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Folk Architecture in Northern Luzon: Rare and Surviving Examples of Fil-Hispanic Houses in the Philippines

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Abstract

This study examines the evolution of the folk architecture of the Itawit community in the Northern Philippines by analysing how carpentry practices have shaped the transformation of their traditional dwellings around the 1930s. Using comparative analysis on samples of heritage houses, including field observation, architectural documentation, historical review, interviews with elders, local carpenters, and shamans, this examines the transition from traditional Itawit construction practices toward a merger with external influences, often referred to as Arquitectura Mestiza – a combination of indigenous and foreign influences. Findings indicate that while traditional Itawit practices remain present, modern tools and materials have gradually altered façade architecture, structural forms, spatial organization, and building technology. The research concludes that carpentry has played a major role in the transition from purely indigenous Itawit houses to a more hybrid form, where traditional culture remains combined with modern practices, which should be continued to be recorded, recognized, and preserved.

Keywords: Itawit architecture; Carpentry culture; Indigenous construction; Cultural modifier; Arquitectura Mestiza

1. Introduction

Fil-Hispanic Architecture had a quite a long discussion especially in regions where scholars have their hometowns as their main sample to conduct their fieldwork. While it is true that indigenous and vernacular architecture needs to be identified, documented, and conserved, folk architecture (or the modernized hybrid form of houses) needs equal attention as a way to preserve evolutionary traces and influences in and of residential architecture that brough it into its modern and present form and of understanding that culture is dynamic and evolving even in houses from its indigenous version to the folk version (Gibson, 2012; Rapoport, 2005; Buchli, 2013; Republic Act 8371, 1997; Oliver, 2006; Ignacio & Alejandrino, 2005). Lessons from such architecture often lead to a more environmentally-conscious design in the age where sustainability is among the world's leading concern and goals towards better design (Mendoza, et al., 2022; Moscoso-García & Quesada-Molina, 2023; Afara et al., 2024; Aziz Amen & Ali, 2025; Nguyen, Ha, Rockwood, & Le, 2019; Martínez, Ma, & Pellegrini, 2022).

In the Philippines, this phenomenon Fil-Hispanic Architecture, is observable mostly on lowlands that were heavily colonized during the Spanish colonial period from the 1560s to the late 1800s, and traces of these influences were extended up to the early decades of the 20th century were houses have begun incorporating foreign decorations, elements, and even construction methods that can be attributed even to Chinese artisans to some of these houses, particularly in Manila, Ilocos, Cebu, and Cagayan, to name a few (Klassen, 2010; Perez, Encarnacion, Dacanay, Fortin, & Chua, 1989), although some of these fell into ruin and needs to be documented as part of the cultural heritage and shared history of the Philippines and Spain (Rodriguez, Abella, & Adame, 2022; Sales, 2013; Alvarez-Piñer, 2011; Luga, 2014). These houses, characterized by stone masonry walls in the ground level and an upper floor of heavy timber commonly called "Bahay na Bato" (stone house) and mistakenly labeled once as "Antillan houses" since it is inconclusive to categorize them as directly imported architecture, but rather the natural hybridization domestic architectural style with foreign elements like Indian, Chinese, Portuguese, Spanish, and the local indigenous Philippine style (Galvan, 1997; Lico, 2008; Luengo, 2017), hence the term eventually "Fil-Hispanic" (Filipino-Spanish) or "Arquitectura Mestiza", i.e. "Hybrid Architecture" (Javellana, et al., 1997; Galvan, 2024).

Spanish authors like Javier Galvan (1997) and Pedro Luengo (2017), have always posited the inseparable characteristics of Spanish colonial heritage in the Philippines, so much that local Filipino artisans began injecting their taste to religious buildings and ornamentations, e.g. churches, retablos, and even bells (Jose, 2025). One of the pioneering visual and scholarly work on Fil-Hispanic Architecture in residential buildings were written by the respected Filipino anthropologist

Fernando Nakpil Zialcita and Martin Tinio (1980), where they guide the readers into extant examples of domestic buildings built during the Spanish colonial period and well beyond the beginning of the American colonialism in the Philippines in the early decades of the 20th century, where their work center on ornamentation, spaces, and architecture that appeared in this phase. Perhaps, the most recent of the discussions on these types of Fil-Hispanic houses is the work of Morales (2013), Tettoni and Reyes (2013), and Luengo's (2017). While this article does not debate on the characteristics or Fil-Hispanic houses, this mainly presents and argues the appearance of this typology in the Northern Luzon, specifically Cagayan province.

