td>
<td>Front plank positioned behind Dorpi Jolo</td>
</tr>
<tr>
<td>4</td>
<td>Songsong Boitok</td>
<td>Also called Pumoloki, the main support beam symbolized as Stomach</td>
</tr>
<tr>
<td>5</td>
<td>Halang gordan</td>
<td>Drum support at the balcony</td>
</tr>
<tr>
<td>6</td>
<td>Sotandang</td>
<td>Upright plank – to keep the frame upright</td>
</tr>
<tr>
<td>7</td>
<td>Pahongkom</td>
<td>Horizontal plank as the base of dorpi jolo</td>
</tr>
<tr>
<td>8</td>
<td>Sibomong Ari</td>
<td>Day shield or rafter in the form of triangle gable structure, some time called Sibomong Anting</td>
</tr>
<tr>
<td>9</td>
<td>Dilpaung</td>
<td>Tongue like upright plank symbolize the umbrella (Samungsamung)</td>
</tr>
<tr>
<td>10</td>
<td>Songsong rak</td>
<td>Horizontal beam of the balcony</td>
</tr>
<tr>
<td>11</td>
<td>Singasinga</td>
<td>Mythical creature ornament depicted Mongala Bulan.</td>
</tr>
<tr>
<td></td>
<td><strong>Element of side wall</strong></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Pandagdingan</td>
<td>This section is the most significant part of the wall, it is the thickest part of the rest of the wall, it stand on the Tureture. Its shape is similar with traditional Toba rowboat.</td>
</tr>
<tr>
<td>13</td>
<td>Dorpi Sandesande</td>
<td>Movable middle plank, it is and stand on Pandagdingan</td>
</tr>
<tr>
<td>14</td>
<td>Dinding Paringrang</td>
<td>Supporter of the wall’s middle planks</td>
</tr>
<tr>
<td>15</td>
<td>Urur Hukohoda</td>
<td>Rafter</td>
</tr>
<tr>
<td>16</td>
<td>Pangumburi</td>
<td>Main beam</td>
</tr>
<tr>
<td>17</td>
<td>Sundalap</td>
<td>Cross beam</td>
</tr>
<tr>
<td>18</td>
<td>Niggor or Bungkulan</td>
<td>Ring beam</td>
</tr>
<tr>
<td>19</td>
<td>Lais-lais</td>
<td>Range latch</td>
</tr>
<tr>
<td>20</td>
<td>Sendal-sendal</td>
<td>Canopy beams</td>
</tr>
<tr>
<td>21</td>
<td>Russang</td>
<td>Inserted plank into the column</td>
</tr>
</tbody>
</table>

Source: Field survey 1998

The rafters are straight poles springing from floor the wall plate, angled outwards to produce the curve of the roof. The roof structures are not braced by any horizontal batten. Reinforcement is provided by diagonal ties, which run back from the tip of the gable’s end to the middle of the Labe-labe. Consequently, there is no interior truss to support the roof, which forms a spacious and potentially usable open area inside the house.

The Toba call themselves and their religion Sipelebegu (the venerator of the death soul). This ideology has predominantly determined the built environment in general and architecture in particular.
The close relationship can clearly be seen in each element of traditional building, which is closely related with particular ritual as was described in previous section. Based on the blessing given by their begus and gods to building material, only a small numbers of particular timber are suitable for traditional building such Sibagure trees for ring beam and Simartolu for rafter.

The buildings will not long last if the gods and begus not recommend the utilization of building materials. The joining is not allowed for the critical timber structure such as main beam and main column, since joining implies discontinuities and instability, which will affect the stability of microcosms.

Although nearly any decision that is taken among the traditional Toba society is seems irrational and superstitious but the result is frequently rational. For instance, the decision to determine building material by particular characteristic has been produced through a process of trial and error, which perhaps has been started since the arrival of the first settlers, who bring with them the initial concept of building characteristic.

Based on their experience, the long lasting traditional house structure is required particular timber characteristic of hardwood, which is very old, straight, sufficient length and strong timber, that is the building material that implies the begu’s and gods consent.

If the applied material turned to have the significant flaws that subsequently lead to the damage of house structure, it will be recognized as indication of the wrath of gods. In this case, the offering and ceremony to ask for the gods blessing is highly required. Whatever the gods told them on such accident, the result is to change the previous material and its characteristics. This will be repeated and can only be stopped if the flawless material structure has been found. This procedure means that the continuous improvement is carried out until they find reasonable structure, techniques building material and concept.

It is clearly seen that the rational and non-rational decision, which is based on religious has fused together to produce a logical result.

The characteristics of these structures tend to develop and subject to transform in accordance with the changes of significant element of culture, as will be shown in the later chapter of this thesis.
4.2.1.6 Architecture as An Offering

The Toba is rarely has the ceremony to frighten and expelled the begu. It should also bear in mind that the evil begu is not subordinated to gods or good begu, besides only the living creature that can be killed and died but not the begu. So to avoid its bad omen, what they normally do is to beg the begu to give its blessing and to persuade it not to harm the inhabitant of the house. By preventing the evil gods to harm the people, they will live in harmony and secure. As mentioned in part 4.3.1, the Toba tends to venerate the evil begu by offering and sacrifice, in order to persuade it to do what the people expected. Consequently, as Niessen (1985: 210) stated that the houses form, its structure and decorative features are more like an offering rather than protector for the inhabitant. The house is seen as a prominent offering to gods, in other words the house is a physical reflection of a sacrifice animal or metaphorically as a sacred buffalo. If the gods and begus satisfy with the offering, they will reside inside the structure or around the house such as in scaffolding rack (Ragaraga) and protect the inhabitants from the bad things.

The hypothesis asserted that a house as a living being is often reinforced by the pray among the Toba to ask the tondi (living spirit) back into its house, just like the human being the house also has a tondi. According to the Toba’s worldview the world itself, as well as the body of participants in the important ritual regenerative rites (Bins) are identified with the body of buffalo. In addition, Niessen (1985) draws together a variety of sources on the culture of Toba concerning the conception of the house and rice barn that was identified as physical body of a buffalo.

It can be seen through the figure 4.28-4.32, a number of buffalo features in the structure of Toba traditional building. The upper third of the structure is called as representation of a buffalo (Pinahorbo). The front gable is decorated with a buffalo head (Ulu horbo). The roofs gently curve back to end in some cases, to a tail at the rear gable. The painted decorative board pointing downward from the roof is called buffalo tongue (Dilapaung). The piece of cotton or linen that hanging out the mouth of the buffalo head called grazing grass (Gagaton). As if animal eats that linen. The length-wise of the roof spars is called stomach (Pamoliki) or belly; this is where the rice is stored. The posts of the house are associated with the leg of buffalo. The doorway of the house is colloquially called the mouth (Baba) of animal. De Boer (1946:385) stated that the
window on the rear wall of the house opposite the front door is called the breath (Hosahosa). Perhaps it is comparable to the posterior of a female buffalo as it is thought. This opening associated with the placenta that is disposed after the birth of a child. From above discussion it is clear that according to Toba is belief (Sipelebegu) the house has both its own souls (Tondi and Begu) and also other dead souls such that of the ancestors who occupy the scaffolding rack in the upper part of house. They will act on behalf of the inhabitant, but certain procedure has to be performed in order to keep them happily to stay in the house and readily to give the blessing when it needed.

For the gods and begu satisfaction, the offering and religious ceremony has to be performed as it is reflected in the daily activities of the inhabitant which is tightly tied into the religious concept. As it was previously described, the house is treated as the living offering as symbolized on its building elements. These building elements are metaphorically named after the buffalo as the most suitable and sacred animal for offering. Sometimes the house is also metaphorically described as a boat, which implies the journey where some of its elements also named as parts of the boat. This concept is highly probable originated from the previous belief in the earlier period that has been transformed. This early belief has been gradually transformed and adapted to local religion, however some of these early believes is retained.

Furthermore, Waterson (1995: 115-138) put forward that the vitality of the house is achieved through, firstly, the building material, the vital force of the trees, which is having its own. Secondly, the process of construction must be viewed as contributing to the efficacy of an object; it is a process after all which brings the object into being. Thirdly, house carvings particularly the effigies of the gods are regarded as inherently powerful and may serve as an offering for protective function to the occupants. Fourthly, a more significant source of house vitality is acquired through the ceremonies performed during its construction.

4.2.1.7 House Carving and Ornament

As it was elaborated previously, that house carving and ornament also used as parts of the offerings to the begus. All these ornament symbolize the concept of veneration, consequently, its formation and placement have its own rules that rather complicated.
They are mainly consists of flora, fauna, mighty creature and geometrical forms. Their origin can be varied, however, all of them had been combined in a specific form in accord with the Toba culture.

Nearly all of the middle part of the building exterior has been carved, whereas the interior is kept nearly barren. The lowest part of the house is also absent of ornament. Probably, based on their believes that only the middle world occupied by human required protection most. The selected types of carvings and ornament and its placement on the Toba house are described on the following figures. All of them support the hypothesis proposed in this thesis.

### 4.3 Indication of Transformation

Architectural theorist and anthropologist rarely correlated house and social structure to show how architectural style is corresponding to the structure of the society such as crucial differences of class, status, sex, age, wealth, and ethnicity, which post structuralism as proposed in this thesis, can not be regarded as a static but a dynamic pattern.

However, the house can be used to reconstruct social events, and on the other hand social events to translate house and architecture.

In general, the study of the culture of Toba ethnic group allows the interpretation of Toba house as grammar permits the reading of a sentence in particular time. However, the grammar and its sentence subjects to dynamic changes, thus, they have to be interpreted and reinterpreted continuously. The Batak Toba was experimenting with their identity in a new and changing world. They tried on different interpretation for house style. Some selected one interpretation and some another. What the building style they choose is not easily interpretable.

During the course of 19th century, European missionaries pushed ever deeper into Toba country. It was found that some of the tradition had been in started since Hindu times, while some other left by the European.

As roads were constructed in the 19th Century, the transportation of the foreign goods and cultural exchanges with external culture were made faster, cheaper and easier
to bring it into the interior. It became possible to make a living by trade alone instead of agriculture. Some of them are no longer depend on the fertility gods. Job diversified.

The standardization of coin and levying of tax increased dependence on the money economy. The need of the people expanded (Meerwaldt: 1981).

Life styles changed to accommodate the new circumstances. Handicrafts and carving decline as they had no foothold in the economy; they were a free time activity, a non-professional activity, inspired by the long slack periods in the agricultural work calendar (Joustra: 1912). Similarly, the age-old Benzoic trade on the West Coast dried up because the Batak Toba discovered easier ways to earn the same money (Joustra: 1915).

However, It is too simplistic to summarize the transformation of daily Batak Toba house in purely economic terms. The terms that can explain the change most clearly are cultural exchanges in particular and by the change of religion in general.

The Toba cultural mission that reflected in their ego was an effective barometer by which to predict directions of change in Toba society. Most Batak groups may be characterized by their cultural needs after success. Which mainly based on its cultural mission (Hagabeon, Hamoraon and Hasangapon) in whatever terms these might be defined.

In the beginning of 20th century, after Batak Toba defeated and Christianized in 1907 Dutch missionaries were amazed at the passion of the Batak, which is associated with the social status related to white-collar (Pangkat) employment and Church related jobs. This preference has reasonable cause, besides the position in the Dutch administration; the Church hierarchy was another social ladder that became available to the Batak Toba. A man who climbs through the Church commonly takes up teaching, preaching, participating in church activities, and so doing meeting of various level of prestigious position. They were not to be dismissed or put down, and they did whatever necessary to achieve the goal of their cultural missions including change their house, clothes and way of life (Castles: 1972).

Although, Toba society is egalitarian as seen in their social structure (Dalihan Natolu), but nearly all social relation in Toba society are vertical. There is always a party who entitled to the superior status by virtue of age, clan affiliation, life achievement and of course power, either magical or physical. This status hierarchy expressed itself according to the situation, which is also analogically seen in utilization of space in the
house that changed according to the nature of activity; it was not absolute. It shifted with the circumstances and responded to new reconciliation of powers.

The Colonial administration had exploited those cultural needs by giving a small portion of the status to indigenous Toba elite and co-opting it into colonial administrative network. In which, the rules of hierarchy were well defined and expression of hierarchy, in contrast to the local culture, which is not absolute. The sacral and egalitarian of Toba house may have still fit the physical needs of the occupants, but it is no longer able to fulfill the social requirement. Consequently, the house had to be transformed to suit to the new strategy in attempt to accomplish cultural mission and subsequently to achieve the relatively unchanged ideology.

The Dutch colonial was very often experienced frustration, especially with the Toba, who greeted every change of policy as stimulus for further negotiation to their own needs, in accordance with their cultural mission rather than the goal defined by the Colonial. However, by the favor of Christian missionaries the Dutch understanding of the structure of Toba culture found its base.

The revised administrative policy required that the local king should submitted a portion of their cultural power to Colonial and the boundaries of each level of authority have carefully determined. The local kings had accepted to collaborate with the colonial as the higher administration, consequently, part of their autonomy replace by the obedience to the Colonial. Accordingly, the local rulers have to be responsive to the Colonial interest instead of to the villager as it used to be. As a result, tripartite administrative and cultural power of the wife-giver and the wife taker affines (Dalihan Natohi), which, had always played a significant role in the decision making process, gradually transformed and fused its administrative power with Christian Church power as a manifestation of adaptation strategy.

While new status terms were developing around the church business, consequently some indigenous positions were in decline. The position of local kings, the medicine man, spiritual leaders and the healers, whose power depended upon their follower belief in the ancient spirit world, becomes weaker and less central. This was exacerbated when the Christian mission started to include European medical personnel in their teams.

The temuous position of the Christians gradually strengthened, partly through their own dedication and modern medication, which have systematically disintegrated the
Thirdly, the physical appearance of built environment has been changed in accordance with the radical changes of culture. As it was clearly seen, that the change of latter would subsequently followed by the changes of former. The changes that lead to abandonment of the original traditional such in case of architecture in Batak Toba land as has been shown in previous examples.

Indication of cultural transformation, which is manifested in architectural changes of the Batak Toba, has been shown on the final section of this chapter. However the question remain open, why these transformation take a particular direction instead of another among many available alternatives and to what extend are they tolerate the diffusion caused by the contact with outside culture.
CHAPTER FIVE
THE CHANGING CITY
CHAPTER FIVE
THE CHANGING CITY

Table of Content

Introduction .......................... 210

5.0 The Early History of the City .............................................. 211
  5.0.1 The Establishment of Medan ........................................ 211
    5.0.1.1 The Haru Sultanate ........................................... 212
    5.0.1.2 The Ruler of Haru Sultanate ................................ 213
  5.0.2 The Pioneer .......................................................... 213
    5.0.2.1 The People ..................................................... 213
    5.0.2.2 Religion ........................................................ 214
    5.0.2.3 Language ....................................................... 214
    5.0.2.4 Economy ....................................................... 264
  5.0.3 The Deli Sultanate Government ...................................... 215
  5.0.4 The Traditional Malay Architecture .................................. 215
    5.0.4.1 Settlement ..................................................... 215
    5.0.4.2 Street Pattern ................................................ 216
    5.0.4.3 House Orientation ............................................ 217
    5.0.4.4 Traditional Malay House ..................................... 217
    5.0.4.5 Anatomy and Transformation of Malay house ................. 217

5.1 The Colonial Town of Medan .............................................. 222
  5.1.1 The Beginning of Colonial Period .................................. 222
  5.1.2 The Development of Plantation ...................................... 223
  5.1.3 Labuhan Deli: The Old Capital of Deli ............................ 224
  5.1.4 The Rise of Medan as the New Capital of Deli ...................... 225
  5.1.5 Architecture in the Beginning of Colonial Period ................. 225
  5.1.6 Colonial Temporary Settlement ..................................... 226
  5.1.7 Early Colonial Architecture ........................................ 229
  5.1.8 The Late Colonial Era .............................................. 234
    5.1.8.1 The Segregated Society ....................................... 234
    5.1.8.2 Town Extension ............................................... 235
    5.1.8.3 New Satellite Town of Polonia ................................ 235
    5.1.8.4 Ethnic Segregation and Physical Development of the City ... 238
    5.1.8.5 Street and Open Spaces as Segregation of Power .............. 240
    5.1.8.6 The Dutch Precinct ........................................... 242
    5.1.8.7 Commercial District ........................................... 245
    5.1.8.8 Government District .......................................... 247
    5.1.8.9 Traditional Settlement Clusters .............................. 249
  5.1.9 Architecture in the Late Colonial Era ................................ 251
    5.1.9.1 Dutch Architecture ............................................ 251
    5.1.9.2 Colonial Architecture in Deli ................................ 253
    5.1.9.3 Chinese Shop-houses Architecture ................................ 257
    5.1.9.4 Architecture of Malay House .................................. 257

5.2 Contemporary City of Medan ............................................. 260
  5.2.1 Social Setting of the City Dweller .................................. 260
5.2.1.1 Population ....................................................... 260
5.2.1.2 Religion ....................................................... 261
5.2.1.3 Language ...................................................... 261
5.2.1.4 Education ...................................................... 261
5.2.2 Economic Setting of the City .................................. 261
5.2.2.1 Economic Background ...................................... 261
5.2.2.2 City Financial Resources ................................... 263
5.2.3 Economic Characteristic of the Population ................... 265
5.2.3.1 Job and Employment ....................................... 265
5.2.3.2 Income and Spending of Household ....................... 266
5.2.4 Population Segregation as a Manifestation of Cultural Needs 267
5.2.4.1 Ethnic Segregation ......................................... 267
5.2.4.2 Religion Segregation ....................................... 270
5.2.4.3 Income Disparity and Segregation ......................... 271
5.2.5 City Planning Policy of Medan ................................. 272
5.2.5.1 Planning Concept .......................................... 272
5.2.5.2 Urban De-concentration in the Context of Anti Urban Policy 273
5.2.5.3 The Road Pattern .......................................... 276
5.2.6 Cultural Incompatibility of Planning Policy ................. 276
5.2.6.1 Actual Physical Development of the City .................. 276
5.2.6.2 Segregation of Population and Urban Form ............... 277
5.2.7 Contemporary Architecture Style of the House .............. 277
5.2.7.1 The Transformation of Residential Architecture .......... 278
5.2.7.2 The Architectural Transformation of the Shop-houses ... 282
5.3 Urban Housing ..................................................... 285
5.3.1 Housing Perspective in Medan ................................ 285
5.3.1.1 Housing Stock ............................................ 287
5.3.1.2 Housing Supply ........................................... 289
5.3.2 Architectural Style of Public Sponsored Housing .......... 291
5.3.3 Spontaneous Settlement ....................................... 294
5.3.3.1 The Spread of Spontaneous Settlements ................. 294
5.3.3.2 Spontaneous Settlement as Manifestation of Cultural Preferences 296
5.3.3.3 Slums area is a Solution rather than Problems .......... 297
5.3.3.4 Architecture Transformation of Spontaneous Settlements 297
5.4 The Changing Pattern ............................................. 299
5.4.1 The Former Sultanate Area .................................... 299
5.4.2 The Change on Outer Rings ................................... 300
5.4.3 The Change in the Core Area .................................. 301
5.4.4 Physical Changes of Houses in Public Sponsored Housing 302
5.4.4.1 The Government Provision Housing ....................... 302
5.4.4.2 Private Housing Project .................................. 304
5.4.5 Indication of Further Changes ................................. 306
Summary ................................................................. 306
CHAPTER FIVE
THE CHANGING CITY

Introduction

This chapter will elaborate on the process of physical transformation of the city of Medan as a reflection of cultural change. These changes have closely related to architectural transformation of Toba house in this area. It is interesting to note that Batak Toba has become one of the dominant ethnic groups in this area despite the strict control of migration by the Sultan of Deli. However, this strict policy was relieved by the Dutch after the Toba has been defeated and Christianized in 1907, where the Toba allowed migrating to Medan, at least to Colonial area.

The formation of Deli was not recognized until the signing of London treaty in 1824, which settled the dispute between European Colonials in Nusantara. The economic of Deli was drastically increased with the outgrowth of the plantations development in 1863, which led to the tremendous physical development in general. Consequently, the great immigrant, who was consisted of European, Chinese, Indian and local people seeking fortune came in the great influx into the new booming city of Medan. The cultural contact among them led to the formation of specific hybrid culture and architecture. It will be explained further that the population segregation and architectural transformation do not come solely from one single force of any dominant culture such as Dutch. Although, the Dutch has dominated the country politically, but the choice of each individual in the society in maintaining cultural needs is reflected in live in line with the cultural mission of each society.

The coming of the Toba society in the later period in the urban areas also underwent cultural transformation which reflected in architectural style of their house, which steadily continues to transform into the present form as, which indication has been discussed in chapter four and will further shown in the study case. The point of discussion in this chapter is mainly focused on the process of change of the city as the setting for the architectural transformation of the Toba house in Medan. With this brief
explanation, it helps to relate to the main intention of the study as well as the outline of
the general aspect of the city and its people.

5.0 The early history of the City

5.0.1 The Establishment of Medan

The early history of Medan is not documented. Hence, there is very little
physical evidence and archeological research to support the scattered fragmented
information found among the Chinese, Arabs and European traveler since 12th Century
A.D. It is believed that Medan is a city of Haru sultanate, which ruled the country from
the seventeenth century until Deli sultanate.

The capital of the Haru Sultanate is rather obscure, although there is several
descriptions occasionally found in a number of chronicles. One of the most humane
Portuguese chronicler Pinto (1500-83 AD) is one among the chronicler who described
the capital of Haru in 1534 as follows; the Capital of Haru situated at the river Panetican,
which can be reached on a five sailing days from Malacca. The capital was bordered and
protected by a fortress on both side of the river, which is located about 1 km in the
interior. The writing was disputed by many scholars; this is because it seemed impossible
that he could have traveled to the entire place and had all the adventures (Reid: 1995).
Another adventurers, Fei sin in his chronicle dated 1436 described that Haru was located
in front of the nine islands; Malacca can be reached by a sailing ship with the fair wind in
3 days and 3 nights (Sinar: 1996).

However, another Chinese traveler Huan recorded that Haru can be reached
from Melaka within 4 days and nights, through fresh water bay. According to him, there
is a large mountain on the West and ocean on the East while on the north bordered with
Pasai kingdom and in the South located the plateau that cultivated with paddy (Huan:
1451). Another record from the itinerary of Chinese official mission to Sumatera, written
in 1433 also described the location of Aru, which are synonymous to Samudra-Lhok

By analyzing the changing time of the ship guard and the distance of the journey
on each changing tune, Mills decided that the location of Haru capital is on the estuary of
Deli River (Mills: 1930). On the other hand, Giles believed that the exact location of the capital is on $3^\circ.47$ North altitudes and $98^\circ.41$ East longitudes (Giles: 1914). Brown (1970) concluded that the earlier capital of Haru, Kota China in Labuhan Deli has been deserted and moved somewhere up stream of Deli River in the mid of 15th Century. The territorial boundary of Haru region was bordered by Temiang on the Northwest and extended to the Southeast as far as Rokan River and on the Northeast is Malacca Strait (Sinar: 1996). On the Southwest lays a mountainous area inhabited by the Toba and Mandailing. This area is known as East Sumatera until the colonial era, and was annexed to the greater region known as the province of Sumatera Utara in the early period of independence.

The dispute among the British and the Dutch in the early period of colonialism had determined the future of this region. The competition among colonials led to the mission carried out by John Anderson in 1823 on behalf of the British government from Penang. He found that Deli Sultanate was centered on Labuhan where the Sultan resided in an ordinary house which similar to the commoner although the size is slightly larger (Pelzer: 1978).

The name of Medina (Medan) for the first time was mentioned by a Turkish traveler who described that Medan was a city port of Aru Kingdom in 1554 (Giles: 1914). The kingdom of Aru was also known as Haru, Guri, Ghor and Deli (Iskandar: 1959), so the kingdom was highly probable that it spreads over from Temiang in North East to Rokan in South West (Sinar: 1996). The earliest description of Haru Kingdom was found in 1275, when the Sriwijaya conquered the Kota China one of the Haru ports located at the estuary of Deli River. Its name was also appeared in Chinese chronicle during the period of Kublai Khan as described by the official mission of Haru to China in 1282.

5.0.1.1 The Haru Sultanate

The Haru was continuously in dispute with its neighboring kingdoms. Sriwijaya Empire conquered Haru Sultanate in 1275 and it fell under the Kertanegara of Singosari in 1292. The incident was recorded in Pararaton during the Majapahit Empire (1293-1528 AD). However, this chronicle is more like a legend rather than credible historical annals, which contains some significant mistakes (Soekmono: 1973). The Haru Sultanate
also defeated by Majapahit in 1350 as described in Negara Kertagama (Mulyana: 1979). The Acehnese also crusaded the Haru Sultanate in 1540 after calling of the attack on Malacca in 1539. The Haru Sultanate kept a good relationship with Chinese Empire for its own protection from neighboring kingdoms through a regular mission to China in 1282, 1419, 1421 and 1423 as recorded by China chronicle. In return, Cheng Ho, a Chinese Muslim admiral accompanied by Huan also visited Haru in 1412 and 1431.

The Acehnese attempted to crusade Haru in 1554 but failed to take over the country. However, it succeeded in 1612 and colonialized it since, then probably lost it again. The Acehnese managed to restore its authorization in 1642 and put his admiral to throne in order lead the Sultanate.

5.0.1.2 The Ruler of Haru Sultanate

According to the Ming Dinasty chronicle, the Sultan of Haru, Husin had sent a mission to China in 1436 (Shih: 7919). Sultan Husin ruled the Sultanate in 1368-1643. He was married to a princess of Malacca, Raja Putih (a daughter of Sultan Makhmud Syah) in 1520. Unfortunately, his son, Sultan Ali Boncar who ruled the Sultanate until 1539 was killed by the Acehnese, and his widow married to Sultan Alauddin Riayatsyah II, King of Riau-Johor Sultanate, and a son of king Makhmud of Malacca. Alauddin supported by the Siak vessel defeated Acehnese at the mouth of Panai River and took over the Haru in 1540. However, the Acehnese had restored its authorization in 1612 and inaugurated one of his admirals in Haru, Sri Paduka Gocah Pahlawan. He was believed as a forefather of Serdang and Deli Sultanate royal family (Brown: 1970).

5.0.2 The Pioneer

5.0.2.1 The People

According to Turnbull, the population of Malacca was about 50.000, it was not 190.000, as was written in the Malay Annals (Turnbull: 1981). In fact, that Haru Sultanate was equal in power with Malacca so presumably the population of Haru Sultanate would not extremely outnumber that of Malacca. Due to the intensive relationship with the neighboring kingdoms and even with China and Arab countries, it
was believed that Haru population consisted of multi ethnic, dominated by Malay Muslim. However, the population of Medan is only 200 inhabitants and the population of Deli, of the smaller area than Haru, was about 7000 persons in 1823 (Anderson: 1823).

5.0.2.2 Religion

The official religion of Haru Sultanate was Islam as implied in Malay Annals and the Annals of king Pasai. The Turkish captain, Ismail and Fakir Muhammad had converted the people of the Haru to Muslim alongside Fansuri, Lamiri and lastly the king of Samudera Pasai Merah Silu. The latter was given a new Arabic name Sultan Malikus-Saleh. These stories conformed by Marcopolo who met Malikus-Saleh in 1292 (Moule et al: 1938). However, some religious concept could be traced back to it source, not in Islam but in ancient Hinduism and Buddhism. Some of the Indian concept, in a very selective way had been adapted, while the others was rejected or be modified, the selection was based on the advantages of the concept and its benefit to the society (Milner: 1989).

5.0.2.3 Language

According to Malay annals, the language used by the Haru Sultanate was Malay. However, there was an inscription on the stone found in 1823 in Kota China (Labuhan Deli) written in a strange alphabet un-deciphered by the local people (Anderson: 1823).

5.0.2.4 Economy

Haru was a warrior kingdom; it had a large number of big and fast sailing ships. It produced paddy, meats, fish, fruit, liquor, high quality camphor, gold, benzoic, apothecaries ignoloes, rattan, candles, honey, and slaves where Arqat (now Rantau Prapat) was particularly a city for slave market.

They obtained their requirement and trading goods from Pasai, Pedir, Fansur and Minangkabau (Pires: 1944). It was important to Malacca, who relied upon the production of East Sumatera until the end of 15th century. Malacca's economy rested
entirely on its port trade, since it produced nothing, except a little tin. In fact, its agriculture was insufficient to feed the population, hence, it had to import rice and other foodstuffs from the West Malay coast and the East Sumatera States.

5.0.3 The Deli Sultanate Government

The government of Deli was concentrated on power of the Sultan. Although his government based on the tenet of Islam that taught his people to worship nothing but God, in general, his ceremonial activities were slightly deviated. The Malays believed that they were part of the natural environment, where the forest, land and other living creature, to the Sultan. The Sultan was believed to have a supernatural power and became the reference to human life (Milner: 1989), therefore he became the law and religion. The loyalty of the Malays to their Sultan would be rewarded by God in the day after, hence, by disobeying the king means a malignant of disaster (Gullick: 1978).

Sultan interest had been lifted into two aspects in relation to the status of the religious affair. Firstly, the very high status and position of Islam Sultanate, as was also shown by Persian Muslim tradition, which was widely, assimilated in the medieval age, where Sultan was regarded as representation of the God on earth. Secondly, The Muslim should adhere mysticism and Sufism in order to be the perfect human, this philosophy can be also found in pre-Islamic period. Through mysticism and Sufism, the Sultan would become a perfect human. Similarly, a flawless human always described in the doctrine of Hindu-Buddha as represented by the King as an incarnation of Vishnu or Bodhisatwa. Those Hindu-Buddha doctrines had transformed in the Muslim doctrine in Malay Deli Sultanate (Milner: 1989).

5.0.4 The Traditional Malay Deli Architecture

5.0.4.1 Settlement

Malay house plans are arranged in a very strict pattern; on the contrary, the relationships among houses are very loose. There is no regulation or guidance available related to the settlement lay out. The house is kept separated as far as possible so as the view isn’t block, created the huge amorphous open space even for the dense population
settlement. There is a clear boundary among the house parcels, therefore the plot of particular house difficult to define. The plot boundary is very often related to the right to collect the fruits of the trees, which is grown around the house (Evers: 1982).

The similar situation is also found in defining the settlement boundary. The settlements usually have a center, which is used as a point of orientation, although the road pattern doesn’t necessary in line with it. In many cases, the Mosque is functioned as a center where the settlement radiated amorphously from this center toward outside with the unclear physical boundary but it could be a Well. The sense of identification of the dwellers, which means to became friendly with a particular environment (Schulz: 1974) toward the center of orientation determine the social and psychological boundary of the settlement regardless the distance and the physical boundary of the natural existing (Clark: 1976). The similar pattern is also reflected in the grave arrangement. On the other hand, their paddy field always has a clear boundary.

In this case, the dwellers of particular kampong frequently identify themselves with the Mosque as a point of orientation, although in fact they are by any means not live inside the territory. The concept of settlement as a territorial unit in Western community could not be applied to the Malay Deli Settlement. The houses in the settlement before the colonial period were very simple and their conditions were poor, while the city was dreadful and neglected. Sultan Deli and other Sultan of the smaller kingdoms in northern Sumatera lived in the palace that hardly differentiated from living space of the common people, except that it built on a slightly larger scale.

5.0.4.2 Street Pattern

The entire kampong consists of overlapping layers of territory, each layer relates to a different aspect of their lives. Superimposed, on the layer of territory is a network of pathways. The streets of the settlements are the pathways that amorphously branch off from one to another in many directions these pathways do not exclusively belong to any individual.

The concept of trespassing into the territory of someone else in a Western sense does not exist. The villagers free to take any pathway they choose and in practice, are the means, whereby people of all ages meet and greet each other. A major function of the pathway is to facilitate human interaction (Gibbs: 1987).
5.0.4.3 House Orientation

The spiritual leader is called to define the site and direction of the house, the house placement referred to the direction of the nearby river or sun in the early days and road in the present time. In the early days, the house is facing toward sunrise for prosperity, good fortune and health. While the river and main access road only determine the first row of the houses, in fact the settlement pattern behind it is kept amorphous.

5.0.4.4 Traditional Malay House

The concept of house as implied in Malay Deli proverb is the source of light on the Earth, the place to perform the ritual and custom, upbringing the offspring. Moreover, House is used to accommodate the relatives and travelers and the debt of the parent to their children. In contrast with the amorphous concept of settlement, the house plan is very strict.

The Malay traditional house system is based on a set of rules taken from the tradition of Malay culture. The rules vary from location to location and it’s far from simple transformation of a word into a place of habitation, but rather a response to a complex culture of Animism, Hinduism, Buddhism and Islam (Gibbs: 1987), Chinese and later European. Largely, the house is a domain of woman, hence the important part of it is mother of the house (Rumah ibu), attached to it are kitchen (Dapur) and verandah (Serambi). There is no notion of one part of the house of one part of the house providing a service for the other and all member of the family use parts of the house. Nevertheless, the separation is maintained. Before the house began, a spiritual leader (Bomoh) is called to perform certain ritual in the context of spiritual affair.

As it was described in Toba (see chapter 4), the Malay have the similar believes that living things especially large trees posses spirit which must not be mistreated by senseless and random cutting, such act provoke the spirit and result in catastrophic punishment.

5.0.4.5 Anatomy and Transformation of Malay House

The Buildings construct on open piles or stilts above ground. Traditional Malay building, as was Toba traditional house also didn’t account for major religious edifices
separate from dwelling. The Islamic mosque was a later infusion into Malay culture and originally it’s not part of the basic Malay architecture (De Graaf: 1963). The roof steeply slopes at 45 degree but on the roof of the verandah, which is of a more gentle pitch. The roof may also be two-tiered (Shepard and Mubin 1972). The roofing material laid on purlins (Gulung), which are supported by the main rafters (Kasau jantang). The rafters extend about six inches on the rooflines and overhang the walls about two feet at the bottom on both ends of the house. The top crossing is known as open scissors (Silang gunting) that allows for the construction of a roof ridge (Bumbung) consisting of a ridge covering (Perabung) supported by a beam (Tulang perabung) cradle within the crossed rafter. The intersection of the rafter is also supported from below by a king post (Tunjuk langit). The rafter rest on a cross beam (Alang pendek) that in turn the assembly put on another beam (Alang panjang) that runs along the house line supported by the main upright pillars (Tiang ibu rumah). Pillars framing of this entire house structure rest on six, twelve or more plinth depends on the house size, made of hardwood, stone or laterite. Main column may be round or square with a shallow ridge to give an appearance of fine workmanship. The floor level of the house ranged from 2-8 feet above the ground, it is the height, at which the cross tie-beam (Rasuk) are rest on stretch lengthwise beam (Peluncur) mortised into the upright pillars. Joints are usually mortised, but if not connected by fittings are wrapped with rattan.

Wall of the Malay house are made of bamboo woven panel (Pelupuh), courses of palm thatch leaves (Atap), bark of the three beaten out to the sheet or wood plank, that fit between the main supporting pillars. The building materials for construction are those readily available from the forest and jungle such as the leaf of palm tree for roofing material, bamboo and jungle sticks for rollers, rattan and bark for wall. Window can be a simple as a mere gap in the in-filled wall or in a more developed type in the form of a square opening with shutter and bars (Hilton: 1956). Doors are usually a large sliding panel, although hinged doors became more common in the 19th Century.
**MALAY ARCHITECTURE**

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>Medan</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOURCE</td>
<td>Field Survey</td>
</tr>
<tr>
<td>DATE</td>
<td>1998</td>
</tr>
<tr>
<td>FIGURE</td>
<td>5.1</td>
</tr>
</tbody>
</table>

**SUB TITLE:** Anatomy of Traditional Malay House

**INFORMATION:**

The simple Malay House has developed into a more complicated form for adopted architectural elements of other culture. The roof at the house built in mild sloping curve.
Sharp angle saddle roof that covered the kitchen probably originated from Minangkabau or Batak has combined with Malay Roof. This roof slightly different from the earlier steady sloping roof of Malay House as can be seen on the roof of mother house.
MALAY ARCHITECTURE

LOCATION: Labuhan

SOURCE: Said and Loebis

DATE: 1977/1988

FIGURE: 5.3

SUB TITLE: Transformation of Labuhan Mosque

INFORMATION:
Labuhan Mosque rebuilt by Sultan in 1886, replaced the previous building built by the Sultan before him. This building built in two-tiered pyramidal roof provided with terrace. Probably was inspired by Chinese Architecture (top photograph). This Mosque replaced by Deli Plantation to its present hybrid European-Middle-East form in 1900 (below photograph).
5.1 The Colonial Town of Medan

5.1.1 The Beginning of Colonial period

Although De Houtman arrived in Nusanteri in 1596 but only 200 years later, the Dutch intensively forced to dominate Sumatera. The treaty of London in 1824 had settled the dispute between British and Dutch colonial. The Treaty, which sought to consolidate Anglo-Dutch friendship in Europe by settling all dispute in their colony in the East by demarcated the spheres of territorial influence. Netherlands withdrew its objection to the British occupation of Singapore and surrendered Malacca to the East India Company not to make any engagement in the Malay Peninsula. In return, Britain transferred Bengkulu and Natal to the Dutch and promised not to interfere in Sumatera and the islands in the South of Singapore Strait (Turnbull: 1981). The Dutch had the significant freedom in Sumatera except the territorial of Aceh Kingdom who was independence. Moreover, the Dutch had to stop monopolizing trading in Sumatera (Reid: 1995). In fact, the Dutch intensively consolidated Sumatera in spite of rebellion from the local kingdom, which completed in 1904, as was indicated by the ending of the Acehnese war.

The plantation has flourished intensively since Jacobus Nienhuys in 1863 started the tobacco plantation on the small concession area, situated on both side of Deli River in Titipapan. Alongside the plantation development, the labor had been drastically imported from China, India and later from Java. Hence, Medan has grown as the most important city in the region.

The transitioned period of the end of colonial rule into the Indonesia government in 1945 led to the uncertain position of plantation and created the local dispute among the population. The squatter illegally had taken over the plantation. The enormous number of Christianized Batak Toba migrated from the mountainous region. Consequently, Medan City as the capital city of Northern Sumatera has drastically increased after independence.

Treaty of London in 1824 encouraged the Dutch to intensify its domination upon Sumatera, in spite of the local kingdom rebellion. The local kingdoms had been defeated subsequently, the Minangkabau had been defeated after sixteen years of war
following the Acehnese after twenty-one years war (1873-1904) and Toba after sixteen years war (1878-1907). While in the eastern Sumatera, Sultanates did not show the significant struggle. Sultan Ismail of Siak signed a treaty with Dutch at 1st February 1858, officially placed the Siak and its entire colony fell under the Dutch sovereign, as a compensation for setting it’s domestic dispute. The Siak stipulated its sovereign upon Deli Langkat and Serdang in spite of its failure to depend the region from the Acehnese that consequently claimed by the Dutch. The conflict between the Acehnese and the Siak for controlling over the smaller Sultanates in the neighboring region included Deli had led to a signing of a mutual defense pact between the Siak and the Dutch. Consequently, that pact placed Siak Sultanate under Netherlands administration. Based on that agreement, The Dutch sent fleet from Batavia in 1862-63 AD to protect Deli from the Acehnese who launched the massive attack.

