THE HARMONIZATION BETWEEN INNOVATION AND CONSERVATION TOWARDS AMERICAN PRESBYTERIAN HERITAGE BUILDINGS IN CHIANG MAI, THAILAND

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Abstract. The American Presbyterian mission started their mission in Chiang Mai in 1867 by building many hospitals, schools and a university in their unique architecture that proclaims the grace of God to Chiang Mai and people of Lanna Kingdom (presently, northern Thailand). Many of these heritage buildings have been demolished and destroyed due to lack of historical concern, development and deterioration. Presently, heritage preservation is one of the big issues in Chiang Mai. The people who live in this city have realized the historical value of these buildings and initiated some preservation programs to maintain the remaining buildings with some innovative technology.

Therefore, when we build, let us think that we build forever. Let it not be for present delight, nor for present use alone; let it be such work as our descendants will thank us for, and let us think, as we lay stone, that a time is to come when those stones will be held sacred because our hands have touched them, and that men will say as they look upon the labor and wrought substance of them, “See! This our fathers did for us” For indeed, the greatest glory of a building is not in its stones, or in its gold. Its glory is in its age.

~John Ruskin

The future of the Presbyterian heritage buildings in Chiang Mai as the greatest glory from missionaries is in the accountability of the Foundation of the Church of Christ in Thailand (Council of Churches in Thailand) who inherited these buildings and especially the later generation of Christians in Chiang Mai. However, we should understand the history of the buildings ‘Root’, their development and present situation ‘Trunk’ and their future productivity ‘Fruit’ as they will promote the growth of Christianity in Chiang Mai and northern Thailand.

ROOT: THE PAST INITIATION
Since 1867, the American Presbyterian Missionary has started their work called “Mission Lao” in Chiang Mai, the capital of Lanna Kingdom, where presently known as northern Thailand. They established many schools, hospitals and churches in this city in order to proclaim the love of God to the people in Chiang Mai and Lanna as stated in the autobiography by the first Presbyterian Missionary in Lanna, Rev.Daniel McGilvary.

Presbyterian Christianity was brought in by the American Presbyterians as known by the name of the Christian Community. The first missionaries who arrived in Chiang Mai were Rev.Daniel McGilvary and his family on April 3, 1867 in the time of Phrachao Kawilorossuriyawong (1856-1869). Their purposes were to preach the gospel, establish schools and perform medical work.
When they first arrived, a permanent church hadn’t been established. The representative of the Chiang Mai ruler allowed them to stay at a public hall near the eastern gate of the city. The hall or sala was built by the Mueang Rahaeng officials as a Buddhist rite performing hall. It was strongly built with clay tiled roofs and strong teak flooring. The missionaries used it for their accommodation and being as a center for their teaching for over four years before establishing a permanent one which is the Chiang Mai First Presbyterian Church on Chiang Mai-Lamphun Road.

Rev. Daniel McGilvary told a joke about the feeling of the locals who saw them come to preach the gospel. They had white skinned women and children with them. We’ve got to have a look. The people’s favorite time was at our meals. They wanted to see how the foreigners ate and what they ate. We hardly had any free afternoons when we could eat our meals quietly without anyone coming to see us. The villagers would say the Farangs don’t eat on the floor and don’t use their hands to eat food like we do. That is what “we must see”. However, the gathering of the crowd of people was an advantage. It opened an opportunity for us to talk and spread the religion.

In 1868 Phrachao Kawilorot Suriyawong gave a piece of land on the east bank of the Ping to the missionaries for constructing the Chiang Mai First Presbyterian Church. The first church building was a bamboo building. In 1889-1891, it was replaced by a new one which was the first Western style architecture building in Chiang Mai designed and built by Dr. Marian Cheek.

The first phase of their missionary work was done along with modern medical healthcare. The significant diseases at the time were chronic malaria, goiter and small pox. The medical service gained them a good reputation and fame. It can be said that the religious work did not succeed as well as the medical services since the government did not support them as much. For example, on September 14, 1868, Phachao Kawilorot Suriyawong sentenced Nanchai and Noisuriya, two of the seven Thai Christians in Chiang Mai with the crime of …neglecting the national religion, so they have rebelled against me and deserved to be punished. This made the people afraid and did not want to change to Christianity. Until 1869 Praya Theworachun, an advisor of King Rama III announced a decree stating… one who desires to believe in one religion may do as they want… and in 1870 when Phrachao Kawilorot Suriyawong passed away, the people were free to change their religion to Christianity.