This article will discuss observations of these instances in Fil-Hispanic style because of Spanish colonial influences found in houses, their make (carpentry technology), and its people. First, observably, such argument can be based on the existing domestic architecture in Ilocos region or the popular Vigan houses (Galvan, 2024). The UNESCO World Heritage (UNESCO, 2010) site of Vigan contributes to this article visually as has been observed also by architectural scholars through the years that characterized the Fil-Hispanic style unique to the Philippine archipelago as a whole: the presence of high-pitched roofs, use of local indigenous wood species for the carpentry, high ceilings, ornate interiors, passive cooling strategies for its large windows, use of outer shells for the window panes (albeit argued that this is Portuguese in origin (Luengo, 2017; Laxmilatha, 2015)), their tools, and terminologies that survived up to present. Secondly, unlike indigenous houses that heavily rely on lashes and wooden dowels, Fil-Hispanic houses saw a more modern fastening method: the introduction of metal fasteners in the form of iron nails and bolts. This necessitates modern tools for house building to be efficient by using drilling and hammering tools - both of which are mostly metals tools. It is notable that metal tools are later introduction aside from the traditional use of sharp metal tools as to cutting bamboo (e.g. "bunang" or machete) or felling and hewing trees (ax) (Lico, 2008). Iron tools were never used as fastening instruments before due to traditional blacksmithing prioritizing sharp iron tools for head-taking, farm tools, and as mentioned for gathering lumber and bamboos. Another factor contributing to the preservation of Fil-Hispanic Architecture would be intangible, that is, in terms of language. Spanish language has well survived up to the pre-World War II Philippines, where the well-off Filipinos still speak and write the language, and friars have been instrumental in influencing its usage as a lingua franca. In fact, even tombs during the 1930s bears Spanish inscriptions, rather than the newer Americanization of the Philippines by teaching its colony the English language. At present, Spanish is seeing its renaissance in the Philippine soil, being taught still in institutions in Manila, for example the University of Santo Tomas and the Instituto Cervantes de Manila. Strong academic study is still also pioneered in Spanish literature in the Philippines, not only during the Spanish colonial period mainly written by administrators and friars, but also native Filipinos with a taste and knack in writing important or even obscure Spanish literary works (Mojarro, 2018; 2020).

Background of the Study

This article will center along the communities on the western side of the Tuguegarao City, Cagayan, Northern Philippines due to their importance as these towns, Solana, Piat, and Tuao, is where indigenous Itawit are located (Tabao & Tablan, 2025). While early attempts were made by other scholars on the indigenous architecture and belief systems directly connected to architecture, they haven't yet explicitly discussed architectural and stylistic appearance of folk architecture in this part of the Philippines on Fil-Hispanic domestic architecture (Fernandez, 2015; Klassen, 2010; Manzolim & Quilang, 2015; Rocero, 1982) or very simplistic presentation of its features (Mabborang, Nozaleda, & Maguddayao, 2022).This is interesting since few extant houses, much less of Fil-Hispanic characteristics, are found in this area while Tuguegarao City (the nearest city along the sample area and the capital of Cagayan province in Northern Luzon) itself retained almost nothing of this kind due to World War II bombings in the area. Discussed below are each of the sample sites west of Tuguegarao City: Cagayan's prominent center of religion, commerce, and civic administration from the Spanish colonial period (Lim, et al., 2024).