In fact, Malay Deli, Langkat and Asahan did not acknowledge the domination of Siak and its pact with the Dutch, but the presence of the Dutch military was irresistible, led to the establishment of nominal Dutch rules. These Sultanates in the Eastern Sumatera were forced to sign the treaties with the Dutch, however the Sultan still self-governing and owing the right of land and the right to implement Islamic law. Nevertheless, the right and duties regarding the colonial government and the population is placed under the Dutch jurisdiction. State ruler of the smaller kingdom such as the Karo region treated as the official employer who received salary from the colonial.

5.1.2 The Development of Plantation

In 1863, a year before the establishment of the Dutch colonial on Deli, Jacobus Nienhuys received land concession from Sultan Deli and started tobacco plantation on the bank of the Deli river. At that time, the population of Deli estimated about 2,000 peoples where half of them living in the center of Sultanate in Labuhan. The success of the first harvest encouraged the expansion of plantation and from then on, the history of Deli that had stagnated for centuries was rapidly changed. The vast area of virgin forest converted to plantation on the basis modest royalty of Sultan Deli for renting the area under his authority. By 1871, Sultan Deli had granted concession for plantation to total 20 companies for 12,702 Hectares land areas (Reid: 1979). However, since the
beginning of the plantation up to the present days, the disputes among the local population and the plantation company have never been completely solved.

The tobacco plantation had formed the specific land pattern. All the cultivated land divided by the regular plantation roads arranged in serial numbers. This specific pattern remained unchanged when this area transformed into the present settlement area. Inside the plantation, the companies built compound consisted of warehouses, housing for staffs, office, workshops, hospital, barracks for coolies and shop that managed by the Chinese.

In 1818, there were 148 entrepreneurs comprised of Americans and European Companies exploited the large land concession (Pelzer: 1985). The largest landowner was Deli Company (Deli Matschappij), who built the branch office in Medan Puteri around the delta of Babura and Deli rivers, the main rivers that divided the city in parts. These rivers were connected the plantation with the port of Labuhan on the estuary of Deli River that was very crucial as the means of transportation of tobacco product by small ships (Sampan) and subsequently to be carried by the large ship to Europe and America. On the reversed, the imported materials were carried through Deli River to the port of Medan Puteri to be unloaded and carried by the smaller sampan via Babura or upstream Deli River.

5.1.3 Labuhan Deli: The Old Capital

Labuhan Deli or Pekan Labuhan was simply called Labuhan. It was the capital of Deli, which was developed into the busy harbor. This city was provided with a small garrison of Dutch military troops, a Custom office and a Post office, all of which represented the colonial government. While the Malay Deli traditional Sultanate represented by the Sultan palace that was similar to the commoner houses, except it was slightly larger. Sultan Makmun al Rasyid Perkasa Alamsyah built a palace on kampong Bahari and a mosque of two-tiered pyramid roof in Labuhan (figure 5.3), to replace the previous temporary mosque built by Sultan Usman Perkasa Alam in 1854. He declared Labuhan as the center of the state in 1886. The Mosque of Labuhan had been constructed in various different styles and the present form was built by Deli Matschappij in 1927, while the Palace was untraceable disappeared. The Chinese settler who mainly
came from Fujian built their settlement and a Buddhist temple adjacent to the Palace surrounded by two stories shop houses, which are in a very bad condition now.

The land dispute between Sultan who backed up by the Dutch and the Karo reached its peak in 1873 known as Sunggal War. Prior to the War, anticipating the situation, the Dutch built army fortress, barracks and the housing complex in Medan Puteri 10 kilometers in the interior to the South of Labuhan Deli in 1863 followed by the founded of the administration office of Deli Matschappij in 1869. The army fortress was dismantled and replaced with Mayor office in 1937 and Local House of Representative in 1970s. In 1887, the Port of Labuhan Deli had moved to the north on the shore of Belawan where the river is deeper and more suitable for the large ship to harbor until now. Consequently, after 1880, the capital city of Labuhan Deli had lost its role as the center of activities and gradually decayed.

5.1.4 The Rise of Medan as the New Capital of Deli

Following the concentration of the army in 1863 and the found of the headquarter of largest plantation, Deli Matschappij’s in 1869, both at the confluence of Babura and Deli river. In 1885, Deli Matschappij finished the construction of railway that connected Medan and Labuhan. The Netherlands Indies government acknowledged the development on the Northern coast of Sumatera by the establishment of an assistant resident in 1879 in Medan. In accordance with the shift of economic activity from Labuhan to Medan, Sultan Deli Makmun Al Rasyid Perkasa Alamsyah also resettled the sultanate to Medan.

5.1.5 Architecture in the Beginning of Colonial Period

The beginning of Colonial architecture development in Medan, indicated by the social revolution in Netherlands back in 1870, led to abolition of government control over agriculture product, caused the influx of entrepreneurs from the Netherlands and elsewhere rushed to Medan. Autonomy of colonial government in Indonesia colony and its provincial districts such as Eastern Sumatera had demanded the new cultural identity of the region and consequently quest for the new style of architecture. The influx of planter immigration in 1900s brought with them the European sensibilities and culture,
which through the cultural exchanged with the local people, were transforming the way of life, both the colonist and the native. The new arrived Dutch architects, beside embedded by the idea of the latest architecture development in Netherlands was also agitated by the local architecture to generate the new alternatives approach to architecture design.

5.1.6 Colonial Temporary Settlement

Medan Puteri simply called as Medan, gradually has taken the role as the center of development in the region. In the beginning, the need of plantation in Deli had to be imported particularly from Penang or Straits Settlement, which was relatively closer than Batavia the center of Dutch colonial government in South East Asia.

At that time, the planters mainly were International group of adventurer and people who were seeking for fortune that were 20 to 40 years in age (Elissa: 1996). The China labors who were imported from China also mainly bachelors. By 1887, 300,000 Chinese coolies from Singapore and Indian coolies from Penang were registered on arrival at port of Belawan, while more than 100,000 Chinese coolies left again (Said: 1977). In the beginning, both, the planter and the labor lived in a society where none of them identified themselves or felt belonged to the region (Jessup: 1987, Paschier: 1995). While the planter intended to return to their home country as soon as the fortune was collected and their future settled so the Asian labor also had the same desire for different reasons. The Asian labor had the greatest desire to return due to the lack of normal family life let alone the harsh and inhuman environment. Consequently, either the white planter or their Asian labor conceived Deli and its new center Medan as a typical temporary settlement. This image had determined their conception of the settlement. The White lodging at the end of 19th Century scarcely differed from those of local houses as was described by Lulofs.
hands and your bed. The furniture was of no account. Who cares, you owned nothing as a youngster. A few pieces of furniture made of rattan, a couple of green plants, a writing table, a bed, and, the most necessary of all, a water filter. A cracked little staircase took you from the bedroom to a slinky scruffy floor and an old cement tub from which you scooped the water to throw all over yourself: oh those bathroom. When taking a bath, you hung two towels over the chinks in the wall, because you wouldn’t like the servants looking at you in the state in which you were born. On the verandah and in the living room an oil lamp encrusted with dirt and sooty, dangled from some rusty iron chain (Lulofs: 1930).

Their Dwelling had constructed in traditional building materials, such as timber, which was adapted to the principle of Malay traditional house, such as elevation above the ground. However, the ground plan was adapted to the needs of the European household in the Tropics. The Architecture of European dwelling in Medan was quite different from those in Java, where the Neo-classic bungalow was already popular; this style only lately reached the outer Java.

However, in the beginning, the European took up the local architecture style for their accommodation. The style was entirely adopted without any significant changes that can be specified as follows. The floor of the houses was raised on stilts up to 2,00 meter high. These wooden piles placed on the stone foundations, where some of the piles only support the floor and the other goes higher to support the roof structure. The house plan very often square in shape covered by pitch thatch roof, provided with the wide verandahs covered by the wide overhung, particularly on the front side, the roof overhung also made encircled the house plan to cover the small window. Sometimes the main roof was branched out toward the entrance to form the smaller pitch roof in order to provide the canopy to cover the entrance space. The high verandahs, fenced with wooden railing were played an important part in provincial life. Such verandah was used as living and guest space in order to catch the evening breeze, so could be provided with a set of chair, hammock and other various items that cannot be found in indigenous house. The European house are larger than indigenous, where the service area that consist of the kitchen, bathroom and toilet facilities of this detached house placed in another on ground out-building separated from the main house. This service area can be reached through the second staircase on rear side of the building. Socially, the separation of activities and spaces indicates the discrimination of race, for the main house strictly occupied by the European, while the service area by the indigenous. This discrimination continues to perform to the end of colonial period and even to present day.
<table>
<thead>
<tr>
<th><strong>EARLY COLONIAL ARCHITECTURE</strong></th>
<th>LOCATION: Medan</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SUB TITLE:</strong> Colonial Temporary Settlement</td>
<td><strong>SOURCE:</strong> Said/Jessup 1987</td>
</tr>
<tr>
<td><strong>INFORMATION:</strong> The pioneering group of early Colonial settler has adopted traditional Malay Architecture to accommodate the European lifestyle. However, the minor necessaries adaptation were required in order to compromise with the specific user need, as indicated by function of verandah as shown on the top right photograph that belong to a plantation manager.</td>
<td><strong>DATE:</strong> 1890</td>
</tr>
<tr>
<td><strong>FIGURE:</strong> 5.4</td>
<td></td>
</tr>
</tbody>
</table>
5.1.7 Early Colonial Architecture

Although Dutch academy graduate architect was making significance progress by putting forward that Geometry, Physic and Engineering was indispensable to the future architect. However, this subject could not be thought at the academic, but it should be learned individually. In fact, the academy graduates nearly always lose commission to the more practically experienced master carpenter pure engineer (Collenbrande: 1993). These pure engineers probably were recruited by the army to be sent to Deli.

A monumental Victorian Renaissance building to lodge the assistant resident was built in 1879 in the Southern side of Deli Matschppij’s headquarter on the Eastern part of Babura River, which is part of Danau Toba hotel at the present moment. This assistant resident’s house (figure 5.5), except a few details were highly reminiscent of the Singapore’s Post Office that was built by the British in 1874. An imposing palace, Istana Maimun (figure 5.5) was built in the new capital. The construction of the palace was started in 1887 and finished in 1891, as told that was designed by Ferrari (Paschier: 1995) an Italian architect, while on the palace was written the name T.H. Van Erp, a Dutch military engineer. The local architecture or at least the hybrid styles, which was generated through the exchanges between traditional and European, were used continuously by the entrepreneur European until 1890s. On the contrary, the colonial government in their attempt to impose the power of the new colonial emporium had turned into the greatness of Neo-Classic style that applied to a number of government buildings. One of the dominant examples is the house of the assistant resident as was mentioned previously. The application of Neo-Classic style in Medan had coincided with development of these styles in Netherlands at then from that time, the role of Medan gradually increased as the center power complex of colonial, traditional and economic power. During 1895, the embryonic urban pattern of Medan had already emerged. The railway transportation system that served the plantation had stimulated the elongated development of the city, while the development of the new center around the railway; station was much faster than the rest of the city. The tobacco plantation of 175 by 275 meters was transformed into the huge open space later known as Esplanade. The early colonial buildings had grown around the Esplanade, on its northern side situated the housing belonging to the Deli Matschappij and a little farther located the military.
ARCHITECTURE IN THE BEGINNING OF COLONIAL PERIOD

SUB TITLE: Early Colonial Architecture

INFORMATION:
The buildings in this period mainly designed by Dutch military engineers rather than by academic graduated architects. The top left is the Resident house built in 1879 following the establishment of the local government. This building was highly reminiscent of Singapore post office built by the British. The building on the top left is Sultan Palace named Maimun Palace. The building designed in 1887 probably by Dingemans, however Van Erp a military engineer is written on the building. The building on the bottom is the Dutch High court designed by Van Erp.

LOCATION: Medan
SOURCE: Field Survey
DATE: 1998
FIGURE: 5.5
**ARCHITECTURE IN THE BEGINNING OF COLONIAL PERIOD**

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>Medan</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOURCE</td>
<td>Field Survey</td>
</tr>
<tr>
<td>DATE</td>
<td>1998</td>
</tr>
<tr>
<td>FIGURE</td>
<td>5.6</td>
</tr>
</tbody>
</table>

**SUB TITLE:** Urban Square

**INFORMATION:**
Urban square called Esplanade emerged in 1895 as embryo of the Urban Pattern. The earlier buildings in this period that reveal various architecture styles can be found on four sides of this urban space.

---

**LEGEND:**
1. Emigration Office
2. Deli Company Hospital
3. Deli Company Office
4. Fortress
5. Commandant House
6. Military Camp
7. Canton
8. Societiet (Club House)
9. Medan Hotel
10. Train Station
11. Fire Department Office
12. Post and TeleGraph Office
13. Court House
14. Hospital for Prostitution
15. Sultan Serdang House
16. Sultan Deli Palace
17. Shop House
18. Police Station
19. Esplanade
20. Horse Race Field
21. Firing Range
22. Official Housing
23. Europeans Cemetery

- City border
- Railway road
- Forbidden area
- Military area boundary

---

USU e-Repository © 2008
Before 1880, there were no public facilities in Medan so the houses of Deli Matschappij also functioned as a guesthouse, hospital, church and public auditorium. In 1884, a small hotel was established on the southern side of Esplanade later replaced by Granada hotel that converted into a national bank nowadays. The Building in Medan at that period had displayed various architectural style namely Neo-classic, Chinese to Art Noveau and Islamic architecture, however, the profile, scale and the atmosphere was European. When viewing the architectural landscape of this era, one can recognize the architectural exchange with the British colonial architecture of Straits Settlement. Since Batavia, the center of Dutch colonial administration was about 1500 kilometers away the planters community of Deli were strongly depended on this British colony for their supply particularly Penang and Singapore. Surprisingly, The contact with the local culture has led to the exchanged of idea.

In the late nineteenth century Holland also experienced a somewhat belated flowering of art and crafts movement, but rather than harking back to the Middle Ages, as had Wiliam Morris, there developed a strong interest in architecture and textile design of Holland's Indonesian colonies. This sense of identification with distant colony eventually contributed to the fantastic, seemingly un-Dutch imagery Amsterdam school (lead by Klerk) and perhaps to an extent, to the development of German Expressionism as well (De Witt: 1987). Although building was exclusively for the benefit of the small population of Europeans, the underlying idea behind “Dutch Indiesche architecture” from 1900 onwards was that there had to be synthesis between “modern” western oriented structure and techniques and eastern art form. In other words, building styles had adopted from the indigenous traditional forms, every aspect of which had taken local climatic into account. This approach produced important and interesting buildings of high quality, many of which serve as a source of inspiration and a historical frame of reference for present day Indonesian architects. Dutch Indiesche architecture was much more than simply a tropical variant of development in the Netherlands, and for this reason it had added the extra dimension to the history of the Dutch architecture (Akihary: 1996). Meanwhile, kampong Kesawan was transformed drastically into a commercial district, the shop-houses mostly managed by the Chinese built along Kesawan road that led to Esplanade. In the beginning, these shop-houses only had one story with the living area in the rear and commercial area in the front.
**SHOP-HOUSES ARCHITECTURE**

**LOCATION:** Kesawan, Medan

**SUB TITLE:** Earlier Shop-houses Architecture

**SOURCE:** Loderichs et al

**INFORMATION:**
The earlier Chinese emigrant as was the Dutch also adopted local architecture for their shop-houses and match their cultural need to the building. The Photograph shown commercial district of Kesawan.

**DATE:** 1997

**FIGURE:** 5.7

---

![1885 Image](image1)

![1899 Image](image2)

![1930 Image](image3)

![1948 Image](image4)
The construction techniques of the shop-houses and warehouses were based on local knowledge by using available building materials of woods and thatch roofs combined with Chinese architectural elements. In 1899, these completely first shop-houses in Kesawan were extinguished after the big fire, the permanent two story shop-houses were built on the same location as can be seen now.

5.1.8 The Late Colonial Era

5.1.8.1 The Segregated Society

The colonial town or Medan expressed the great differences and dualism of its society, as was reflected in the arrangement of the urban areas and its architectural morphology. On the one hand, there were the European district of permanent and semi permanent building, Chinese shop-houses, on the other hand, Sultanate traditional and spontaneous kampong areas.

The colonial society was based on racial segregation, the distinction between the divergent ethnic and economic class of the population was ever established by law. The leaders of each community of ethnic group were nominated by the colonial administration, designated with the military rank such as lieutenant, captain, and major. The relation between the divergent section of population in colonial society in terms of power and influence can be characterized as complicated and based on unstable and highly sensitive balance. Furthermore, The local population physically separated into the indigenous Malay residents and local immigrants mostly of Javanese in origin, who lived mainly in the so-called kampong Java in the south east of Esplanade and in the outskirts of the town. The small group of Arabs and other Asiatic mainly from British India, usually lived and worked on the south western side of Esplanade

Following the Dutch policy of decentralization, a region council of Deli was founded in the year 1906, only to be abolished when Medan obtained the status of independent Municipality in 1909 under the assistant resident. In 1918, the first major was appointed.

The population was 14,000 in 1905 but drastically increased to 43,826 in 1918 consisted of 409 Europeans, 8,629 Chinese, 139 other Asiatic and 35,009 indigenous Dutch Indies mainly Javanese, Batak, Mandailing, Minangkabau, Aceh and Malay Deli.
In 1930, the population had increased to 74,976 consisted of 4,292 European, 27,180 Chinese, 3,408 Arabs, and other Asiatic, and 37,096 indigenous Dutch Indies.

When Medan obtained the status of Municipality in 1909, the enormous lack of regulation was recognized, exacerbated by the inexperience of the local government. There was no evidence of any formal town planning before 1920s, shortage of funds led to atmosphere of competition prevailed between the Municipality and the Central civil administration regarding territories, competencies and responsibilities (Passchier: 1995).

The shortage of building plots was another basic problem, which finally solved in 1919 by converted agriculture land to belong Deli Matschappij in the southwestern part into urban area. Around 1900, the European lived at the northern and western side of the Esplanade.

5.1.8.2 Town Extension

The town has expanded from 1,000 hectares (Has) into 1,583 Has in 1920s, consisted of district Kesawan, Petisah hulu, Petisah hilir and Sei Rengas. In 1923 had added another 40 hectares, allocated for central government’s office complex and European settlement of Polonia. Accordingly, the architecture of European had changed into a universal detached house with tile roofs, sometimes two stories high, a garage and some out building called colonial style.

5.1.8.3 The New Satellite Town of Polonia

Polonia is a name of a small town in Poland, which is given to a tobacco plantation in Medan by its owner. The local Dutch government had converted that plantation into settlement. It is intended to be the garden city in the colony, so provided with a lot of public parks, wide roads, and trees. The grid pattern of this satellite town is following the existing plantation service roads.

The southern part of Polonia probably designed by Thomas Karsten who acted as an advisor for at least nineteen Municipalities in the colony. Until 1950, the entire Polonia neighborhood dwelled by European.
They were grown dry paddy or other non-perennial agriculture. While, the rest moved to the nearby towns for seasonal work, especially road and building construction or took the jobs as laborers, janitors, or other manual position. The Javanese made up a bulk of the urban proletariat and non-skilled labor. The indication of ethnic segregation explicitly shown by the naming of the settlements that referred to its original inhabitant.

In 1905, there were kampong China, Arab, Keling (Indian), Mandailing, Deli Malay and Minangkabau. Where each ethnic group was physically separated based on a clear boundary. It is important to note that Christianized Batak Toba wasn’t recognized at that moment. Since they were informally not allowed to live in Sultan’s Deli jurisdiction, while their education were not high enough to live along with European and they were not obedient to be the plantation workers. The ethnic sentiment also reflected in the naming of street, especially for those who wish to maintain the identity. The Indian street names such as Ceylon, Madras, Bombay, Calcutta and Colombo can be found in Indian district. In Chinese district, the familiar names for the streets are Swatow, Shanghai, Hongkong, Canton, Hockian, Hainan and others. In 1960, such foreign names were forbidden due to nationalism program launched by the government.

5.1.8.5 Street and Open Space Sesign as Segregation of Power

The rapid expansion of a transportation system became the most decisive factors in sprawling of the city. In the early years of plantation development in 1860s, the rivers were the main transportation system. However, the intensive clearing of the jungles for plantation for years caused the accumulation of sediment, made the rivers became difficult to navigate.

Later in the first years after the annexation of the Batak Toba into Northern Sumatera shortly after it defeated by the Dutch 1907, the Colonial started to build land transportation network by utilized the local forced labor. This system linked with the newly established administrative centers of Langkat, Pangkalan Brandan, Tanjung Pura, Binjai, Lubuk Pakam, Kisaran and Rantau Prapat to Medan, also connected port of Sibolga in interior of Tapanuli with Belawan. Thus, an important foundation for the future economic development of the region was laid. It took almost fifty years for the Dutch to finish the project and from the beginning of construction people had continuously moved from the hinterland to the nearest new cities.
They particularly has moved the city of Medan. In 1883, Deli Matschappij established the Deli railway and started to build a railway network. The first three routes built according to the needs of plantation production and material, which connected Medan-Belawan, Medan-Delitua and Medan-Timbang Langkat. The expansion of the road network contributed to drastic development of Medan. The first and most developed parts of the city were the area along the main roads that connected Belawan and Delitua (now respectively Jl. Puteri Hijau and Katamso). Also, has developed the area around the roads junctions and the crossing between roads and Rivers. Kesawan was the first shopping street and trading center lined with shop-houses. Toward the end of colonial period the street in Medan had been drastically developed from what it was in the beginning of 20th Century by taking the full account of modern town planning practice.

The city was laid neatly between the rivers of Babura and Deli structured by the main roads, which run parallel with the rivers. Those main roads branched out into a numbers of sparsely smaller streets. The street formed the combination of European grid and amorphous Traditional Deli Malay pattern. The main streets still kept the role as axis and transit road that created the strategic location for the most profitable economic activity. The other Streets were modernized to function as internal street network and linking the main streets together in the complicated network.

5.1.8.6 The Dutch Precinct

The streets and open spaces were used as the spatial tools in forming the segregation of power between the Dutch and Sultan Deli. The Dutch concentrated around the Esplanade and Polonia. Esplanade is a single block in the city center that became the essential composition of the town structure. The building arranged around the square were dominated by the Dutch official and commercial buildings namely the town hall, post office, banks, hotel, company offices and railway station, all impressed the civic symbol of the town. The dominant road (now Jl. Raden Saleh) functioned as the East-West axis, connected the Esplanade with the adjacent military district in the Western part. In the military district, an open space (now Benteng square) was set in front of Dutch military base. The courthouse also placed on the West side of that quasi-
public square since only used for military activities and prohibited for the common people.

The European settlements of Polonia and offices quarter were situated on the area of 40 hectares in the area between Babura and Deli River. The streets in these areas were laid out spasiously forming the organic pattern with the ample squares and public open spaces at the roads intersection. The streets were straight and sometimes formed the gentle curves with the landscape median and fine bordering houses in generous greenery. Within this area, the main street is 15 m and the secondary street is 8 m width. They were so wide for the scarcely automobiles traffic passing at that time but providing the wide open linear spacious as well as supporting the transportation network in the inner city. The spacious street complemented with abundant of open spaces consisted of Town Parks (now Ahmad Yani and Banteng squares), some landscape street median formed by the small gardens. The open space for sport and games (Kebun Bunga) was established in 1929, six years after the founded of Polonia.

In European district, the area was divided into various shapes of block enclosed by the street. The blocks arrangement were based on the size of the sites. They could be either single row with fronts and the rears of the houses facing the different roads, or double row, consisted of two single rows of houses back to back separated by fences. The blocks are varied in size, ranged from 80 m by 400 m to accommodate 8 single rows, to 60 m by 80 m to accommodate eight double rows houses. The streets and block divisions were based on economic and rank status, which mostly came from the upper class Dutch elite. The important building such as Resident’s and Mayor’s house occupied almost one block. Prior to the end of colonial period, building development and trade had been developed. The houses occupied by the European families were probably much better than the dwelling they had in their home country. The largest size building lot was 1,800 square meters and the smallest was 600 square meters. The houses were detached as a single-family dwelling or duplex similar with the Dutch’s suburbia villa types. The building could be symmetrical or asymmetrical in plan. They were placed on a considerable set back of 8-14 meters depended on the width of the road (road class) in front of the house, consequently created the spacious front garden that planted with tropical trees. Probably, this was the way the Dutch to adapt the building with the harsh tropical climate (Elissa; 1996) but it has to bear in mind that this settlement was designed based on anti urban of the garden city concept.
Building coverage of the houses was 50% led to a considerable low density. The building regulation had been strictly applied. The bulk of public building that spread in the inner city area were set on large plot of 0.5-1 hectares lot.

The building coverage was more intense that of 50-70% where the building designed up to four stories. The building could be an individual building standing as a landmark, although the set back very often was closer than the houses. The other type was terrace building of various types standing continuously alongside the Kesawan road. As it was mentioned previously, viewing the architectural landscape dating from the early colonial period, it was clearly shown the exchange of style with the colonial British architecture in Strait settlement particularly Singapore and Penang.

5.1.8.7 Commercial District

In merchant area, the blocks were made up of long narrow shape of building lot of 8 meters width and average length of 12 meters depended on the block size. Nearly 100% building coverage led to the high density of buildings. The building was often two stories, shop at the front of ground level and family area above. This building connected each other by the share wall and even roof. The architecture of buildings in Chinese merchant area was similar with those in Straits Settlement such the presence of continuous verandah that transformed into arcade, lintel molding and variety of styles of opening in the second floor. They usually had saddle roof covered with tiles, wall of plastered brick, which was more resist to fire hazard than wood as was the shop-houses of the early Chinese settler, which was burnt in 1894. In Indian merchant district, the width of the lots slightly larger than the Chinese lots and in contrast to the Chinese shop-houses, their timber building generally made of single story. Most of the Indian engaged in retail trade, sold cotton materials, sport equipment and Indian imported small items, craftsman’s and a small number works as estate rent collector that later they came to own. The influence of architecture style from their homeland was not significant except for the temple. Today, the trace of Indian shop-houses in Kampung Keling is rarely seen and it was replaced by the contemporary style building. The commercial area of Kesawan, occupied by the Indian and Chinese in the east part of the city, the street forming the grid pattern, divided in blocks into almost uniform size. In contrast to the European district, this area was lack of open spaces and greenery.
The only open spaces in this commercial district used to be the horse race area established in 1905, and it was transformed into a central market in 1933, strengthened the exploitation of this district as the commercial activity center. The main street was 15 m in width, formed the rectangular shape and subdivided into longitudinal monotone secondary roads of 10 m in width.

This area was busy by the traffics and business activities of retail, the arcade sidewalks were provided for pedestrian and vendors. The merchant district that occupied by the Chinese on the east part and Indian on the west part of the Esplanade, these commercial blocks covering the large area which divided almost into uniform blocks. It can be narrow elongated block of about 0.5-1 hectare, accommodated a tight series of deep parcels mainly of shop-houses. The block consisted of 30-50 units of building lots. Each row of building faced the proper street, back to back with another row in one block, separated only by a small alley.

Another type was a block accommodated the narrow single row of buildings or rectangular block divided into smaller parcel with the front and rear facing the street. There were some cases where the single block occupied by large building such as the house of Chong A Fie the richest Chinese captain. However, the rectangular blocks forming the grid pattern occupied by the small uniform building either single story or two story shop-houses were considered dominant in this area.

5.1.8.8 Government District

The government and business district were set in the north part of the city around the Esplanade. The block practically was absence of residential dwelling, and the average size of each block was 2-5 hectares divided into large building lot. The lots boundaries varied and developed individually by the owners.

As was mentioned previously, the position of rivers had also determined the shape of the blocks. The public buildings block developed along the area between the rivers. The office buildings for business ventures were occupied large building lots. They were not only set in the meeting of two rivers and along the rivers but also spread deep inside the city; especially the area along the first developed a main street, which connected Belawan and Delitua.
5.1.8.9 The Traditional Settlement Clusters

The formal plan was never applied in the kampong, which was occupied by the indigenous population, so the streets were consisted of the amorphous narrow passage. The roads were uncovered, almost impassable in the rainy season, no street lighting, poor drainage and poor sewage disposal. This was partly because the Dutch was not intended to meet the need of natives, who lived under the jurisdiction of the Sultan.

The Sultan’s jurisdiction was centered on Kota Maksum in the southern part of Esplanade, which slightly separated from to the Dutch town center. This compound connected with the Esplanade by the dominant Kesawan street (now jl A.Yani and jl.Katamso) that also functioned as a strong North-South axis of the city. The Sultan district centered on the Maimun palace, Maksum palace, Great Mosque that provided with the burial place for the nobles, Courthouse, housing for the nobles and the King Park. All the buildings concentrated around this Park. The Maimun palace located in the middle of spacious area on the West Side of the Park. The Maksum palace is on the eastside of the Park opposite to Maimun palace. This palace had been burned in 1948 during the social revolution by the people who hated the royal families for their collaboration with the Dutch, behind this palace situated the settlement of the Deli Malay nobles families. The great Mosque located on the south side of the Park. The Park also was not a square actually, since it’s only provided for the kings and the nobles and dominantly occupied by the pond. The compound was designed in hybrid of Western concept that has been adapted to the Malay atmosphere. The Mosque and the Palace became the center of the settlement whose lay out was a mixed of grid and amorphous placement of houses.

It becomes clear that streets and open spaces had strategically arranged in such a way in order to keep the balance among the Military, the Dutch government, and the commercial and indigenous rules for the interest of the Colonial. It also revealed that Dutch through the planning, not only controlled the social-economic power but also applied the basic concept of modern urban form by purely using their owns rules and cultural preferences. The surplus of plantation production was the main motivation of the initial establishment of the city, economic prosperous had stimulated the city to become the business center, which arranged in colonial concept and ignored the indigenous traditional order.
However, the Sultan's limited autonomous power had enabled him to set his own state center and implanted the Malay tradition and Islam concept. The clusters were extensive in kampong areas, buildings were scattered that their patterns were very different with the above mentioned of Dutch European pattern. There were no exact boundaries between each housing lots. As the clusters gradually absorbed the incoming migrant, the building density developed into higher degree compared to the very low density of building in their countryside. The Colonial had objected on the condition of the kampungs, which they regarded as substandard, unhygienic and had the high potential to spread the diseased into the Dutch settlement. In 1918, the Municipality took its first attempt toward the kampong improvement and built low cost housing. However, their contribution was insignificant.

5.1.9 Architecture in the late Colonial Era

5.1.9.1 Dutch Architecture

Delft architecture school was found prior to 1865 and followed by the Polytechnique School that also situated in Delft, for the first time led by Gugel, a German architect. In the school as was propagated by Napoleon previously, Art and Science as well as engineering and architecture were studied in combination. At that time nearly all leading architects in Netherlands such as Gugel, Cuypers, Leliman, Eberson, work to rational principles, where building were regarded consisted of functional organization and construction so called “core form” and artistic value of compositional principle and ornament added by the individual architect so called” art form”. The Education institution in Dutch played a crucial role in architecture development in Netherlands as was seen in the founded of academic art education in 1817, Delft architecture recently prior to 1865 followed by Delft Polytechnic school. In 1905, the first university training course level transformed from Polytechnic school in Delft, school of Architecture Decorative Art and Craft in Harlem and Vocational training in Amsterdam. Evers, who appointed as a professor at Delft in 1902 to replaced Gugel has brought autonomous Beaux Art to Netherlands that retained almost a century, in his view structure and form was of lesser importance. He also drew attention to the formal vocabulary of new eastern and Islam architecture. In line with the view of academism, he
also propagated building typology as was devised by Duran in the beginning of 19th Century. He favored a link between ground plan and elevation but not between structure and skin of the building, technology should be accommodated as long as the composition and outward of the building didn’t suffer as result. Ever and disciples design academics building with exterior refer to Wright, Dudok and Amsterdam. He focused on traditional field of attention as the reflection of architecture on social reality, as stretching the architecture task to urban design for Berlage. However his disciples in academicism such as Friedhoff, Steur and Zwier believed that remotes attitude toward acute social condition such as housing shortage, in their view the architect shouldn’t be expected to sketch a new world order or anticipate possibly changes in society.

Largely the concept propagated by the academicism in 1930s was forged in a doctrine of Ecole de Beaux Art. Applied a complete system of monumental buildings in which the architectural programmed was classified into a number of functional elements. The order of element led to spatial hierarchy that crowned by an appropriate climax and the main principle used for ordering elements were symmetry and the strong axis. The basic starting point was the ground plan. The building composed of tightly integrity, which owing to extensive circulation system that was clearly feasible to some one walking through the building. The vertical elevation of the building was seen as a skin that didn’t necessarily had to reveal constructional principle. Steel and concrete were not prohibited as long as they were covered up. Elevation was obliged to reveal, firstly, the main structure of the ground plan and secondly, character of the building. Character meant that a building imparted something of its purpose, so its offered an aesthetic interpretation of the program with the result that an office building could never be confused with say a Church, these concepts led to typology of building.

Academicism indicated the private and closed atmosphere, based on random instead of mathematics, predominantly used brick, pitch roof and conservative in style, thus in contrast with new architecture (Niew Bouwen) movement that propagated open-glass wall, mathematics based, flat concrete roof and progressive instead of conservative. These two differences approaches had been compromised by a study group that interested on domestic architecture. As a result, they propagated flat concrete roof to be used in a denser urban housing while pitch roof in the rural area, and close atmosphere in the country while the open to be used in the city or the area of the lesser dependency on climate. The twentieth century Dutch architecture indicated by the prolonged conflict
between “conservatism sometime called romanticism” led by Moliere in 1924 of Delft school and “progressive functionalism” supported by the younger group of architects of Nieuw Bouwen in 1921. This conflict had split the Dutch architecture throughout the second quarter of 20th Century. Although in the late 1930s was regarded as masochistic rhetoric of 4th dimension theory. The conservative regarded that engineering as a closed self contained territory of unprecedented beauty, technology based engineering works was attributed more dignity, confidence, force and feeling than the product of contemporaries architects who functioned as artist-architect. They propagated a method of working based on the strictly systematic, following a program of concrete scientific data. According to Moliere, a gradual reconciliation of arts and technology was the only way to make art as a flower of culture accompanied by a renewal spiritual unity in society. However it was rather short sighted to assume that the only those aspect govern by a strictly mathematics system were worthy of being called “rational” and that randomness in a composition was no more than “artistic romanticism”. The most important thing was not to allow either of the two characteristics to dominate; he was concerned for both, system at randomness. Moliere turned to Catholicism in 1927, consequently in his hermetic system there was no room for spatial illusion, of which the new movement architect so enamored, but which he considered a transgression of naturally defined borders. Even less, the room for material those were too remote from the “primitive substances” from which the creator had constructed his universe such as natural stone, was preferred above concrete, which he dismissed as a petrified porridge.

5.1.9.2 Colonial Architecture in Deli

The building trade began to develop in the first decade of 20th Century, when the building company and Dutch architects arrived in Medan. These Dutch architects mainly educated in the Academicism tradition. Consequently, There was a growing need for administration space, trade, shops building space, housing and so forth. The change of society followed by the transformation of architecture, in parts of town, the development, the conception and expression of architecture became a European product. The architecture style has changed from wooden Malay adaptation house into British cottage style of wooden houses with a stone basement.
The great mosque (Mesjid Raya) was built in 1906 on 1.32 hectares lot in the Southwest of Sultan palace (Istana Maimun), the Mosque designed by Dingemans in hybrid style inspired by Moroccan architecture, which confined by European Principe. The building using stained glass imported columns marble. The building cost 500,000 Dutch Guilder. The plan of the mosque similar with orthogonal Indian Mughal's mausoleum, the foundation referred to European technology, marble imported from Italy, the mechanism of the door using the European technology with Islam ornament. The Windows frames are the hybrid of Mamluk and Ottoman mausoleum with Venetian style. The columns are using the Roman style. Various arch can be found in this mosque namely Mamluk, Gothic, and pointed arch. The domes are using the Brunelleschi style referred to Florence cathedral cupola (1420). In the same year, the building of Sultan’s high court of justice was built in the opposite Maimun palace. The housing with beautiful garden, pond and other palace on the eastside of Maimun palace called Istana Maksum. This development possible due to the royalty and land rent paid by the planter that amount more than 1 million Dutch guilder per year. Because of decentralization acts 1903, an operation was launched to reform currency in Deli by banned British strait settlement dollars and introduced Dutch Indies Guilder in 1907, followed by the establishment of Deli Matschappij’s Javasche bank designed by Boon in 1908 on the West Side of Esplanade. This building rejected by the board of directors and sold to the Municipality to be the New Town Hall. Board of directors commissioned Cuypers to design another Javasche bank office, which is used as Central bank now. Cuypers brought the European standard concept with him from Netherlands to Deli, his vision was also strongly embedded with the Empire style used by the British in India and other colonies. Berlage, a proponent of Dutch’s modern architecture visited the colony in 1923 qualified this building as designed in modernized and feeble Renaissance. In the same year, Snuyf designed new post office to replace the old one, which built in 1879. The Post office was the first example that aimed to achieve innovative architecture in Medan. The style drew its inspiration from traditional Dutch gable architecture. The British firm on rubber plantation Harrison and Crossfield built its office designed by Walkers and Adams A.R.I.B.A in 1914 on the Southwestern corner of Esplanade. In 1929, Netherlandsche Handel Matschappij bank built their office on the Westside of Esplanade. The building designed by Bruyn in modern style with a clear architectural concept and minimal use of decoration and ornament provided with double façade to prevent direct sunlight.
5.1.9.3 Chinese Shop House Architecture

The Chinese population lived and worked in their shop-houses mainly in the commercial area Kesawan and in the opposite area in the eastern side of railway. That district composed in a rectangle urban grid comprised of main and secondary road.

These multi story shop-houses were similar in appearance with those in the strait settlements, that allowed for both domestic and economic activities in the same building, were business on the ground and living accommodation on the upper floor.

The upper story projected over the street to provide shelter arcade for pedestrian customer and functioned as a unifying element for linking the shop-houses into a consistent street façade.

5.1.9.4 Architecture of Malay House

In traditional settlement, most of the buildings were detached although quite close each other for the distance among houses only 5-7 meters. The sizes of the buildings were varied, mostly oriented to the street. In case, the buildings set without facing the street, they maybe oriented in the same direction created the imaginary street in front of the buildings, but in most cases, the buildings were scattered.

According to the remaining traditional Malay houses, presumably there were a great numbers of such buildings were built in the Malay urban quarter during the colonial period. Those houses were raised on stilts with verandah in the front and additional building in the rear that used for serviced.

The housing for white collar native had a different characteristic with those in kampongs. In the royal settlement, the building lines were set in relation with the street lines as much as possible and almost uniform. Only a minor element of Malay ornament was applied the rest was based on hybrid of modern vernacular style. The lot size of 600 square meters in average was small compared to the lot size in European quarter.

The Dutch also built the similar public housing with almost similar pattern and characteristic of the natives middle class as can be found in Jatiulu, Sekip, Pasar Lumba and Sidodadi in 1925.
5.2 Contemporary City of Medan

Although, the population of city is continuously undergoing the process of cultural exchanges, however, the segregation is also growing in the same line. The physical ethnic segregation as indicated by the separation of settlements, gradually transform into ethnic social organization. Furthermore, the population segregation, which is based on level of income drastically increased in the form of the luxurious, housing complex, low cost housing and slum areas that are reflected in the architectural style of these houses.