Besides the religious and medical work, the missionaries founded the Frennor School nearby. Mrs. Frannor Nor was the founder. She came to Chiang Mai at about the same time as Rev. Daniel McGilvery. The school accepted both boys and girls to be students. In 1923 when the school was closed the students were transferred to the Royal Consort’s School.

During WWII the church was used as a military camp and the church’s clock tower was modified to be an anti-aircraft gun turret.

In 1968 the new Chiang Mai First Presbyterian Church was built on Charoenrach road. It was considered very modern. Rev. Taylor Potter, the designer, won the prize from one of the Architectural Institutes in the USA.
On November 19, 1968 a farewell church ceremony and procession to the new location was held with the Prince Royal’s College Marching Band leading the parade following with reverends, pastors, church staff and church members marching to the new chapel.¹

Stepping back
As they started their mission, they also applied some western perspective for their mission and their living in Chiang Mai where the weather is hot and dry in summer (March-April) humid in the rainy season (May-October) and cold and dry in winter (November-February). One example of the knowledge they brought to Chiang Mai is “Buildings” and also their knowledge of landscaping. The integration between western knowledge and local wisdom creates many precious and wonderful buildings for this city. They brought the blue print and architects from aboard to discuss with the locals, negotiate for the best solutions and integrate the local materials and construction techniques for implemented buildings, which were the starting process of Presbyterian building in Chiang Mai.

Most of the buildings are built along the Kaewnawarat Road on the east side of the city. This area was the missionary site for the new schools and hospital where this land was a brake and considered as unusable. The American Presbyterian Missionaries viewed this wasteland as an opportunity; they bought the land piece by piece until it was large enough to be a new initiative for them. They first built the Chiang Mai First Presbyterian Church, then the girls’ school (Dara Academy), the boys’ school (The Prince Royal’s College), the hospital (McCormick Hospital), the rehabilitation center (McKean Rehabilitation Center), the international school (Chiang Mai International School), the nursing school (McCormick School of Nursing and Midwifery) and the theological seminary (McGilvary Theological Seminary). All these institutions presently exist and have some development, especially the nursing school and the seminary agreed to establish the first private university in Thailand, Payap University.

These buildings are considered to be the American colonial architecture or either farang (foreign) architecture from Thai’s perspective. However, these buildings also represented the local wisdom in it, where the result of these should be called the Lanna-contemporary colonial architecture.

TRUNK: THE PRESENT SECURITY

Most of the buildings were built from the end of 19th century to the early of 20th century, and reflected nationalistic architectural style, garden design, and interior design movement in the United States which sought to revive elements of colonial architecture. In the early 1890s Americans began to value their own heritage and architecture. This also came after the Centennial Exhibition of 1876 reawakened Americans to their colonial past. Colonial Revival sought to follow the American colonial architecture around the Revolutionary War period, usually being two stories in height with the ridge pole running parallel to the street, a symmetrical front facade with an accented doorway and evenly spaced windows on either side of it. In addition, the architectural style has the basic exterior, plan and generally one room deep. Common characteristics are a steep roof, and often have two stories. Structures were built
with locally available natural materials. Pegged post and beam construction were common in the area when available in wood. The colonial buildings are not concerned with the architectural style but later they have been gathering a style of buildings in that period to be more formal and symmetrical.²

The colonial architecture referral to the American Presbyterian in Chiang Mai reflected its definition. And these buildings are also no doubt considered as the “Historical and Landmark Building” of Chiang Mai city. In Thailand, regarding to the historic artifacts and antiques and the national museum act B.E.2540, historical buildings are “the buildings and properties that are by age or by nature of the construction or the evidence about the history of the property are valuable in the art. This also includes the historical or archaeological site that includes an archaeological source, historic sites and historical parks.” However, this should be considered by the Rector of the Department of Fine Arts for registration of the building and after the registration it shall be preserved under the government and legally protected. Normally, the registered buildings are the historical temples or palaces.

Furthermore, another adaptation for the missionaries comfort in the tropical weather was the “Rain tree”, because it adapts to any soil condition and can make the nearby area cooler. In order to live in Chiang Mai where occasionally the weather in summer is raised to more than 40 degree Celsius, the missionaries generally planted the rain tree besides their residence for cooling their house.