Solana was once one of the outskirts villages of Tuguegarao and later separated as a town. During the last century of Spanish presence in Cagayan province, it has its own stone church, cemetery, and a grid-planned center. There's indeed a thriving Spanish and Filipino population in the area. While the only stone structure was the church of San Vicente Ferrer, limitations on building materials of this young town can be seen in the residential construction that are largely made of wood and iron. Such observation is similar and was documented fortunately in early 20th century aerial photographs in Tuao, Cagayan (see also Fig. 4 in Tabao & Tablan, 2025). Tuao is another important town in west Cagayan, largely populated by Itawit. It is second to Tuguegarao as to population during the Spanish colonial period after the decline of Cagayan's capital Nueva Segovia in the 1750s. The town also had a stone military fortress, a large stone church, and massive tobacco structures during the tobacco monopoly. Piat, on the other hand, is one of the most important towns until now adjacent to Solana and Tuao in the western Cagayan, known mainly as a devotional center of Cagayan for its Nuestra Señora de Piat, the wooden image popular for the miracles attributed to it beginning from the early 1600s in the Spanish colonial period. It is also a town with a high concentration of Itawit settlers, but is also home to Ilokano migrants, and the regular and seasonal influx of pilgrims across the country. These three important towns of western Cagayan as summarized has a long history of Spanish colonialism and indigenous Itawit - a formula of which that when integrated could produce a hybrid architecture that melds indigenous elements and foreign building technology (Malumbres, 1918; Nepomuceno, 1919; Salgado, 2002). It is in this regard that this article would like to investigate results of this fusion with rare extant examples of houses, that is the occurrence of the hybrid Filipino and Spanish elements or "Arquitectura Mestiza", as will be discussed in the following.

Objectives & Research Questions

Wooden residential houses, while humble in scale, have features that is going away from the typical indigenous archetypes which are termed as "folk architecture", i.e. modernized but having local elements still (Ignacio & Alejandrino, 2005). Coupled with the obvious influence of Spanish architecture and modern technology, this observation leads this study to

answer the following modest questions and objectives: (1) What are the characteristics that identifies these Fil-Hispanic houses? This is to look for architectural characters and other visual elements that could be attributed with the Fil-Hispanic architectural movement of the 1800s-1930s; (2) What are the evolutionary carpentry methods employed? This is to look for carpentry instruments building technology methods that is different with the Itawit indigenous archetype; and (3) how are they preserved in the modern language? This is to examine instances in the Itawit terminology traces of Spanish influences or, if present, even religious practices. This will ultimately bring into the academic discussion the appearance of Fil-Hispanic influences in residential houses, their characteristics, and how they can be conserved in the future.

2. Materials and Methods

The study employed a mixed-method approach (quantitative and qualitative methods) to examine Itawit folk architecture in Cagayan Valley, focusing on traditional carpentry tools and construction practices from the 1930s to the present. The data were gathered from selected communities in Solana, Tuao, and Piat.

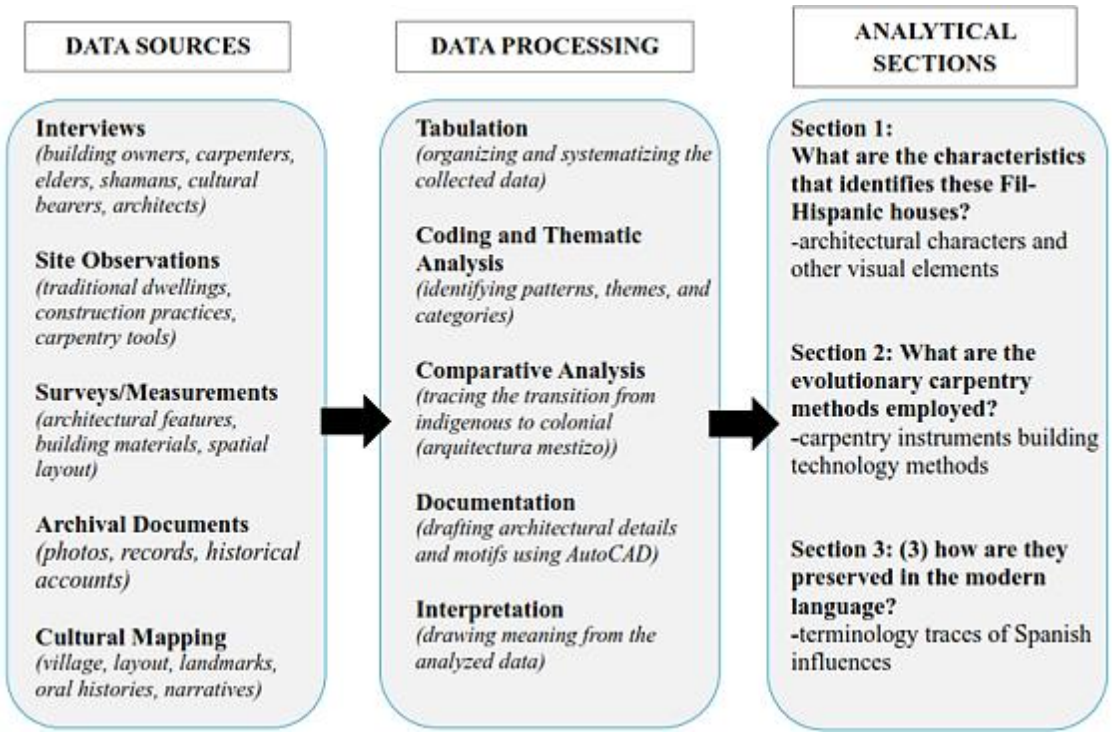

Figure 1. Structure of the Study.