City planning policy of Medan, which is based on the Western model, is not effective to harness the development due to its failure to anticipate the crucial ethnic segregation and to accommodate local culture. One of the responses to this planning policy is the spontaneous house that drastically grows and leads to the uncontrolled development.

The cultural exchanges between Western and Domestic produce a unique architectural styles of buildings that gradually transform into particular typology, that conforms with various cultural needs of different ethnic groups in the region. The historical phases of these architectural styles transformations are clearly represented by the houses, where the original houses, which were built prior to the nineteenth century until the end of twentieth century, can be found in the region.

The Shop houses that originally brought by Chinese immigrant have also transformed and they were no longer exclusively occupied by the Chinese, they have become a new dominant architectural style that enable to accommodate the requirement of various cultural needs due to its extreme flexibility.

5.2.1 Social Setting of the City dwellers

5.2.1.1 Population

Historical processes of population's conglomeration in surrounding Medan have been elaborated in the preceding section. Due to the drastically booming of plantation in 1860s, the urbanization and the tremendous immigrant have steadily continued to influx
until the collapse of Deli Sultanate, coincided with the independence of Indonesia in 1945. The population of Deli, which was only 200 in 1823 had increased to 85,000 in 1942, occupied the area of 1.583 hectares. This area defined in 1909 as Medan got its autonomy. Furthermore, it had extended to 26.510 hectares in 1973, and the population accordingly had increased from 984,464 persons in 1971 and 1,373,747 in 1980. During the period of 1980-1990, the population growth was at the rate 2.33% per annum and in 1997, the population of Medan reached 1,976,298 persons.

Based on 1997 data, the population density of Medan is only 75 persons per hectare (p.h), which can be categorized as sparse. In fact, 27.45% of total area, that consists of districts Maryland (8.99%), Labuhan (13.83%) and Deli (7.86 %) are marshy land and only occupied by 13.5% of the total population. So the population density in this marshy districts, less than total average for only 32.88 p.h, while district Tuntungan, Johor and Sunggal cover the area of 5,070 hectares altogether have the population density of 49 p.h. In contrast, the district of Area of 552 hectares that cover only 2.08 % of total area of Medan dwelt by 124,981 persons or 6.33% of total population of density of 226.41 p.h. The highest population density of 275.14 p.h reached by district of Perjuangan. The latter two districts situated in the core of the city and study case located in the district of Area.

5.2.1.2 Religion

The majority of population is Islam (57%), the rest is Catholic (6%), Protestant (12%), Buddha (7%), and Hindu (Less than 1%). There is a close relationship between religion and ethnic. The Batak mainly devoted to Protestant, Indian to Hindu, Chinese to Buddha and Catholic while Malay, Javanese, Mandailing, Acehnese and Minangkabau devoted to Islam. Religion also contributed to segregation of settlement among the city dwellers.

5.2.1.3 Language

Although Malay formally agreed as a lingua franca, however nearly all of the ethnic groups have their own language that used among the ethnic community and placed Malay as a second language. Moreover, in a number of government offices, which are
dominated by the Toba, they have used their language as a means of daily communication. Only Deli Malay ethnic group that consistently use the language, since that language was adopted from their native.

5.2.1.4 Education

The largest number (69.82 %) of population whose ages are above ten years, have not attended any formal education, however, there is no available information whether they attended any informal education program. While 8.13 % of populations are student of elementary school, 7.96 % secondary school, 6.83 % high school, and 5.90 % student of higher education. Nevertheless, there are 1.36 % of population who do not have any formal education and highly probable illiterate (Statistical year book 1998).

5.2.2 Economic Setting of the City

The plantations in surrounding Medan are still the economic basis of the growing Medan. They have grown as a collection center of agriculture produce, which at the same time, also functioned as a distribution center of manufacture product. In both case the local main revenue is came from tax on services activities namely hotel, shopping center, building construction and public utilities, which are not sufficient to finance the operation of the town properly.

5.2.2.1 Economic Background

The location of Medan on Malacca strait has placed the seaport of Belawan at a strategic port in the region. As was discussed previously, since the beginning, the economic of Medan is based on agriculture and plantation, which depend on this port, and continues to play a significant role until present time. Besides, Medan is also holding the role as the trading center of Northern Sumatera, which its commercial scene is dominated by export trade of agricultural and plantation product that represented by approximately 300 trading companies. These companies are mainly involved in trading of agricultural product such as palm oil, rubber, tobacco, coffee, tea, fruits, and vegetables. Although some of these plantations located in a considerable distance from Medan,
however, their offices are placed in Medan. There is an oil refinery in Brandan about forty kilometers from Medan.

Another important businesses are retail, since the consumption level of consumer goods are considerable high. This economic background clarified the main factors boosted the rapid physical growth of Medan in the last fifty years. Although the fast urbanization has created crucial urban problems, however the concentration of population has placed this region as a potential market, on not only the level of northern Sumatera but also national and perhaps even for Asian region.

Due to afore mentioned condition, the growth of Medan contributes to the reduction of the tremendous disparity among the regional growth in Indonesia. In this respect, Medan that occupied by multi ethnics can be seen as a prototype of a development that functions as antipode to the large metropolitan areas of Java.

Although the role of industries have gradually increased in economic of northern Sumatera in the beginning of 1970s, but it cannot replace the position of plantation and agriculture. The international monetary crises in the end of 20th have placed raw material imported based industries in a difficult position, due to the wide discrepancies of foreign and domestic currency, while its production are sold in domestic currency, while its raw material should be bought in foreign currency, this condition has forced a majority of industry into bankruptcy. Again the plantation play a significant role in maintaining regional economic activity, particularly its export based production.

In fact, the greatest part of these local revenue have to be submitted to the central government of Jakarta, consequently, there is a strong centralized and concentration of excessive power. Therefore, It can be said that local government does not have control over its local resources.

5.2.2.2 Cities Financial Resources

Due partly to the lack of funding, the local government of Medan is hardly able to implement its town planning policy that give way to the growth of unplanned spontaneous development notably urban slum area and commercial district. Although the local government is authorized to collect the small enterprises such as tax on land, building and services that so called local real income, While the great share of local
income goes to central government where the small part of it distributed back in the form of subsidies. The growth of city local budget can be seen in the following table.

### Table 5.1: The Real Income Growth of Local Government of Medan

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Agriculture</td>
<td>3.97</td>
<td>4.33</td>
<td>4.37</td>
<td>4.54</td>
<td>4.08</td>
<td>4.71</td>
<td>5.03</td>
<td>4.70</td>
</tr>
<tr>
<td>2</td>
<td>Mining</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.01</td>
<td>0.01</td>
</tr>
<tr>
<td>3</td>
<td>Industry</td>
<td>15.68</td>
<td>14.88</td>
<td>13.94</td>
<td>15.31</td>
<td>16.41</td>
<td>16.91</td>
<td>15.68</td>
<td>16.39</td>
</tr>
<tr>
<td>4</td>
<td>Public Utilities</td>
<td>3.19</td>
<td>3.33</td>
<td>3.12</td>
<td>3.14</td>
<td>3.90</td>
<td>4.67</td>
<td>4.64</td>
<td>4.58</td>
</tr>
<tr>
<td>5</td>
<td>Buildings</td>
<td>5.20</td>
<td>5.09</td>
<td>4.67</td>
<td>4.50</td>
<td>4.73</td>
<td>4.10</td>
<td>4.08</td>
<td>4.00</td>
</tr>
<tr>
<td>6</td>
<td>Trading, Hotel, Restaurant</td>
<td>25.74</td>
<td>25.48</td>
<td>29.93</td>
<td>29.93</td>
<td>28.42</td>
<td>28.37</td>
<td>28.86</td>
<td>29.26</td>
</tr>
<tr>
<td>7</td>
<td>Communication, Transport</td>
<td>20.84</td>
<td>22.05</td>
<td>19.84</td>
<td>19.38</td>
<td>18.72</td>
<td>17.50</td>
<td>17.79</td>
<td>17.25</td>
</tr>
<tr>
<td>9</td>
<td>Social fee</td>
<td>11.02</td>
<td>10.90</td>
<td>10.02</td>
<td>9.43</td>
<td>8.83</td>
<td>7.88</td>
<td>7.69</td>
<td>7.57</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Equivalency in Rp billion</td>
<td>1,080</td>
<td>1,237</td>
<td>1,533</td>
<td>1,836</td>
<td>1,955</td>
<td>5,094</td>
<td>5,806</td>
<td>6,402</td>
</tr>
</tbody>
</table>

Source: Medan statistical yearbook 1986-1998

### Table 5.2: The Growth of Financial Cash Flow of Medan Local government

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Revenue</td>
<td>6,209,968</td>
<td>9,120,820</td>
<td>8,624,816</td>
<td>12,415,599</td>
<td>5,165,125</td>
<td>9,953,958</td>
</tr>
<tr>
<td>2</td>
<td>Local Income</td>
<td>29,063,958</td>
<td>33,214,093</td>
<td>36,491,100</td>
<td>44,461,201</td>
<td>53,733,337</td>
<td>55,680,403</td>
</tr>
<tr>
<td>3</td>
<td>Property tax</td>
<td>7,093,847</td>
<td>11,882,001</td>
<td>14,135,692</td>
<td>15,224,258</td>
<td>19,071,733</td>
<td>21,623,131</td>
</tr>
<tr>
<td>4</td>
<td>Share in Road tax</td>
<td>1,788,640</td>
<td>1,929,825</td>
<td>2,363,435</td>
<td>2,604,200</td>
<td>2,781,127</td>
<td>5,463,370</td>
</tr>
<tr>
<td>5</td>
<td>Share in Non tax</td>
<td>380,382</td>
<td>515,446</td>
<td>661,192</td>
<td>983,168</td>
<td>1,185,667</td>
<td>885,475</td>
</tr>
<tr>
<td>6</td>
<td>Central gov subsidy</td>
<td>202,750</td>
<td>227,750</td>
<td>234,750</td>
<td>256,300</td>
<td>243,000</td>
<td>235,000</td>
</tr>
<tr>
<td>7</td>
<td>Subsidy for salary</td>
<td>11,855,541</td>
<td>16,740,217</td>
<td>15,306,121</td>
<td>38,068,730</td>
<td>49,565,527</td>
<td>59,180,071</td>
</tr>
<tr>
<td>8</td>
<td>Other subsidy</td>
<td>120,678</td>
<td>159,093</td>
<td>20,643</td>
<td>488,405</td>
<td>556,503</td>
<td>684,783</td>
</tr>
<tr>
<td>9</td>
<td>Province subsidy</td>
<td>1,650,808</td>
<td>0</td>
<td>119,254</td>
<td>179,664</td>
<td>1,018,743</td>
<td>196,025</td>
</tr>
<tr>
<td>10</td>
<td>President subsidy</td>
<td>11,531,486</td>
<td>15,175,422</td>
<td>14,585,842</td>
<td>13,182,486</td>
<td>14,691,638</td>
<td>14,942,138</td>
</tr>
<tr>
<td>11</td>
<td>Loan</td>
<td>7,883,652</td>
<td>6,908,279</td>
<td>3,607,644</td>
<td>2,536,636</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Total revenue</td>
<td>75,112,320</td>
<td>95,628,946</td>
<td>98,408,289</td>
<td>130,400,827</td>
<td>148,012,398</td>
<td>168,844,354</td>
</tr>
</tbody>
</table>

Source: Budgeting division Medan Local government

As was mentioned above, the real income of the local government is not sufficient to fill the required budget for running the city properly. The allocation process of local budget is very complicated, tricky and full of conspiracy. In fact the total sum of the budget is insufficient, for only provide about 30% of total real required budget. Moreover, the allocated budget is still corrupted up to 30%. The growth of city local budget cash flow can be seen in the above table.
5.2.3 Economic Characteristic of the Population

5.2.3.1 Job and Employment

The greatest parts of the employed populations are traders, clerical staffs in private company and workers as shown on the following tables.

Table 5.3: Employment of Population per District in Medan in 1997

<table>
<thead>
<tr>
<th>District</th>
<th>Population</th>
<th>Employment/Person</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Persons</td>
<td>H hold</td>
</tr>
<tr>
<td>Kota</td>
<td>17,200</td>
<td>27,142</td>
</tr>
<tr>
<td>Timur</td>
<td>16,506</td>
<td>21,082</td>
</tr>
<tr>
<td>Perumahan</td>
<td>17,528</td>
<td>22,466</td>
</tr>
<tr>
<td>Barat</td>
<td>14,048</td>
<td>18,840</td>
</tr>
<tr>
<td>Baru</td>
<td>8,880</td>
<td>1,221</td>
</tr>
<tr>
<td>Denai</td>
<td>16,363</td>
<td>21,582</td>
</tr>
<tr>
<td>Deli</td>
<td>21,337</td>
<td>26,582</td>
</tr>
<tr>
<td>Labuhan</td>
<td>6,955</td>
<td>10,266</td>
</tr>
<tr>
<td>Maretan</td>
<td>15,134</td>
<td>20,266</td>
</tr>
<tr>
<td>Belawan</td>
<td>13,102</td>
<td>17,266</td>
</tr>
<tr>
<td>Johor</td>
<td>11,606</td>
<td>16,702</td>
</tr>
<tr>
<td>Sunggal</td>
<td>14,965</td>
<td>20,062</td>
</tr>
<tr>
<td>Tumangga</td>
<td>9,919</td>
<td>13,019</td>
</tr>
<tr>
<td>Ares</td>
<td>21,860</td>
<td>26,961</td>
</tr>
<tr>
<td>Amblas</td>
<td>16,102</td>
<td>21,202</td>
</tr>
<tr>
<td>Periasah</td>
<td>13,139</td>
<td>17,239</td>
</tr>
<tr>
<td>Polonia</td>
<td>8,363</td>
<td>12,463</td>
</tr>
<tr>
<td>Mainam</td>
<td>9,153</td>
<td>13,253</td>
</tr>
<tr>
<td>Tambang</td>
<td>19,518</td>
<td>24,618</td>
</tr>
<tr>
<td>Helvetia</td>
<td>20,482</td>
<td>25,582</td>
</tr>
<tr>
<td>Selat</td>
<td>7,923</td>
<td>10,023</td>
</tr>
</tbody>
</table>

Military; a, Gov official; b, Clerical workers in private company; c, Trader; d, Fisherman; e, Peasant; f, Service Workers; g, Workers; h, Retired; i.

Source: Detail Planning of Medan City

Table 5.4: Employment According to the Type Sector and Type of Job in 1997

<table>
<thead>
<tr>
<th>No</th>
<th>Type of sector</th>
<th>Percentage (%)</th>
<th>Type of employment</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Agriculture</td>
<td>4.03</td>
<td>Professional</td>
<td>6.96</td>
</tr>
<tr>
<td>2</td>
<td>Mining</td>
<td>0.24</td>
<td>Managerial</td>
<td>0.67</td>
</tr>
<tr>
<td>3</td>
<td>Industry</td>
<td>11.54</td>
<td>Administrative works</td>
<td>14.51</td>
</tr>
<tr>
<td>4</td>
<td>Public Utilities</td>
<td>1.36</td>
<td>Field Workers</td>
<td>Agriculture</td>
</tr>
<tr>
<td></td>
<td>Electricity</td>
<td></td>
<td>Gas</td>
<td>Fishery</td>
</tr>
<tr>
<td></td>
<td>Drinking water</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Construction work</td>
<td>6.22</td>
<td>Sales</td>
<td>32.26</td>
</tr>
<tr>
<td>6</td>
<td>Trading</td>
<td>34.27</td>
<td>Service workers</td>
<td>9.05</td>
</tr>
<tr>
<td>7</td>
<td>Communication/Transportation</td>
<td>8.44</td>
<td>Plant Workers</td>
<td>30.19</td>
</tr>
<tr>
<td>8</td>
<td>Financial sector</td>
<td>2.15</td>
<td>Miscellaneous</td>
<td>2.80</td>
</tr>
<tr>
<td>9</td>
<td>Services</td>
<td>31.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Miscellaneous</td>
<td>0.24</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>100.00</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Medan in Figures 1998
The populations who have employment only 23.73 %, so the largest part of which consists of unemployment, under school age and children under five years old. In this case, one employed person has to support 3.21 person as dependent family member.

5.2.3.2 Income and Spending of the Household

Income per capita of the urban population in Medan is quite high, compared to other regions in Sumatera and gradually increase although the gap of its distribution among the income group is very wide as seen on the following table 5.7.

The consequences of the lack of local government funding, inequality of income distribution and the urgent needs of population reflected in the physical development of the city, notably disparity of development which is based on income segregation, such as development of well designed high income housing complex and unplanned spontaneous housing.

Moreover, urban facilities and utilities are insufficient and substandard notably drinking water that only available for about 70% of population, while the condition of urban road, sewerage and drainage are very bad.

The excessive unplanned development that take place in the urban core and in the highly concentrated population usually carried out by financially powerful private developer, who normally has the capacity to dictate the local policy maker. This powerful private developer has built large buildings such as banks, hotels, shopping centers, private schools and luxurious housing complex almost in any potential urban land, regardless of the legal city planning.

Table 5.7: Expenditure and Consumption per Capita in 1997

<table>
<thead>
<tr>
<th>No</th>
<th>Range of Expenditure and Consumption in Rp 000</th>
<th>Population (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Expenditure</td>
<td>Consumption</td>
</tr>
<tr>
<td>1</td>
<td>20-30</td>
<td>0.33</td>
</tr>
<tr>
<td>2</td>
<td>30-40</td>
<td>2.58</td>
</tr>
<tr>
<td>3</td>
<td>40-60</td>
<td>24.55</td>
</tr>
<tr>
<td>4</td>
<td>60-80</td>
<td>22.83</td>
</tr>
<tr>
<td>5</td>
<td>80-100</td>
<td>19.40</td>
</tr>
<tr>
<td>6</td>
<td>100-150</td>
<td>19.77</td>
</tr>
<tr>
<td>7</td>
<td>150-200</td>
<td>6.01</td>
</tr>
<tr>
<td>8</td>
<td>&gt;200</td>
<td>4.53</td>
</tr>
</tbody>
</table>

Source: National economic and social survey 1996
Table 5.6: Household Income in 1997

<table>
<thead>
<tr>
<th>No</th>
<th>Income Rp 000/month</th>
<th>%</th>
<th>Household numbers</th>
<th>Total (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Less than 100</td>
<td>10</td>
<td>32,503</td>
<td>32,503</td>
</tr>
<tr>
<td>2</td>
<td>100-150</td>
<td>20</td>
<td>65,006</td>
<td>97,500</td>
</tr>
<tr>
<td>3</td>
<td>150-200</td>
<td>20</td>
<td>65,006</td>
<td>162,515</td>
</tr>
<tr>
<td>4</td>
<td>200-500</td>
<td>14</td>
<td>45,505</td>
<td>208,020</td>
</tr>
<tr>
<td></td>
<td>Upper middle</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>500-750</td>
<td>10</td>
<td>32,503</td>
<td>240,523</td>
</tr>
<tr>
<td>6</td>
<td>750-1000</td>
<td>5</td>
<td>16,252</td>
<td>256,775</td>
</tr>
<tr>
<td></td>
<td>Lower higher</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>1000-1500</td>
<td>5</td>
<td>16,252</td>
<td>273,027</td>
</tr>
<tr>
<td>8</td>
<td>1500-2000</td>
<td>5</td>
<td>16,252</td>
<td>289,279</td>
</tr>
<tr>
<td></td>
<td>Upper higher</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>2000-3000</td>
<td>5</td>
<td>16,252</td>
<td>305,531</td>
</tr>
<tr>
<td>10</td>
<td>More than 3000</td>
<td>6</td>
<td>19,502</td>
<td>325,033</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>100</td>
<td>325,033</td>
<td></td>
</tr>
</tbody>
</table>

Source: Field survey 1998

5.2.4 Population Segregation as Manifestation of Cultural Needs

5.2.4.1 Ethnic Segregation

The segregation of ethnic groups are clearly affected the physical form and zoning of kampongs in the earlier colonial cities, as was seen in Medan. Each kampong named according to the ethnic group who occupied it, so there was kampong Melayu, kampong Jawa, kampong Keling, kampong Arab, kampong China, kampong Mandailing, and kampong Minangkabau. It is misleading to say, that urban ethnical segregations are solely the production of the Colonial as was widely belief. It is said that it was forced by the Dutch in order to keep them exclusively separated and fighting each other, so they can be controlled systematically. In fact, the ethnical segregation still continues long after the Colonial left, even have increased to an unimaginable degree, exacerbated by segregation of population, which is based on income level, social economic status, religion, profession and ideology. The segregation is a consequence of freedom to choose the suitable environment to live in (Rapoport: 1980), hence, it is a cultural need. In the Colonial period, aside from its benefit, the ethnic settlement had created problems since the occupant still maintained their tribal habit that no longer suitable for urban live, particularly the habit that dealing with health and hygiene. The significant characters of ethnic settlements are its traditional pattern, the close relationship with their place of origin and socially and physically different each other. The composition and growth of ethnic segregation during 1930-1981 can be seen on the following table.
Table 5.7: Ethnic Growth and Composition

<table>
<thead>
<tr>
<th>No</th>
<th>Group Ethnic</th>
<th>Year</th>
<th>1930</th>
<th>1981</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Javanese</td>
<td></td>
<td>19,067</td>
<td>380,570</td>
</tr>
<tr>
<td>2</td>
<td>Minangkabau</td>
<td></td>
<td>5,590</td>
<td>141,507</td>
</tr>
<tr>
<td>3</td>
<td>Malay Delf</td>
<td></td>
<td>5,408</td>
<td>100,915</td>
</tr>
<tr>
<td>4</td>
<td>Mandailing</td>
<td></td>
<td>4,688</td>
<td>154,172</td>
</tr>
<tr>
<td>5</td>
<td>Sundanese</td>
<td></td>
<td>1,209</td>
<td>24,572</td>
</tr>
<tr>
<td>6</td>
<td>Batak Toba</td>
<td></td>
<td>882</td>
<td>187,686</td>
</tr>
<tr>
<td>7</td>
<td>Batak Karo</td>
<td></td>
<td>145</td>
<td>51,651</td>
</tr>
<tr>
<td>8</td>
<td>Chinese</td>
<td></td>
<td>22,287</td>
<td>166,150</td>
</tr>
<tr>
<td>9</td>
<td>European</td>
<td></td>
<td>4,293</td>
<td>Na</td>
</tr>
<tr>
<td>10</td>
<td>Arabians</td>
<td></td>
<td>Na</td>
<td>28,390</td>
</tr>
<tr>
<td>11</td>
<td>Others</td>
<td></td>
<td>8,075</td>
<td>53,484</td>
</tr>
</tbody>
</table>

Source: Pelly 1994

The segregation retains until the present time, however its boundary is not always physically clear as it used to be. When the European and left, their houses had been taken by Indonesians either legally by government or illegally by the population. The majority of houses in Polonia were handed over to the military to house their high rank senior staffs, while the rest to the civil government to be occupied by senior staffs of the local government. After twenty year of occupation, those who inhabited government house have the right to purchase the house at the reasonable price. Some part of the house had undergone a temporary renovation in the beginning, only after the secure ownership obtained, the occupant started the permanent rehabilitation to suit the building into their present need, however the original style are traceable in a number of houses. In the last decade, because of the economic development that benefited the pseudo capitalist class of Indonesian Chinese led them bought the majority of the houses at Polonia as a symbol of supremacy. The Polonia that used to be the European quarter continued its role as the high-class neighborhood and manifestation of ethnic segregation, where the European had been replaced by the Chinese. This new high class had changed the appearance of the Polonia significantly. However, the present physical ethnic segregation was not as strict as the segregation in the Colonial period. Chinese ethnic population still concentrated on the commercial area, as a consequence the greater part of the central district had been undergone the urban renewal by the construction of a great number of shop houses. The huge development of shop-houses in commercial areas has led to the building homogeneity.
These areas exclusively are occupied by Chinese who rarely speak Malay even among the local born Chinese. The Chinese maintain their traditional culture and to separate from the native people. The characteristic of exclusiveness of Chinese communities are also reflected in the tendency of Chinese people to cluster as close as possible in a form of group that reflected in the form of their house. The group of Chinese could live in one building or shop houses, one block of areas or even one district. Since normally located along the main road on the strategic point for commercial activities, so the crowded shop houses always generate the congested traffic. Moreover, the pedestrian have to compete with the vehicles since the stalls have occupied the sidewalk. The place doesn’t have a clear orientation or focal center whatsoever.

5.2.4.2 Religion and Segregation

As mentioned in part 5.0.2.2, the religion also contribute to the population segregation. The former traditional Sultanate area particularly district of Maimun and Labuhan still dominantly occupied by the group of Moslem Malay. While the Christian protestant, Toba mainly occupied the newer district such as Kota, Petisah, Ampelas and Helvetia where the largest low cost housing project located.

Table 5.8: Composition of the Devotee of Religion in Medan in 1997

<table>
<thead>
<tr>
<th>No</th>
<th>District</th>
<th>Islam</th>
<th>Catholic</th>
<th>Protestant</th>
<th>Hindu</th>
<th>Buddha</th>
<th>Syncrete</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Kota</td>
<td>39,330</td>
<td>2,178</td>
<td>20,897</td>
<td>145</td>
<td>29,962</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Baru</td>
<td>19,385</td>
<td>6,803</td>
<td>15,880</td>
<td>1,189</td>
<td>2,115</td>
<td>68</td>
</tr>
<tr>
<td>3</td>
<td>Barat</td>
<td>62,321</td>
<td>2,844</td>
<td>9,993</td>
<td>790</td>
<td>4,247</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Johor</td>
<td>63,895</td>
<td>3,935</td>
<td>11,452</td>
<td>315</td>
<td>5,936</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Tuntungan</td>
<td>32,474</td>
<td>6,517</td>
<td>15,206</td>
<td>128</td>
<td>187</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Sungei</td>
<td>47,940</td>
<td>14,254</td>
<td>8,832</td>
<td>1,966</td>
<td>10,306</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Area</td>
<td>74,111</td>
<td>3,168</td>
<td>5,275</td>
<td>107</td>
<td>29,565</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Petisah</td>
<td>33,954</td>
<td>2,942</td>
<td>21,136</td>
<td>1,933</td>
<td>1,441</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Polonia</td>
<td>24,150</td>
<td>1,134</td>
<td>7,498</td>
<td>1,693</td>
<td>8,984</td>
<td>84</td>
</tr>
<tr>
<td>10</td>
<td>Maimun</td>
<td>30,137</td>
<td>2,210</td>
<td>1,099</td>
<td>583</td>
<td>1,306</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Helvetia</td>
<td>60,379</td>
<td>5,121</td>
<td>27,394</td>
<td>233</td>
<td>2,194</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Selapung</td>
<td>29,652</td>
<td>11,516</td>
<td>3,399</td>
<td>1,514</td>
<td>587</td>
<td>80</td>
</tr>
<tr>
<td>13</td>
<td>Ampelas</td>
<td>64,095</td>
<td>4,076</td>
<td>21,047</td>
<td>67</td>
<td>417</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Timur</td>
<td>62,340</td>
<td>2,981</td>
<td>12,279</td>
<td>634</td>
<td>16,208</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Demai</td>
<td>66,426</td>
<td>26,551</td>
<td>9,249</td>
<td>93</td>
<td>5,397</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Dusai</td>
<td>70,503</td>
<td>672</td>
<td>3,564</td>
<td>171</td>
<td>8,013</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Labuhan</td>
<td>41,398</td>
<td>8,840</td>
<td>1,114</td>
<td>5</td>
<td>4,699</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>Belawan</td>
<td>55,337</td>
<td>2,364</td>
<td>17,058</td>
<td>216</td>
<td>5,470</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>Tembang</td>
<td>82,114</td>
<td>6,211</td>
<td>13,207</td>
<td>141</td>
<td>8,617</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>Pejuanang</td>
<td>55,051</td>
<td>7,012</td>
<td>8,531</td>
<td>505</td>
<td>1,147</td>
<td>44</td>
</tr>
<tr>
<td>21</td>
<td>Maretan</td>
<td>51,237</td>
<td>356</td>
<td>1,625</td>
<td>107</td>
<td>1,359</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>1,127,914</td>
<td>119,085</td>
<td>235,515</td>
<td>12,331</td>
<td>146,753</td>
<td>276</td>
</tr>
</tbody>
</table>

Source: Local government 1998
5.2.4.3 Income Disparity and Segregation

That physical segregation in Medan during the last fifty years is mainly based on income class rather than ethnic groups. Nevertheless, it does not mean that intensity of the segregation by ethnic is significantly reduced, as was shown by the study of Bruner (1972) that ethnicity is steadily increasing among the Toba. However, due to the development of transportation and communication system the segregation not necessary depends on the physical boundary as it used to be, but more often emerged socially rather than physically. In fact, the observation revealed that each income group had occupied the identifiable place although not physically separated by the clear boundary. Each income group lives in the area of different pattern, building density, size and environment that can be simplified in three distinctive segregations as follows.

Firstly, high-income neighborhood that occupied by high-class society who keep the building and population density low. The environment still displays the characteristic of colonial garden city of the past. However, the small park and greenery that used to be functioned in the Dutch era, no longer visited by the inhabitants in the evening but very busy in the morning dawn until the sunrise. The park not only visited by the Chinese dweller but also the Chinese from the other part of the city that comes for physical exercising. The atmosphere of the rest of the neighborhood is very quite. The inhabitants tend to maintain the individual attitude. Gatherings and communication among the neighbors are the rare sight in this area. The high-income society occupied the southern part of Polonia, Medan Baru and the exclusive housing complexes such as Setia Budi.

Secondly, the Middle-income group society, which formed the higher portion of population, they occupied the higher population density compare to the high-income group, occupied the smaller size of residential buildings with the poorer environment. In contrast with the high-income society, people in this area maintain the close relationship among them. During the afternoon, it is a common sight to see the community member particularly the children playing in the neighborhood narrow street. They nearly occupied all parts of the city intermingle with the low-income group.

Thirdly, the low-income group squatted in illegal settlement forming the slum with the very poor condition of environment. The atmosphere of this area is similar with the condition of other kampong that scattered in Medan. This population group mainly illegally occupied the bank of Babura, Deli and Belawan rivers, alongside the train
railway and scattered in undeveloped area in the whole region. There is another middle-income group of Chinese, this group resided the commercial area such as kampong Keling, Petisah and Kota, their shop houses lining the main busy roads forming a ribbon pattern, some of the area had been transformed from Indian and other ethnic into Chinese domination, who has successfully maintained the area into a busy commercial district. This area displayed the environment of China town by the construction of a large number of shop houses that are always busy with commercial activities.

5.2.5 City Planning Policy of Medan

The Dutch implemented the first modern town planning on Polonia in 1930; the second was only made in 1974. The period range of town planning 1974 is 20-30 years and was modified in 1991. The main objectives of the planning are to improve the living quality of city dwellers by providing more jobs, the better facilities and utilities. Moreover, Medan is intended to function as the center of regional development of the Northern Sumatera as well as the Western Indonesia; in other words, it will be one of the growth poles of development.

5.2.5.1 Planning Concept

The concept of planning 1974 mainly based on Central place theory that was put forward by Christaller in 1933 (Carter and Arnold: 1981) who makes an assumption that town act as central place for the countryside, that they came into being to carry out at a central accessible place the task which the life of the countryside creates. Christaller acknowledges that this basic assumption derived from Gradman (1916), who had contended that the distinctive role of a town was to be the center of its rural surrounding and mediator of local commerce with the outside world, collecting and exporting the local product, importing and distributing the necessary goods and services which the countryside demands. The significance of this role and centrality cannot be measured by the number of population. Centrality, the degree to which town serves its surrounding area, can only be measured in terms of goods and services offered. There are variation in quantity and quality and different orders of good sand services offered, for some are
costly and purchased or needed infrequently and will need large population to sustain them; other are everyday needs and will require small population. From these two concepts emerge. Firstly, Threshold population that defined as minimum population that is required to bring about the offering of certain good for sale or to sustain any services, in economic terms this means the minimum demand to make such an offering viable. Secondly, Range of a good and service, this is the maximum distance over which people will travel to purchase a good or derive a service offered at a central place, farther from the center the inconvenience of travel measured in time, cost and trouble will outweigh the value or need of the good. Another reference of the planning 1974 is Howard’s Garden City that focused on de-concentration of Medan into six neighboring satellites. That concept elaborated more in the planning of greater Medan consists of Medan, Binjai and Deli Serdang in 1993. According to Howard all the advantages of town life could be maximized and all the disadvantages minimized if development were limited to cooperative based towns of small and strictly limited size that maximum to 32,000 populations. They would be dependent for their food and natural resources on the green land encircling them, and would contain in themselves all the necessary services and industries, being pre-planned in a rational manner, with integrated transport system. When there was a need for expansion, this should take the form not of growth at the edges but the foundation of new satellite towns at a distance. In practice, these principles were flouted and deceptive. The garden cities were immediately translated into garden suburbs, low density, well planned and predominantly middle class areas at the edge and depend on the existing town so expanded the town into an intolerable huge size.

5.2.5.2 Urban De-concentration in the Context of Anti Urban Policy

In order to prevent the concentrated high-density development in the city core that generated crucial problems, The Town planning 1974 recommended the de-concentration planning, by divided Medan into three main sub-regions that consists of Belawan, Medan-Belawan corridor, and Medan as described figure 5.21. Furthermore, Each sub-region divided into smaller areas called sub-center. There are 6 sub-center and a city core. Each sub-center will accommodate about 190,000 to 460,000 population that consist of smaller sub-sub-center of 60,000 to 120,000 population.
The smallest neighborhood is dwelled by 5,000 to 10,000 peoples. The schematic of these divisions described on figure 4.22. The Belawan region and the corridor of Belawan-Medan should be encouraged to develop in order to reduce the pressure on city center. Industrial activities are concentrated in two areas, the small and medium industries in district of Maryland and heavy industries in Titipapan and Timbang Deli districts. The town planning 1974 neither accommodates the ethnic preferences nor considers its segregation. The planning does not also specify the floor area ratio, building set back, building coverage, open spaces and street pattern but its implementation is negotiable and easily manipulated.

5.2.5.3 Road Pattern

In line with the de-concentration recommendation as put forward in planning 1974 and in attempt to create a more efficient transportation in the city, so the road pattern will be developed in rings model that consist of inner, intermediate and outer ring road, these three layers of rings road will be connected by a number of radial road. By these road patterns, it is expected that through traffic no longer pass trough the city center and the access from the whole parts of the city to the city core will be equal, that will generate the equal development in all parts of the city and connected the whole satellite neighborhoods.

5.2.6 Cultural Incompatibility of Planning Policy

5.2.6.1 Actual Physical Development of the City

The Town plan of Medan had been legalized and put into action in 1974. However, the physical development of the city didn’t necessary growth as recommended by the plan for the following reasons. Firstly, the plan that based on the Modern Western concept required certain precondition in order to support its implementation, such as autonomy of local government, the strong public participation and the equal social and economic opportunity. Without which the implementation of the plan could not be done as was meant to be. As a consequent of absence of those preconditions, the strong public control was required which in fact led to the manipulation of the legal plan for the
interest of particular individuals. Secondly, The City didn’t have the legal autonomy to consolidate and to mobilize its own resources unless by the guidance of the central government who always misinterpreted the local requirements. Thirdly, the plan didn’t take into account the ethnical and cultural preference of the city dwellers, that was proved have a significant role in settlement forming, and was affected the zoning and the administrative boundary lines. Lastly, The plan was not accorded with the city dweller’s need. As the result, the de-concentration of physical development of the city as was recommended had not came into being, even after the plan had been issued for over than 25 years.

On the contrary, the city development is more highly concentrated where the city center occupied by the high-density large buildings that represented world architectural style and its various transformation into the local context.

5.2.6.2 Segregation of Population and Urban Form

Segregation of population that mainly based on level of income, ethnic and religion has also contributed to the physical formation of the City. The Chinese that are mainly the follower of Buddhists and economically better off than the average city dwellers have dominated the center core of the city. Each ethnic and religion is socially having their own territories, where their cultures have characterized the physical appearance of the environment.

5.2.7 Contemporary Architectural Style of the House

Architectural style is a definite type of architecture, distinguished by special characteristic of structure and ornament (Oxford dictionary). Conceived in these terms, style is essentially visual and has no necessary relationship to the function of the building, so airports, prison, community building high-rise building, low-rise building and residences may all be the same architectural style. Stylistic designation is very helpful in describing architecture and in relating buildings even of different chronological periods to one another. But more than that, stylistic clarification acknowledge that buildings is not just a craft, it is an art form that reflect the philosophy, intellectual current, hope and aspiration of its time and culture (Poppelier et al, 1983). As it was elaborated previously,
Medan built prior to 20th was a typical colonial town that expressed the great discrepancy of society. The colonial was imported architecture style and related technology from Netherlands to this colonial new city.

The exchanged of these imported architecture styles with the local tropical architecture lead to transformation and into the formation of hybrid architecture style. The influx of imported architecture styles is continued to the present day, which source isn’t limited to a particular colonial country of Netherlands but from the whole part of the world. These exchanges are extensively developed due to the drastic improvement of communication and education system. The various types of architectural style transformation style on each phase of cultural exchange as was represented by numbers of houses style in Medan.

5.2.7.1 Transformation of Residential Architecture

Indonesia emerged as a newly liberated nation by proclaimed its independence in 1945, consequently once again the quest for a new National identification became paramount. That quest cannot be fully answered by Indonesian architects or Dutch architect who retained in the country until 1957. Some of these local architects insist to continue the Dutch colonial style and rationalist tradition, the other group attempted to develop Indo-European style, and the rest try to catch up the latest modern architecture, but instead of referred to Netherlands Modernism these latest group focused on leading American and Non-Dutch European architects. In this situation, it’s difficult to find local architect who academically interested to develop the local traditional architecture by its own merits, on the contrary, it has developed and transformed spontaneously by its own way. Largely, the contribution of local architects in house development was significant, since they mainly focused on monumental building that dominated by the government buildings and large public buildings. Moreover, their numbers are too small and concentrated only in the large cities of Java. Consequently, the design of the houses in Medan generally was left in the hands of local craftsmen and drafters who happened to work in Dutch architect firm. These designers imitate the previous Dutch colonial villas as a prime model. New satellite town of Medan Baru that built in 1950s was a second large prestigious housing project that sponsored by government, after the Dutch garden city of Polonia in 1930, both provided for the higher income government staffs.
The Settlement covered the area of about 300 has, that laid out in a grid pattern and meant as an extension of Polonia. The houses style referred to the Dutch colonial villa, only simpler, smaller, and most of all had experienced transformation to a certain degree, because of adaptation to the local culture.