**Stand stilled**

What about the private-owned buildings? Are we able to do as what we preferred? The answer is “yes”. Therefore, if the American Presbyterian buildings in Chiang Mai are unexceptional, many buildings have been modified into the modernized architecture, adding some exterior and interior decoration recompense to the administrators appreciation with an ignorance of its deep historical value. Moreover, some were demolished with their consideration that the buildings were depreciated and unsafe to use.

Presently, 21 of the American Presbyterian buildings exist and serve as a usable and historical landmark as they use to be in various institutions as shown in **Table 1.**

**Table 1: The existing American Presbyterian heritage buildings in Chiang Mai**

<table>
<thead>
<tr>
<th>Building</th>
<th>Location</th>
<th>Original use</th>
<th>Present use</th>
<th>Architecture</th>
</tr>
</thead>
<tbody>
<tr>
<td>The old sanctuary of the First Presbyterian Church (1891)</td>
<td>CMC</td>
<td>Worship hall</td>
<td>Auditorium</td>
<td>Colonial</td>
</tr>
<tr>
<td>Harris house (1905, rebuilt 1993)</td>
<td>PRC</td>
<td>Residence</td>
<td>Museum</td>
<td>Colonial</td>
</tr>
<tr>
<td>Missionary house (1905)</td>
<td>PRC</td>
<td>Residence</td>
<td>Office</td>
<td>Colonial</td>
</tr>
<tr>
<td>Kennedy Hall (1912)</td>
<td>PRC</td>
<td>Dormitory</td>
<td>Office</td>
<td>Colonial</td>
</tr>
<tr>
<td>Neilson Hays (1916)</td>
<td>PRC</td>
<td>Medical</td>
<td>Classroom</td>
<td>Colonial</td>
</tr>
<tr>
<td>Building</td>
<td>School</td>
<td>Use</td>
<td>Architectural Style</td>
<td></td>
</tr>
<tr>
<td>----------------------------------------------</td>
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<tr>
<td>Powers Hall (1928)</td>
<td>PRC</td>
<td>Canteen</td>
<td>Library</td>
<td></td>
</tr>
<tr>
<td>Chapel (1929)</td>
<td>PRC</td>
<td>Chapel</td>
<td>Chapel</td>
<td></td>
</tr>
<tr>
<td>The '92 Auditorium (1929)</td>
<td>PRC</td>
<td>Auditorium</td>
<td>Auditorium</td>
<td></td>
</tr>
<tr>
<td>Butler Hall (1948)</td>
<td>PRC</td>
<td>Classroom</td>
<td>Auditorium</td>
<td></td>
</tr>
<tr>
<td>Harrs Hall (1948)</td>
<td>PRC</td>
<td>Classroom</td>
<td>Chapel</td>
<td></td>
</tr>
<tr>
<td>Administration (1905)</td>
<td>CMIS</td>
<td>Residence</td>
<td>Office</td>
<td></td>
</tr>
<tr>
<td>Dormitory (1921)</td>
<td>DRA</td>
<td>Mixed-use</td>
<td>Library</td>
<td></td>
</tr>
<tr>
<td>Green House (1921)</td>
<td>DRA</td>
<td>Residence</td>
<td>Museum</td>
<td></td>
</tr>
<tr>
<td>Lucy Niblock (1950)</td>
<td>DRA</td>
<td>Mixed-use</td>
<td>Office</td>
<td></td>
</tr>
<tr>
<td>A &amp; B (1920)</td>
<td>MCH</td>
<td>Wards</td>
<td>Office</td>
<td></td>
</tr>
<tr>
<td>Foreign (1921)</td>
<td>MCH</td>
<td>Wards</td>
<td>Rental</td>
<td></td>
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<tr>
<td>Na Chiangmai (1929)</td>
<td>MCH</td>
<td>Wards</td>
<td>Laboratory</td>
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<tr>
<td>Anusarn Sunthorn (1929)</td>
<td>MCH</td>
<td>Wards</td>
<td>Laboratory</td>
<td></td>
</tr>
<tr>
<td>Mary Stoner Village (1922)</td>
<td>MRC</td>
<td>Wards</td>
<td>Wards</td>
<td></td>
</tr>
<tr>
<td>Mission Hospital (1930)</td>
<td>Red cross</td>
<td>Wards</td>
<td>Office</td>
<td></td>
</tr>
<tr>
<td>Missionary House (1926)</td>
<td>PYU</td>
<td>Residence</td>
<td>Museum</td>
<td></td>
</tr>
</tbody>
</table>