2.1 Data Sources

The primary data sources include verbal accounts and experiential knowledge provided by local elders, building owners, carpenters, shamans, cultural bearers, and architects who collectively offer a holistic perspective on the traditional construction and cultural narratives of Itawit architecture. Additional data were also gathered from available documents, sketches, and archival sources, including existing literatures were supported by site observations, photographic documentation, and cultural mapping to better understand the relationship between the dwellings and their environment (Rodriguez, Abella, & Adame, 2022).

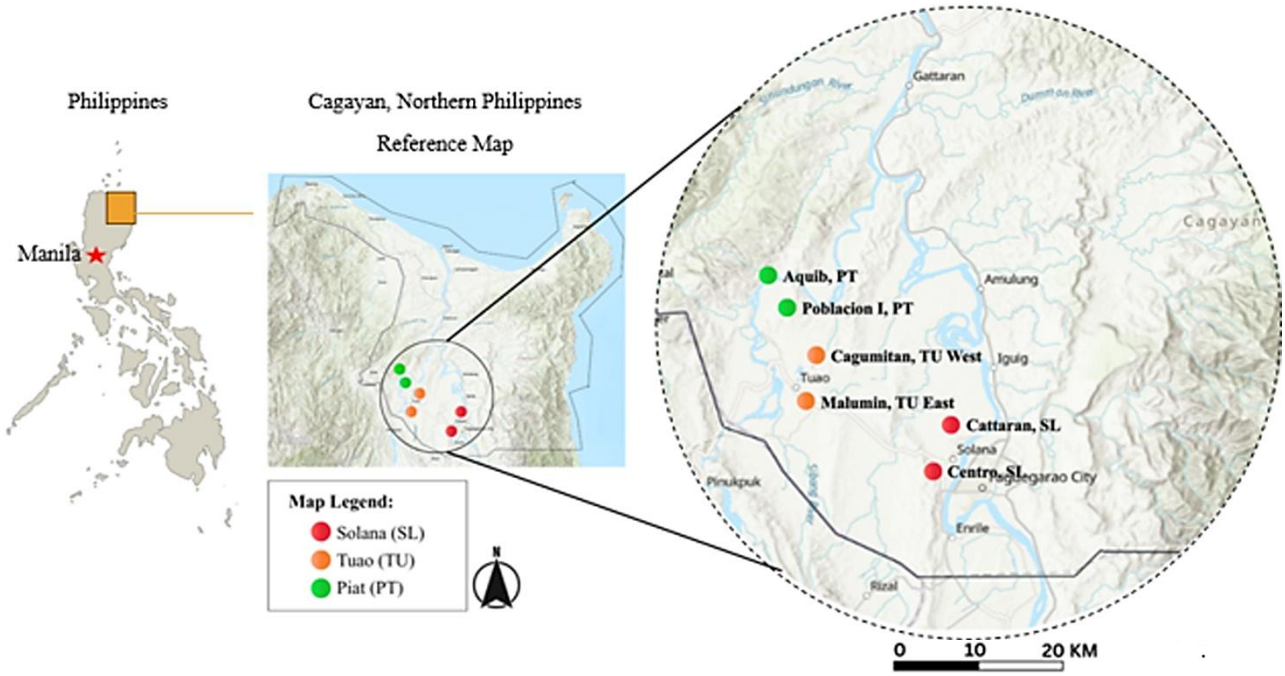

Figure 2. Study Sample Sites.

2.2 Sampling Procedure

In identifying qualified respondents for the study, the researchers sought assistance from community elders who possess deep knowledge of local families and cultural practices. Other elderly members of the community played a crucial role in this process; due to their respectable age and standing in the community, they facilitated introductions, built rapport, and helped identify appropriate individuals to participate in the interviews.