Only after 1970, the large-scale government sponsored housing was provided for low-income population, while the small proportion of housing requirement of the higher income group had provided by private developer. The economic development in 1970s that followed the increased of world oil price due to the market policy of oil producers countries, have profited the government of Indonesia in general and the ruling class in particular. National development policy has placed the economic growth as a prime priority over equality of wealth as was suggested by the foreign assistance. The aim is to concentrate the excessive productive property in the hands of few industrialists. In order to give them opportunity to grow and boost the countries economy to its peak that in turn would spill over to the lower income population. This new capitalist class, according to the policy rules will distribute some of the excess income to the poor in the process called 'trickling down effect' that is never happened. Involvements of the burgeoning capitalist class on building activity are characterized by the economic rationalization that prevailed over aesthetic of the large buildings. These characters conform to paradigm of modern architecture, on the contrary, their attitude was different toward their house, they readily spent a large fund to build their house as if they compete each other to create unusual prestigious house that reflected the social status of the owner. In the meant time, the national school of architecture have graduated the sufficient number of architect to be distributed to large secondary cities in outer Java, among the first of them has come to Medan in 1970s. The first school of architecture in Medan was founded in around 1975 that grew to five schools in 1990s. That local institution produced graduation about 40 young architects per year, in spite of their insufficient educational facilities and these graduates have the significant roles in introducing modernism and post modernism into public. The abundant producing oil, has led the government through its high national income concentrated on the development of the large cities. Consequently, the cities grow into unprecedented level and create the crucial housing problems. In order to seek the solution for some of these problems, the government recommended the city expansion, urban renewal to replace slum area and built low cost housing.
The pluralistic background of actors who involved in housing development, had produced various architectural style namely; Pseudo classical villa with Grecian and Romanian column, Futuristic capsule, Modernism, Deconstruction, Post-modernism while the other were actively insist to develop regional architecture as a reaction against International style. However, the majority of houses were not designed by those local academic trained and un-matured architects, but by the craftsmen who built by imitated the existing previous buildings. This building can be categorized as spontaneous, which have dominated the houses in Medan now.

5.2.7.2 The Architectural Transformation of Shop Houses

The unprecedented growth of Medan following the economic development, has led the city sprawling into the outer boundary. However these overgrowth is prevented by the surrounding plantation area that should also have been kept as a source of National income and can’t be converted into the urban area, however lately in 1990 some part of these plantation had been converted into the housing project through conspiracy of the ruling class and the Chinese developer. The shortage of the land to accommodate the urban growth, led to the linear development, limited only alongside the mains road that connected Medan with the neighboring secondary cities of Binjai and Lubuk Pakam in the form of ribbons, caused the traffic congestion during the working hours.

The scarce of land in the city, gave way to the growth of shop-houses that originally introduced by the Chinese immigrant in the colonial period. The designed of the shop-houses conform to the available land in the city, its frontage normally only 3-4.50 m and the length was 12 m. The outburst of shop-houses clarified the fact that these building have been culturally accepted. Because of its high market value due to its flexibility as a multipurpose building, give way to the transformation of almost any strategic vacant land in the city. Today, the shop-houses are no longer exclusively belong to the Chinese but the nearly the entire ethnic group have accustomed to it, since it can be adapted to the cultural needs of the non-Chinese ethnic groups except probably the Batak Toba.

The façade of the shop-houses have been also dictated by historical transformation of architectural style in the region as have been previously discussed.
5.3 Urban Housing

5.3.1 Housing Perspective in Medan

Cultural needs accomplishment of the user most clearly indicates in the spontaneous house architecture and form. The changes and retaining of house or its element that are closely related with the cultural value obviously reflected in the spontaneous house transformation as described in the previous section on this chapter. The houses of modern styles were built in recent years particularly after the growing number of architecture school had graduated their student in 1940s in Bandung and 1990s in Medan. However, the greatest numbers of houses were spontaneously built without any help of architect, where the owner-occupier could freely expressed their cultural need.

Some of the owner-occupier afforded to build the house that they dreamed of, while the other have to satisfied to buy the finished housed that built by developer under the government subsidized program, that can be bought by installment. The houses that have been built by developer are very often have to be torn down and renovated in order to match these houses to their need. All those houses as were mentioned in preceding chapter are material culture that produced by particular urban society based on their cultural need. Ethnic sentiment and traditional lifestyle are more clearly reflected in the physical appearance of the spontaneous settlement of low-income group. The high-income society tends to reflect their ethnic preferences in social way, while the lower-income expressed it physically.

Based on a survey carried out by Sumatera Utara statistical office (1997) the physical conditions of the houses in Medan are specified on the following description.

The floor area of 50-99 sqm are the largest percentage (40.82 %) of the houses, followed by the floor area of 20-49 sqm (31.82 %) and 100-149 sqm (16.98 %), the houses with the floor area more than 150 sqm that dominated by the luxurious house only 8.64 %, while the houses with floor area less than 20 sqm are the smallest percentage (1.74%).

The flooring material dominated by cement (57.99%), followed by the relatively more expensive tiles (26.62 %) and the most expensive marbles (12.92%), while non-
fabricated floor materials are insignificant such as Wood (1.21%), Bamboo (0.10%), some houses (1.06%) even do not have any floor cover or directly use the earth surface. The wall of these houses dominated by brick (70.02%), followed by wood plank (27.65%) and woven bamboo (2.02%). The roof cover dominated by corrugated zinc and asbestos (79.57%), followed by reinforced concrete (11.28%) and tiles (6.32%) while thatch material still exist (1.75%) the smallest percentage of houses are using wood (0.98%) for the roofing material. The greatest numbers of the houses (98.42%) are provided with electricity, the rest are using gas and kerosene lamp for lighting. Most of the houses (70.03%) have been serviced by the clean water piping lines that managed by the local government company, while 2.54% of houses have used individual water pump, however 26.27% of houses still use protected well, another 1.06% used unprotected well. The greatest part of the houses (86.04%) provided with individual taps, while communal and public tap respectively are 8.55% and 1.52% another 3.89% of houses that the households probably buy their water consumption from the peddlers on daily basis.

Most of the houses (89.08%) provided with individual toilet and septic tank, while communal and public toilet respectively are used by 10.48% and 0.30% of houses, the rest dispose their solid waste in the nearby river.

A study on housing need in Medan carried out by Surbakti (1997) among the middle and low-income population whose number has reached to 248,500 households. More than 90% of them lived on the spontaneous housing. The households whose income is less than 300,000 rupiah is 71.40% and more than that is 28.60%. The study findings have complemented the previous data that will be described on the following paragraphs.

The conditions of the houses are relatively in a good and fair condition (89.80%) for only 10.20% in a very bad condition. The floor of houses dominated (52.50%) by the small area that less than 50 sqm. This figure doesn’t conform to previous figure put forward by statistical office. According to the last observation, this floor area should be in the range of 50-100 sqm.

In 1997, the owner occupier are 43.10% of the household, while 43.40% of population are living in the rented house that based on monthly basis (19.60%), 2 yearly basis (23.80%) and the rest 13.5% are living with another households without any payment. Some of the households (83.20%) who rent the house on monthly basis pay
less than 50,000 rupiahs and another (16.80 %) pay more than that, while 87.31% the households who rent on two yearly basis pay less than 50,000 rupiahs and the rest 12.69 % pay more than that. The flooring material dominated by cement (81.10 %), followed by the relatively more expensive tiles (15.30 %), while 3.60 % is using various materials.

The wall of these houses are dominated by timber plank (51.90 %), followed by brick (43.00 %) and miscellaneous (5.10 %). The roof of these houses dominated (95.80 %) by corrugated zinc and asbestos. Most of the houses (69.80 %) provided with individual toilet and septic tank, while communal and public toilet respectively are used by 29.00 % and 1.20 % of houses. While the houses that owned the individual bathroom are 72.60% followed by sharing the toilet of 26.70 % and communal toilet that used by 0.70 % of the houses.

According to the survey that 56.90 % of the households didn’t have house, and 9.30 % highly intent to buy house for their family, while the owner occupier is 43.10 % of the total population. A number of households (18 %) eventually intended to build or to renovate their own house, while 9.30 % preferred to buy the finished house and the rest 6.60% satisfied to rent. Surprisingly, only 0.88 % of population accepted to live in multistory flat. The owner-occupier population who satisfied and would continue to stay in their present environment was 35.40 % out their total number (43.10 %). The population who satisfied with the floor area of their present houses was 54.00 % and 83.70% of the employed population satisfied with the present access to the workplace, probably because the majority (71.17%) could reach their work place less than 30 minutes. A part of them used public transport (32.32%), another part used a private vehicle (29.57%) and the rest (37.91%) went to their workplace on foot.

5.3.1.1 Housing Stock

As was it mentioned in section 5.2.2.1, population had increased at 2.33% per years during the period 19801990, accordingly the population density increased from 52.04 p/h in 1980 to 65.43 p/h in 1990 at the rate of 2.55 per years. District of Kota used to have the highest density (232.51 p/h) in 1980, but decreased to 228.43 p/h in 1990 probably caused by Sukaramai urban renewal project.

While at same year the district Labuhan had the lowest the density (8.99 p/h) that increased to 13.32 p/h in 1990.
Moehammed Nawawiy Loebis : Architecture in transformation the case of Batak Toba, 2000
USU e-Repository © 2008


However, after the expansion of districts from 19 to 21 districts in 1992, district of Kota had split into district Kota and Area, as a consequence the density in 1997 respectively is 99.12 p/h and 124 p/h. The households growth was 3.88% per years during 1980-1990, that slightly greater than population growth. While, the housing production had grown at the rate of 5.54 % per years on the same period. Consequently, there is a wide gap between the housing stock and the total households, who reasonably required a place to live.

### 5.3.1.2 Housing Supply

The oil boom in 1970s and the excessive loan from the International Monetary Funds (IMF) in the last two decades had stimulated the physical development in primary cities of Indonesia as Medan. The Central government via National Housing Board (*Perumahan Nasional* shortened as *Perumnas*) had built government sponsored low cost housing in 1980 in two locations. Firstly, situated district of Helvetia that used to be the plantation area in the west fringe of Medan and secondly, situated on the outer fringe in the South-east of Medan, bordered with district of Denai. Two other similar projects were built in the district of Tuntungan and Kota in 1985. The last and largest government sponsored low-cost housing project was built on district Labuhan in 1996. In the same year the local government also built government sponsored low-cost housing project for fisherman in order to accommodate population that resettled from bank of Belawan due to river normalization project. Those numbers were insignificant comparing to the potential housing demand in the same year.

#### Table 5.11: Housing Supply by Central Government Sponsored 1980-1996

<table>
<thead>
<tr>
<th>No</th>
<th>Project title</th>
<th>Location in district</th>
<th>Area (Ha)</th>
<th>Units</th>
<th>Year built</th>
<th>Cost level</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Helvetia</td>
<td>Helvetia</td>
<td>190.00</td>
<td>4,804</td>
<td>1980</td>
<td>Low-cost</td>
<td>Couple</td>
</tr>
<tr>
<td>2</td>
<td>Mandala</td>
<td>Border</td>
<td>180.00</td>
<td>9,590</td>
<td>1980</td>
<td>Low-cost</td>
<td>Couple</td>
</tr>
<tr>
<td>3</td>
<td>Simalingkar</td>
<td>Tuntungan</td>
<td>215.00</td>
<td>7,270</td>
<td>1985</td>
<td>Middle/Low</td>
<td>Row</td>
</tr>
<tr>
<td>4</td>
<td>Sukaramai</td>
<td>Kota</td>
<td>3.24</td>
<td>400</td>
<td>1985</td>
<td>Low-cost</td>
<td>Walk up</td>
</tr>
<tr>
<td>5</td>
<td>Martubung</td>
<td>Labuhan</td>
<td>100.00</td>
<td>5,000</td>
<td>1996</td>
<td>Middle/Low</td>
<td>Couple</td>
</tr>
<tr>
<td></td>
<td>Martubung</td>
<td>Labuhan</td>
<td>200.00</td>
<td></td>
<td></td>
<td></td>
<td>Reserve</td>
</tr>
<tr>
<td></td>
<td>Sub Total</td>
<td></td>
<td>888.24</td>
<td>27,064</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Field Survey 1998
Table 5.12: Housing Supply by Local Government Sponsored 1996-1998

<table>
<thead>
<tr>
<th>No</th>
<th>Project title</th>
<th>Location (district)</th>
<th>Area (Ha)</th>
<th>Units</th>
<th>Year built</th>
<th>Cost level</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Fisherman village</td>
<td>Labuhan</td>
<td>90.00</td>
<td>1,086</td>
<td>1996</td>
<td>Low-cost</td>
<td>Couple</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>958</td>
<td>1998</td>
<td>Low-cost</td>
<td>Couple</td>
</tr>
<tr>
<td></td>
<td>Sub total</td>
<td></td>
<td>90.00</td>
<td>2,044</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Field Survey 1998

Table 5.13: Housing Supply by Local Private Developer 1985-1994

<table>
<thead>
<tr>
<th>No</th>
<th>Project title</th>
<th>Location (district)</th>
<th>Area (Ha)</th>
<th>Units</th>
<th>Year built</th>
<th>Cost level</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Setu Bukit</td>
<td>Sunggal</td>
<td>600.00</td>
<td>2,038</td>
<td>1985</td>
<td>Luxury</td>
<td>Vary</td>
</tr>
<tr>
<td>2</td>
<td>Menteng Indah</td>
<td>Tenggara</td>
<td>39.00</td>
<td>452</td>
<td>1988</td>
<td>Middle</td>
<td>Vary</td>
</tr>
<tr>
<td>3</td>
<td>Malibu</td>
<td>Polonia</td>
<td>20.00</td>
<td>398</td>
<td>1990</td>
<td>Luxury</td>
<td>Row</td>
</tr>
<tr>
<td>4</td>
<td>Royal Sunastra</td>
<td>Tuntungan</td>
<td>164.60</td>
<td>823</td>
<td>1994</td>
<td>Luxury</td>
<td>Attached</td>
</tr>
<tr>
<td>5</td>
<td>Cemara hijau</td>
<td>T.Mulia</td>
<td>31.90</td>
<td>1,211</td>
<td>1996</td>
<td>Mid/High</td>
<td>Vary</td>
</tr>
<tr>
<td>6</td>
<td>Puri T.Sari</td>
<td>Sunggal</td>
<td>3.59</td>
<td>113</td>
<td>1997</td>
<td>Middle</td>
<td>Couple</td>
</tr>
<tr>
<td>7</td>
<td>Padang hijau</td>
<td>Sunggal</td>
<td>11.10</td>
<td>869</td>
<td>1996</td>
<td>Mid/High</td>
<td>Couple</td>
</tr>
<tr>
<td>8</td>
<td>Cendana Asri</td>
<td>Tombong</td>
<td>20.75</td>
<td>1,400</td>
<td>1996</td>
<td>Low</td>
<td>Row</td>
</tr>
<tr>
<td>9</td>
<td>Cendana Asri</td>
<td>Tombong</td>
<td>27.50</td>
<td>600</td>
<td>1996</td>
<td>Low</td>
<td>Row</td>
</tr>
<tr>
<td>10</td>
<td>Pancing Emas</td>
<td>Tombong</td>
<td>24.35</td>
<td>651</td>
<td>1996</td>
<td>Luxury</td>
<td>Row</td>
</tr>
<tr>
<td>11</td>
<td>Taman Citra</td>
<td>Deli</td>
<td>1.00</td>
<td>30</td>
<td>1996</td>
<td>Mid/High</td>
<td>Couple</td>
</tr>
<tr>
<td>12</td>
<td>Taman Citra</td>
<td>Deli</td>
<td>17.70</td>
<td></td>
<td></td>
<td></td>
<td>Reserved</td>
</tr>
<tr>
<td>13</td>
<td>Villa Gading</td>
<td>Ampelass</td>
<td>4.84</td>
<td>185</td>
<td>1994</td>
<td>Luxury</td>
<td>Row</td>
</tr>
<tr>
<td>14</td>
<td>Villa Gading</td>
<td>Ampelass</td>
<td>4.20</td>
<td>162</td>
<td>1996</td>
<td>Luxury</td>
<td>Row</td>
</tr>
<tr>
<td>15</td>
<td>Palm Mas</td>
<td>Sunggal</td>
<td>1.57</td>
<td>127</td>
<td>1994</td>
<td>Middle</td>
<td>Row</td>
</tr>
<tr>
<td>16</td>
<td>Taman Kasari</td>
<td>Sunggal</td>
<td>2.05</td>
<td>104</td>
<td>1996</td>
<td>Luxury</td>
<td>Row</td>
</tr>
<tr>
<td>17</td>
<td>Villa Polonia</td>
<td>Polonia</td>
<td>1.91</td>
<td>58</td>
<td>1996</td>
<td>Luxury</td>
<td>Row</td>
</tr>
<tr>
<td>18</td>
<td>Duri Sunggal</td>
<td>Sunggal</td>
<td>2.18</td>
<td>108</td>
<td>1996</td>
<td>Shop-house</td>
<td>Row</td>
</tr>
<tr>
<td>19</td>
<td>Riviera Village</td>
<td>Ampelass</td>
<td>12.71</td>
<td>531</td>
<td>1996</td>
<td>Mid/High</td>
<td>Row</td>
</tr>
<tr>
<td>20</td>
<td>Duri Sunggal</td>
<td>Sunggal</td>
<td>26.06</td>
<td></td>
<td>1996</td>
<td>Shop-house</td>
<td>Row</td>
</tr>
<tr>
<td>21</td>
<td>Green Garden</td>
<td>Barat</td>
<td>1.41</td>
<td>45</td>
<td>1996</td>
<td>Luxury</td>
<td>Row</td>
</tr>
<tr>
<td>22</td>
<td>Deli Permai</td>
<td>Johor</td>
<td>22.00</td>
<td>733</td>
<td>1995</td>
<td>Low-Cost</td>
<td>Couple</td>
</tr>
<tr>
<td>23</td>
<td>Griya Riantar</td>
<td>Helvetia</td>
<td>27.78</td>
<td>482</td>
<td>1993</td>
<td>Luxury</td>
<td>Row</td>
</tr>
<tr>
<td>24</td>
<td>Tomang Elok</td>
<td>Sunggal</td>
<td>2.79</td>
<td>186</td>
<td>1990</td>
<td>Shop-house</td>
<td>Row</td>
</tr>
<tr>
<td>25</td>
<td>Remaja Laguna</td>
<td>Johor</td>
<td>1.67</td>
<td>111</td>
<td>1995</td>
<td>Mid/High</td>
<td>Couple</td>
</tr>
<tr>
<td>26</td>
<td>Timbar Garden</td>
<td>Timbar</td>
<td>2.07</td>
<td>69</td>
<td>1994</td>
<td>Luxury</td>
<td>Row</td>
</tr>
<tr>
<td>27</td>
<td>Westin</td>
<td>Polonia</td>
<td>1.00</td>
<td>50</td>
<td>1996</td>
<td>Apartment</td>
<td>10th Floor</td>
</tr>
<tr>
<td>28</td>
<td>Semayang</td>
<td>City border</td>
<td>3.56</td>
<td>202</td>
<td>1995</td>
<td>Mid/High</td>
<td>Row</td>
</tr>
<tr>
<td>29</td>
<td>Lake View</td>
<td>Johor</td>
<td>12.50</td>
<td>419</td>
<td>1994</td>
<td>Luxury</td>
<td>Row</td>
</tr>
<tr>
<td>30</td>
<td>Emerald G</td>
<td>Parat</td>
<td>2.54</td>
<td>64</td>
<td>1994</td>
<td>Mid/High</td>
<td>Row</td>
</tr>
<tr>
<td>31</td>
<td>Villa Prima</td>
<td>Johor</td>
<td>6.60</td>
<td>222</td>
<td>1994</td>
<td>Mid/High</td>
<td>Row</td>
</tr>
<tr>
<td>32</td>
<td>Taman Tempora</td>
<td>border</td>
<td>2.54</td>
<td>91</td>
<td>1994</td>
<td>Mid/High</td>
<td>Couple</td>
</tr>
<tr>
<td>33</td>
<td>Villa Deli</td>
<td>Maryland</td>
<td>4.40</td>
<td>206</td>
<td>1995</td>
<td>Low-Cost</td>
<td>Row</td>
</tr>
<tr>
<td>34</td>
<td>Asri Land</td>
<td>Helvetia</td>
<td>26.62</td>
<td>1,324</td>
<td>1994</td>
<td>Mid/High</td>
<td>Vary</td>
</tr>
<tr>
<td>35</td>
<td>Cemara Asri</td>
<td>T.Malia</td>
<td>107.00</td>
<td>535</td>
<td>1994</td>
<td>Luxury</td>
<td>Reserved</td>
</tr>
<tr>
<td>36</td>
<td>Asri Land</td>
<td>Helvetia</td>
<td>250.00</td>
<td>476</td>
<td>1994</td>
<td>Luxury</td>
<td>Detached</td>
</tr>
<tr>
<td>37</td>
<td>Buni Seroja</td>
<td>Sunggal</td>
<td>10.00</td>
<td>285</td>
<td>1994</td>
<td>Middle</td>
<td>Semi</td>
</tr>
<tr>
<td>38</td>
<td>Budi Amal</td>
<td>Johor</td>
<td>1.00</td>
<td>20</td>
<td>1994</td>
<td>Middle</td>
<td>Row</td>
</tr>
<tr>
<td>39</td>
<td>Villa Prima</td>
<td>Johor</td>
<td>1.00</td>
<td>20</td>
<td>1994</td>
<td>Middle</td>
<td>Row</td>
</tr>
<tr>
<td>40</td>
<td>Johor Permai</td>
<td>Johor</td>
<td>260.00</td>
<td>1,200</td>
<td>1989</td>
<td>Mid/High</td>
<td>Vary</td>
</tr>
</tbody>
</table>

Source: Field Survey 1998
Since the government-sponsored housing could not change the housing supply, so the housing market still opens wide for private developer to participate in the housing industry, particularly for the higher income population. Among the first attempts carried out by private developer was Setiabudi housing project that built in 1985, that consisted of 2,038 dwelling units, situated on district Sunggal in the southern part of Medan.

The success story of this pioneering project has encouraged another developer in the last decade, however all these productions could not fill the gap between the demand and supply. The housing units supplied by private and government developer are described on above tables.

It is clearly seen that the total numbers of housing supplied are very small compared to the total demand, either produced by government sponsored developer or private developers that also subsidized by the government through the housing loan. In fact, the greatest numbers of housing supply are produced by population individually so-called spontaneous house.

5.3.2 Architectural Style of Public Sponsored Housing

The accomplishment of the cultural need of the occupier is more precisely reflected in architecture of housing than in monumental public buildings that commonly sponsored by the government. This need hardly cannot be fulfilled, unless the population involved in the decision making process. The users are not involved in both of the mass housing production system that sponsored by the government either produced by government sponsored developer or private developers that also subsidized by the government through the housing loan. Consequently, most of the owner-occupier has changed their houses.

Although the involvement of the burgeoning private sector in housing business were characterized by the prevailing economic rationalization over aesthetic, however the customer’s need have to be considered.

As the widely reaction against the International style, the private developers have to accommodate the revival interest in various architectural style such as local architecture, pseudo classical villa, futuristic capsule and eclecticism style, nearly all these styles appeared in housing built by developers.
5.3.3 Spontaneous Settlement

5.3.3.1 The Spread of Spontaneous Settlement

As was mentioned previously, the spontaneous settlement were grown outside the planned city core of Polonia in the Dutch period, particularly around the sultanate indigenous area on the west part of city. These spontaneous settlements have been rapidly grown to cover nearly the whole area now, even in some are growing beyond the land capabilities and turn into slum area.

In the last decade, these large areas of spontaneous settlement had been dispersedly dotted by the incremental planned housing development that filled any vacant land and renewal project on strategic cheap land. The high density of spontaneous settlement, that has been exist since the Colonial period and it has continuously developed to the present moment in the form of slums that scattered in the nearly entire region particularly in derelict public areas which are neglected by the government. It is said that this situation mainly caused by the strong military centralized government, unequal political power and unequal income distribution. The strong concentration of power in the urban ruling class has led to the concentration of money and consequently encouraged the rapid urbanization from the surrounding rural area, moreover the cultural mission of the rural population also have contributed in encouraging the young population to migrate and make them no longer interested in land cultivation (see chapter 4).

All of these aspects have contributed the high urbanization rate and in turn to the fast formation of spontaneous settlement that gradually led into the slums in the last three decades as can be seen in districts of Kota Maksum, Kota, and Tegalsari in districts of Area, etc. Now, the location of slums are scattered nearly in the whole districts of Medan. Somehow, these slums have mixed up with the well-planned settlements that formed a typical functional coexistence, so their boundaries are not necessarily physically clear.

In many cases the symbiotic activities exist between the low-income population on the slum area and the higher income population in the spontaneous well planned settlement, the slum inhabitant will provide handy men, driver, maids, and provide other requirement of the higher income-group, on the reverse, the higher income-group
provide jobs for the low income group. The well designed houses of high-income group frequently dominate the main roads, while behind them developed the slum areas that can be accessed only by walk and motorcycles.

There are two rivers in Medan that run from South to the North, the first is Babura river on the east side and Deli river on the west, both of these rivers are met in the center of Medan and unite to be the Belawan river that continue to flow to the North to the seaport of Belawan. These rivers used to be the main transport in the early days, consequently a number of spontaneous settlements lined alongside the banks. Both of land transportations, railway that built in 1883 and followed by the road that built in alongside the river stream, only recently that road branched out intensively and encouraged the physical extension of the city.

The shape of the city of Medan was determined by this transportation system and the city initially developed on both sides of these rivers bank, while the later modern transportation pattern also conformed to the early pattern. Since these rivers are no longer used as a dominant transportation in the city, so the settlements on the banks no longer have their strategic position and turn into the inferior site that transformed into slum. Some of which had been cleared in 1991 under the river improvement project and its population resettled into the fishermen village in district of Labuhan.

The location of slum area according to its position to the city core can be specified as follows; Firstly, Slums on the city fringes. Although termed as fringes, however, due to the irregular shape of the city its position relatively close to the city center,. This area mainly occupied by low-income groups, who works on informal sectors and benefited by the close location to the city core. These type of slums located on the districts of Denai, Deli, Tembung, Helvetia, Ampelas, Sunggal and Selayang. Secondly, Slums on the outer fringes that far enough from the city, the location of these slums are closer to the Belawan seaport in the North about 20 kms from city center. This area mainly occupied by industrial workers, seaport related workers and traditional fisherman. Thirdly, Slums on the city core are the slums that located on districts of Maimoon, Polonia, Kota, Area, Barat, Perjuangan and Petisah. The scales of these slums are relatively smaller than the formers. These slums mainly occupied public land, reservation area, and buffer zone of the rivers, alongside the railway, ex-plantation area and ex-sultanate land.
5.3.3.2 Spontaneous Settlement as Manifestation of Cultural Preferences

The formation, sustain and continuation of the slum areas are supported by a numbers of its significant factors. Firstly, it provide a cheap accommodation and the cheapest urban facilities for the urban poor, notably, illegal water and electricity connection, garbage disposal on the nearby rivers and any available vacant land, illegal water tap, minimal transport cost due to its strategic location that all of which exempted from tax. Secondly, the slums are the sources of cheap human resources, where unskilled, semi skilled workers are concentrated, all of which have the crucial roles in supporting the urban mechanism and without which, the urban mechanism will be collapsed. Thirdly, the cheap housing expenses and the excessive availability of human resources are significantly reduced the urban living cost for the whole strata of population in general and the urban poor in particular.

In can be concluded, the slums and the city are living in co-existence mutual symbiotic. However, these cheap urban facilities and accommodation obtained by the urban poor unconsciously have to be subsidized by the higher-income group. Since the high losses of clean water, electricity and other facilities due to the illegal connection lead to the increasing of its units cost, which have to be paid by the higher income population. In many cases, the higher-income groups refuse or manage to avoid such increased payment by the collaboration with corrupted officials. Finally, the burden will go to the government and in turn weaken the authority institution. Sometimes the local government will compensate these excess expenses by deducting its yearly development budget that allocated for building, improvement and maintenance public facilities.

Moreover, unhealthy condition of the slums areas are very often affected the whole city population particularly in relation with the epidemics diseases. The unhygienic environment also affects the diet of the city’s dweller, since the great number of slums, dwellers are food peddlers and food preparation related workers, whose food are consumed by most of the population. However, besides its aforementioned roles, the slums also functioned as a concentration place of unemployment that very often creates the social disturbances and criminal actions.

Finally, the slums not only performed as economic relief for the urban poor but also functioned as mechanism of cultural expression. The wide areas of slums that nearly covered the whole parts of the city have provided the broad alternatives for each urban
community to form their own ethnic group in attempting to reduce the high urban
tension. Urban dwellers will readily pay for more transport cost to the work place in
order to live among their own ethnic group rather than live among unfamiliar ethnic
group. These cultural preferences lead to the formation of ethnical segregation inside the
slums. The slum areas that scattered in the wide area and its variety have provided
alternatives for high motilities among the urban poor communities, by selecting location
according to their cultural needs. While the variety of slums that ranged from the most
rural to the most urban atmosphere have provided a suitable environment for each phase
of cultural adaptation that lead to the gradual cultural transformations.

Spontaneous settlements in general and slums in particular that are almost
totally overlooked by any acts and regulations are freely used by urban dwellers as a
means of cultural expression in fulfilling their cultural needs.

5.3.3.3 Slum Area is a Solution Rather than a Problem

It is erroneously believed that slums are the most crucial problem of the urban
area; in fact, they bear the significant potential dealing with solution to the problems of
the urban poor. As was previously described the slums have been used as a mechanism of
wealth distribution facing the unequal income distribution among the urban dwellers in
Medan. It can be seen also that slums are used as a defensive mechanism by the urban
poor to protect themselves against the unfair rules that put forward by the authority. This
mechanism is effective, since the planning policy and building codes have been replaced
by the norms and among the member of community, that mutual understanding easier to
develop among the members of similar ethnic group. Once the mutual understanding
among the inhabitants developed there will be a freedom to express cultural needs for
each member of the community

5.3.3.4 Transformation Architecture in Spontaneous Settlement

The government nearly always simplify the existence of substandard
spontaneous settlement into mere a visual problems. Therefore, They attempt to interfere
by proposing the simplified solution such as urban renewal or kampong improvement.
In fact, the government interference on housing very often creates conflict with the dweller’s needs, lead to the failure of public policy that should had been meant to overcome these misleadingly simplified problems. It also false to believe, that all spontaneous settlements in urban areas are unhygienic, substandard and poor environment to live. Although it is true in a certain case, however it is obvious that spontaneous settlements as any other settlements are under process of natural transformation that can either lead to a worse or better condition, which are closely related to the intention of the dwellers.

Similarly, the transformations of Architecture in spontaneous settlements are also closely related to the ethnic, religion, life style that based on their worldview, the available options and obstacles. The low-income spontaneous settlements occupied by Javanese are always tidier and cleaner than any settlement occupied by other ethnic groups. On the other hand, the temporary settlers of Minangkabau accept to live in the poorer settlement although they afford to live in a better settlement in order to reduce their living cost and to get more money to be sent to their hometown. It is clearly seen that economic and financial status of the dweller is not a cause to carry out the house improvement but only a mechanism. The houses in spontaneous settlements in Medan are steadily transformed as indicated by the growing number of more permanent houses although the pattern and the atmosphere are relative as it is used to be.

5.4 The Changing Pattern

5.4.1 The Former Sultanate Area

During the Colonial age, The Sultanate area such as sub-district Aur, Masjid, Kota Maksum was dominated by the ethnic group of Deli Malay. These traditional areas have undergone the significance change of ethnic population. Aur in the northern part used to be dominated by Malay Deli and Minangkabau, but today the Chinese are infiltrating the area and establishing the new shop houses. Today, Aur’s population consist of the Chinese (40.00 %), Minangkabau (40.00%), Deli Malay (10.00%) and the rest of which are Mandailing and Batak Toba. Ironically, the native pioneer ethnic Deli Malay has disappeared from district of Masjid and it has been dominated by the
Minangkabau at present moment. The Minangkabau also dominates district of Kota Maksum and place the Deli Malay and Javanese as minority. The entire Deli Malay ethnic group had been gradually forced outward, since the Deli Malay’s sultanate lost their authority after the independence so they are no longer hold the strategic political position. The economic pressure had forced them to sell their houses and lands to the Minangkabau and Chinese migrant, who formerly was forbidden to own any property in the Sultanate area. The ethnical replacement process had affected the physical urban pattern.

Unlike the Minangkabau who rarely change the environment, the Chinese had changed the area into a distinctive feature of settlement pattern. The culturally trader Chinese prefer to purchase the strategic lands that located along the main road which surely bring the economic advantages. The developments of shop-houses are the only alternative that provides the most effective way to utilized the area. The embryo of china town had been laid in the northern part of Kota Maksum along jalan Suprapto and jalan Katamso, this penetration mostly came from the north. It hard to recognize the physical boundaries between these two distinct groups, since the Chinese already penetrated into the Malay kampongs although the old houses have not been replaced yet into shop houses. Two years ago, a large Chinese owned shopping center had been built in the opposite of Sultanate great mosque. It is believed as long as the Chinese hold the economic domination. The process of this imbalance change will be continued unless the Minangkabau is capable of competing and upholding the economic supremacy.

5.4.2 The Change on the Outer Ring

The area outside districts of Kota, Barat, Baru, Timur and Medan is called as the outer ring area. This area used to be the part of plantation that has been transformed into the settlement soon after the end of Colonialism. When the Japanese established their authorities in March 1942 and arrested the European planter, the Javanese coolies had freed from plantation. After the independence, some Javanese coolies squatter on the plantation that border with the city and legalized under the agrarian land law no.8/1954/1954 by the local government. The Javanese domination reflected in the name of sub-district in this area (Elissa: 1996) such as Sitirejo, Sudirejo, Indrakasih, Sidorame, Sidodadi, Tanjungsari, Tanjungrejo, Sukaramai, Harjosari, Tanjungselamat, Sarirejo,
Sukadamai, and Tegalsari. This statement was argued by Noer (1996), who confirmed that segregation existed and reflected in the settlement pattern in 1940, where the Dutch in the core, Chinese in the intermediate and Indonesian in the outer fringe but he wondered why these areas were given the Javanese’s name while not many Javanese can be found.

Moreover, the food shortages during the Japanese occupation in the Second World War had led to the drastic transformation of plantation into the paddy field under the permission of the ruler. However, the strategic part of this area has developed into a commercial area that dominated by Chinese and Minangkabau and pushed the Javanese outward into the periphery. The outer fringe of the city that formerly consisted of tobacco plant and occupied mostly by the Javanese was incorporated into the municipality in 1973, the other dominant occupant of this area were Deli Malay and Karonese who have the customary land right since they were the host population. However, the rapid migration of the christianized Batak Toba had forced the first settlers to sell their lands. The migration of aggressive christianized Batak Toba was opposed by the Malay Sultanates during the colonial, but the collapse of the Sultan authority in 1942 freed them to enter the area. Elissa (1996) confirmed that, the mosaic of culture formed by various ethnic in Medan are not always spatially separated each other with the distinct boundaries, even though they tend to formed the cluster. Although the different cultural setting are easily to be felt when entering subculture settlement, but this situation is not always coincided with distinguishable physical and spatial boundary. Kota Maksum that mainly occupied by The Muslim Minangkabau will be recognized by the atmosphere of Muslim communities that indicated by the existence of abundant mosques, while the cluster occupied by the Batak Toba and Karo were indicated by the present of cafes that serve the fermented palm wine and roast pig restaurants. To conclude, the boundaries of each sub-cultures cluster are based on unnoticeable social boundaries rather than physical confinement.

5.4.3 The Changes in the Core Area

The area of Polonia, the former European quarter also underwent the drastic change. The great number of houses were torn down to be replaced with contemporary houses occupied by the new high-income group consist of Chinese trader. These houses
represented the contemporary architectural style that popular among the member of their class. The number of public buildings such as government buildings, mosque, and large hotel also appear in this core district.

5.4.4 Physical Change in Public Sponsored Housing

5.4.4.1 The Government Provision Housing

The economic growth and the high concentration of urban population consequently have led to the shortage of accommodation. That shortage was responded by the government in various ways namely provision of; low cost housing, urban renewal that replaced the spontaneous kampongs and historical site, expansion of the city and provision of the site for shop houses. Economic rationalization that dictated aesthetic value characterized the government-sponsored housing. This character some way is accord with architecture modernism. As a result, the national housing board has put forward the standard of too small core houses that arranged in the strict grid pattern, so the houses are only connected by the too narrow street that cannot be accessed by cars.

The building height deliberately made too low in order to minimize the building material and in turn reduce the building cost. The available cheapest material dominates the building materials particularly corrugated asbestos for the roofs and asbestos sheet for the walls that produced by local substandard industries. The houses are made in couples, divided only by the ceiling height internal asbestos wall. Since the space under the roof is left free, so the sound will pass from one house to the other. The house floors of 35.00-70.00 square meters are very small compare to the traditional or spontaneous houses. Although the houses are provided for the low-income population but they could not afford to buy it, so it has been transferred to the higher income groups, who have the higher capability to express their cultural need.

Since the cultural needs of the occupant cannot be accomplished, so there is a strong drive to change the houses, but the design of these houses are very formal and difficult to rehabilitate. In spite of the difficulties to renovate the house, almost all the houses have been modified. Furthermore, nearly one third of the houses has been completely torn down and replaced with the very new houses, while the rest were upgraded into various architecture models.
Consequently, after a decade, the settlements were transformed into a different appearance, were the original design of the houses are hardly traceable, so it is very difficult to imagine that these houses used to be the similar mass produced housing units. As a result, economic efficiency as the primary design criteria put forward by the government has turned into economic inefficiency caused by changes of the houses in order to adapt these houses into the user needs.

5.4.4.2 Private Housing Project

As previously mentioned, the housing demand of higher-income group were met by the private developer, that to certain extend were also supported by the government through low interest housing loan. In contrast to the government sponsored housing which avoid the user participation, the private developer in the attempt to anticipate the market sentiment to certain extent have opened the chance for buyer’s participation.

There are three levels of user participation determined the housing forms in private housing projects. Firstly, the house completely designed and built by developer, without any participation of the buyers, the process of production is similar with the government sponsored housing, in fact almost all of these houses were changed either partly or totally, in order to suit the building into the user needs.

Based on that experience the developer put forward the second alternative that involved the user in the building process. The developer’s architect designed the standard house and the prospective buyers offered the chance to change the design that bounded by budget limitation unless the buyers readily paid the excess budget as consequences of the additional spaces and architectural elements.

Surprisingly, the significant numbers of these houses were also changed either partly or totally, in order to suit the building into the user needs, however it took the longer period to change than the first alternatives.

Thirdly, the developer sold the vacant land and the buyers are free to design their house accord to their needs. The building codes are relatively absent except the frontage and setback. Since the user of these buildings are relatively rich and have the huge financial power to gain their cultural needs, so the houses are built according to their need from the beginning.
Consequently, the house changes are not as drastically as the change of the finished house. Although many buildings, which built, by the private developer have transformed them but the original form of most these houses are still traceable.

5.4.5 Indication of Further Changes

The populations have strong intention to change their houses. The 1997 survey revealed that 56.90 % of the households were renting their house, which the greatest part of them (41.00 %) intended to built their own houses, only 9.30 % accepted to buy the finished houses, while the rest 6.60 % would continue to rent probably due to the available options or they didn’t see any chance to own the house. Consequently, The significant number of population (41.00 %) are going to express their cultural needs on their own house in the near future if they have a stable financial status.

Furthermore, Only 35.40 % households, out of total number of owner occupier (43.10 %) who satisfied to continue to stay in their present environment, while 64.60 % intend to move out to another house and another settlements. It means that the present houses of owner-occupier do not conform to the actual user needs that lead to the strong drives to transform the houses. Moreover, The majorities of population (56.00 %) don’t satisfy with the present floor area and by any available chance are going to extend it according to their needs.