(CMC: Chiang Mai Christian School, PRC: The Prince Royal’s College, CMIS: Chiang Mai International School, DRA: Dara Academy, MCH: McCormick Hospital, MRC: McKean Rehabilitation Center, PYU: Payap University)

The present conditions of these buildings are mostly good for their preservation, and highly encourages if this considerable as a major strategy to preserve as their institutional privileges.

Innovative preservation techniques are developed day by day for response to the need of buildings difference sites and characteristic conditions. As an innovation is the way to serve human being for their comfort and concern, therefore, preservation is a higher-grade of innovation repose to human appreciation in the building properties. This considered and realized makes innovation and preservation can step forward together as a companionship.

When starting a renovation of the historical buildings by using an innovation, the building owner considers some critical concerns and facing some critics in acquiring the new apparels to be harmonized with the characteristic of the building without refraining from the historical value. There are three types in the heritage building extension and development: matching, compatible, or contrasting; these belong to the owner on which types or alternatives they are going to select. However, in Chiang Mai, which is highly concerned about our rich culture and one of the top tourist destinations in Thailand, mostly, we selected to make our buildings to be matched and compatible instead of contrasting.

**FRUIT: THE FUTURE CREATIVITY**
The future of these historical buildings is reflected in the owner’s conscience, whether they want it to be, either conservative preserved or moving forward by ignoring the history. As some architects thought the architecture should have its own development, we should keep walking or stepping forward and do not look back and ignore preserving history. Most of the administrators in the institutions founded by American Presbyterian Mission are currently concerned on this issue. In Payap University’s perspective as the only higher education founded by the deep root of the McGilvray Theological Seminary, we considered to step to the future inspired by our history and philosophy and to serve God and the people in Thailand. We understand and accept the innovation, the necessity and the popularity in green building, however, the strategic point is how we can use an innovation as a guideline for building development without declining any historical value.

Therefore, There are four approaches of the general guideline for intervention of the buildings; preservation, restoration, reconstruction, and conservation. The definition of these four approaches are as follows.

1. **Preservation**: the maintenance of the buildings without alteration of the current condition. The preservation of the heritage buildings accept those changes but retain its historical integrity and the original apparels and features as much as possible. The only intervention is normally maintenance or special covered structure needed to protect the building structure.

2. **Restoration**: the process of returning a building into its condition at an original time period. However, when we start to restore the building, it means we ignore some time period and development of the building.

3. **Reconstruction**: it is the approach to rebuild the structure of the building; the historical material will exist minimally.

4. **Rehabilitation**: the most flexible intervention strategy. Rehabilitation preserves those portions or features that represent the historical and architectural value of the building while making a compatible use of the building. This approach involves the freedom to assign a new use to the heritage building. Generally, the changes are mostly interior, such as adding an air conditioner, electrical and information technology equipment and handicap accessibility features.

In addition ‘conservation’ program or research is needed, refers to the preservation of specific materials and management of heritage building. Conservation activities include examination, documentation, and preventive conservation for evaluation whether the construction techniques, its colors, materials, life style and the landscape to be as in the preferred past period.

**Innovative conservation**

As Steve Job the CEO of Apple said “Innovation distinguishes between a leader and a follower.” Therefore, as a former leader in education and health in Chiang Mai since the early 20th century, why don’t we play the leadership role again as being a best practice for Chiang
Mai community not only in building conservation but also as a user friendly building that responds to the need of its usage and is suitable for all ages. An innovation does not mean something to modernize, it is the way of bringing the new things into our everyday life where responding to personal specific needs. This is why this word came from its root Latin word ‘innovare’ (to renew or change).

As a leader in innovation conservation, the designer must have highly considered in an appropriate and reasonable innovation for solving present problems and protecting future problems. An innovative conservation can be studied from the missionary history as mentioned above and we can use it as an example of their flexibility with the local limitation and use limitation as a new opportunity for creating an innovation.