2.3 Research Instruments

For data interpretation, the collected information was systematically organized through tabulation to allow for clearer analysis and comparison. Architectural elements, particularly motifs, were documented using digital photography and further developed into technical drawings using AutoCAD, SketchUp, and Photoshop. Other qualitative data included like narratives as well as wordlist for terminologies were transcribed and tabulated and used a modified Swadesh list for documenting loanwords appearing in Itawit from the Spanish language. The mapping of the study sites was done through GMapGIS. The results of these are presented throughout this article. Informed Consent forms were also used and secured for the respondents to freely give their permission to use the culled data to be presented in this article.

2.4 Analytical Technique

Ethnography in architecture was used to combine all qualitative data available taken from archival information, on-site photos, as well as texts resulting from the interviews from the respondents and are presented as follows in the results section. Such results are subdivided based on the research questions introduced and organized based on the themes (thematic analysis) they most likely represent and included with appropriate figures and tables (Groat & Wang, 2013; Aksamija, 2021; Buchli, 2013).

3. Results

This section shall be divided based on the three research questions above and will describe each answer in the following subsections as discussed.

3.1 Characteristics that identifies Fil-Hispanic houses in Cagayan, Northern Philippines

This section answers the question, what are the characteristics that identifies these Fil-Hispanic houses? This is to look for architectural characters and other visual elements that could be attributed with the Fil-Hispanic architectural movement of the 1800s-1930s as discussed by Zialcita and Tinio (1980) and followed by the “carved house” Morales (2013) described. Figure 3 below are few samples taken from the study area (see also Fig. 2). From Solana are the following houses and surname of owners in parenthesis (when available): Figures: 3a (Balisi), 3c (Mabborang), 3d (Diego), 3e (Manalang); 3h-i (Adduru), 3j (de Asis), and 4j (Abig). From Piat are Figures: 3g (Guzman) and 6a (Mamba), and from Tuao Figures: 3b (Anonymous) and 3f (Pascua). Among these houses as to Fil-Hispanic characteristics, the (1) most ornate are houses in Figures 3a (with Figs. 5l & Fig. 6e), 3b (with Figs. 5a, 5d, & 5h), 3d (with Figs. 4c, 5i, & 6d), 3f (with Figs. 4e, 5g), and 3g (interior at Fig. 6c), (2) some are less decorated such as Figures 3c, 3e, and 3j, and (3) some has dominant vernacular elements retained such as Figures 3h, 3i, and 6a. This means that the Fil-Hispanic Architecture in this part of Cagayan in the Northern Philippines has a continuous timeline of style from the vernacular up to a more ornate version, though samples have been challenging to identify and document as of this writing. The following subsections also show these evolutions.

3.1.1 Façade Architecture

Perhaps one of the key features observed that is strikingly similar to another regional style in the Philippines - the Bahay na Bato - in Vigan, Ilocos Sur, is the usage of a continuous vertical succession of openings from the floor level upwards: the ventanilla (a railing with an interior sliding door, see Fig. 4a2), topped by a window (Fig. 4a1, Fig. 4a3 for the sliding rail or "pasamanu"), and sometimes crowned with a calado (frieze). This fenestration design, generally known in Ilocos Sur and some parts of the country, has not yet been identified in Cagayan Valley, much less in samples of surviving residential houses. In this article, it compares for the first time this occurrence in Western Cagayan of the Northern Philippines with the occurrence of the architectural style also found in ancestral houses in Vigan, Ilocos Sur – a collection of beautifully preserved residential buildings in an urban scale and a UNESCO World Heritage Site. Since most of the samples here are pre-World War II houses in this study, documentations shows that decorations and ornamentation can be attributed to Spanish colonial images as referenced using extant samples in the Philippines. Morales also argues a similar instance, despite geographically the location of the samples of her study is largely on Muslim-dominated areas, the presence of Islamic ornamentation incorporated in their designs. Still, these areas investigated by Morales also have a significant Spanish colonial presence in Mindanao, Southern Philippines (Alvarez-Piñer, 2011; Morales, 2013).