This indication clearly reflected in the physical transformation of the houses in the spontaneous settlements, where the numbers of temporarily houses are steadily decreasing replaced by the more permanent houses of contemporary style, coincide with improvement of their financial condition.

Summary

This Chapter shows that Medan has experienced the process of cultural transformation since the early history of Haru Sultanate until present time and it will continue into the future. Specifically, it was clarified that culture and worldview of the population are very crucial in adaptation the external values in any cultural contact and exchanges. Adoption of any external values should conform to their cultural needs.
CHAPTER SIX
THE CONTEMPORARY CULTURE
AND ARCHITECTURE
OF BATAK TOBA
# CHAPTER SIX

## THE CONTEMPORARY CULTURE AND ARCHITECTURE OF BATAK TOBA

Table of Content.

<table>
<thead>
<tr>
<th>Introduction</th>
<th>308</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0 Spontaneous Settlement: Tegalsari</td>
<td>311</td>
</tr>
<tr>
<td>6.0.1 The Effect of Cultural preferences on Social Characteristics</td>
<td>311</td>
</tr>
<tr>
<td>6.0.1.1 Ethnic Related Segregation and Cultural Preferences</td>
<td>311</td>
</tr>
<tr>
<td>6.0.1.2 Migration Pattern</td>
<td>313</td>
</tr>
<tr>
<td>6.0.1.3 Language Among the Ethnic Groups</td>
<td>313</td>
</tr>
<tr>
<td>6.0.1.4 Education and Knowledge</td>
<td>314</td>
</tr>
<tr>
<td>6.0.1.5 Religion</td>
<td>314</td>
</tr>
<tr>
<td>6.0.1.6 Kinship</td>
<td>315</td>
</tr>
<tr>
<td>6.0.1.7 Households Characteristic</td>
<td>316</td>
</tr>
<tr>
<td>6.0.2 The Effect of Cultural Preferences on Economic Characteristic</td>
<td>316</td>
</tr>
<tr>
<td>6.0.3 Dwelling Preferences</td>
<td>320</td>
</tr>
<tr>
<td>6.0.3.1 Mandailing, Toba and Karo</td>
<td>322</td>
</tr>
<tr>
<td>6.0.3.2 Javanese</td>
<td>322</td>
</tr>
<tr>
<td>6.0.3.3 Deli Malay</td>
<td>323</td>
</tr>
<tr>
<td>6.0.3.4 Chinese</td>
<td>323</td>
</tr>
<tr>
<td>6.0.3.5 Minangkabau</td>
<td>323</td>
</tr>
<tr>
<td>6.0.4 Preferences on Selected type of Dwellings</td>
<td>324</td>
</tr>
<tr>
<td>6.0.4.1 Shop Houses</td>
<td>324</td>
</tr>
<tr>
<td>6.0.4.2 Low-cost Multilevel Apartment</td>
<td>325</td>
</tr>
<tr>
<td>6.0.4.3 Conventional House</td>
<td>326</td>
</tr>
<tr>
<td>6.1 The Contemporary Culture of Batak Toba</td>
<td>327</td>
</tr>
<tr>
<td>6.1.1 Urban of Culture Batak Toba</td>
<td>327</td>
</tr>
<tr>
<td>6.1.1.1 Language</td>
<td>327</td>
</tr>
<tr>
<td>6.1.1.2 Education</td>
<td>328</td>
</tr>
<tr>
<td>6.1.1.3 Ties with the Hometown</td>
<td>328</td>
</tr>
<tr>
<td>6.1.2 From the Rice Grower to Workers in Urban Sectors</td>
<td>329</td>
</tr>
<tr>
<td>6.1.2.1 Jobs and employments</td>
<td>330</td>
</tr>
<tr>
<td>6.1.2.2 Income and Spending</td>
<td>331</td>
</tr>
<tr>
<td>6.1.2.3 Domestic Jobs</td>
<td>331</td>
</tr>
<tr>
<td>6.1.3 Social Organization</td>
<td>333</td>
</tr>
<tr>
<td>6.1.3.1 Kinship</td>
<td>333</td>
</tr>
<tr>
<td>6.1.3.2 Birth and its ritual</td>
<td>335</td>
</tr>
<tr>
<td>6.1.3.3 Marriage</td>
<td>335</td>
</tr>
<tr>
<td>6.1.4 Religious and Ritual System</td>
<td>337</td>
</tr>
<tr>
<td>6.1.4.1 Religious Concept</td>
<td>337</td>
</tr>
<tr>
<td>6.1.4.2 The Begus and Tondies</td>
<td>337</td>
</tr>
<tr>
<td>6.1.4.3 Cosmology</td>
<td>338</td>
</tr>
</tbody>
</table>
6.1.4.4 The Role of Food and Dining in Ritual ........................................ 338
6.1.4.5 Talk, Rites and Spell .......................................................... 339
6.1.4.6 The Cult of the Death and funeral ........................................... 340
6.1.5 From Animism to Monotheism ..................................................... 340
6.1.5.1 Contemporary Religious Symbols ............................................. 340
6.1.5.2 Hybrid of Religion .............................................................. 341
6.2 The Contemporary Architecture and Settlement of Toba ...................... 343
6.2.1 The Settlement ........................................................................ 343
6.2.1.1 Perception on the Settlement ................................................. 343
6.2.1.2 The Settlement Lay-out ........................................................ 346
6.2.1.3 The Disappearance of Market Place (Onan) .............................. 347
6.2.2 Contemporary Architecture of Toba House .................................... 347
6.2.2.1 Plan Structure of Urban House ............................................. 349
6.2.2.2 Space Allocation ................................................................ 355
6.2.2.3 Architecture Gradually Transforms to be a Secular Object ......... 356
6.2.3 Preferences for essential rooms and Furniture ................................ 358
6.2.3.1 Living room ......................................................................... 358
6.2.3.2 Bedroom .............................................................................. 360
6.2.3.3 Kitchen ............................................................................... 362
6.2.3.4 Bathroom ............................................................................. 364
6.2.3.5 Family room ...................................................................... 366
6.2.3.6 Terrace ............................................................................... 368
6.2.3.7 Storage ................................................................................. 368
6.2.4 Cultural Preferences Architectural ................................................ 370
6.2.4.1 Type of Houses ..................................................................... 370
6.2.4.2 House Orientation ................................................................. 370
6.2.4.3 Set back and Distance between Houses .................................... 371
6.2.4.4 Building Materials ............................................................... 371
6.2.4.5 Floor .................................................................................. 371
6.2.4.6 Wall .................................................................................... 372
6.2.4.7 Roof and Ceiling ................................................................. 372
6.2.4.8 Windows and Doors ............................................................. 373
6.2.4.9 Carving and Ornament ......................................................... 375
6.2.4.10 Fencing ............................................................................. 377
6.2.4.11 Greenery and its placement ................................................. 377
6.2.4.12 Utilities ............................................................................. 381
6.3 Architecture Styles ......................................................................... 381
6.3.1 Traditional houses ..................................................................... 382
6.3.2 Synthesis of Local-European Architecture ................................... 384
6.3.3 Colonial Architecture ............................................................... 386
6.3.4 Government Sponsored Low-cost Houses .................................... 386
6.3.5 Apartment ............................................................................... 389
6.3.6 Government Staff House .......................................................... 391
6.3.7 Shop-houses ............................................................................ 391
6.3.8 Luxury Contemporary House .................................................... 394
6.3.9 Conventional Detached and Compound House ............................. 396
6.3.10 Modern architecture ................................................................. 399
6.3.11 Deconstruction style ................................................................. 401
6.4 The Probable Path of Future Transformation ..................................... 403
   Summary ....................................................................................... 403
CHAPTER SIX

CONTEMPORARY CULTURE AND ARCHITECTURE
OF BATAK TOBA

Introduction

Whilst in the previous chapter we discussed on the past culture and architecture of Toba, in this chapter we will elaborate on the present of contemporary culture of Toba and its relationship to transitional stages of architecture. The main contention of the discussion is pointed to the characteristic of the culture and architecture of Toba, which had been transformed from the past as was described in chapter 4 to the present pattern as will be described in the following chapter. The similar analysis approach in the previous chapter as was used on elaboration of the past culture and architecture of Batak Toba in their homeland is applied in this chapter. However, the collecting data is slightly different, the former is mainly supported by the historical record, while data for the latter obtained through direct interviews.

Supposedly, the spontaneous architecture style, anatomy of buildings and settlement pattern as a reflection of cultural needs and preferences, and its relationship to contemporary society of Batak Toba in the urban area can be described.

The discussion is carried out in an attempt to see whether the cultural values of the past still exist or transformed into the contemporary architectural style of urban houses. Furthermore, to find out how far the traditional architectural traits have exchanged with external values in the changing setting of urban area.

Therefore, the elaboration of contemporary culture of the Batak Toba is expected to give the clear picture of the concept of architectural style and the pattern of their spontaneous settlement and the comparison of contemporary architecture to the past will highlight the path of architecture transformation of the Toba house in the future. The study case for analysis of contemporary culture is carried out in district of Tegalsari in the core of Medan city.
6.0 Spontaneous Settlement: Tegalsari

_Tegal_ and _sari_ are Javanese words stand for arable land (_Tegal_) that belong to the fertile goddess (_Sri_). Tegalsari is a relatively flat land situated in the district of Medan Area. Its area enclosed partly by the Medan’s intermediate ring road (Jalan Abdul Rakhman Hakim) on the West side, a small river which is named Sulangsaling on the North-east which is the main drainage system and local access road on the South (Figure 6.2). Based on 1994 survey, the administrative area of Tegalsari is 24.50 hectares, with the population of 9,347 persons or 2,192 households with a density of 381 persons per hectare. The area was used for the plantation during the colonial era. Hence, some of the plantation workers houses mostly in bad condition still can be found among the spontaneous houses. After the colonial era, this area had been illegally occupied by the workers and local people from the surrounding region as far as Toba land (Figure 6.1).

6.0.1 The Effect of Cultural Preferences on Social Characteristics

6.0.1.1 Ethnic Related Segregation and Cultural Preferences

The region has been occupied by various ethnic groups and the diversity of ethnicities, which were mainly Chinese, Javanese, Deli Malay, Minangkabau, Mandailing, Toba and Karo has reflected the variety of culture in the study area. Although the region is dominated by various ethnic groups but segregation of racial is rather obvious. Ethnic segregation and cultural preferences of the population on the city level can also be seen in lower level such as settlement in Tegalsari where various ethnic groups are living in their own cultural precinct. That ethnic segregation of the population has affected the social pattern of the society that directly reflected in the physical pattern of the houses. Each ethnic group tends to assemblage in the form of clusters as can be seen in the figure 6.2, while its percentage is described in table 6.1. On the contrary to the ethnic segregation in the colonial period which was interfered by outside dominant power that led to the misleading belief that segregation is due to the colonial rule and policy, which is in fact the spontaneous ethnic segregation is solely motivated by the cultural drives and preferences to live in familiar community.
Table 6.1: Ethnic Segregation

<table>
<thead>
<tr>
<th>No</th>
<th>Ethnic Group</th>
<th>The Households (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Malay Deli</td>
<td>13.00</td>
</tr>
<tr>
<td>2</td>
<td>Javanese</td>
<td>8.20</td>
</tr>
<tr>
<td>3</td>
<td>Mandailing</td>
<td>12.40</td>
</tr>
<tr>
<td>4</td>
<td>Minangkabau</td>
<td>35.30</td>
</tr>
<tr>
<td>5</td>
<td>Batak Toba</td>
<td>18.40</td>
</tr>
<tr>
<td>6</td>
<td>Batak Karo</td>
<td>2.50</td>
</tr>
<tr>
<td>7</td>
<td>Chinese</td>
<td>4.00</td>
</tr>
<tr>
<td>8</td>
<td>Others</td>
<td>6.20</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Source: Field Survey 19194

This segregation is a strategy in an attempt to reduce the high urban tension and to form the solidarity among the members group. As was stated previously, there is a close correlation between religion and ethnic group. The Chinese are mainly Buddhist, while Deli Malay, Javanese, Mandailing and Minangkabau are Islam and Batak Toba and Batak Karo are Christian, either Protestant or Catholic.

Table 6.2: Cultural Preferences on Social Aspects

<table>
<thead>
<tr>
<th>No</th>
<th>Cultural preferences</th>
<th>Deli</th>
<th>Java</th>
<th>Mandailing</th>
<th>Minang</th>
<th>Toba</th>
<th>Karo</th>
<th>Chinese</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Length of stay</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Less than 5 years</td>
<td>42.00</td>
<td>59.50</td>
<td>11.00</td>
<td>50.30</td>
<td>41.80</td>
<td>37.10</td>
<td>62.60</td>
</tr>
<tr>
<td></td>
<td>More than 5 years</td>
<td>58.00</td>
<td>40.50</td>
<td>89.00</td>
<td>49.70</td>
<td>58.20</td>
<td>62.90</td>
<td>37.40</td>
</tr>
<tr>
<td>2</td>
<td>Head of household education</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Non-formal</td>
<td>2.60</td>
<td>2.10</td>
<td>5.50</td>
<td>6.60</td>
<td>3.60</td>
<td>21.40</td>
<td>8.30</td>
</tr>
<tr>
<td></td>
<td>Elementary</td>
<td>56.60</td>
<td>41.70</td>
<td>41.10</td>
<td>59.20</td>
<td>38.20</td>
<td>21.40</td>
<td>54.20</td>
</tr>
<tr>
<td></td>
<td>Secondary</td>
<td>17.10</td>
<td>31.30</td>
<td>24.70</td>
<td>18.80</td>
<td>28.20</td>
<td>35.70</td>
<td>29.20</td>
</tr>
<tr>
<td></td>
<td>High school</td>
<td>18.40</td>
<td>18.80</td>
<td>21.90</td>
<td>11.70</td>
<td>19.10</td>
<td>21.40</td>
<td>4.20</td>
</tr>
<tr>
<td></td>
<td>Higher education</td>
<td>5.30</td>
<td>6.30</td>
<td>6.80</td>
<td>3.80</td>
<td>9.10</td>
<td>0.00</td>
<td>8.30</td>
</tr>
<tr>
<td>3</td>
<td>Religion</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Islam</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>0.00</td>
<td>7.10</td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td>Christian</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>100.00</td>
<td>92.90</td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td>Buddhist</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>100.00</td>
</tr>
<tr>
<td>4</td>
<td>Household size</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Less than 5 persons</td>
<td>43.40</td>
<td>22.60</td>
<td>42.40</td>
<td>54.20</td>
<td>30.00</td>
<td>21.50</td>
<td>62.50</td>
</tr>
<tr>
<td></td>
<td>6-5 persons</td>
<td>36.90</td>
<td>33.40</td>
<td>26.00</td>
<td>16.20</td>
<td>40.00</td>
<td>71.40</td>
<td>29.20</td>
</tr>
<tr>
<td></td>
<td>More than 6 persons</td>
<td>19.60</td>
<td>43.80</td>
<td>31.60</td>
<td>25.60</td>
<td>30.00</td>
<td>7.10</td>
<td>8.30</td>
</tr>
<tr>
<td>5</td>
<td>Dependent household members</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Less than 4</td>
<td>40.80</td>
<td>43.80</td>
<td>49.30</td>
<td>41.80</td>
<td>38.20</td>
<td>35.10</td>
<td>54.10</td>
</tr>
<tr>
<td></td>
<td>4-5</td>
<td>35.60</td>
<td>25.00</td>
<td>26.10</td>
<td>29.60</td>
<td>37.30</td>
<td>50.00</td>
<td>49.90</td>
</tr>
<tr>
<td></td>
<td>More than 5</td>
<td>23.60</td>
<td>31.20</td>
<td>24.60</td>
<td>28.60</td>
<td>24.50</td>
<td>7.10</td>
<td>4.20</td>
</tr>
<tr>
<td></td>
<td>1 (Mostly the wives)</td>
<td>46.10</td>
<td>52.10</td>
<td>38.40</td>
<td>46.10</td>
<td>48.20</td>
<td>64.30</td>
<td>58.30</td>
</tr>
<tr>
<td></td>
<td>More than 1</td>
<td>53.90</td>
<td>47.90</td>
<td>61.60</td>
<td>53.90</td>
<td>41.80</td>
<td>35.70</td>
<td>41.70</td>
</tr>
<tr>
<td>6</td>
<td>Type of family</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Nuclear family</td>
<td>78.90</td>
<td>77.10</td>
<td>69.90</td>
<td>77.50</td>
<td>78.20</td>
<td>71.40</td>
<td>87.50</td>
</tr>
<tr>
<td></td>
<td>Extended family</td>
<td>21.10</td>
<td>22.90</td>
<td>30.10</td>
<td>22.50</td>
<td>19.10</td>
<td>28.60</td>
<td>12.50</td>
</tr>
</tbody>
</table>

Source: Field survey 1994
Majority of the Mandailing were stayed longer than the other ethnic groups and probably the first immigrant among the others (Table 6.2). However, their individuality is relatively low as indicated by the number of extended family within the group. Although the Toba is the last ethnic group to move into the city, but the higher education among them is the highest among the entire ethnic group in the study area.

6.0.1.2 Migration Pattern

Tegalsari was formerly part of the Deli Sultanate area and dominated by the Malay and with the Sultan permission, the region was in fluxed by the Muslim Mandailing and Minangkabau. The plantation workers from Java and Chinese traders, while the Christian Toba were strictly forbidden by the sultan to settle in the Muslim Sultanate. However, they started to squat in this area and other strategic locations of Deli only after the collapse of the Colonial and Sultanate. Today, the Toba has superseded the number of the other ethnic group apart from the Minangkabaus and their number growing number is steadily outnumbered the other ethnic in line with their cultural mission to have more land and more children. Half of the total households who have occupied this area for more than six years are the direct descendants of the first settler after 1950s, mainly dominated by the Mandailing and the Minangkabau. While the other half just have moved within the last six years. Some of them are temporary settlers that consists of highly mobile seasonal migration of the Minangkabaus who frequently going back to their hometown. The Deli Malay were forced to move out from their strategic location in the city as a result of financial constraint, while the Toba and the Karo occupied the outer fringes in attempt to move into a more strategic location in the city.

6.0.1.3 Languages among the Ethnic Groups

To a certain extend, each ethnic groups speak their own native languages, however, Malay language is widely used in everyday activities. These native languages have diffused in each other language; consequently, it is not the same as the language spoken in their hometown. The physical concentrations of the ethnic groups have intensified the usage of native language in Tegalsari. According to Tan (1886), there is only 58.40% of total
population in Medan who consistently speak Malay although 75.00 % speak Malay at work. The strong cultural identification and preferences is indicated by the intensive usage of native languages among the ethnic group. This is shown that the ethnic groups are undergoing the transformation of languages, however, they maintain their own language as the identity of the group in keeping with their cultural mission.

6.0.1.4 Education and Knowledge

The level of household education generally is indicated by the formal education of the head of the households. A significant number of them have never attended formal education and illiterate rate is very high. The highest numbers of non-formal education among the ethnic group are Karo (21.40 %), Chinese (8.30 %) while the lowest are the Deli Malay (2.60 %) and Javanese (2.10 %). Majority of the head of households have finished the elementary, secondary and high school but only small number graduated from the higher education where the highest among the ethnic groups are Toba (9.10 %) and Chinese (8.30 %).

The levels of education have indicated that the level of communication are defined through the absorption of information and cultural exchanges that contributed to the transformation of the life styles. In spite of the low level of education, the frequency of reading newspaper among the Toba is very high which is 78.40 % of female and 47.40 % of female respectively. While, 20.00 % of them listen to the radio and more than 65.00 % regularly watches the television. On the one hand, the above information shows that the awareness among the Toba on the importance of knowledge and widespread affordable information is very high. On the other hand, this information doesn’t necessarily transform their culture more drastically than the other ethnic groups. In fact, the ethnic sentiment of the Toba in urban area is steadily growing as was previously discussed.

6.0.1.5 Religion

As described above, various ethnic groups are living in the obvious segregation in Tegalsari, they are mainly Chinese, Javanese, Deli Malay, Minangkabau, Mandailing, Batak
Toba and Batak Karo. Since correlation between religion and ethnic group is very significant, hence ethnic segregation also indicated the religious segregation.

The Chinese are mainly Buddhist, while Deli Malay, Javanese, Mandailing and Minangkabau are Muslim and Batak Toba and Batak Karo are Christians, either Protestant or Catholic. The proportion of religious devotee described in table 6.3. The majority of population (70.10 %) is Muslim followed by the protestant (19.10 %), Buddhist 4.00 % and Catholic (0.80 %). This data shows the close relationship between ethnic and religion that formed the social segregation and consequently defined the pattern of physical segregation in the settlement (Figure 6.2).

Table 6.3: Religion Segregation

<table>
<thead>
<tr>
<th>No</th>
<th>Religion</th>
<th>The Households (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Islam</td>
<td>70.10</td>
</tr>
<tr>
<td>2</td>
<td>Buddhis</td>
<td>4.00</td>
</tr>
<tr>
<td>3</td>
<td>Protestant</td>
<td>19.90</td>
</tr>
<tr>
<td>4</td>
<td>Catholic</td>
<td>0.78</td>
</tr>
<tr>
<td>5</td>
<td>Hindu</td>
<td>0.13</td>
</tr>
<tr>
<td>6</td>
<td>Net.Available</td>
<td>5.09</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Source: Field survey 1994

6.0.1.6 Kinship

As with the language, each ethnic groups also keep their own kinship system. The Minangkabau conceptualize the society as a bounded unit by matrilineal descent, while the others assume the close agnate group of sibling and of agnates who trace descent from a common grandfather. However, the entire ethnic groups allocate social organization to accommodate activities that cannot be accepted by the ethnic organization such as religious matters, marriage, business activities. Such non-kinship organization has given a significant contribution to the transformation of kinship relationship either to make it weaker or stronger. Therefore, the kinship of contemporary urban ethnic group in the study case is no longer precisely the same as it used to be in traditional society but it has been slightly transformed. Each ethnic group has undergone the different intensity of kinship transformation. The kinship also has enhanced the identification of the ethnic group and partly contributed to the social segregation of the population.

315
6.0.1.7 Household Characteristic

The cultural mission has also affected the household characteristic. Three of ethnic groups Mandailing, Karo and Toba have the nearly similar basic culture (see chapter 4) that one of their cultural mission is to produce a large number of offspring (Hagabeon). Consequently, the percentage of Mandailing (31.60 %) and Toba (30.00 %) whose households have more than four children are relatively high among the entire households except Karo (7.10 %) probably because they are relatively new couples that highly likely will increase in the near future. However, Javanese have the highest rate of large family (43.80 %) and the highest number of extended families members conform to their cultural mission as is described in their cultural phrase “Whether the food is available or not our large family have to stay and stick together”.

More than two-third the households are the nuclear families, the highest percentage is the Chinese (87.50 %) and the lowest is Mandailing (69.90 %). The percentage of extended families among the household not necessarily indicated that individuality have increased among the ethnic groups. These phenomena will be elaborated in more detail in subsequent section on this chapter.

The rates of dependency among the household are considerable high. Nearly half of the households have more than one depended households and about one-third have more than five depended house member. In spite of cultural preferences, this rate of dependency is unnatural if compared to the range of the head of the households age that are too old to feed such high dependency. These dependency rates have affected the income and spending of the households. The households of low dependency rate, who have more than 5 dependent household members among the ethnic group is Chinese (4.20 %) that followed by Karo (7.10 %), Deli (23.60 %), Toba (24.50 %) Mandailing (24.60 %) while the highest is Javanese (31.20 %).

6.0.2 The Effect of Cultural Preferences on Economic Characteristic.

The economic and financial characteristic of the target population is indirectly affected by the cultural mission since it closely related with the job preferences and
dependency rate of the society members. Their employments are mainly small trader and home industries in informal sectors. Both of these jobs are benefited by the location of the settlement in the core of the city.

In order to support the household income 19.70%, so 38.40% of the household has more than one working family members although the significant number of the household (65.70%) only has one working family member and it is usually the head of the household.

Whereas, the rates of unemployment among the target groups are also high, which is 44.00% of the total households has one unemployment household member, while 25.60% of the households have more than one employment.

<table>
<thead>
<tr>
<th>Table 6.4: Cultural Preferences on Economic Aspects</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>No.</strong></td>
</tr>
<tr>
<td>---------</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>5</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>6</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

Source: Field survey 1994

The rate of dependent family member which should be supported by the working members of the household are also relatively high, for 34.90% of the households have less than 3 dependent members, 19.20% households have more than 5 dependent members, finally 55.90% of the households have dependent family member in the range of 3-5 persons.
Those figures are very contrastive to the composition age, for only 65.29 % of the population, are at the productive age of 19-55 years. Based on that condition, it can be said that the economic condition of the target population is moderate.

The greatest number of working population employed as urban workers on informal sectors (62.34 %), where 48.35 % out of which were handymen. Those jobs have not required trained workers or specialist and it is the lowest securities among the available jobs.

The cultural preferences, which are drove by cultural mission, have determined the employment favorite among the ethnic groups. In chapter 4, it has shown the employment preferences among the Toba have shifted from agriculture to a more prestigious clerical and church related job after the intensive contact with the European colonial and missionaries. The transformations of job preferences are conformed to and still within the context of Toba cultural mission. In chapter 5, it has described that the local people were not interested to work in plantation as indentured labor while the Chinese preferred to be the middle merchants than working as coolies although they started as such. Only the Javanese had obediently worked for European planters. The jobs favorite underlying by cultural preferences has become the crucial factor in seeking the settlement by ethnic groups that lead to the segregation of the settlement. The discrepancies of jobs favorites have also clearly seen among the target population in 1994. The Mandailing, Toba and Karo who have the nearly similar basic culture prefer the independence and dignified jobs as it is used to be in the colonial era. Because of this, preferences the European misleadingly regarded them as stubborn and difficult to manage. Consequently, they mainly work as entrepreneur and government employment rather than workers. Differently, Javanese prefer workers and home industry that depends on an employer. The Chinese have put the highest priority on entrepreneurship. Although, the significant number (18.20 %) of the Toba works in transportation sectors as workers and drivers, these preferences mainly related with the perception among them that consider automobile as symbol of richness, hence the car related job categorized as dignified employment. As a consequence or these cultural preferences, the employment of the total number of the head of the household are mainly entrepreneurs (39.00 %), dependent workers in small home industries such as shoe maker, ready made cloth and handy craft that controlled by the Chinese middlemen. The cultural preferences related with the family type, number of children, job preferences, education and kinship have simultaneously determined the number.
of depended household members, unemployment, working household member that affected the household income. That has put the Chinese as the relatively richer ethnic group and Deli Malay as the poorer among the ethnic group while Mandailing, Toba and Karo took the middle position.

Table 6.5: Employment Diversity

<table>
<thead>
<tr>
<th>No</th>
<th>Type of Employment</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Unemployment</td>
<td>3.40</td>
</tr>
<tr>
<td>2</td>
<td>Retirement</td>
<td>7.59</td>
</tr>
<tr>
<td>3</td>
<td>Student</td>
<td>0.30</td>
</tr>
<tr>
<td>4</td>
<td>Entrepreneurs</td>
<td>39.00</td>
</tr>
<tr>
<td>5</td>
<td>Small industries (dependent workers)</td>
<td>15.90</td>
</tr>
<tr>
<td>6</td>
<td>Factory Workers</td>
<td>1.20</td>
</tr>
<tr>
<td>7</td>
<td>Building Workers</td>
<td>0.80</td>
</tr>
<tr>
<td>8</td>
<td>Transportation Workers</td>
<td>9.20</td>
</tr>
<tr>
<td>9</td>
<td>Government employee</td>
<td>5.90</td>
</tr>
<tr>
<td>10</td>
<td>Military personnel</td>
<td>0.50</td>
</tr>
<tr>
<td>11</td>
<td>Peddlers</td>
<td>0.30</td>
</tr>
<tr>
<td>12</td>
<td>Handymen</td>
<td>0.30</td>
</tr>
<tr>
<td>13</td>
<td>Private company clerk</td>
<td>6.90</td>
</tr>
<tr>
<td>14</td>
<td>Not available</td>
<td>8.40</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Field survey 1994

According to the survey carried out in 1989 (Local government report: 1989) only 7.69% of the household could be categorized as the urban poor, however these gross income have to be deduced by household spending to obtain the net income. The household spending on housing and non-housing such as clothing, food etc were different from household to household.

Table 6.6: Income Level

<table>
<thead>
<tr>
<th>No</th>
<th>Individual Income of the target population</th>
<th>Range of Income (Rp 000)</th>
<th>Head of Household (%)</th>
<th>Total Working Family member (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Less 100</td>
<td>4.20</td>
<td>16.90</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>100-150</td>
<td>59.30</td>
<td>29.10</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lower middle</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>151-200</td>
<td>10.70</td>
<td>11.40</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>201-500</td>
<td>17.10</td>
<td>30.40</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Upper middle</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>501-750</td>
<td>1.40</td>
<td>3.30</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>751-1000</td>
<td>1.30</td>
<td>2.00</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Low higher</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>1001-1500</td>
<td>0.50</td>
<td>0.60</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>1501-2000</td>
<td>-</td>
<td>0.20</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>More than 2000</td>
<td>Na</td>
<td>Na</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>100</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

Source: Field survey 1994

319
The physical transformations of dwelling have strictly depended in housing related spending of the household. Furthermore, the survey revealed that about 70% of the household afforded to buy a subsidized house by installment while 8% afforded to a new house by cash.

6.0.3 Dwelling Preferences

According to local government, the total dwelling units in the study area were 1,564 units. Since the area was occupied by 2,192 households. Consequently, 28% of the households had lived together with another households in the same buildings. Some of the houses (11.09%) had a dual function as a living space and as a working place or shop, however the greatest number of houses (88.91%) only used for family life. Nearly all the houses were single story (89.38), while two stories, were only 10.07 and the numbers of three story houses were very small for only 0.55%.

The timber workers housing of the former plantation that built prior to are 1950 still existing in Tegalsari and it comprises 2.20% of the total houses. The number of houses had grown to 1,564 in 1991 with drastically fluctuated rate of average 7% in 1950 due to the collapse of colonial; this plantation had been squatted by its own worker and local people. Therefore, The greater part of the land plots are illegal (95.20%) where the ownership of the half of it only recognized by the head of the community.

Furthermore, The bad condition in rural area in 1960 shortly before the central government took over by the military give rose to the increasing of the rate of building development to 8.90% per-annum. Following by, the world oil boom in 1970 that benefited the country contributed to the drastic increased rate to 15.90% per-annum. The stable World Bank financial loans kept the steady rate of 7.40% in 1980.

Based on the availability of infrastructure, durability of building material, building maintenance and physical condition of the building the greater part of the building (55.80%) can be categorized as substandard, only 27.50% are in good condition and the rest are fair. However, the building condition doesn’t necessarily depend on the building materials of the upper structure of the houses since 50.70% of the houses are using permanent building material such as concrete and brick, while 35.50% are using the combination of more permanent material and timber, only 12.90% of houses using timber.

320
The roof of the houses are mainly (92.60 %) made of corrugated zinc, only small number of the better condition houses are using cement tiles (1.80 %) and concrete reinforcement slab and beams (4.70 %). Nearly all of floor of the houses (96.00 %) are covering by cement tile. The ceilings are made of asbestos (35.60 %) and plywood (28.90 %) and the rest (28.40 %) leave the ceiling uncovered. The houses are dominantly (83.90 %) single stories. The floors area is varied, the range from 50 to 100 square meters consists of
44.20 %, follows by 101-150 square meters is 23.40 % while the floor area less than 50 square meters is 13.50 % and more than 151 is 18.90 %. Building plot less than 50 sqm only 7.40 %, building plot within the range from 50 to 100 square meters consists of 25.20 %, while in the range from 101 to 150 and 151 to 300 sqm conversely is 27.60 % and 29.60 %, more than 300 sqm only 12.50 % of the houses. The discrepancies of dwelling preferences of ethnic group are given in the table 6.7.

6.0.3.1 Mandailing, Toba and Karo

The Mandailing Toba and Karo of nearly similar basic culture have regarded their settlement as an expansion of their hometown that should not be interfered by any other people. These cultural concepts have influenced their view toward land legality and house ownership. Consequently, They have the highest percentage of land legality and home ownership compare to the other ethnic group in order to proclaim their authority upon the dwelling. Although the number of the household that living together in a house in steadily decrease.

6.0.3.2 Javanese

The Javanese is the most tolerant ethnic group as indicated by the highest rank (47.90 %) of having more than one household living together in a house that followed by Minangkabau (39.90 %). This figure doesn’t indicate that individuality of the other ethnic group has slightly increased. The research finding has shown that the kinship ties among the Tobas are growing stronger in spite of their refusal to live with other families in the same house as it used to be. The Javanese also stand to live with other ethnic groups in the same house although in the moderate rate (22.90 %). Interestingly, although having the second highest (54.20 %) total occupancy rate (more than 7 persons) of the house and the highest multi-household rate (47.90 %), but their house plot and its floor area doesn’t necessarily higher than other ethnic group. These conditions are consistent with their culture as previously mentioned and indicated that they could tolerate a more congested space than other ethnic group.
6.0.3.3 Deli Malay

As was Javanese, Deli Malay also put up to live with different ethnic group in the same buildings as was indicated by the highest rate (73.70%) of multiple households but the number of total household member relatively smaller compare to the other ethnic group that conformed with the small building lot and floor area.

6.0.3.4 Chinese

The Chinese also have put the high priority on land legalities and home ownership but solely for the financial security. Nearly all (75.00 %) of the houses are occupied by the single households. The rest 25.00 % although occupied by more than one household but majority (91.70 %) are only accept to live with their own ethnic group. The Chinese households mainly (66.60 %) consist of small family of less than five household members. Although, The building lots are relatively smaller than other ethnic group but 58.30 % of the houses are multi level that is the highest percentage among the ethnic group. Consequently, they have the largest floor area. This large floor area conform with the cultural preferences of the Chinese who accustom to live and work in the same buildings as indicated by the highest rate (45.80 %) of multiple use dwellings so called shop-houses. Although, the Chinese have the high income but half of the houses are substandard.

6.0.3.5 Minangkabau

Among the Minangkabau, the number of the households who have the land legality and who stay in illegal property are nearly similar. The Minangkabau who stay less than five years mainly consist of circulatory migration that rented the illegal property. The rate of household (60.10 %) who singly occupied a house are second to the lowest, in other word 39.90 % of the Minangkabau are live in more than one households. The total occupancy rate are relatively high but it does not affect the floor area requirement, so as was Javanese they also put up to live in congested space. Beside for the family life, the significant number of
housing condition is mainly (78.90%) substandard which is the highest rate among the ethnic group.

6.0.4 Preferences on Selected Type of Dwellings

6.0.4.1 Shop Houses

Shop-houses that initially were introduced by the Chinese have widely accepted as commercial property and have transformed the appearance of the city of Medan. However, only 31.50% of population of various income group in Tegasari who accepted to dwell in shop-houses and they are mainly the Chinese who comprised 4.00% of the population, the Javanese and Minangkabau ethnic group. Due to its strategic commercial location, the shop-houses were accepted by them who employed as traders, home industries and entrepreneurs.

Table 6.8: Income and Preferences to live in Shop Houses

<table>
<thead>
<tr>
<th>No</th>
<th>Level of Income Group</th>
<th>Preferences for shop house (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Strongly rejected</td>
</tr>
<tr>
<td>1</td>
<td>Low income</td>
<td>8.00</td>
</tr>
<tr>
<td>2</td>
<td>Lower-middle</td>
<td>9.50</td>
</tr>
<tr>
<td>3</td>
<td>Upper-middle</td>
<td>8.00</td>
</tr>
<tr>
<td>4</td>
<td>Upper-higher</td>
<td>1.00</td>
</tr>
<tr>
<td>5</td>
<td>Total</td>
<td>17.00</td>
</tr>
</tbody>
</table>

Source: Department of Social Sciences, Universitas Sumatera Utara, 1994

Table 6.9: Employment and Preferences to live in Shop Houses

<table>
<thead>
<tr>
<th>No</th>
<th>Employment Employment</th>
<th>Preferences for shop house (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Strongly rejected</td>
</tr>
<tr>
<td>1</td>
<td>Entrepreneur</td>
<td>4.50</td>
</tr>
<tr>
<td>2</td>
<td>Commerce</td>
<td>1.50</td>
</tr>
<tr>
<td>3</td>
<td>Factory workers</td>
<td>0.00</td>
</tr>
<tr>
<td>4</td>
<td>Retired</td>
<td>1.50</td>
</tr>
<tr>
<td>5</td>
<td>Government</td>
<td>1.50</td>
</tr>
<tr>
<td>6</td>
<td>Military</td>
<td>0.00</td>
</tr>
</tbody>
</table>

Source: Department of Social Sciences, Universitas Sumatera Utara, 1994

324
6.0.4.3 Conventional House

The most part of the respondent, gave the positive answer to the question about living in a conventional house. The conventional house is a dwelling that developed out of local traditional house throughout physical transformation caused by natural cultural exchanges with outside culture and evolution initiated by the innate psychological drives. There were 92.50% of the respondents who accepted to live in conventional houses. They were covering the whole type of employment of the lower income group who separated their living space and workplace consisted of Mandailing, Toba, Karo Minangkabau Java and Deli Malay and in the small extends the Chinese. The population of the higher income group prefers the more modern house.