Design guideline for the American Presbyterian heritage buildings

In order to preserve the American Presbyterian heritage buildings in Chiang Mai, I suggested to have the design guideline for the institutions who are responsible for those building. Moreover, other facilities and should be add-on to the guideline by comprising in several areas referring to the various intervention approaches in the design diagram as shown in figure 2.

Figure1: Conservation project design diagram

1. Project studies: the project studies is needed in order to prepare budget and gather all requirements from the building owner (Institution administrator) on their attitudes and objectives of the project. These might help the designed team to work easier by knowing their intention before they start on the next process.

2. Designing team: the designing team might set into three groups; research, architecture, and interior design.
   1. Research: the research team will be an initial working team of the project. They have to research through the current condition and the history of the building from physical evidences (letters, photographs, and etc.) and human sources. The history will play a role as the ‘root’ of the building and with this point we will know and understand the building story from the beginning.
2. Architecture: after the research team did their work, the architecture team will be the next part on designing. Generally, the blue-print of the American Presbyterian Heritage buildings in Chiang Mai have either vanished or are not in a good condition, whether it was in a good condition their might cause some technical problem while all the buildings were designed in a British-unit but Thai’s worker are familiar with the SI unit. Moreover, engineering techniques are needed in this phase, for their knowledge in the innovation for conserving the building to be as an approach and also the suitable way to install the appropriate mechanical equipment. Best of all, the design team will come up with an innovation for problem solving of all the buildings issues.

3. Interior design: the interior design team will be the last team for designing and interior as the owner requires.

However, these 3 groups as a one ‘designing team’ must work in tandem because some requirement in each team always affected to others and they have to adjust some work for harmonizing.

3. Feasibility: the designing team will come up with possibilities, approaches, and innovations needed in the project for the building owner’s consideration and finalized the project.

Figure 2: Heritage buildings project development feasibility
4. Implementation: on the conservation project, it needs very high attention from the owner and the design team. The plan might change in every work step because the new ponderings appeared day by day and they have to justify the new process and innovation for the project regularly.

Case study: Mho Chao Fa Museum

The missionary house at the Payap University’s city campus was built in 1926 as a residence for the McCormick hospital director, Dr.Edwin C.Cort, and in 1929, Mahidol Adulyadej, Prince of Songkla, who is the father of the present King of Thailand, King Bhumibol Adulyadej, stayed at this house for 3 weeks when he returned home after graduating in medicine from Harvard University. Firstly, he was planning to return to Siriraj Hospital in Bangkok for internship. However, his princely status then became a problem as it was felt that he was too prestigious to be allowed an internship. Undeterred, Mahidol chose another hospital in a more egalitarian
environment, the missionary-run McCormick Hospital in Chiang Mai. He worked there, day and night, as a resident doctor. His patients fondly called him "Mho Chao Fa" (Doctor Prince).  

Payap University and affiliations: McCormick Hospital, Dara Academy and the Prince Royal’s College have agreed to renovate this house to be a museum for honoring Prince of Songkla and displaying the story about health ministry in Lanna. They also decide to raise and donate funds for supporting this project and assigning the Campus Planning Office of Payap University to be responsible for this project. After studying documents and the historical evidence, we have found many unnoticeable evidences in order to display the story. We decide to use the preservation approach for this house to strengthen it structure and preserve the exterior, while all the exhibition will be displayed in the nearby matching new building. We come up with the preservation and rehabilitation approach and implementing an innovation in the structural strengthening by articulate the brick, concrete, and wooden structure. The amount of the outdoor condensing units and the energy conservation practice as the conventional air conditioning system are solved by the Variable Refrigerant Flow (VRF) by its ability to reduce the number of the condensing units and also more than 30 percent energy consumption, best of all an environmental friendly with the new solution R410A. Moreover, we also solve the humidity problem by reducing the soil porosity with a chemical soil improvement substance. These represent only some examples of the present innovation; surely, in the future the wisdom of many innovations to support the high need of conservation and the understanding of the deep historical root will surely harmonize an innovation and conservation towards the American Presbyterian heritage buildings and many other invaluable historical buildings.

“For wisdom is a defense as money is a defense, but the excellence of knowledge is that wisdom gives life to those who have it.”

Ecclesiastes 7:12 (NKJV)

NOTES


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