<table>
<thead>
<tr>
<th>No No</th>
<th>Level of Income</th>
<th>Preferences (%) for conventional house</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Income Group</td>
<td>Strongly rejected</td>
</tr>
<tr>
<td>1</td>
<td>Low income</td>
<td>0.00</td>
</tr>
<tr>
<td>2</td>
<td>Lower-middle</td>
<td>0.50</td>
</tr>
<tr>
<td>3</td>
<td>Upper-middle</td>
<td>0.50</td>
</tr>
<tr>
<td>4</td>
<td>Lower-higher</td>
<td>0.50</td>
</tr>
<tr>
<td>5</td>
<td>Upper-higher</td>
<td>0.00</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>1.50</td>
</tr>
</tbody>
</table>

Source: Department of Social Sciences, Universitas Sumatera Utara, 1991

<table>
<thead>
<tr>
<th>No No</th>
<th>Type of Employment Employment</th>
<th>Preferences (%) for conventional house</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Strongly rejected</td>
</tr>
<tr>
<td>1</td>
<td>Entrepreneurs</td>
<td>0.50</td>
</tr>
<tr>
<td>2</td>
<td>Home Industry</td>
<td>0.00</td>
</tr>
<tr>
<td>3</td>
<td>Factory workers</td>
<td>0.00</td>
</tr>
<tr>
<td>4</td>
<td>Retired</td>
<td>0.50</td>
</tr>
<tr>
<td>5</td>
<td>Government</td>
<td>0.00</td>
</tr>
<tr>
<td>6</td>
<td>Military</td>
<td>0.00</td>
</tr>
<tr>
<td>7</td>
<td>Trading/Peddler</td>
<td>0.00</td>
</tr>
<tr>
<td>8</td>
<td>Loosely Job</td>
<td>0.00</td>
</tr>
<tr>
<td>9</td>
<td>Miscellaneous</td>
<td>0.50</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>1.50</td>
</tr>
</tbody>
</table>

Source: Department of Social Sciences, Universitas Sumatera Utara, 1991
6.1 The Contemporary Culture of Batak Toba

6.1.1 The Urban Culture of Batak Toba

The study area, which situated in the core of the city, has been occupied by Toba immigrant since 20 years ago. Majority of them (75.00 %) have stayed for more than 10 years, while 50.00 % of these figures have moved into the region more than 20 years ago. The head of the households were mainly born either in rural area of Toba land (61.90 %) or other rural area (14.30 %) in Northern Sumatera. Only 22.20 % of them were born in urban area. Some of them had migrated to urban area after attending the preliminary education in their hometown. The head of the households were predominantly (75.00 %) above the age of 40 years, the rest 25 % were under 40 years; the younger was 28 while the oldest was 77 years old. In spite of the higher level of education (see 6.1.1.2) and the relatively longer period of stay in the region (table 6.2) than some other ethnic groups, surprisingly, they were retaining the significant traditional values, which were not necessarily conformed to the urban lifestyle. Although, some how, it has steadily transformed to its present form as will be described in the following section

6.1.1.1 Language

The significant number of the households (57.10 %) speak Toba native language fluently, while the rest 36.90 % is only mastering by either single or both of the parent. Interestingly, 42.90 % of the households indiscriminately are using that language, while the other speaks it conditionally. Consequently, There is the significant number of ethnic group members, who in any gathering communicate in the native language particularly in traditional ritual such as the cult of the death, marriage custom and birth ritual custom. It can be said that there are no environmental barriers, physically or psychologically that is strong enough, which could make them undergo adaptation and alternate their means of communication even among the dominant host society in who use Malay as lingua franca as in Deli. Consequently, nearly all (85.70 %) of the parents intend to encourage the future generation to preserve this native language. However, this language is no longer precisely similar with the old native, since
some of new words have been annexed to it, while some old words deleted cause it transform into a new native Toba language, which is only understood by themselves.

6.1.1.2 Education

The education of the head of the households is moderate that are Preliminary (38.20 %), Secondary (28.20 %), High school (19.10 %) and Higher degree (9.10 %), nevertheless, there are 3.60 % of the household who never been attended any formal education. Slightly more than half of them (53.80 %) have completed their school in their hometown, while the remaining (46.20 %) are in urban area. This implied that some of them have migrated at the early age and have a more intensive cultural contact with external societies than the other ethnic groups, this difference should have been changed their cultural perception more radically and indicated the intensity higher rate of cultural diffusion.

6.1.1.3 Ties with the Hometown

In spite of the relatively higher level of education, but in line with the intensive usage of native language, they have the close ties with the hometown. The close relationship with the hometown (Bona Nipasogit) obviously indicated by number households (69.80 %) who have the property in the hometown. This property could be a house, agricultural land, or vacant land, which is mainly obtained through heritage (63.50 %) only small number (6.30 %), however, have individually bought it.

They kept the property for various reasons but mainly for cultural related reason (49.20 %) for only 7.90 % for purely financial reason, however, 34.90 % of them cannot explain the reason for they only unquestionably follow the common practice of Toba. Therefore, the latter also can be regarded as cultural reason. Interestingly, the intensity of personal contact of the property owner with the villager is relatively low for only 28.60 % of the households are regularly visited by their villager relatives and only 22.20 % of the households, who are frequently calling on their home town.

However, this tie is not used to be as was the relationship between the old and the new settlements in the old times (see chapter 4). There are a number of obvious differences,
firstly, the ownership of the new settlements in the urban area no longer communal but individual, secondly, the urban settlements (*Buna Niranto*) not physically subordinate to or part of the administration of original settlement (*Buna Nipasogit*) but there is a close cognitive relationship between them. Thirdly, they have built a new network that substitutes the role of the hometown and original settlement in urban area (see section 6.2.1.1)

6.1.2 From the Rice Grower to Workers in Urban Sector

Conformed with the traditional culture, the Batak Toba used to be the seasonal rice grower before the intensive contact with the European colonial and missionaries. After the intensive cultural exchanges, the manifestation of their cultural mission and preferences have drastically changed coincided with their conversion to Christianity. Under the disguised protection of the missionaries and the Colonial, the Toba started to migrate to urban area as far as Medan and settle in urban periphery employed as subsistence peasant. After the Deli Sultanate who prohibited the Pagan or Christian to settle in his jurisdiction was fell down, the Toba inexorable exodus to any available spaces in the city caused them received the predicate as “the land hunger” who would grab any available land and dignified jobs that could take them to the higher social status as a new strategy that conform to their cultural mission. The Mandailing and Toba have the nearly similar basic culture, but has experienced the difference cultural exchange, the former with Islam and the latter with Christian. Therefore, from the beginning, they have the significant different attitude toward the job preferences. The Mandailing Muslim regarded the medical care activities as religiously unclean since it has to deal with human excretes, fester and blood, so refused medical related work. In contrast, the Toba has regarded the medical care as the dignified job as was taught by the missionaries so highly accepted the medical related works. However, the limitation of employment in formal sector have forced the Toba to work in urban informal sector that totally have a different character with their former employment as rice grower. They no longer have the excessive spare time and have to work individually and compete with the stronger contestants of other urban ethnic group. Consequently, the change of employment from the rice grower into the workers in urban informal sectors has resulted in the changes of social structure and division of labors that in turn change their physical environment, dwelling and architectural style.
Therefore, the spare time between two seasonal paddy cultivations are no longer available, the traditional kinship organization to manage the paddy field is no longer needed and the large monumental building to storage the harvest is useless. The diagram on figure 6.3 shown how the job preferences as cultural strategy to accomplish their cultural ideology and worldview have undergone the changes, from the rice grower to the clerical jobs and teacher as recommended by the Dutch colonial and recently the entrepreneur and government employer.

6.1.2.1 Job and Employment

From the following table, it can be seen that Batak Toba prefer to work in government sector and other relatively independent job such entrepreneurs and trader and avoid the small industries and craft that are highly depends on the Chinese middlemen for capital and marketing of the production. There is also an obvious shift in their perception on religious related job that are regarded as the most dignified job in the beginning of their contact with the missionaries.

It is clear that the job preferences have undergone the changes while the cultural mission for achieving the target is relatively static. In order to fulfill their cultural need and inspiring by its cultural missions to hold the authority (Hasangapon) has reflected on their job preferences.

**Table 6.14: Type of Employment**

<table>
<thead>
<tr>
<th>No</th>
<th>Type of employment</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Government employee</td>
<td>20.60%</td>
</tr>
<tr>
<td>2</td>
<td>Entrepreneurs</td>
<td>19.00%</td>
</tr>
<tr>
<td>3</td>
<td>Small trader/roadside staff</td>
<td>19.00%</td>
</tr>
<tr>
<td>4</td>
<td>Private company employment</td>
<td>11.10%</td>
</tr>
<tr>
<td>5</td>
<td>Teacher and lecturer</td>
<td>3.20%</td>
</tr>
<tr>
<td>6</td>
<td>Transportation workers</td>
<td>3.20%</td>
</tr>
<tr>
<td>7</td>
<td>Religious related job</td>
<td>1.60%</td>
</tr>
<tr>
<td>8</td>
<td>Small industries and craft</td>
<td>1.60%</td>
</tr>
<tr>
<td>9</td>
<td>Retirement</td>
<td>19.00%</td>
</tr>
<tr>
<td>10</td>
<td>Unemployment</td>
<td>1.60%</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Source: Field survey 1998
Moreover, it also has affected their position in the work organization. The Majority (69.80 %) of The Batak Toba holds the moderate to the high position. Consequently, they (85.00 %) also have the moderate and high responsibility in their work environment.

They consistently work for particular job, where the greater part of employed Toba (43.30 %) are stuck to a type of job in the same workplace while the other (33.30 %) consistently involved for nearly similar job but because of some reasonable causes they have moved to different work organization. In general, nearly all of them (90.00 %) have occupied their position for more than 10 years.

6.1.2.2 Income and Spending

The job preferences have affected the income of the Batak Toba. They are relatively poorer than other ethnic group in 1974 where 73.60 % of the households have the total income less than Rp 500.000 per month, but on the survey 1998 there are 65.00 % of the households who spent more than Rp 500.000 per month. The increasing of total spending has put them slightly better off than the other ethnic groups.

This indicated that their short-term cultural need has been accomplished as reflected by their intention to keep the present job. The network of interrelationship of cultural ideology, cultural needs, cultural mission, job preferences and income can be described on the schematic diagram on figure 6.3.

6.1.2.3 Domestic Job

There is a clear separation of domestic tasks among the members of households. These are mainly the responsibility of the housewives that assist by the females, particularly by the daughters who are going to be the housewives someday. The tasks include in domestic affair are notably, house cleaning, preparing dishes, washing and ironing. However, the males particularly the heads of the household are responsible for cleaning the bathroom, house repair and improvement. The origin of this separation can be traced back to the past culture that has not been drastically changed. Where, the roles of woman is still significant in managing the domestic affairs, whereas the decision to design the house in the hand of the man.

331
6.1.3 Social Organization

6.1.3.1 Kinship

The family relationship among the members of the Batak Toba is very close and even tighter than the kinship in the past time (Bruner: 1974). However, there are some obvious changes in the form of its basic unit. The communal life as found in traditional houses where number families of close kinship in the form of extended families living together are no longer fully accepted by dwellers in the study case. There are 46.00 % of the households who don’t intend to live with other household in a house; only 19.00 % totally accepted and 23.00 % conditionally accepted extended communal family live. This conforms to the fact that 76.20 % of the households are living individually in the form of nuclear family and 23.80 % in the form of extended families. The latter consists of 15.90 % of households who are staying with other households in a one house and the rest 7.90 % accommodated one or two close families members. Their perception toward communal living reflected in the intention to accommodate relatives on the long-term basis. Nearly all of the households (75.80 %) totally accept to accommodate their parent and the rest (24.20) accept them conditionally. There are only about one-third of the households who accept to accommodate or to live with their siblings, uncles, nephews, and the married child in a one house, about 40.00 % accept conditionally while the remaining less than 10.00 % refuse them. The perception on communal living that are gradually transforming into a more individualistic type doesn’t necessarily describe the tightness of the kinship relationship as can be seen in their perception about tripartite traditional kinship relationship called “Dalihan Natolu” that traditionally organize the bond of wife giver, wife taker and one’s own lineage family in particular system. The majority (73.00 %) has stated the highly significance and advantages of this traditional kinship in urban area particularly for helping each other and cooperation in facing the hares urban challenges, however, 6.30 % felt its disadvantages and 19.00 % had no idea. Consequently, each household have one to four close relatives that closely related with traditional social pattern (Dalihan Natolu) in the separate dwellings on neighbourhood.

It can be concluded, that past traditional kinship ties were not disappeared only transformed into the new form as described in the following figure 6.4.
TRANFORMATION OF KINSHIP TIES

**SUB TITLE:** The elements of donor culture are adopted and utilized to strengthen the recipient culture within a new format.

**INFORMATION:**
The kinship ties in the context of cultural change have transformed from previous form in their home town in the past to the contemporary form in urban area. The following figure describes the network of interrelationship of cultural construct and the changes of cultural strategy in attempt to make an adaptation and maintain the cultural ideology. However, the kinship relationships are even closer and tighter that utilize to face the harsh urban life.

**LOCATION:** Tegalsari

**SOURCE:** Field Survey

**DATE:** 1998

**FIGURE:** 6.4

![Kinship Ties Diagram](image)
6.1.3.2 The Birth and Ritual.

The ritual on the birth of the baby is common among the households. Although, this ritual is no longer performed precisely as it was in the past time and it has diffused with the Christian ritual but it is still traditional custom where the Christian dogmas is fitted into not the other way around. The performers (82.60 %) of the birth ritual do not have a sufficient knowledge of the origin of the ritual, what they knew are that the ritual has been performed even before they were born. Some (12.70 %) believed the ritual has been introduced by Christian missionaries and another (4.80 %) convinced that the origin of ritual could only be found in prehistoric mythology. This perception conforms to how the birth ritual has performed. The birth ceremony has performed in combination of traditional believes and Christian dogmas, Christian baptized procedure (27.00 %) and as Toba traditional ritual (25.40 %). Most of the populations have performed the ritual in a fusion of traditional and Christian dogma. In fact, the attendant of the ritual, who are expected by the households to join and perform the ritual are the member of traditional kinship (46.00 %), all acquaintances without exception (25.40 %), while the combination of Christian and traditional community members (11.10 %) are insignificant.

Therefore, the birth ritual cannot be categorized as part of the Christian ritual but obviously the traditional ritual, but it has adopted some insignificant Christian dogma and has been secularized. Consequently, the birth ritual nearly always takes place in the house (85.70 %); and only in 6.40 % of the cases, the religious building are involved. This birth ritual probably are going to perform continuously in the future, since the majority of the Toba (79.40 %) highly intend to encourage their descendant to follow this tradition, possibly for deep unconsciously reasons that closely related to the eternality in the after life as was believed in the past.

6.1.3.3 Marriage

There are significance differences of transformation between birth and marriage ritual, where the exchange with Christian concept and traditional believes in marriage ritual are more complex than the former. The intrusion of Christian concepts into marriage ritual are
deeper, consequently, the majority (52.40 %) perceived the marriage ritual as amalgamation of Toba traditional culture and Christian concept, however, some of the households (34.90 %) have performed it as purely traditional ritual, while another (12.70 %) as the secular Christian ritual. This perception also clearly reflected in the spouse criteria in the following table, where the Christian related criteria for the ideal spouse are much higher than ethnic criteria that represented the traditional culture, consent of the parent and even love. The majority (60.30 %) put forward that the spouse determined by the traditional custom is not valid any longer, however, the remaining (39.70 %) agree in that traditional arrangement. Nevertheless, interesting to note that intermarriage among the same lineage descendant (Marga) which is accepted by Christian is still highly forbidden and regard it as incest, however far their position may be related in the family tree they still regarded as brother and sister.

Table 6.15: Spouse Criteria among the Batak Toba

<table>
<thead>
<tr>
<th>No</th>
<th>Criteria of spouse</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Christian</td>
<td>14.30</td>
</tr>
<tr>
<td>2</td>
<td>Consent of parent</td>
<td>6.30</td>
</tr>
<tr>
<td>3</td>
<td>In-deliberately</td>
<td>3.20</td>
</tr>
<tr>
<td>4</td>
<td>Love</td>
<td>1.60</td>
</tr>
<tr>
<td>5</td>
<td>Similar ethnic, Christian, Love</td>
<td>6.30</td>
</tr>
<tr>
<td>6</td>
<td>Similar ethnic, Christian, Consent of parents</td>
<td>39.70</td>
</tr>
<tr>
<td>7</td>
<td>Similar ethnic, Consent of parents</td>
<td>4.80</td>
</tr>
<tr>
<td>8</td>
<td>Christian, Consent of parents</td>
<td>22.20</td>
</tr>
<tr>
<td>9</td>
<td>Consent of parents and accord with the tradition</td>
<td>1.60</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Source: Field survey 1998

Since, the marriage is the synthesis of the traditional ritual and the secular Christian concept, consequently, the procession can takes place in bride’s place (36.50 %), the groom’s place (27.00 %), the Church (23.80 %) and both the bride’s and groom’s place (8.00%). After the ritual, the newly married couple will temporarily stay either in the bride’s parent house (15.90 %) or in the groom’s parent house (44.40 %) before moving out to their own place, however, some couples (36.50 %) directly move in to their own house.

This contemporary arrangement is different with the previous arrangement in traditional Toba culture that apply the virilocal where the couple should settle in the groom’s parent house or community.
6.1.4 Religious and Ritual System

6.1.4.1 Religious Concept

As it was discussed in chapter four, the Batak Toba have intensively attempted to convert into Protestant Christian particularly after the legendary local leader Sisingamangaraja the 9th, as the symbol of local myth, had been defeated in 1917. However, the Toba had never be like the European Christian whose ideology has generated the Capitalism as put forwarded by Weber and as was exemplified by the missionaries, but instead they have developed the syncretism of local believe and Christian. The urban Batak Toba has fanatically devoted into this typical Christian and it used as an instrument for the struggle in order to accomplish their cultural need and cultural mission that closely related with their ethnic and culture.

At least, they perform eight congregations in a month. Four times at the Church, attend by the large congregation in the range of 40 to 1000 members, about two hours at noon usually on each Sunday on the location within the range of 1-5 kilometers that can be reached either by walk or public transports. Another four times, conducted by a smaller number of about 30 members; approximately two hours in the evening alternately take place on in each member’s house within the walking distance. All the sermons are given in the Toba native language. These rituals are national wide, organize in a systematic network under the organization called The Batak Protestant community (Huria Kristen Batak Protestan shortened as H.K.B.P), and have a close connection with the European countries that had sent the previous Christian missionaries into Batak land in the Past. Coincidentally, the culture of the Batak Toba had been introduced to the modern organization and Europeanized Christian that give way to the alternatives for their cultural strategy.

6.1.4.2 The Begus and Tondies

There are 52.40 % of the dwellers that believe that houses have a living spirit (the tondies) that will protect the occupant, while, 31.70 % refuse, the rest 12.70 % are in doubt. Traditionally, they believe that the soul (the begu) of the death ancestor has the capacity to protect the house and the evil spirit can plunge the house. Now, although they (52.40 %) still
believe in that soul and evil spirit but their strength and physical power have been far reduced. This proposition has been conformed, since the significant number of the respondent (54.00 %) doesn't believe that the souls of the death can protect the house. However, on the reverse, the insignificant number (27.00 %) strongly believed in the mythical power of the death soul, while the rest (14.30 %) are in doubted that are probably to shy to acknowledge that they believe in superstitious.

6.1.4.3 Cosmology

According to the mythology, the Batak Toba is descendant of the high God Debata Mutajadi Nabolon, where one of his grandchildren called Siraja Batak has come down to the earth and happened to be the ancestor of the Toba. There is only small number (27.00 %) of the urban Toba migrant who does have faith and the precise knowledge about this mythology and majority (65.10 %) doesn't. However, nearly all (65.10 %) believes that they descend from one ancestor, Siraja Batak.

Some of them (39.70 %) can describe the lineage relation in a clear schematic family tree right from Siraja Batak, the first ancestor down to their last grandson, while the other (50.80 %) have a vague description on that matter. Interestingly, almost all (65.10 %) are truly believe in that family tree although they could not describe it properly, even the latter who have the vague description of their ancestor, somehow believe that there is a family tree somewhere that should be trusted by any Toba.

6.1.4.4 The Role of Food and Dining in Ritual

The original recipe of the traditional dining only acknowledged by 23.80 % of the households, and it has transformed into a more simplified dining set that can prepared by the larger segment (41.30 %) of households. It can be seen that this traditional dining is mainly provided for traditional related ritual and is hardly involved in the purely Christian ritual, except in the syncretism of Christian and traditional ritual. This ritual dining also gradually lose its sacred and healing powers and to the lesser extend has been served daily and for secular activities.
Table 6.16: The Event that Use Traditional Diet as Ritual

<table>
<thead>
<tr>
<th>No</th>
<th>Event</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Traditional ritual</td>
<td>57.10</td>
</tr>
<tr>
<td>2</td>
<td>Christian ritual</td>
<td>4.80</td>
</tr>
<tr>
<td>3</td>
<td>Christian and traditional ritual</td>
<td>14.30</td>
</tr>
<tr>
<td>4</td>
<td>Any special secular event</td>
<td>12.70</td>
</tr>
<tr>
<td>5</td>
<td>Daily</td>
<td>1.60</td>
</tr>
<tr>
<td>6</td>
<td>Not available</td>
<td>9.50</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>100.00</td>
</tr>
</tbody>
</table>

Source: Field survey 1998

6.1.4.5 Talk, Rites and Spell

The talk, rites and spell for medical purpose have been radically replaced by modern medical attention represented by doctors. This modern medical attention has been intensively introduced and used by the early Christian missionaries in systematic attempt to destroy the magic power of the traditional medicine man and king priest. However, there is a significant group of households (39.70 %) who simultaneously implement the modern medical attention provided by doctors and spells and rites provided by the medicine man. Partly, because they believe that the doctors could not cure all the diseases for traditional reasons (52.30 %) such as the sickness caused by an evil spirit. That explanation shown that modernization and Christianity are not fully accepted, therefore it is impossible to use them to eliminate entirely the traditional culture and believes and they are only capable to transform the existing culture into a new synthesis form. This proposition conformed by the level of believes in the traditional magic in the following table.

Table 6.17: The Level of Believe in Traditional Magic

<table>
<thead>
<tr>
<th>No</th>
<th>The level of believe</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Totally believed</td>
<td>15.90</td>
</tr>
<tr>
<td>2</td>
<td>Partly believed</td>
<td>55.60</td>
</tr>
<tr>
<td>3</td>
<td>Totally not believed</td>
<td>25.40</td>
</tr>
<tr>
<td>4</td>
<td>Not-available</td>
<td>3.20</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>100.00</td>
</tr>
</tbody>
</table>

Source: Field survey 1998

There is only 25.40 % of the entire households who do not entirely believe in the traditional magic, and 30.20 % of households who have never see and heard the amulet that used in practice of traditional magic.
6.1.4.6 The Cult of the Death and Funeral

The majority (77.80 %) feel that traditional ritual for accompanying the death and funeral is highly needed, only 20.60 % state that such ritual is not necessary. They (52.40 %) claim that this traditional death ritual should be implemented together with the Christian ritual, but some respondents (28.60 %) prefer the Christian death procession and the other (19.00 %) solely need the traditional death ritual. This perception reflected in the preference of burial place, although 54.00 % of the respondents intend to be buried in Christian cemetery in the surrounding Medan, there is a significant number of respondent (31.70 %) who intend to be buried in their hometown that obviously for traditional reasons.

As a result, the place of death ritual mainly takes place either in the house in Medan (71.40 %) or the house in the hometown (15.90%). Only small number households (9.90 %) perform the death ritual in religious Christian building. This fact shows, how the essence of traditional believes have significantly continued to exist and safely hide within the transformation cultural strategy, even after more than a hundred year since the Dutch colonial had converted the Toba into Christian and strictly avoided the local pagan practices and traditional believes.

6.1.5 From Animism to Monotheism

6.1.5.1 Contemporary Religious Symbol

The entire traditional religious objects that symbolize the system of religion such as Batak magic wand, jointed doll, traditional calendar (Parhalaan), amulet and mascot, mythical beast (Gajah dompak or Singasinga) have nearly disappeared from the common sight. that have been replaced by the contemporary symbol of Christianity such as picture of the Christ and his apostles on the last supper, the cruciform and Christmas trees. The respondents have difficulties to describe the ideal house according to the Christian concept probably because the houses are regarded as the secular object.
Table 6.18: The Good House according to Christian

<table>
<thead>
<tr>
<th>No</th>
<th>The good house according to Christian</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The Christian doesn't have such criteria</td>
<td>23.80</td>
</tr>
<tr>
<td>2</td>
<td>Physically</td>
<td>28.60</td>
</tr>
<tr>
<td>3</td>
<td>Psychologically and Sociologically</td>
<td>28.60</td>
</tr>
<tr>
<td>4</td>
<td>Symbolically</td>
<td>1,60</td>
</tr>
<tr>
<td>5</td>
<td>Physically, Psychologically and Sociologically</td>
<td>15,90</td>
</tr>
<tr>
<td>6</td>
<td>Combination of all above item</td>
<td>1,60</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>100,00</td>
</tr>
</tbody>
</table>

Source: Field survey 1998

However, according to some respondents (28.60 %) the determining factor to be the good house is the physical condition of the house and its environment, for instance it should be clean and order. For the other (28.60 %) the factors are psychological and sociological that should be reflected in the peaceful mind and harmonious interaction among the occupants.

The belief of Toba has transformed into the syncretism of Christian and traditional. These also have affected the social structure of the society and in turn, change the physical environment of nearly the similar effect, as was the transformation of employment from the rice grower into the worker in urban informal sector.

6.1.5.2 Hybrid Religion

The quite large percentage of the households (20.60 %) is still devoted and has faith in the traditional religion; this number is far greater than the population (12.70 %) who absolutely does not believe. The latter, doesn’t necessarily have totally converted into Christian but has rejected this animism simply because it is not conformed to their common sense. In fact, there are the small numbers of households (3.20 %) who attempt to place the traditional ties, believes as the secular business, and attempt to pick up the Christian as purely the only concept of religion. The greatest part of the households (52.30 %) has managed to synthesize the old traditional believe with the European Christian in the syncretism or hybrid form. This consensus was symbolized in appointed the name of their animism god; *Debata Mulajadi Nabolon* to be the high god of this specific type of Christian instead of Jesus. While his three sons as told in traditional myth have never been mentioned ever since. However, they believe that they are the direct descendants of one among the three sons of that animism God.
FROM ANIMISM TO MONOTHEISM

SUB TITLE: The Effect of Religion Transformation

LOCATION: Tegalsari

SOURCE: Field Survey

DATE: 1998

FIGURE: 6.5

INFORMATION:
The acceptance of Christian religion has triggered the cultural change of Toba. Accordingly, the architectural transformation as a strategy has voluntarily selected and disposed the architectural traits offered by the donor to enhance the culture of the recipient rather than been intimidated by the donor of more developed cultures. The recipients, through cultural exchanges only accept the other architectural traits only if those traits are compatible with its own culture. Hence, Christian associations are used to express ethnic identity and further to support ethnic existence. Consequently, Ethnic identity is always reflects in any social activities, not to mention religious ritual. Ethnic interrelationships are growing stronger in different form. The units of Toba culture has split and distributed into various associations as reflected in the new architectural objects namely Church buildings, individual houses and their network and ornamented graves. These architecture objects through cultural exchanges are synthesized into the new hybrid forms that different with either previous recipient culture or the donor culture.

The souls of death ancestors are resided in the upper part of the house, so easy to call on down for giving help to their living descendant.

The place of evil souls symbolized the darkness and the world of the death in the lower part of the house.

The ancestor soul the gods and the evil spirit expelled from the house and disperse into

Place for secular activity where the ancestor soul can be called but not settled permanently.

Church

Accommodated religious life

Animism

The ancestor, the gods and the evil spirit resides nearby.

Monotheism

Provide the imaginary new remote places for the soul of the death ancestor and the gods instead of in surrounding the house, however, they oversee the house from a far and can be called at need.
6.2 The Contemporary Architecture and settlement of the Toba

6.2.1 The Settlement

The physical condition of the study area was described in the beginning of this chapter; the building density on the location is relatively high (79 units per hectare) compared to the building density (50 building units per hectare) in the low cost houses project that sponsored by government. The area dwelt by 9,347 habitants of the density about 381 persons per hectare therefore, the average housing density is five persons per house unit. The floor area provided for each dweller are mainly ranged from 13.00 to 57.00 square meters, however, there is 10% of houses of floor area is less than 13.00 square meters and 10% of more than 57.00 square meter.

This floor area is also larger than the floor area of the low cost housing provided by the government and it is larger than floor area per person in the traditional house. The majority (79.40%) of dweller is satisfying with this floor area, only 15.90% complaining that it is too small, probably, this complaint came from the population whose floor area less than 13.00 square meters. The house plots mainly range from 100.00-485.00 square meters with frontage 7.00-18.00 meters, while the depth is 11.60-29.70 meters.

Nearly the entire (90.50%) house plot is freehold and the household (88.90%) is owner-occupier. However, only 69.80% of the houses have building permit and nearly one third is illegal, this is quite normal since the majority of the total houses in the area hadn't been formally recognized by the local government and The Toba is one of the higher ethnic group that concern with the property legality.

6.2.1.1 Perception on the Settlement

The location of the ideal house is determined more by the physical criteria (49.30%) such as distance to the workplace, market, city center and availability of urban facilities rather than closeness to the Christian community (1.60%) or even ethnic related criteria (14.30%) such as closeness to the Toba community, kinship ties, however, the combination of these criteria are also significant (28.60%).

343
These criteria do not necessarily mean that the ethnic related criteria have the lower priority, since, they have the close social ties and very intensive contact with their ethnic group through the Church, whose congregation member are mainly the Toba and all the procession conducted in native language, although in some cases the Churches are located far beyond their settlement. More or less, The Churches and the urban clusters have functioned as the old or mother village and the new settlements that have to be expanded on strategic criteria, all in traditional sense (see figure 6.4).

Consequently, they have moved into this present settlement and will move out and expand for the similar reasons. In line with these perceptions, the dwellers (68.30 %) are satisfied and stick to this settlement only a few (19.00 %) plan to move and retreat into a more quiet urban fringe. The perception about the number of the Batak Toba in the neighborhood is varied some regarded it is excessive (20.60 %), the other few (31.70 %), however the significant number (42.90 %) stated that the number is sufficient and common. According to the dweller, the financial status of the neighbors is moderate (84.10 %) and the different income equally distributed in the neighborhood. In spite of, frequent flooding in the rainy season, the absence of garbage collection, the poor drainage and uncovered roads in parts of the settlement, the dwellers (84.20 %) regard the neighborhood can be categorized as clean. In spite of the fact that more than half of the head of households only manage to complete the preliminary school, the greatest part of the dweller (44.40 %) regard that educated neighbors are many in the neighborhood, while the other (42.90 %) consider it as normal. Furthermore, they (81.00 %) perceive that the moral condition of the greater part of the neighbors is ordinary. As a reflection of the perception of satisfaction toward their environment, the dwellers (85.70 %) prefer to stay at home on their spare time in contrast to the traditional community who spend much of the time in out door. The next priority to spend the spare time is recreation places (25.40 %) and in the neighborhood (15.90%). Nearly half of the household rarely socialize with the neighborhood; while the other half have a good relationship, the meeting with the neighbors usually take place in the terrace and the living room in the afternoon to evening. The criminals rate aren’t obtained but according to the dwellers the settlement is very secure and normal (88.90 %). They require the children play ground as part of the open space that probably the transformation of granary house that also used as children territorial in the traditional settlement.
### SETTLEMENT PATTERN

<table>
<thead>
<tr>
<th>LOCATION:</th>
<th>Tegalsari</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOURCE:</td>
<td>Field Survey</td>
</tr>
<tr>
<td>DATE:</td>
<td>1998</td>
</tr>
<tr>
<td>FIGURE:</td>
<td>6.6</td>
</tr>
</tbody>
</table>

**SUB TITLE:** The Functions of Mother-Village Partly Take Over by The Church

**INFORMATION:**
Traditionally, relationship of mother village (Bona Nipasogit) and other new settlements (Bona Niranto) is very close. The latter was regarded as the extension of the former, consequently the former always refers to in any important action. This relationship has transformed into the network of Church and contemporary settlements clusters in urban area. The Church has functioned as central either of profane or sacred activity as was mother village in the hometown of the past.

![Diagram of Settlement Pattern](image-url)
6.2.1.2 The Settlement Layout

The lay out of the settlement of the urban Batak Toba should have been in a strict gridiron, since it was based on the pattern of the plantation in the Dutch colonial period. Furthermore, the traditional Batak Toba settlement also lays in the strict grid pattern.

On the contrary, it is laid in amorphous pattern except alongside the main access roads that has been existed before the Batak Toba moved into the settlement. The origin of this pattern probably can be found in the Deli Malay settlement.

The typical existing lay out of the settlement don’t conform to the preference of the Toba. They prefer a the house to be oriented to a wide access road, while; the houses oriented to the other house aren’t culturally accepted (see house orientation in 6.2.5.2).

On a one hand, in order to compromise with the local existing condition, on the other hand, maintain the close cluster according to the traditional concept, hence the house borders and buffer is very crucial, as nearly all (82.50 %) the houses are bounded by fences on the front side (see section 6.2.5.10 and 6.2.5.11). These fences made of solid brick wall around 1.50 meter height (3.20 %), iron grill less than 2.00 meter height (27.00 %), combination of solid brick and iron grill (20.60 %), combination of solid brick and barbed wire (11.10 %), dense foliage (9.50 %) and the massive wall of the house (6.30 %), however, there is 15.90 % of the houses that kept open free.

The difference treatment is made to the left, right and rear border, nearly all those sides are massively blocked either with solid brick wall of around 1.50 meters height (34.90 %), or massive wall of the houses (52.40 %), only small number (1.60 %) of houses let it open, free of fences. The width of the access roads to the houses range from 2.00-8.00 meters, however there are another 10 % that less than 2 meters and another 10 % that more than 8 meters.

The range of the width of the road is mainly (47.60 %) regards as ordinary and sufficient, although some (23.80 %) consider it is narrow and the other (23.80 %) wide. The lengths of the main public roads to the houses range from 20.00 to 800.00 meters. This range mainly (47.60 %) regarded as convenience, although some (31.70 %) consider it is too close and the other (15.90 %) too long thus inconvenience to use.
6.2.1.3 Disappearance of Market Place (Onan)

The market place as a neutral zone in traditional settlement could not be preserved. Its function as a communal space and peaceful region even during a between the hostile settlements in the old days not any longer can be found in the urban area (Chapter 4). However, one of its elements that are traditional café which sell the traditional liquor made of fermented coconut juice can be found in any Toba settlement in urban area unexceptionally this study case area. The location of traditional café is usually within the walking distance.

The custom only maintain by about 25 % of the dwellers that visit the café 3 to 12 times a month. The majority of households (46.00 %) don’t have opinion about visiting the traditional café and 20.60 % regard the custom only suitable for rural life, however 28.60 % strongly stated that the custom suitable for urban and rural life as well. It is important to mention that drinking the liquor is the common custom of the Batak Toba that continue to maintain until now that takes place in the house particularly on Christian special days such as new year and Christmas.

6.2.2 Contemporary Architecture of Toba House

The decision to build a house is principally authority of the father (79.40 %) as the head of the household although in some cases the opinion of the mother is required (30.20 %).

The houses in study case are mainly built between the year 1950-1986, however half of these building have been renovated after the year of 1967 either through minor renovation (25.40 %) such as changed the building material, enlarger and rearranged the spaces or completely rebuilt (28.60 %).

Some of the households (41.30 %) simply cannot explain the reasons of the renovation, seems there is unwritten commitment to improve the house in any possible way, therefore, they (33.80 %) instantly renovate their house when their financial condition improve.

However, there are households who renovate the house for reasonable causes such as additional of children (9.50 %), additional function of the house other than living space (12.70 %) and obsolete of building material (11.10 %).
Highly probable, the reason for the former is to express the richness, wealth and high social status of the dweller as subconscious manifestation of the cultural mission (*Hamoraon*).

Similarly, They also implement material that widely used in good houses at reasonable cost (52.30 %) and material that shows the high status of the dweller such as look modern, durable, expensive, luxurious and the stronger building material (42.80 %). On the contrary, only small insignificant number of households applied the building material due to its cheap price (3.20 %).

**Table 6.19: Reason to renovate the Building**

<table>
<thead>
<tr>
<th>No</th>
<th>Reason to renovate the Building</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Eventually and naturally</td>
<td>41.30</td>
</tr>
<tr>
<td>2</td>
<td>Availability of budget or the family get richer and wealthier</td>
<td>33.80</td>
</tr>
<tr>
<td>3</td>
<td>Addition of children</td>
<td>9.50</td>
</tr>
<tr>
<td>4</td>
<td>Additional function of the house other than living space</td>
<td>12.70</td>
</tr>
<tr>
<td>5</td>
<td>Obsolete of building material</td>
<td>11.10</td>
</tr>
<tr>
<td></td>
<td>Missing</td>
<td>1.60</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>100.00</td>
</tr>
</tbody>
</table>

Source: Field Survey 1998

### 6.2.2.1 Plan Structure of Urban House

Nearly all the house plan is combination of open and close arrangement (65.10 %) and the rest (31.70 %) arrange the rooms in the close plan. Surprisingly, the open plan as commonly found in traditional Toba house cannot be found in the plan arrangement.

How the house plan has radically transformed is the crucial question in this section. In fact, the transformation of the house plan from the open plan in traditional house into the close plan of contemporary house is not as radical as it is widely perceived, since the traditional Toba houses also recognized the strict psychological division and separation that not concretized by the physical boundaries except by the curtain that hanging during the night. This imaginary wall even implemented around the person or between two persons that highly prohibited by the custom to communicate directly such as a father and his daughter in law. Due to transformation of the traditional custom, the function of these psychological boundaries no longer effective to maintain the required privacy, consequently, the Toba voluntarily accepted the materialized wall offered by the contemporary architecture in order to fulfill their preserved cultural ideology. Plan configurations have also transformed into
synthesis form of traditional and western arrangement. In the contemporary Toba houses, it is found that that the dominant configuration of the essential rooms are as follows; bedrooms places on the front-right side (44.40 %), kitchen is on the rear-right side (46.00 %), bathroom on the rear-left side (46.00 %) and the living room on front-left side (44.50 %).

The configuration of this contemporary Toba house is quite different with the western floor plan arrangement, where the bedrooms usually located in the quietest part of the house, rarely in the front side, open to the living room as found in the contemporary urban house of Toba, while, the bathroom ideally place adjacent to the bedroom.

Since the kitchen is the core of the service area the western floor plan arrangement, it should be located near the service entrance and near the waste disposal area, while the living room is usually centrally located close to the entrance where most of the living occurs and very often referred to as show place of the house. The arrangement is mainly based on functionalism.

These configurations are also different with traditional arrangement, where the master bedroom always placed in the most sacred part of the house that is the rear-right side. The kitchen is part of the bedroom that has the significant role in sacred ritual, upon which placed the sacred rack where the soul of the death ancestor is resided.

The whole part of the house is functioned as the living room during the day where the entire psychological boundaries will disappear so define a sort of time zoning, where the space allocation changing over time. The sacredness of the space increase toward the right (left-right axis) and rear side (front-rear axis) and all the activities adapted to this notion.

Therefore, the contemporary arrangement can be seen as the compromise of the western and traditional arrangement. Due to the transformation of religion, the sacredness of the kitchen has reduced, although not totally lost but no longer has the dominant role in the ritual or it has become the profane activities where its placement is based more on its utility function. Consequently, as part of the services the kitchen is placed close to the garbage collection on the rear side, for the space underneath the house that used to function as garbage collection has also disappeared, so, the sacredness of the rear-front axis of the house has disappeared however the sacredness of the left-right still maintain.
Therefore, the bedroom as the territory of the chief that used to place on the right-rear side has to move to the right-front side.

The bathroom that contains the toilet as the most secular activity is put in the left-rear side. Since, the imaginary boundary has been replaced by a fix concrete wall that eliminate the flexibility of space as it is used to be in traditional arrangement so the need of fix space to accommodate the living activities is emergent. This living space is placed on the front-left side for it is less secular than the bedroom and should be adjacent to the main entrance as the show place of the house in the modern sense.

The lost of flexibility of the spaces and its time-zoning in line with the compartmentalized of the house cause the number of rooms significantly increase in line with the more complexities of life in the urban area. The number of rooms is range between 4-14 rooms; the building coverage ranges from 20 to 100 %, where about one tenth of total sample have the building cover the entire site. The floor area ratio ranges within 20 to 150 %, where one tenth of total building have the floor area ratio more than 100 %.

6.2.2.2 Space Allocation

For Toba (66.60 %), the most essential rooms that provided in the house are living room, bedroom, kitchen and bathroom. Furthermore, they (92.10 %) strongly insist that this room should have a clear physical demarcation and the strict separation between married and non-married house members, however, the small number (22.20 %) of household tolerate the minimal separation of this marital status. Chatting with respectable persons take place in the living room, while chatting with close relatives can be performed in any part of the house. Conversation with un-familiar or stranger guest can be taken place in living room (33.00 %), terrace or outside the house (40.50 %). Dining activities carry out in family room (54.00 %) or dining room (19.00 %) if such room not available it will be in the kitchen (20.60 %), but the respectable guest is never invited to dine in the kitchen, if the first two rooms aren’t provided the guest will dine in the living room. Communal prying is mainly performed in the living room (70.30 %) and in the lesser degree in the family room (20.60 %), while individual prying conducted in the bedroom (65.10 %). Living room has an important role in ritual activities, the corpse of the household member and its related ritual.
The groom and bride in wedding ritual all are concentrated in the living room, except the birth ritual that concentrated in the bedroom.

The single overnight guest is placed in the bedroom either alone or sharing with the other non-married household member of similar sexes, but if the guest is a couple married, they should be provided a private bedroom. The communal guest will put in any available space except the kitchen and bathroom. Reading and writing performed in the bedroom (37.70 %), family room (41.20 %) and living room (12.10 %).

6.2.2.3 Architecture Transform to be a Secular Object

As was elaborated in depth in chapter 4, the traditional architecture is totally treated as a sacred object. This concept has gradually transformed, but not entirely disappeared as widely believed but retain as described in the following building process.

The houses mainly designed by the owner (42.90 %) and the building workers (41.30 %) as seen in the following graph. The design is absolutely relied on the inspiration of the owner who received the idioms through the houses he had ever seen (60.30 %), copying the existing contemporary house (12.70 %) and copying the house in magazines (11.10 %). Interestingly, there are small numbers of household (9.50 %) who ask the advice of the medicine men for house design.

The owners express the idea either orally (31.70 %) or by sketching on paper (54.00 %). The most dominant persons in designing of the house are the fathers (49.20 %) although in some cases received the second opinion from the mother (15.90 %) or the entire family members (15.90 %). The ritual during the design phase or before the building erection only do by half of the household by performing the small dining ritual (25.50 %) and asking the advice of the medicine man (9.50 %). However, nearly all perform the ritual during the construction such as dining at the settling of the first stone (6.30 %), placing a big bunch of banana and coconuts (11.10 %), dining ritual after the house completely built (30.20 %) and combination of aforementioned rituals (15.90 %). Sometimes the house is built by the owner (15.90 %), but mainly built by the professional workers (73.00 %) that are hired on lump sum basis.

The builder is appointed through the personal contact as recommended by friend (27.00 %), relatives (31.70 %), neighbors (15.90 %) and friend (17.50 %).
Building material is defined and provided by the owner (93.70 %) although in some cases he relies on the workers advice (27.00 %).

Since, the Christian doesn’t specifically provide the rules for the process of making a perfect good house as was traditionally believed, therefore, they have sought the traditional source to find the guidance for the perfection of their houses.

6.2.3 Preferences for the Essential Rooms and its Furniture

6.2.3.1 Living Room

The area of the living room ranges from 14.00 to 40.00 square meters, of the length from 4.00 to 9.00 meters and width from 2.50 to 5.90 meters that according to more than 65.00 % of the dweller is sufficient. The ceiling height range from 2.70 to 3.50 meters that is regarded too low by 26.90 % of the dwellers, however the majority is satisfied with this measurement.

The living room is placed in the front-left (50.80 %). However, there is 36.50 % of household who place the living room in the rear part of the house.

There are a combination of traditional and functional reason that underlying this placement.

Access to the living room from outside is mainly through the terrace from the yard (52.40 %) or directly from the yard (27.00 %) since some of the houses do not have a terrace. While from inside, the living room can be reached easily the since it is amorphously (34.90 %) or directly (31.70 %) connected to other rooms, although the latter usually separated by clear boundaries but it is usually connected by the doors. The windows opening are range from 1.70 to 10.00 square meters that widely accepted and provided the sufficient daylight and natural air condition. The furniture, which is commonly placed in living room are as follow; television set (61.80 %), large table (23.80 %), side table as a showcase of the glassware and silverware (65.10 %), luxurious couch (87.30 %), rocking chair (19.00 %), sofa set (82.50 %), expensive carpet (58.70 %), family photograph (66.70 %), expensive painting of scenery (82.50 %), cheap painting of scenery (30.20 %), calendar with beautiful picture (28.60 %) and very expensive small table (61.90 %).
In addition there are antique expensive furniture (84.10 %), expensive chair set made of teakwood (77.80 %), sofa that can also be used as bed (49.20 %), aquarium (63.50 %), sacred item for family protection (19.00 %), bookshelves (12.70 %), wall clock (41.30 %), telephone (55.60 %) and expensive crystal lamp (81.00 %).

The types of furniture that intend to place in the living room has revealed the perception of the dweller toward the living room; the most expensive and luxurious furniture and facility for public are placed in this room. The figure of the typical living room also describe the set number of the relatively expensive couch that very contrast with the other room in the same house.

The living room of contemporary house obviously has the similar functions as was the rooms during the day in traditional house in the past. Both of these rooms are used to accommodate traditional communal ritual such as birth, death, marriage and social activities. Nevertheless, the living room in contemporary house is also functioned as a showcase and the central of the house in the modern sense intentionally represent the social status of the owner in attempt to impress the guest in order to accomplish the traditional cultural mission.

Hence, the living room of the contemporary house is excessively provided with furniture and decorated in contrast to the other rooms. In this case, it can be seen that modern arrangement has been used efficiently as a means to achieve the traditional target in the framework of reasonable strategy. The Christian has been used in similar strategy in the similar strategy as discussed in the previous section.

6.2.3.2 Bedroom

There are one to four bedrooms in a house. The area of the bedroom ranges from 8.00 to 20.00 square meters, of the length from 3.00 to 5.00 meters and width from 2.50 to 4.00 meters that according to more than 65.00 % of the dweller is sufficient. The ceiling height ranges from 2.70 to 3.50 meters that is regarded too low by 23.80 % of the dwellers, however the majority is satisfied with this measurement.

The bedroom is placed in the front-right (44.40 %), however, there is 22.60 % who place the living room in the rear part of the house. There are a combination of traditional and functional reason that underlying this placement.
Access to the bedrooms from outside is mainly through the living room (52.40 %) or other rooms of hidden door to the living room (30.20 %). While from inside, the bedroom can be reached easily since it is directly (82.60 %) connected by the door to other rooms but separated by physical boundaries. The bedrooms provided with one door each (87.00 %) that regarded sufficient by 49.20 % of household but too small for the other (42.80 %). The windows opening ranges from 0.45 to 3.20 square meters that widely accepted and provided the sufficient daylight and natural air condition.

The furniture usually place in the bedroom are as follows; closet and dressing hangers (84.10 %), bed set (94.40 %), rose bunk (77.80 %), cheap painting of scenery (19.00 %), study table (79.40 %), glass mirror (52.40 %), bed for the guest (81.00 %), sacred items for family protection (23.80 %) and book shelves (42.90 %). The bedroom is the most private area in the contemporary house and highly restricted for the outsider.

The surveyor has to make extra support to get the complete picture of this room. The obvious difference of the contemporary and the traditional bedroom is additional study activities. The unnatural exaggerations of this bedroom have reminded us to the living space of the traditional house.

6.2.3.3 Kitchen

The area of the kitchen range from 4.50 to 20.00 square meters, of the length from 2.50 to 8.00 meters and width from 1.50 to 4.00 meters that according to 41.00 % of the dweller is sufficient, but 36.50 % it is small and the other felt that it is 17.50 % it is large. The ceiling height is relatively similar with other room.

The kitchen is placed in the rear (90.50 %), however. There are combination of traditional (39.70 %) and functional (46.00 %) reasons that underlying this placement. Access to the kitchen from outside is regarded easy, however, it is hidden to the living room (42.90 %). While from inside, the kitchen can be reached easily since it is amorphously (30.20 %) connected to other rooms or separated by physical boundaries but directly connected by door (55.60 %).

The windows opening are range from 0.60 to 2.20 square meters, while 25.00 % is windowless. That opening regarded normal and accepted by some households (46.00 %),
However, this opening is inconvenience by the others (38.10 %). Somehow, nearly all (80.00 %) positively perceived that it is provided the sufficient daylight and natural air condition. The common fixture and furniture placed in the kitchen are: The refrigerator (81.00 %), the placement of the large table is ambiguous whether in the kitchen (42.90 %) or in the dining room (19.00 %), shoes rack (20.60 %), cheap painting of scenery (17.50 %), tableware of glass and plate (27.00 %), wash basin (49.20 %) and cooking utensil (96.00 %).

The sacred function of kitchen in traditional architecture has greatly decreased following the conversion of the Toba into Christian as was discussed in section 6.6.2.1, that lead to the resettle of the death souls of the ancestor from the space above the cooking place into the mysterious immanent space. Consequently, the utilitarian function of the kitchen is increasing, as can be seen on their perception on the fixture and furniture that should place in the kitchen.

6.2.3.4 Bathroom

The area of the bathroom ranges from 2.50 to 10.00 square meters, of the length from 1.80 to 4.00 meters and width from 1.50 to 3.00 meters that according to more than 55.60 % of the dweller is sufficient, however 25.60 % complaining that it is too small, while 20.70 % felt it is large. The ceiling height ranges from 2.50 top 3.50 meters that is regarded too low by 12.70 % of the dwellers, however the majority is satisfied with this measurement.

The bathroom is placed in the rear-left (46.00 %), however, there is 25.40 % who place the living room in the rear-right of the house. There are a combination of traditional and functional reason that underlying this placement. Access to the bathroom from outside is mainly through other rooms of hidden door to the living room (80.90 %) only very small number that directly reached from the yard (3.20 %). While from inside, the bathroom can be reached easily the since it is directly (80.90 %) connected to the other rooms, although always separated by clear boundaries but directly connected by a door.

The windows opening ranges from 0.24 to 0.60 square meters, moreover, 25.00 % of the bathroom are windowless. However, those are widely accepted and regarded sufficient to bring in daylight and natural air condition.
This room cannot be found in the traditional house, taking bath and other related water activities has taken place in the nearby spring, lake or stream surrounding the settlement. These activities have been domesticated and transformed into a private business, furthermore, squeeze into a bathroom that has become an essential room in the contemporary architecture. This is emerging because of the changing environment and the transformation of culture.

6.2.3.5 Family room

A quarter of the total houses doesn’t provide with family room. The area of the family room ranges from 11.00 to 40.00 square meters, of the length from 4.00 to 7.00 meters and width from 3.0 to 5.00 meters that according to more than 36.50 % of the dweller is sufficient, while the other (22.20 %) regarded the size is large. The ceiling height ranges from 3.00 to 3.50 meters that is regarded too high by 19.10 % of the dwellers, however the majority is satisfied with this measurement.

The family room is placed in the middle (70.80 %) and central to the other rooms, it is usually more likely the extension of the living room. There are a combination of traditional and functional reason that underlying this placement. Access to the family room from outside is mainly through the other rooms of exposed door to the living room. While from inside, the living room can be reached easily the since it is amorphously (36.50 %) or directly (31.70 %) connected to other rooms, although the latter usually separated by clear boundaries but it is usually connected by the doors.

The windows opening ranges from 0.30 to 3.50 square meters that widely accepted and provided the sufficient daylight and natural air condition. The family room is provided with one (25.00 %), three (25.00 %) and four (25.00 %) doors each that regarded normal by the majority (42.90 %) of households but too small for the other (19.10 %). The fixture and furniture are usually placed in the family room are the following items: television (23.80 %), rocking chair (11.10 %), sofa that can also be used as bed (14.30 %), bookshelves (12.70 %) and telephone (11.10 %). The family room is a new element in the Toba house because of the compartmentalized of the activities and the changes of the time-zoning of the utilization of the houses in the process of adaptation.
6.2.3.6 Terrace

There are a number of houses (25.00 %) that doesn’t provide with terrace. The terrace area ranges from 10.00 to 25.00 square meters, of the length from 4.00 to 10.00 meters and width from 2.00 to 3.00 meters that according to majority of the dweller is sufficient. The ceiling height ranges from 2.50-3.00 meters that is regarded too low by 15.90 % of the dwellers, however the majority feels convenience with this height.

On the existing houses, the terraces are placed in the front-left (60.80 %) side; however, 12.50 % of terraces are located in the rear part of the house. This placement conforms to the preference of the dweller as revealed by the field survey. There are a combination of traditional and functional reason that underlying this placement. Access to the terrace from outside is mainly through the yard (52.40 %) or directly from the access road (27.00 %) since some of the houses do not have yard. While from inside, the terrace can be reached easily from the living room although it is usually separated by clear boundaries but it is usually connected by the doors. The terrace is usually open on three sides except on the living room side. This terrace is a transformation of the balcony in traditional house, which functions as the thermal comfort that has been recognized by the European settler back in the colonial era, unfortunately this functions always is not overseen by local architects.

The terrace concrete wall of 1.00 meter height is required by the majority of the dweller (39.70 %), however there are 31.70 % of them who prefer the open terrace; the rest doesn’t give the opinion, the main reason for this contrary preference is combination of functional and cultural. For the cultural reason and conformity in their life style the terrace is mainly utilized in the afternoon and evening. The furniture is normally placed in the terrace are: shoe rack (12.70 %), rocking chair (39,70 %), a set of cheap plastic chair (73.00 %),

6.2.3.7 Storage

As a result of the compartmentalizes of the spaces the storage is required to keep the item that doesn’t belong to the specified rooms, the items that placed in the storage are: Shoe rack to keep the shoes (50.80 %), the garage of motor cycle (65.10 %) and to keep the sacred items for family protection (15.90 %).
6.2.4 Cultural Preferences Architecture

6.2.4.1 Type of House

In most cases (73.00 %), the dwellers prefer and satisfy with the type of the present house. The reasons for this preference mainly that it fulfills the need of the dweller functionally and practically (42.90 %), culturally (31.70 %) and combination of functionally and culturally (11.10 %). These types of the house will be discussed in depth in the following part.

6.2.4.2 House Orientation

Orientation of the house to the main road is required most (88.90 %) for mainly functional reason (61.90 %). While, there are some households (11.10 %) who feel less dignified, underlying by the cultural concept and another some (19.00 %) who have the combination of functional and cultural reason.

However, this preference cannot always be implemented in urban area. Orientation of the house to the traditional compass is no longer remembered, however the dwellers (57.10 %) prefer the orientation of the house toward the east for functional reason such as to obtain the healing effect of the sunshine.

The house in the rear or oriented to another house, symbolically, places the owner in a lower status, therefore, the traditional Toba house hardly placed in such arrangement which is in contrast with the settlement of the Deli Malay that amorphously arranged.

Probably, that is the reason why the dweller (66.70 %) of contemporary Toba house rejected the orientation to the other house, in fact 39.70 % of the dwellers cannot explain the reason, 27.00 % for functional reason, 17.50 % for cultural reason and 15.90 % for combination of functional and cultural reason.

Quite the opposite, the houses are arranged back to back and side by side is widely (57.10 %) accepted primary for cultural reason (22.20 %), functional reason (20.60 %) and combination of both (15.90 %).
6.2.4.3 Setback and Distances between Houses

The set back of the houses mainly ranges from 6.00 to 8.00 meters, however, about one tenth of total houses doesn’t have the set back or built right on the edge of the access road. They mainly accept the similar set back for cultural reason. The distance between houses is ranges from 1.00 to 10.00 meters; however, the dominant distance (40.00 %) is 2.00 meter, they (85.70 %) reject the sharing wall mainly for cultural reason.

6.2.4.4 Building Materials

The widely used material for flooring is colored cement tile (44.40 %) followed by plastered cement (36.50 %), plastered brick for walling (74.60 %), asbestos (73.00 %) followed by plywood (14.30 %) for ceiling and for roofing are used corrugated zinc (84.10 %), cement tile (9.50 %) and corrugated asbestos (4.80 %). They implement material that widely used in good houses at reasonable cost (52.30 %) and material that shows the high status of the dweller such as looks modern, durable, expensive, luxurious and stronger (42.80 %), in contrast, only small number of household who implemented the building material due to its cheap price (3.20 %). There is a strong combination of cultural and functional reason in determining the building material.

6.2.4.5 Floor

The position of the house level has considerably transformed. Instead of floating in the air, lift by the columns, it is now placed directly on the ground. This transformation coincided with the changes of their believes. The synthesis of Christian and Animism has replaced the position of the gods, death souls and evil spirits. Instead of settled under the floor and above the hearth where spaces physically provided for them that symbolically represent the heaven and the land of the dead, the land of the dead and the dead souls have removed into the after life. Therefore, the space under the floor is left empty and has neither the ritual nor utilitarian function. Consequently, the floor has put down directly on the ground (68.30 %) adopted the typology offered by the European solely for utilitarian function. For the similar
6.2.4.8 Windows and Doors

Wood panel doors are widely (84.10 %) used. Two main reasons for applying the panel doors are, firstly, they are widely used (49.30 %) and secondly, they are look modern and urbanized (31.70 %). The types of window can be seen on the following table. The areas of front windows range from 2.10 to 25.00 % of the front wall that is regarded sufficient for passing the natural light.

Table 6.21: Window Types in Contemporary Houses

<table>
<thead>
<tr>
<th>No</th>
<th>Type of Windows</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Glass louvers</td>
<td>34.9</td>
</tr>
<tr>
<td>2</td>
<td>Small panes glass</td>
<td>15.9</td>
</tr>
<tr>
<td>3</td>
<td>Timber louvers</td>
<td>14.3</td>
</tr>
<tr>
<td>4</td>
<td>Wood frame glass</td>
<td>11.1</td>
</tr>
<tr>
<td>5</td>
<td>Timber panel</td>
<td>7.9</td>
</tr>
<tr>
<td>6</td>
<td>Skylight</td>
<td>6.3</td>
</tr>
<tr>
<td>7</td>
<td>Glass louvers and skylight</td>
<td>1.6</td>
</tr>
<tr>
<td>8</td>
<td>Combination of timbers and glass louvers</td>
<td>1.6</td>
</tr>
<tr>
<td></td>
<td>Missing</td>
<td>6.4</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: Field survey 1998

The elements of windows cannot be found in traditional Toba houses but very common in contemporary house. Thus, these elements have adopted from other cultures and relatively new among the Tobas. The Iron grills has provided for all the windows in order protect the house from burglary. However, the preference of the Toba has shift from the types of the existing windows as found in the survey into a more modern types as described on the following table. Since the former window has been regarded sufficient to let the day light in, so the changes of preference is more likely a cultural need rather than physical need, particularly to impress the viewer on the social status of the owner.

Table 6.22: Window Preference

<table>
<thead>
<tr>
<th>No</th>
<th>Window preferences</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Wide glass covered the facade</td>
<td>66.3</td>
</tr>
<tr>
<td>2</td>
<td>Small panes windows covered the facade</td>
<td>23.8</td>
</tr>
<tr>
<td>3</td>
<td>Small panes on limited place on facade</td>
<td>9.5</td>
</tr>
<tr>
<td>4</td>
<td>Wide glass covered the small part of the wall</td>
<td>1.6</td>
</tr>
<tr>
<td></td>
<td>Missing</td>
<td>4.8</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: Field survey 1998
The reference for these windows is the large expensive houses in luxurious in the region of Medan city. These houses have been put as references for they have become status symbol in the region. This preference is conformed to the method of design as has been discussed in the section 6.2.2.3. The Toba have applied the new strategy to show their wealth and dignity by implementing the particular type of windows. These types will likely change if they are not any longer effective as an agreed symbol among the urban Toba in general and urban population in particular. The windows are not regarded as a united system of a house but as a separate element, so a particular type of window can be applied to any style of house. Since the window is a separate element of a house, so it can be renewed and replaced in attempt to impress the viewer of the social status of the owner.

6.2.4.9 Ornament and Carving

Ornament is something added to make something richer in style or more beautiful rather than because it has a utilization function. In that sense, carving on traditional housing is also an ornament because it is added on to the house not because it has the utilitarian function but the sacred ritual function. This type of ornament and carving have disappeared from the contemporary Toba houses in line with the changes of the religion therefore it lost its sacred function.

The carving has been replaced by the contemporary ornament mainly for esthetic reason rather than utilization or sacred function. Thus, for different reason, the ornament is a familiar element in either traditional or contemporary Toba houses is only transforms from one type into another. The ornaments in cotemporary Toba houses are mainly implemented on windows (46.10 %), wall (31.80 %), eaves (28.70 %), column (22.30 %) and doors (12.80 %). However, the majority (50.80 %) prefers to have the ornaments on column (30.20 %), wall (28.00 %), eaves (20.70 %), window (17.50 %) and doors (17.50 %).

The ornament in the Toba’s contemporary house also functions as a cultural strategy as was the window types, in attempt to impress the viewer on the high social status of the occupant in line with their cultural mission.
6.2.4.10 Fencing

The society where the Batak Toba live, has transformed from a homogenous society into a heterogeneous ethnic. Coincided with the physical changes of the settlement that used to have the physical boundary that prevent the dweller from physical as well as psychological harm into a multi ethnic settlement that impossible to surround with confines fences.

Besides, the form of harm that possibly happen also has radically changed from an attack, wars and harm spells from any hostile neighborhood settlements and evil spirits into burglaries, thief and of course enemies spell and evil spirit to a lesser degree. Therefore, the requirement for the fences has retained as seen in the need and perception of the dwellers.

Nearly all the dwellers (87.30 %) require the physical boundaries on all sides of the building but the fences are only in front and rear side, since the boundaries on the right and the left side are usually represented by the neighboring house. Although the main reason that underlying the provision of house’s fences is physical function (58.70 %), interestingly, there are significant combination reasons of physical and cultural (33.30 %). For the similar reason, the height of the fences ranges from 1.00-2.00 meters. They mainly prefer the iron grill (50.80 %) concrete (12.70 %) or combination of both (25.40 %).

6.2.4.11 Greenery and its Placement

Their perception for greenery is positive, however, 38.10 % of the respondents require the greenery only in the front side, while 30.20 % insist in the greenery on all sides of the building and the rest variously require one or two sides of the building.

Surprisingly the reason is significantly combination of cultural and functional (55.60%) that far greater than dwellers who have the practical function (38.10 %).

As in the explanation on the fences, the history of greenery and landscape can be traced, back to the traditional settlement that usually surrounded by either the natural landscape or paddy field, while the houses inside the settlement also surrounded by the trees and grazing area for domestic animals. Since the traditional enclosed compact settlement has been broken down into scattered houses in the open and among other houses that belong to the out-group so, it is difficult to be fenced or to be landscaped communally.
Consequently, the greenery and landscaping are also have to be broken down into individual landscape and greenery to follow the main transformation trend in urban area.

6.2.4.12 Utilities

Nearly the entire houses provided with electricity, piped water and water closet with septic tank. The latrine located inside the houses and half of the houses have more than three water taps.

On the contrary, the infra structure in traditional house is provided by the natural environment (see chapter 4). They have to fight to get the water resources and expand the territory to proclaim their hegemony over other peoples, in attempt to increase the status of their ancestors in the after life. In the past, the bushes were used as the latrine during the day in stead of the streams, spring or rivers, during the night the soil was thrown through the split of floor timbers down to ground under the house. Hence, there is no great effort to make adaptation to use in house toilet in contemporary urban house. What they have to do is to collect the money as much as possible to pay for the infrastructure, which is needed to increase their social status.

6.3 Architectural Styles Preferences

The width of facades that range from 6.00 to 14.00 meters and the height of façade including roof ranges from 4.00 to 8.00 meters are regarded common, for only 17.50 % of households claimed narrow and low, whereas 25.40 % claimed that the width of their house are wide and high. The window opening on the façade ranges from 2.10-25.50 % of the wall that is felt common (47.60 %) and sufficient to let the sun shine in, however they (60.30 %) prefer the wider glass window covers the whole façade.

The entire houses are painted, half of it is richly painted where more than four different bright and calm colors are used in combination. The majority is satisfied with this coloring, but 30.20 % felt it is dull, whereas, 24.30 % felt that the paint of their house is too bright.
For some unknown reasons, although it should have never been flooded, the level of the floors is always higher than the yard. Probably, this is the remains of the past tradition, where the house floor always put in the high place above the ground.

The preferences of the respondent on selected architectural styles are attached on the following section. The level of preference is obtained by handing out a number of selected predominant architecture styles ever developed in the region to the respondent, except a building’s model, which is designed by Prix in post-modern style.

These architectural styles are to be hierarchical arranged according to level of preference of the respondents. The style prefer most is placed as number one and the most undesirable style is placed as number eleventh. It can be seen that apartment placed in an undesirable position by most of the households. While the conventional house or spontaneous detach house, which is came into being as a hybrid of traditional, colonial, modern etc.

6.3.1 Traditional House

Now, the traditional houses have been widely built and become the reference in some other houses in the hometown, solely to impress the viewer on the social status of the owner and his ancestor. This attempt is quite successful in the hometown but not effective in the urban area, due to the difference of cultural values.

Consequently, the contemporary houses of the Toba have to make adaptation to those urban values also in the similar attempt to express the social status as the fulfillment of cultural mission. This perception revealed by preference level on the traditional house. Nearly all of the respondents like traditional houses but it isn’t put it in the high level of preference since it is not suitable for the urban area.

As seen in the graph, the preference on the traditional houses level is split, some insist that the traditional house is suitable for the urban area and should make as a reference in building a house, while another refuse to build the traditional house in urban area in spite of their preference to the traditional house.

As a result, the urban Toba has developed an alternative tradition for urban area that called as conventional house in this thesis (see section 6.3.9).
The term tradition is referred to definition put forward by Steil (1987). Tradition architecture is not concerned with historical styles, but with historical principle; not with classification but with cultural integrity, not with academic debate but with the conscientious study of tradition; not with an abstract and academic discourse but based on reality and tradition; not with progress and modernity but with preservation and perfection of the previous tradition.

6.3.2 Synthesis of Local and European Architecture

In the beginning of colonial period, the Dutch had applied the synthesis of local architecture and European vocabulary to form the typical architectural style. They applied the Western technology into the rudimentary local house to form the sophisticated architectural form where the stilts, the space under the house, the high floor and the terrace except the gable have changed into hipped roof and the proper bathroom has been added on the far rear of the house. This type of house has nearly extinguished from the city but widely found in the government plantation on the fringe of the town. Unfortunately, the respondents do not clearly remember its original style in detail as shown on the following figure but a more developed form, therefore their perception is probably unreliable, however they do not put it neither in the lowest level nor the highest level of preference.

These types of dwellings have transformed into a different style with additional small panes glass windows, cemented staircase that widely can be found in small cities in Northern Sumatera.

The European lifestyle had been adapted into this type of synthesized house form, where the terrace was used as living room that decorated and provided with European furniture and additional bathroom and toilet in the far end of the house. While, the local people performed the different adaptation, the space under the house was functioned as a place to keep the chicken and other domestic animals. The local people weren’t providing the house with bathroom or toilet, they still use the nearby river and stream for bathroom that also function as communal public gathering. Only recently, these dwellings provided with pipe water and individual toilet facilities.
6.3.3 Colonial Architecture

Prior to the end of colonial period, building development and trade had been developed and the synthesis of Local-European architecture style has been deserted by the Dutch although continuously developed by the local peoples in smaller cities in the Southern part of North Sumatera.

The house styles introduced by the Dutch were detached as a single-family dwelling or duplex similar with the Dutch’s suburbia villa types. The building could be symmetrical or asymmetrical in plan. They were placed on a considerable set back from 8.00 to 14.00 meters depended on the width of the class of access road in front of the house, consequently created the spacious front garden that planted with tropical trees.

The designs were based on anti urban of the garden city concept and the building coverage of the houses was 50% or less lead to a considerable low density. The building regulation had been strictly applied. This type of houses still widely found in the Polonia and Medan Baru.

The house is built directly on the ground, hipped high roof, thick brick walled that replace the timber synthesis Local-European wall and glass windows. The bathroom, kitchen, toilet and other services were placed in the far end of the house near the maids rooms. This service area was separated from the house for the master but connected by the open gallery. Apart from functional segregation this house also applied, the socio-cultural segregation was the European master is separated with from its slaves.

The level of preference to this type of dwelling is nearly similar to the synthesis of local and European architecture were not put it neither in the lowest level of nor the highest level of preference but in the middle.

6.3.4 Government Sponsored Low-cost Houses

The reason to introduce the low-cost is similar to the low-cost apartment, which fills the wide gap between the demand and supply. This type of house has been discussed in chapter 5 section 5.3.2. The locations of this house are always in the outer fringe of the city.
The low-cost housing is placed on the cheapest available land in an attempt to reduce the initial cost of the project but the higher running cost for transportation should be paid by the occupants. The designer and developer hardly ever meet the prospect occupier until the transaction of the finish house is made let alone to accommodate their cultural needs. The house style and its design is very formal and rigid therefore it is difficult to make an adaptation to the cultural need of the occupants. Consequently, the respondent put these house styles in the low preference.

6.3.5 Apartment

The apartment has been introduced by the government to overcome the land shortage and housing need in the urban cities as has been done in the neighbouring countries such as Singapore and Malaysia. In line with that one side appointed solution, the local government plans to carry out Urban renewal project in Tegalsari and prepare the feasibility study in 1991 that followed by the formal planning in 1994.

The scenario of the plan is land sharing where a part of the land is given to the private developer for commercial use, the money acquired from that land will be used to build a number of apartment and shop-houses to accommodate the resettle households. That project is highly feasible on financial perspective but quite contrary to the cultural need of the households. The populations refuse the plan and live in apartment and shop-houses. In order to continue the plan, the local government attempt to change the preference the peoples by introducing a the new lifestyle for a new type of settlement.

Unfortunately, the result of this attempt can not be resumed due to the political instability and financial difficulties prior to the year 1999. The main reason for this refusal is clearly the cultural factor as was discussed in preceding section.

The Toba prefers the distance between houses, gardening around the house, reject the sharing wall, require the particular plan arrangement, prefers particular façade. Consequently, they refuse to adopt the apartment and shop-house since none of those cultural requirements can be accommodated. It is clearly seen from the overleaf figure that the level of preference on apartment is placed as the subsequent priority.
The level of preference is obtained by handing out a number of selected predominant architecture styles ever developed in the region to the respondent, to be hierarchical arranged according to their level of preference. The style, which prefer most is placed as number one and the most undesirable style is placed as number eleventh. It can be seen that apartment placed in an undesirable position by most of the households.

6.3.6 The Government Staff House

The government very often provides the house for their high rank staff, particularly for the highly mobile staff that has to move from one place to another in relatively short time. The style of the house is normally very formal and functional, it rarely changes and it is always in a good maintenance.

This type of houses has become the symbol of social stability and prosperous of the dweller, therefore it is one of the reasons why it is widely imitated.

The style of this government staff housing is following the national architecture trend of the eclecticism that combines a various style and more functional and formal than the spontaneous houses. These houses occupy the strategic and prominent sites in the center of the city. The preference level for this type of style is quite high, although not put as the highest level of preference but it is close to it.

6.3.7 Shop-houses

As was discussed in chapter five, the shop-houses introduced by the Chinese who had come to Nusanterra long before the European Colonial emerged. Now, the shop-houses dominates the appearance of the city core including the main roads that confines the study area.

The contacts between Chinese and the local people have taken place in a quite long time and are very intensive but the shop-houses not adopted by the Toba.

Although they (66.70 %) accept the shop-houses as commercial assets but they refuse to live on it, however there are people (30.20 %) who accept to live in the shop houses on temporarily basis.
As was discussed in preference on apartment, the main reason for this refusal is clearly the cultural factor as was discussed in preceding section. Consequently, they refuse to adopt the shop-house since none of those cultural requirements can be accommodated.

It is clearly seen from the overleaf figure that the level of preference on shop-houses is placed in the subsequent priority after the spontaneous house.

6.3.8 Luxury Contemporary House Style

The contemporary houses in urban area implement the pluralistic style that formed by a variety of actors and resources. The pluralistic cultural background of actors who involved in housing design, has produced the various combination of architectural style namely; Pseudo classical villa with Grecian and Romanian column, Futuristic capsule, Modernism, Deconstruction, Post-modernism while the other are actively insisting to develop regional architecture as a reaction against International style.

However, it is difficult to find the pure style but the hybrid form of aforementioned grand styles. The local academic architects have not fully involved in designing the majority of houses, but the craftsmen who build them by imitating the existing previous spontaneous building.

Those types of building dominate the luxurious houses in Medan now and they have become the main reference of other next incoming buildings. The level of preference to this type of style can be seen in the graph on following figure.

The role of this style is obvious in development of architecture style in the region since the majority of respondents put it the highest preference as the spontaneous houses on section 6.3.9.
6.3.10 Modern architecture

The Enlightenment has put forward the power of reason as a first priority; this is based on objectivity by autonomous subject that can be achieved through distance from the object. The necessary process of distance making helps man to learning increasingly to control himself and nature primeval forces. On the contrary, this distance making also has caused the subjectivity that directed into the continuous searching of truth so that its comprehensive meaning is continuously fragmented into ever-smaller particles.

These fragmentations make the holistic vision ever harder to uphold. However, in the first three decades of 20th century, architects are consciously adapted their work to the process of social rationalization to express the rational advance of mankind, where the rationality of the exact science and hierarchical thinking go hand in hand.

Architecture became the instrument of reason and exclusively rational construction of logic, progress and totality that express best by the pure geometric forms and in idealization of form toward unity and simplicity. Abstraction, alienation and fragmentation deliberate destruction or distortion of tradition has been revealed as the main issues of modernism.

However, it creates a new modern myth that has attempted to avoid in the beginning. The rigid bond and continuity with the past has been severed that recognized as antithesis and irrelevant to architecture.

Until then, the modernism spread to rest of the world unexceptionally the Nusantara. Thus, in the beginning of the independence in 1950s, some of the local architects tried to catch up the latest modernism, but instead of referred to Netherlands these latest group focused on leading American. Nevertheless, only as late as 1970s the modern architecture reached the city of Medan and continued to be implemented either purely or in the synthesis form with the other styles. In fact, the respondents undesired this style, as seen in the following figure the majority put it in the lowest level of preference.
explanation, some of the houses (25.40 %) are multi-floor since it is also familiar in traditional house. The area of first floor ranges from 65.00 to 230.00 square meters, and the second floor is around 65.00 square meters.

6.2.4.6 Wall

The wall particularly internal wall has also undergone the transformation but as was discussed in 6.2.2 it is not as radical as it is widely perceived, since the traditional Toba houses have also recognized the strict psychological division and separation that not concretized by the physical boundaries except by the curtain that hanging during the night. Due to erosion of the traditional custom, the function of these psychological boundaries no longer effective to maintain the required privacy, consequently, the Toba voluntarily accepted the materialized wall offered by the contemporary architecture in order to fulfill their preserved cultural.

6.2.4.7 Roofing and Ceiling

The synthesis of Christian and Animism have replaced the position of the gods, death souls and ancestor spirit. Instead of settled under the roof above the hearth where spaces physically provided for them that symbolically represent the heaven, it has removed into the after life. Therefore, the space under the roof hasn’t the ritual but utilitarian function. Consequently, the roof has maintained and voluntarily adopted the typology offered by the contemporary European architecture solely for utilitarian function. However, the greatest parts of the houses are using the gabled roof the similar type as was used in traditional houses. Whereas, the material used to cover the roof of contemporary houses are largely corrugated zinc that mainly for practical reason.

Table 6.20: Type of the Roofs

<table>
<thead>
<tr>
<th>No</th>
<th>Type of roofs</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Gabled</td>
<td>51.10</td>
</tr>
<tr>
<td>2</td>
<td>Hiproof</td>
<td>41.7</td>
</tr>
<tr>
<td>3</td>
<td>Pyramid</td>
<td>4.4</td>
</tr>
<tr>
<td>4</td>
<td>Flat</td>
<td>2.6</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: Field survey 1998

372
6.3.11 Deconstruction style

Deconstruction style has not reached the region yet, however it is attached to the level of preference of the dwellers only for comparison purpose.

Deconstruction appears as the response to the enlightenment in age of reason. The liberation and distance making process from nature as a precondition of modernism has turned against man himself and become the victim of his natural need to dominate of nature. The enlightenment also creates the dialectical between modernism and deconstruction that impinge and corrective each other and maintain a kind of antagonistic rapport. Deconstruction came to fore, by many architects that refuse to accept the fragmented situation, attempting to reconstruct from the fragment of disintegrating world, a whole, true and essential world-view that mistrust the typical reason and attempt to unmask its mythical character and deconstruct the construction. The term deconstruction derived from Heidegger that means as dismantling the structural layer and to take apart edifice in order to see how it is constituted and de-constituted. Deconstruction is not a form of demolition; on the contrary, it establishes the condition of possibilities of the traditional architecture rather than staging it fall. Therefore, the aim is to make the building shaking, not to make it collapse.

This aims is achieved not by subjecting it to some external force but to explore it from within, consolidate the structure, imitating its every gesture, faithfully repeating its operation but in a way exposes its limit, opening up its structure or rather findings the opening that already there and the concealed points of weakness.

Although the strategy is, seem return to the original aim of modernism but it refuses to be too limited scientific, technical rationality, mythic, paradise seeker, overhasty harmonization and fundamentalist.

The implementation of the concept by the Coop Himmelblau has produced a sort of insensitive that other architect normally tries to eliminate. They have created the form through confrontation and by giving free reign to a repertoire of gesture, tilting, twisting, piercing, breaching, and slitting (Noever: 1991).

This style clearly couldn’t be accepted by the respondents, for it doesn’t contain any familiar elements that can be adapted to their own culture or in other world, it is entirely strange for them for the time being.
6.4 The Probable Path of Future Transformation

From the above discussion, it is clear that the preferences of house styles are very protean. The present house styles that used to be adored and had derived from the needs of the dwellers are not fully satisfied their present needs. This is conformed by the discrepancies between the physical existing of the house and the their preferences and conception about the house. This is most clearly seen in the preference of the type of windows (see part 6.2.5.8) nearly all of the dwellers prefer the types of window that different with what they have now. Therefore, the further transformation is un-avoidable in the near future. However, the pattern of the transformation is obviously determined by the internal perception, world-view and availability of outside cultural idiom that obtained through cultural contact. Although, they have the similar cultural background but they have the different cultural exchange that lead to different synthesis therefore the styles transformation will be more fragmented than before as was seen in the different perception on the traditional house between the hometown rural villager and the urban dwellers. Consequently, the traditional house revival that widely found in the hometown is unusual in the urban area in spite of their financial capabilities of the urban dwellers, building material availabilities and building permit support from the local government.

Summary

Analysis of the contemporary The Batak Toba culture and architecture in this chapter has revealed that there is a very close relationship between the past and the contemporary culture. There is a similar underlying concept of architecture but different manifestation in the transformation form.

The symbolic values of the house have degraded due to the distribution of its function into a number of spaces notably the church, grave and open spaces however, they have adopted a new myth and the new symbolic values among which are a symbol of social status as part of their cultural mission (hamoraon and hasangapori). They have expelled their gods, death ancestors soul and evil spirits from the house and sent it away to imaginary places where they are no longer need a physical concretized space but they are always available in need.

403
Thus, it can be said that the cultural ideology of the Toba relatively unchanged but slightly transform as manifested in their religion that increasingly richer due to the contact with Christian. However slight the transformation of the religion is, its effect on the architectural style is drastic.

As a result of exchanges with Christian and urban society, employment preferences have also transformed from rice grower into a more dignified jobs such as government employer and entrepreneur, these preferences are always in line with their cultural mission. The job application has affected the selection of the settlements and type of the house.

Consequently, the tripartite kinship relationship (*Dalihan natolu*) that usually occupied the traditional house can not be maintained any longer since there is no communal job as growing the rice that required this sort of kinship, however it doesn’t necessarily weaken the kinship ties, which on the contrary growing strong. In other words, the communal traditional house has been splitting into a number of urban houses with the similar strong kinship ties among the dwellers; again, it disperses the function of the house. Since the house, is no longer entering and utilizing by the member of ethnic group who applied the same cultural values, the psychological boundary as interior division that performed in traditional house is no longer effective and has been replaced by the concrete material.

Since the urban houses have dispersed in units, so they are no longer can effectively be fenced and landscaped communally as was traditional village. Moreover, the sort of danger and harm that should be kept out has also transformed from the hostiles neighbor settlements into the thieves and burglaries in the urban area, consequently, type of fences and landscape offered by the other culture has been adopted and applied in keeping with their own cultural need.

In can be sum up, that through the cultural exchanges, Toba has selected the items that can be utilized to transform their cultural strategies, in order to meet their cultural needs and cultural ideologies.
CHAPTER SEVEN
CONCLUDING REMARK
CHAPTER SEVEN
CONCLUDING REMARKS AND RECOMMENDATION

Table of content:

Introduction ........................................................................................................ 405
7.0 Synthesis of the Research Findings................................................................. 406
  7.0.1 Architecture Transformation of Cultural Change .................................... 406
    7.0.1.1 Transformation Through
        External Exchanges (Diffusion) ......................................................... 406
    7.0.1.2 Transformation Through the Growth
        from Inside (Evolution) .................................................................... 407
    7.0.1.3 The Transformation as a Result of Interaction
        of Diffusion and Evolution ................................................................ 407
  7.0.2 The Protean Cultural Strategy ................................................................. 408
  7.0.3 Architectural Styles as Cultural Strategy ................................................. 408

7.1 Critical Issues Regarding Architectural Transformation .......................... 409
  7.1.1. Architectural Transformation is a Continuing Process ......................... 409
  7.1.2. The Drastic Transformation into New Form Create Tension ................ 409
  7.1.3. Unpredictable Direction of Transformation ......................................... 411
  7.1.4. Architect Versus Spontaneous House ................................................. 411

7.2. Consideration of a New Framework ........................................................... 412
  7.2.1. New Approach ................................................................................. 413
  7.2.2. The Diversity in Design for Different Ethnic Groups ........................... 413

7.3 Framework for Understanding the Cultural Needs of the Dwellers ........... 413
  7.3.1. Determining the Cultural Needs ....................................................... 414
  7.3.2. Cultural Based Architectural Styles .................................................. 415

7.4. Recommendation ......................................................................................... 416
  7.4.1. Recommendation for User .................................................................. 416
    7.4.1.1. Socio-Cultural Aspects ................................................................. 416
      a) The Cultural Based Architectural Styles ........................................... 416
      b) Compartmentalized Spaces ............................................................... 417
      c) The Compromise of Contradictory Needs ........................................... 417
    7.4.1.2. Economic and Financial ............................................................... 417
    7.4.1.3. Physical Aspects ........................................................................ 418
      a) Building Materials ............................................................................ 418
      b) Building Types ................................................................................. 418
      c) Detached House .............................................................................. 419
      d) The Role of Religious Building ......................................................... 419
  7.4.2. Recommendation for Providers ............................................................... 419
    7.4.2.1. Socio-Cultural Aspects ................................................................. 420
      a) Space Allocations ............................................................................. 420
      b) Anticipation of the Infinite Types of Transformation ........................ 420
    7.4.2.2. Financial Aspects and House related Spending of the Dwellers .... 420
a) User Participation .................................................. 420
b) The Role of Provider ............................................. 421

7.4.2.3. The Physical Aspects .................................... 421
   a) The Clear Guides to cater for Transformation ............ 421
   b) The Public Space ............................................. 422

7.4.3. Recommendation for Policy Maker ......................... 422

7.4.3.1. Policy and Socio-Cultural ............................... 423
   a) Institutional Framework ...................................... 423
   b) The Planning Guide Should be
       Continuously Revised ....................................... 423
   c) The Multi Cultures ........................................... 423

7.4.3.2. Financial Aspects ......................................... 424
   a) To Promote the Spontaneous Houses ......................... 424
   b) The Flexible Building Standards ........................... 424

7.4.3.3. Physical Aspects ........................................ 425
   a) Encouragement Rather than Limitation .................... 425
   b) Building Materials .......................................... 426

7.5. Areas for Further Research .................................. 426
CHAPTER SEVEN

CONCLUDING REMARKS AND RECOMMENDATION

Introduction

From the previous discussion, we can summarize that changes and transformations are continuous and unavoidable process, however, it is difficult to find the total cultural changes where the old practices or cultural traits entirely disappear, instead they have transformed into a new protean hybrid cultural forms where some of the old practices is obviously present. Hence, this chapter will summarize the research findings and propounding recommendations for the actors, which involve in design of the human settlements.

The study cases have also revealed that cultural transformation is directly reflected in architectural style of the houses, in this context, the ethnic of Batak Toba is put as a specific focus of the issue of cultural change in relation to architectural transformation. Architectural forms and their transformation as cultural strategies in fulfillments of cultural needs are elaborated in this framework. It have been discussed why the cultural needs, images, values, priorities have transformed toward specific direction, during this specific range of period.

In line with that perspective, the settlements of the Batak Toba in two different places and period have been analyzed in a diachronic and synchronic presentation. The architectural transformation also creates the critical issues in various forms of tension among the actors in fitting themselves into the man-made environment. From here, the recommendations also help to settle these disputes.

The implication of architectural transformation to the policy makers as well as end user and provider are also extended for future involvement in the process of future building. To complement this study further research is highly required.
7.0 Synthesis of the Research Findings

7.0.1 Architecture Transformation in the Context of Cultural Change

Transformation of Culture is an unavoidable continuous process, which is caused by some cumulative changes through the working of some factors within a given pattern of culture, lead to a dynamic conflict between what people where and what they intent to be, that should be settled down by adaptation, however its origin and mechanism must be sought in a wider context of integrated cultural exchanges which consist of internal (evolution) and external (diffusion) cultural exchanges. Therefore, cultural changes are convincingly ascribed to accumulation or sudden intrusion (diffusion) and to voluntarily innate evolution through the exchanges of cultural elements.

The unlimited variant of types and theories of change are mainly determined by the intensity of the working factors in the exchange of the cultural traits and it will always be possible and legitimate to select some processes and trend which are peculiar amenable to analysis and illuminate the process of change by either endogenous, exogenous approach or both of these approaches. The focus of argument in the study has concerned with the role of architectural transformation as a cultural strategy in the context of cultural change in order to maintain the cultural integration. In this strategy, the recipient has voluntarily selected and disposed the architectural traits of others in order to enhance their culture rather than intimidated by the donor cultures. The recipients, through cultural exchanges only accept the other architectural traits from the donor if those traits are having roots and compatible with their own culture. Those architecture styles through cultural exchanges are synthesized into the new hybrid form that different with either previous recipient culture or the donor culture. The hybrid architecture forms can only be reconstructed through synchronic and diachronic comparison as were implemented in the study.

7.0.1.1 Transformation Through External Exchanges (Diffusion)

Diffusion is a term as migration of elements or traits from donor culture to another recipient. The study has revealed that the process of diffusion is not one of
indiscriminate give and accidental take but it is directed and defined by mechanism of exchange such as forces and pressures on the side of donor culture and well determine resistance and acceptances on the part of recipients in the form of dynamic dialectic process until the consensus and compromises are obtained. The impact of donor culture, its interest, influences and active agencies are not mere fusion or mixing, but something oriented on different lines with definite purposes of the recipient. Thus, they are not quite integrated with each other, and which therefore don’t act in any simple manner. The resistance and acceptance of the recipient of the recipient culture indicated the crucial role of the active selection by individual or group of recipient, which are elaborated by tendencies of innate growth from inside (evolution).

7.0.1.2 The Transformation Through the Growth from Inside (Evolution)

The basic aim of evolutionism is to comprehend the processes of cultural change, which will show both the orderliness of change and the innate tendency of every order to undergo change, by making serious attempts to explain the causes and mechanisms of changes, in addition to classify the forms of changes, which takes at different periods of time. The study has revealed that, the direction of change is dictated by ideology that embedded in the worldview, which reflected in ideal interest of the society and selected strategy to achieve the cultural mission.

7.0.1.3 The Transformation as a Result of Interaction of Diffusion and Evolution

The study has also revealed the complementary and interdependent of innate tendency and the impact of external cultural exchange, and summarized that both are always involved simultaneously in the process of cultural change. Although some cumulative changes can be traced to the working of factors within a given pattern or unit, there remain some broad changes whose origin and development must be sought in a wider context of relationships between that unit and its external partners. Where changes cannot be convincingly ascribed to either accumulation or sudden intrusion, or to voluntarily internal innate tendency, there is a prima facie case for deriving them from the linkages and mutually inter-influencing relation of a given unit with others.

The argument here has concerned the importance in the historical record, not only of a sudden cataclysmic intrusion, but a broader and more lasting interaction.
between pattern and units, which form the essential setting for analysis of human responses and innovations in the light of unique value commitments and ideals. It is in this dialogue between, on the one hand, the ever changing environmental context and the network of inter-unit relations, and, on the other, creative human innate tendency and initiatives, that much significant changes, its origin, mechanism and forms can be located and understood. Therefore, this study applied an approach that regarded the cultural change is a process where interaction among the units in the broader context is likely to happen beside the innate tendency to undergo the change, hence, diffusion and evolution were work together.

### 7.0.2 The Protean Cultural strategy

The cultural needs in keeping with the cultural mission and cultural ideology is difficult to fulfill in the changing environment unless by the protean nature of cultural strategy as reflected in the architectural preferences.

### 7.0.3 Architectural Styles as Cultural Strategy

The change of Toba culture has been triggered by the intrusion of Christian religion, which have been accepted by the recipient. The religion has the crucial role in ethnic identity expression among the Tobas, where the moral of religion and ethnic status are integrated in the form of isomorphic. Religious associations either animism or monotheism Christian are used to express ethnic identity and further to support ethnic existence. Hence, ethnic identity is always reflected in either formal or informal communities, interrelationship of social activities. The most important function of ethnic association is to provide a forum for secular activities in the context of ethnic identity expression, particularly those traditional activities, which cannot be accepted by the new religious association. The secular and religious association is used together to support the ethnic identity. The architectural style has transformed along the cultural transformation. The Toba culture has split into various institution and association due to the transformation of cultural strategy that accommodated in the new architectural objects namely Church buildings, individual house, network of individual houses and ornamented graves.
7.1 Critical Issues regarding Architectural Transformation

7.1.1 Architectural Transformation is a Continuing Process

The history of architecture has shown that architecture has undergone an unavoidable transformation; there is no total stagnation in any man made-form. However, this fact is rarely noticed by the actors of building even by the user let alone the architect who is very often intend to build an eternal monument of his own ego. This fact is contradictory with the intention of the man to create the eternality; hence, they pitifully attempt to conserve the buildings. This fact described by Paul Rudolph in a very simple word.

One characteristic of the 20th century is that nothing is ever completed and nothing is ever fixed. We don't think of things as being complete within themselves. A building can only be thought of in relationship to a changing setting, and at point of time. Therefore, the designs suggest the past and the future, so the whole idea of uncompleted building, which is going to be expanded in unknown ways, is an obsession. I have now long enough to know that buildings get torn down, they get burned, they get added on to, their uses get changed etc., so for me the temple in the park, or aligning a great avenue organized around axis, is meaningless (Paul Rudolph in Clotz and Cook: 1973)

The Asian traditional architecture such as Japanese anticipated this situation in a different way, which bridge the past with the present by less fixed to material things but philosophical thing. This concept clearly represented by the Ise shrine that originally built in the seventh century but is continually rebuilt every twenty years but claimed it is still the same building. It is one thousand years of history and at the same time it always new since in Japan the preservation of form and process supersedes the preservation of material and structure itself and therefore the rebuilt of the shrine can always be seen to be the original.

7.1.2 The Drastic Transformation into a New Form create the Tension

Previously, it is widely believed that only by learning history could people understand the present and hope to foresee what life would be like in the future. These believes based on assumption that the past was knowable, the future is certain, the change is gradual and cyclical, and that human nature is more or less the same in all
times and places. Hence, the past is a useful learning since it significantly determines the present and the future.

In fact, according to the line of reasoning as put forward by the relativist, the past in general have become increasingly gloomy, the consequences are growing uncertain, what remains is partial accounts of it, which is based on the vague memories and fragments of former times, thus, the reconstructed of a distance past as a substitute for that lost realm is anything but fixed and solid.

However, attachment to the past is in any case inescapable, because there is no human being is exempted from countless forms of dependence on the past. It is an essential component of the human condition, who, has no choice but to concern with the past, for it has been built into the physical and psychological characteristic. The survival and existence of mankind are based on the faculty of memory instead of amnesia, without them, the human could neither learn nor long endure in any environment. Habit enables them to perform action previously learned without having to think; memory enables human to recognize familiar features, to negotiate familiar route and to cast back the previous experience in order to assess the outcomes of actions.

The significant influence of recollection and repetition in everyday life stresses the need for environmental continuities. Habit and memory can be effective and efficient only if the world around is stable enough so that everybody can readily recognize and act on our environs in a way that will yield expectable results. Hence, we utterly rely on the familiarity of our surroundings.

*Neophobia, the fear of the new objects that is a common response mechanism in the animal kingdom can be identified in humans. In this instance, animal habitat can be replaced as village, town or city or architectural objects. Familiarity with surrounding brings about a sense of relative security (Murphy: 1993).*

When a new building is erected in the surrounding that impinges upon and challenges, this experiential pattern then could be a negative response to the intrusive element is often apparent. This particularly true if that new architectural object is transformed in contrast vigorously and drastically to the existing environmental grains of the surroundings in terms of style, function, scale, and visual treatment. The discontentment is frequently borne out of insecurity caused initially by the shock of the new object that may manifest itself as a fear or dread if the discomfort either physically, psychologically, or both are continued.
7.1.3 Unpredictable Direction of Transformation

As was mentioned previously, although the unavoidable continuous transformation is recognized and the past was knowable but the future no longer can be forecasted. Nowadays, architectural of new styles are even more rapidly designed to replace things that look and function quite differently.

The rapid high technology of communication in this information age has spread the new alien architectural forms into remote countries; to be exchanged with the local wisdom and by hybridization process, creates another exhaustive new forms. However, as was revealed in research finding, that permutation of those new forms always retains the previous architectural values. The concealed previous architectural value in those new hybrid forms cannot be specified, unless through the intensive research. One of the best ways to anticipate those exhaustive exchanges probably is through flexibility of new forms, although the flexibility sometimes could also mean uncertainties, the other ways is through consensus, compromised, hybrid and symbiosis form of architectural forms.

7.1.4 Architect versus Spontaneous House

Architects are the prominent actors in introducing these new forms, who endlessly create, synthesize and hybridize the architecture styles. They dedicate strange new forms to the newly rich patronages that seek the new forms just for being different in order to proclaim to the world of their new status symbol. Architects through their education are the first informed about the progress of architectural styles in parts of the developed world. However, those architects, in amnesias mental condition for not being properly taught about their own cultural values, who have indiscriminately copied those strange forms and implemented the alien concept as pure as possible.

On the contrary, the commoners stick to the natural and gradual transformation. They refuse to be victimized by the amnesias architects and build their own houses in their own styles. They have put the architect to create buildings as reference to enrich their own hybrid architectural style rather than indiscriminately copy those strange styles. This is the hopeless situation for the mentally westernized architects who stubbornly insist to perform the alien design standard and concept obtained through their education in the westernized curriculum university. The gap
between architects and commoners need to be filled in order to focus the limited resources into the intended direction agreed by the entire society.

7.2 Consideration of a New Framework

The previous discussions have substantially focused on the understanding of architectural transformation in the context of cultural change as accomplishment of cultural needs. However, the assessments of that transformation are inadequate. This section will address these inadequacies in order to be incorporated into the framework that will be discussed. The discussions here take into consideration the Medan context particularly in formation process of architectural style either in the spontaneous or planned settlements.

7.2.1 The New Approach

The system of house provision is very strict as reflected in formal building and planning regarding the population density, plot size, building density, set back zoning allocation and architectural forms are in general subservient to political and economic scenario put forward by the local and central authority. Although the planning concept is often derived from English garden city but it is no longer stressed on the social community, which is based on cooperation but capitalistic economy. This approach has neglected the cultural needs of the inhabitant and possibilities of transformation. A planning policy unlikely effective and success to achieve its main objectives unless support by the population to whom the planning is provided for. This support cannot be expected unless they are culturally benefited and those planning policies conform to the user needs.

Consequently, the inhabitant has neglected the existing planning regulation and organically has developed and transformed their own strategy in attempt to make an adaptation to the urban challenges. Therefore, since in any situation people are the best determinant of their own satisfaction, so an approach that allows peoples to devise the architectural style of their own house and configuration of their settlement might eliminate the drawbacks and insufficiencies of current design paradigms. The framework for anticipating the transformation in built environment to be formulated in
this study should therefore take into consideration, which is particularly regarded to the culture and cultural needs of the people that change continuously. Therefore, the design paradigm should be flexible and have the continuous intensive dialogues with the user in keeping with those continual architecture transformations.

7.2.2 A Diversity in Design for Different Ethnic Group

The current arguments for uniformity inherent in building, planning standard and in design of finished houses are mainly based on the false outlook that the entire ethnic and cultural groups have the similar responses to a design paradigm. In fact, as shown on chapter five and six, each ethnic group has the different responses to similar stimulants and consequently, has the different cultural preferences. There were evidences that standard design proposed by the authority were inappropriate. It is obvious that equal standards are not realistic when the dweller cultural needs are different. Thus the framework being formulated should be able to cater for the unequal requirement of different economic and socio-culture values and needs.

Therefore, the new framework needs to concentrate on an approach that focuses on the similarities that owned by the entire ethnic groups and at the same time to accommodate their differences. As a result, the approach should be more concerned with facilitating and encouraging the needs of the dweller rather than enforcing the strict common limitation and neglect the obvious differences.

7.3 Understanding the Cultural Needs of the Dwellers

From the beginning of this study, it was stated that the main objective of the study was to formulate a framework to analyze the transformation, change, and adaptation of spatial configuration through time with special reference to architectural style. In order to establish an understanding of user cultural needs and to make recommendations for future dynamic architecture forms that based on local culture and free of alien cultural hegemony, therefore, the conflict, tension and dualism in architectural trait can be avoided.

However, the study findings have shown that the exchange between local culture and alien culture is unavoidable as long as there is a cultural contact that leads to
the cultural exchange. Moreover, it is found that donors cultures are not necessary will influence the recipient culture; unless the cultural trait belong to the donor culture is accepted by the recipient. This is contradictory with what widely postulated by the anthropology scholars.

Thus, this section essentially discusses the finding of the study out of which guidelines for analyzing and understanding the architecture transformation underlying by the cultural needs of the user. These guidelines are what is referred to as a "framework" in this study. As was stated previously, the current framework has been insufficient. Therefore, a new framework to alleviate the shortcomings in the present framework is important.

7.3.1 Determining the Cultural Needs

Until the moment, there is no study carried out to determine the user cultural needs and architectural style of the house despite the fact that the requirements for such research are very crucial. The method is appropriate for the study area and its surrounding is a chance for user participation in policymaking, planning, design, implementation, project management and maintenance of their built environment. The common people in spontaneous housing as already discussed in this study have applied this method.

On the contrary, the user never involves in the public housing that lead to rejection of the product. The authority and financial creditor see the process of collecting data of cultural needs of the user as waste of time and funds, while; whatever the product is always taken and paid by the customer.

The fulfillment cultural needs through the users participation as performed in spontaneous housing has many advantages, namely, involving a limited number of people, the users directly express their cultural needs that reduce the possibilities of bias and mismatch, accommodating the diversity of individual cultural needs, that can be adapted to financial affordability of the user and requiring a short period of time to put data into the significant useful comprehensive information.

Hence, the results are always sharp, direct, easy to apply and straight forward, since the information are given by the users as a direct input into the formation of their dwellings. However, the method also has drawbacks, the poor dwellers have difficulties in obtaining the financial support. The financial sponsors require a considerable
guaranty through intervention into the building process that would spoil the autonomy and spontaneity of the architectural formation. Furthermore, the dwellers have difficulties in organizing the complicated technical tasks such as provision of large infrastructure, roads, sewerage system, electricity and clean water system that required the large organization in urban area. These tasks are usually involving a larger organization scale than any organization, which is found in the ethnic settlement or traditional settlements. Consequently, the interference of the local government is highly required but it should be in harmony with the authority that is asked by the dwellers.

7.3.2 Cultural Based Architectural Styles

Findings from the case studies showed that the dwellers had different cultural preferences on architectural styles. Hence, there would be a requirement for substantial input from the dwellers that in most cases are the head of the households. These inputs and role of the dwellers are neglected in the public housing projects, where the already made planning and design decision do not provide the sufficient flexibility for physical changes to cater for the cultural needs, which should be made by the dwellers. The propose framework therefore calls for a possibility of the dwellers being given greater chance of participation in the entire phases of building process in creating the architecture styles of their houses. There are three spatial levels of built environment, in which the user should be involved, which are, dwelling units, the clusters of settlement and the city levels. The active role of local government is required to integrate the various different needs of ethic groups and class segregation that are very often in conflict. The dwellers participation on the city level is the most complicated because of the numbers of user involved and the differences cultural needs and background. For the effective user involvement in the city level, therefore, the people should be divided into a smaller planning unit based on their cultural background and preferences without being exclusive. However, the main problem will be faced is retained, which is the insufficient of funds and professional staff that require to give the technical support and working together with the group. Unless which, the effective participation of the inhabitant in the city forming especially in the planning and design stages unlikely can be understood. Thus, the professional will have to work closely with them, the interrelationship of the activities will have to be documented and carried out by the
professional designer with a direct input from the user, to whom the environment is meant for. The city planner will use the mutual understanding among the segregated groups and policy makers as guidance to shape the city.

7.4 Recommendation

7.4.1 Recommendation for User

The cultural preferences of the user, to a certain extend, have to be confined on the wider context and the higher level of the city, otherwise, it can be too aggressive and causes the rest of the inhabitant uncomfortable. This is mainly because each ethnic group has a different cultural mission that antagonistic each other.

On the one hand, the unsociable environment is likely to be formed, unless the dwellers could perform the proper cultural exchanges and reconciled their different cultural needs. On the other hand, these various cultural needs also have to encourage the ultimate stages to make them physically and mentally comfortable which will difficult to achieve unless in a sociable environment. Therefore, the users should recognize the level and limitation of the possible participation, which could be attended by each individual and ethnic group in the larger stratum of society.

7.4.1.2 Socio-cultural Aspects

a) The Cultural Based Architectural Style

In attempt to apply the proper and effective cultural strategy, the dwellers very often unintentionally adopt the incompatible architectural element with one particular aspect of their culture, thus create the unnecessary tension in their daily use. The ubiquitous example is adoption of a copy of the compartmentalized luxurious house in order to give the superficial impression of the high social status of the occupant, in fact the loose arranged spaces is also required, which is both underlain by the same cultural missions and ideology.

Therefore, it is suggest that the architecture style should be based more on the dweller’s own culture in compromised and hybrid architectural forms rather than un-
discriminately adopted alien architectural style in its purest form as the new cultural strategy.

b) Compartmentalized Spaces

The integrated cultural exchanges have transformed the life style of the dwellers into the hybrid form, which has affected the utilization of spaces. On the one hand, there is a requirement for large spaces to accommodate the large number of people particularly during the death, marriages and religious ritual as required by the culture. On the other hand, they require the private compartmentalized smaller spaces for routine daily activities in accord with modern life. The requirement for modern compartmentalized spaces, whereas cultural needs for open and highly flexible spaces can only be provided in the forms of flexible arrangement of spaces by applying the removable or foldable wall to cater for the hybrid form of life style.

c) The Compromise of Contradictory Needs

As frequently mentioned, the cultural needs of the dweller do not always in keeping with the needs of the wider society that create the unpleasant situation, this is particularly obvious when dealing with religious ritual where the large congregation of ethnic group members are involved. In order to prevent the unpleasant and unsociable situation the alternative places should be considered to accommodate unsociable activities.

7.4.1.2 Economic and Financial

It has been recognized, that the different cultural needs of various ethnic groups and class segregation tend to conflict at the higher city level. This conflict unlikely can be settled unless interfered by the authority in the appropriate forms of building regulation, building codes and land use policy. On the contrary, this interference will cause the social and financial cost that should be paid by the city dwellers regardless what their cultural needs are. The interferences are led to consensus among the contradictory cultural needs. The consensus very often can only be achieved by sacrificed some of their cultural needs, which can also transform into financial cost.
Another types of cost that should be paid by the city dwellers as a compensation for freedom to express their cultural needs are tax and levy.

7.4.1.3 Physical aspects

a) Building Materials

The building materials play an important role in determining the architectural style of the house. In this study, it was demonstrated that dwellers prefer building materials which were implemented in exclusive houses in attempt to make the building look modern, stronger, expensive and luxurious, thus impress the viewer about the high status of the dweller.

However, this type of high cost building materials rarely can be implemented in low-cost public sponsor housing where the trade off between spaces and building materials are always required. It is therefore the contention of this study that the choice of building materials should be left to the user who can make the trade off between the cultural needs and existing constrain in the environment.

And furthermore, to encourage the user to use the available and high quality materials, instead of applying the improper expensive imported building materials, which is superficial modern.

b) Building Types

The case studies show that preferences of building typologies are varied, however the majority of the dwellers prefer the conventional detached house, on ground, wide glass window, oriented to the main roads, modern ornamentation, provided with terraces, the width of façade ranges from 6.00 to 14.00 meters, surrounded by the garden and fenced. These building types are obviously underlain by the traditional concept, which has developed into a sort of new urban tradition (see the explanation about conventional and urban tradition house style in section 6.3.9 on chapter six).

However, these current preferences could be transformed into another newer hybrid architectural style in the future, based on the premises that the architectural
styles is a cultural strategy that continuously in the changing state, which can only be anticipated and channeled through the intensive dialog and considerable participation of the dweller that is crucial in shaping the cultural habitable built environment.

a) Detached House

The cultural preference of the dweller for detached house of considerable distance with the neighbors, which is more likely the continuation of the past traditional concept of the house, it cannot be fulfilled frequently in the urban area where the land is limited. Therefore, it is required to adopt the alternative cultural strategy and transform this architectural style preference into semi-detached house or two-story house of sufficient distance between houses.

d) The Role of the Religious Buildings

The church is not limited only for the Christian ritual but also for cultural ritual or synthesis activities of Christian and Animism religion. More important, the church has derived from traditional house. The traditional house has split and transformed into various spaces notably the church, grave, house and houses, which are interrelated in the network and bounded by the tripartite kinship ties.

Furthermore, the Church also functions as a center of the urban settlement as the extension of the hometown mother village. Therefore, the activities accommodated by the church are numerous and seem unlimited.

This specific role required the unique location and should be prevented for not to become the stronghold as was the home-villages in traditional sense and not to spoil the entire neighborhood.

7.4.2 Recommendation for Provider

The house providers are the institutions that produce the houses on profit basis; they can be either private developers or states companies. These institutions are usually implements the modern functional organization of highly efficiency with profit as the main aim.

In fact, it is unusually benefited from the public subsidy that should have been
provided for the user. They produce the finished houses and get the cash payment from the bank, while the user pays it by installments to the bank. The faster and cheaper they build the greater the profit they achieved.

The user needs can hardly be met, let alone to understand and it takes into account since it consumes time and money.

As a result, the great numbers of these finished houses had been renovated and adapted to the user cultural needs.

7.4.2.1 Socio-cultural Aspects

a) Spaces Allocation

The provider of the finished houses either private developer or government institution always implemented the normative measurement and standard in houses as seen in chapter 5. This scheme has created inefficiencies, diseconomies and social and psychological tension among the users, due to its failure to accomplish the cultural needs of the dwellers. Therefore, it recommends that spaces allocation should conform to the measurement, which is based on the culture of the dwellers rather than using the normative and statutory standard although it is always easier and straightforward.

b) Anticipation of the Infinite Types of Transformation

Similar to the nature of cultural continuous change, the form and direction of architectural transformation cannot be precisely predicted. However, the transformation rarely eliminated the entire previous styles. So it would be advantageous to base the new plan on the predominant structure of the widely known styles of spontaneous housing but at the same time provide the chances and spaces for new elements as an infinite effect of the future architectural transformation.

7.4.2.2 Financial Aspects and House-related Spending of the Dwellers

a) User Participation

The research finding has shown that the finished houses have also eliminated
the chance of the users to participate in the building process. The absence of this participation has caused their cultural need cannot be accomplished; consequently they have to tear down parts or the entire building and renovate or build a new one. This process has consumed a lot of money and increases the housing related spending of the dwellers. However, some of the dwellers of lower affordability highly depend on the installment payment, which is offered by the funding agency despite of its high interest rate. Therefore, the dwellers prefer to build spontaneous houses where they fully participate in every phases of building process.

Based on that, it is advised to give the greater chance for the users to participate in building process and get the direct loan, hence, their spending on housing can be significantly reduced.

b) The Roles of Provider

The provider is expected to supply building materials, which are required by spontaneous housing of the commoners, rather than to build the finished houses or determine the building materials that solely based on economic and technical consideration, therefore, the dwellers have opportunities to chose the suitable materials to their cultural needs. As a result, the changes of building materials as frequently happen, which consume the considerable funds, can be avoided. The provider is suggested to collaborate and proportionally share the task with the dwellers in a mutual cooperation in order to find the considerable building cost.

7.4.2.3 The Physical Aspects

a) The clear Guides to cater for Transformation

The clear guides of flexibility to facilitate the future un-avoidable but unpredictable transformation is highly required. The flexibility can be expressed either physically through the architectural designs such as floor plan, roof plan, building height and structure, or can be obtained through “built and infill” system where the provides supply the frame of the main structure and the dweller filling in the building components as suggested by Habraken (1982) in accord with their cultural needs.
In other words, every part of the building is opened for the dwellers to arrange, in accord to their cultural needs.

b) Public Space

In the process of entering the public house, some of the cultural practices are inevitably dropped and the other should be traded off. However, the common cultural activities, which exist among different ethnic groups should take into consideration by providing the common space which would facilitate the development a sense of community among the different member of ethnic group. This common space will help to integrate the different cultural practices through the cultural exchanges lead to the consensus and compromised of the conflicting cultural elements.

7.4.3 Recommendation for Policy Maker

The local authority has a decisive crucial role in shaping the built environment particularly in providing the strict comprehensive planning and mobilization of huge resources that cannot be performed by individual user.

Nevertheless, in many cases, that comprehensive planning is not based on cultural requirement of the inhabitants; on the contrary, it is emphasized on political and economical arrangement. Consequently, the users only have the very limited chance in contributing and participating in any phases of design of their house and their city. This insignificant role is insufficient to express their cultural identity, as part of cultural needs that leads to disobediences. As a result, these planning arrangements often fail to guide the city development as was intended by the authority.

Therefore, it is recommended to insert the cultural aspect of the citizen into the current approach, which is mainly based on political and economical arrangement to form a comprehensive new approach.
7.4.3.1 Policy and Socio-cultural

a) Institutional Framework

The change of approach to allow the public participation is vital in fulfillment of dweller cultural needs. This full participation can only be maximized in democratic environment with the sufficient public participatory levels in every stratum of society, without being anarchy, in contrast with the current situation where much of decision making and planning is highly centralized. Therefore, the government policy, individual cultural needs and the requirement of society as a whole should be in harmony. The favorable guidance to create in the study case is not available now, whereas, the outburst of the spontaneous houses is harmonious condition conducted by the dwellers through the full participation, which is more because of the inability of the local government to create the favorable planning policy and its failure to provide the dwellers needs.

Therefore, the present institutional framework must be restructured to fit it into the proposed comprehensive building and planning standard that are advocated in this study. The current top-down planning approaches whereby all decision were made for people instead of with people have to reverse, in order to create the balance between society and individual needs.

b) The Planning Guides should be Continuously Revised

In order to keep up with the continuous transforming architectural styles, the planning guides and policies should also be kept revising to cater for the changing cultural strategy, particularly its detail rather than its main framework. Failure to anticipate this changing will lead to unnecessary tensions among the city dwellers. The effect of architecture transformation unlikely can be anticipated unless by the flexible planning guides.

c) The Multi Cultures

Local authority needs to focus on the various ethnic groups that represent the
sub-culture of different cultural needs, rather than treated the population as the similar abstract figures and regarded who only have the physical basic requirement that should be supplied as was frequently stated. The differences of cultural needs sometime are antagonistic and create the tension and disharmony among the dwellers. Thus, it is recommended to separate them in the form of difference-segregated settlements. However, these segregated settlements should have the appropriate common space to perform the intensive cultural exchanges in order to reduce the exclusiveness and alienations.

Furthermore, the culture of each sub ethnic groups should be enhanced by stimulate the cultural transformation through cultural exchanges. Therefore, each ethnic group can perform cultural activities in their own clusters and undergo the internal exchanges and the same time encourage the external cultural exchanges with other ethnic groups which can take place in the common spaces.

7.4.3.2 Financial Aspects

a) To Promote the Spontaneous Houses

The authority is advised to promote spontaneous houses rather than mass-producing finished houses. So, the instant costly renovation of the finished building by the dwellers that widely has taken place in government-sponsored housing project can be avoided. Therefore, the financial and technical support are directly given to the users instead of to developer the dwellers can build the houses, which is based on their cultural needs.

b) The Flexible Building Standards

The present statutory planning standard of building and planning in the settlements and in any housing projects are very rigid, normative, too detail and too technical. This standard is mainly based on financial and technical matter, consequently, the buildings produced that based on this statutory standard rarely compatible with the cultural needs of the dwellers lead to the renovation, transformation and entirely tearing down the finished building. However, the implementation of those statutory standards is mitigated in the spontaneous settlements than in the public housing projects. This is
partly due to the shortage of manpower and expertise of either the local government or financial sponsors, besides, the spontaneous housings are funded individually by the dwellers so there is no need to supervise the buildings since there is no funding that should be amortized back to the creditors. The numbers of the renovations obviously are much higher in the public support real estate projects, which is based on this statutory planning standard than in spontaneous settlements, however, the latter also underwent the transformation in line with the nature of cultural change.

Therefore, it is reasonable to recommend the more flexible and cultural based standard so the dwellers have greater chances to participate and to build the cost efficient buildings that conform to their cultural needs.

7.4.3.3 Physical Aspects

a) Encouragement rather than Limitation

Conforming to the above recommendations; the building and planning standards should be more encouraging rather than restricting. In line with this encouragement, the building and planning standard should be compatible with the culture and lifestyle of the inhabitant. The strict building codes and zoning regulation should be replaced with the flexible clear guides, alongside the provision of infrastructure required by specific activities, which is intended for particular location.

The strict regulations have suppressed down the cultural needs of the dwellers, consequently, the dwellers have to apply alternatives strategies or to transform the current strategy which confront back those strict policies lead to the stagnation of the entire planning arrangement.

This condition obviously described by the study case, where the local government has implemented the very strict building and planning regulation.

According to the local planning policy, the densities of the population in study case are 170 inhabitants per square hectare, while the building densities are 15-20 houses per hectare and each house has a building coverage of approximately 60.00%. The land is distributed into built area (55.00%), open spaces (25.00%) and access roads (15.00%) and infrastructure (5.00%).

In fact, the population densities are much higher than recommended, which are 381 persons per hectare; housing densities are 63 units per hectare, the building
coverage of the houses mainly (67.60 %) is 100.00 %, where nearly the entire site allocated for houses excepted about 10.00 % is left for access roads. Surprisingly, nearly the entire dwellers are satisfied of their house either physically or culturally and they don’t have the intention to move into other area. Whereas, the local government plan to carry out the urban renewal and replace the houses with the new houses conform to the recommended strict planning guides with additional low-cost apartment to squeeze the density in order to obtain the sufficient land as advised by the planning.

b) Building Materials

The findings of the study have demonstrated that dwellers preferred expensive building materials, which have been implemented in good luxurious houses in the exclusive neighborhood. The local authority is recommended to provide the wide range of cost, high quality materials and construction techniques for dwellers, so they have the wider choices and the greater chances to meet their needs.

7.5 Areas for Further Research

The recommendation in this study is very limited, but accord with the findings of the study, it has been suggested the importance of the concept of architectural transformation in the context of cultural needs accomplishment of the dwellers, while the findings have stimulated by no means exhaustive another investigation. Furthermore, the issues related to this subject can be broadened in order to improve and retest the theory and the study findings; consequently, there is a need to highlight the issues through intensive further research. Further research could focus on firstly, the study of other ethnic groups using the more developed techniques and methodology so that cultural needs can be specified and compared to the previous findings in order to retest the finding and expand the result. Secondly, to carry out further research to investigate the reason why the cultural ideology is more difficult to undergo the change than cultural mission and cultural strategy. The result of investigation will contribute to the previous findings and will highly useful to build the comprehensive knowledge about the subject.
Bibliography


dan 18: Melacak akar-akar Pembaharuan Islam di Indonesia. Bandung:
Mizan.


Illinois: The Dorsey Press.


and Oceanic. Auckland: Collins.

Wales: Academic Press.

……………….., (1985). A Hypothesis for Austronesian Origin. Asian Perspectives No 26:
107-117.

16 no. 12.

Bernard, H. R., (1994). Research Method in Anthropology, Qualitative and

Desa/Kelurahan Disetiap Kabupaten /Kotamadya.

Blust, R. A., (1976). Austronesian Culture History: Some Linguistic Inferences and
their Relation to the Archaeological Record. World Archaeology, No. 8, pp.19-
43.

……………….., (1980). Early Austronesian Social Organisation: The Evident of
22(2), pp.184-5.


...............(1974). Internecine Conflict in Tapanuli. RIMA 8 No: 2


Coon, C. S., (1965). *The Living Races of Man*.


Eickstedt, E. von., (1934), *Rassenkunde und Rassengeschichte der Menschheit*.


(Unpublished).


.................(1996). *Cities and Citizenship, Special Issue of Public Culture*. 8 (2)


**Pinto, F.,** (1539). *Aceh's Crusader Against the Batak,* In *Witnesses to Sumatera, A Traveler's Anthology.* Reid, A., (ed). Kuala Lumpur, Oxford


Sargeant, G. and Saleh, R., (1973). *Traditional Building of Indonesia, vol 1; Batak Toba; vol 2; Batak Karo; vol 3; Batak Simalungun / Mandailing*. Bandung: Regional Housing Center (REHOCE).


Surbakti, S., (1996). *Study on housing needs in Medan*. A seminar paper on Housing and settlement international workshop in Medan conducted by Local government.


................., (1958). *Batakse Buffelwichelerij*. BKI.