Figure 4 shows multiple occurrences of the sliding windows with ventanilla (SW-V) in Folk Architecture in Solana, Piat, and Tuao (Figs. 4c-4j) showing characteristics of Arquitectura Mestiza. Figure 4a shows the nearest surviving sliding windows with a ventanilla of the Spanish colonial period typical to Arquitectura Mestiza in the Archbishop's Palace in Nueva Segovia, Vigan, Ilocos Sur in the Northwestern Philippines. Figure 4b is one of the best-preserved archival photographs of a priest's house (University of Southern California Libraries (digital), ca. 1920-1940) in Tuguegarao City, Cagayan showing an SW-V, notable with a cris-crossing ventanilla. In the SW-Vs presented, some of the ventanillas' railings are lathework (Figs. 4c, 4e, 4h, 4i; close-up in Fig. 5g), plain vertical railing (4d), horizontal vents (4f, 4j), and diagonal (4g).

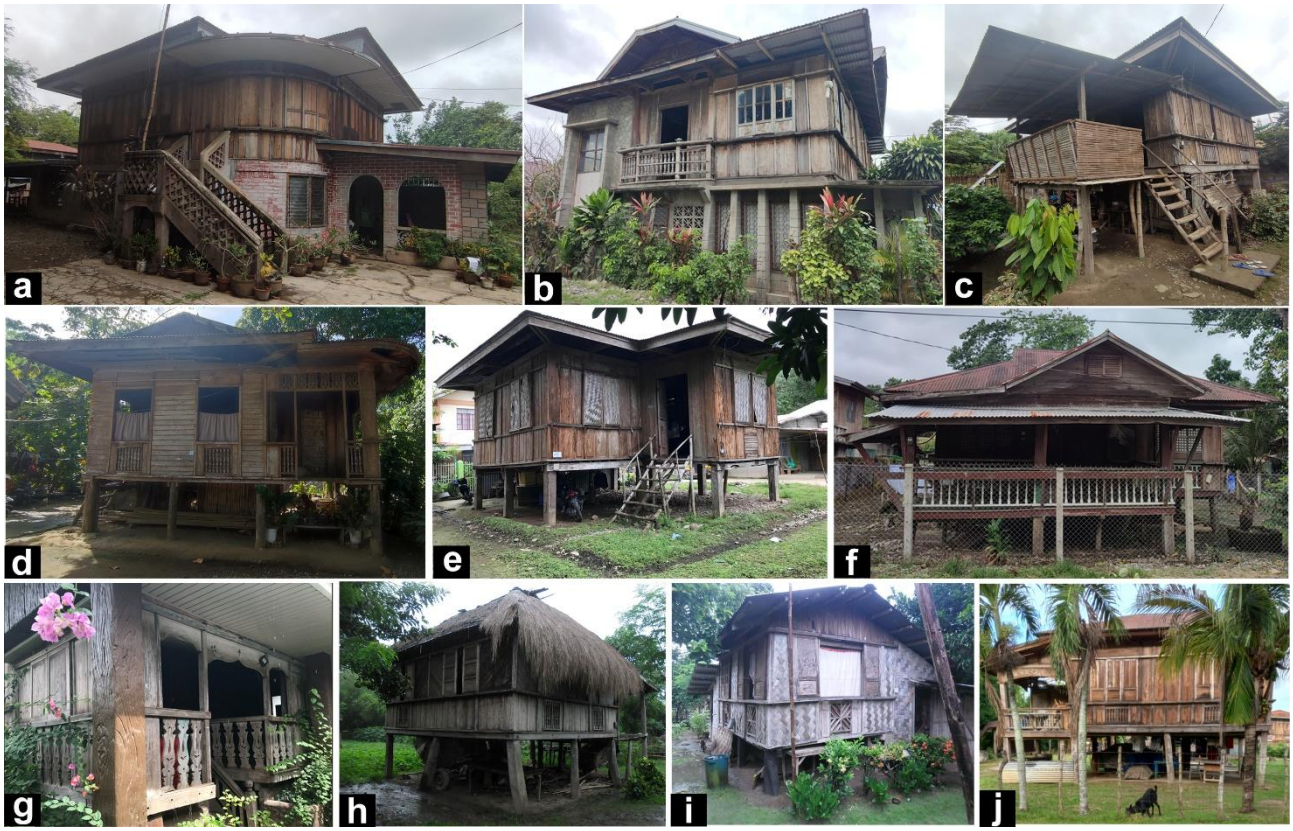

Figure 3. Fil-Hispanic Folk Architecture Samples of the Itawit in Solana, Tuao, and Piat.

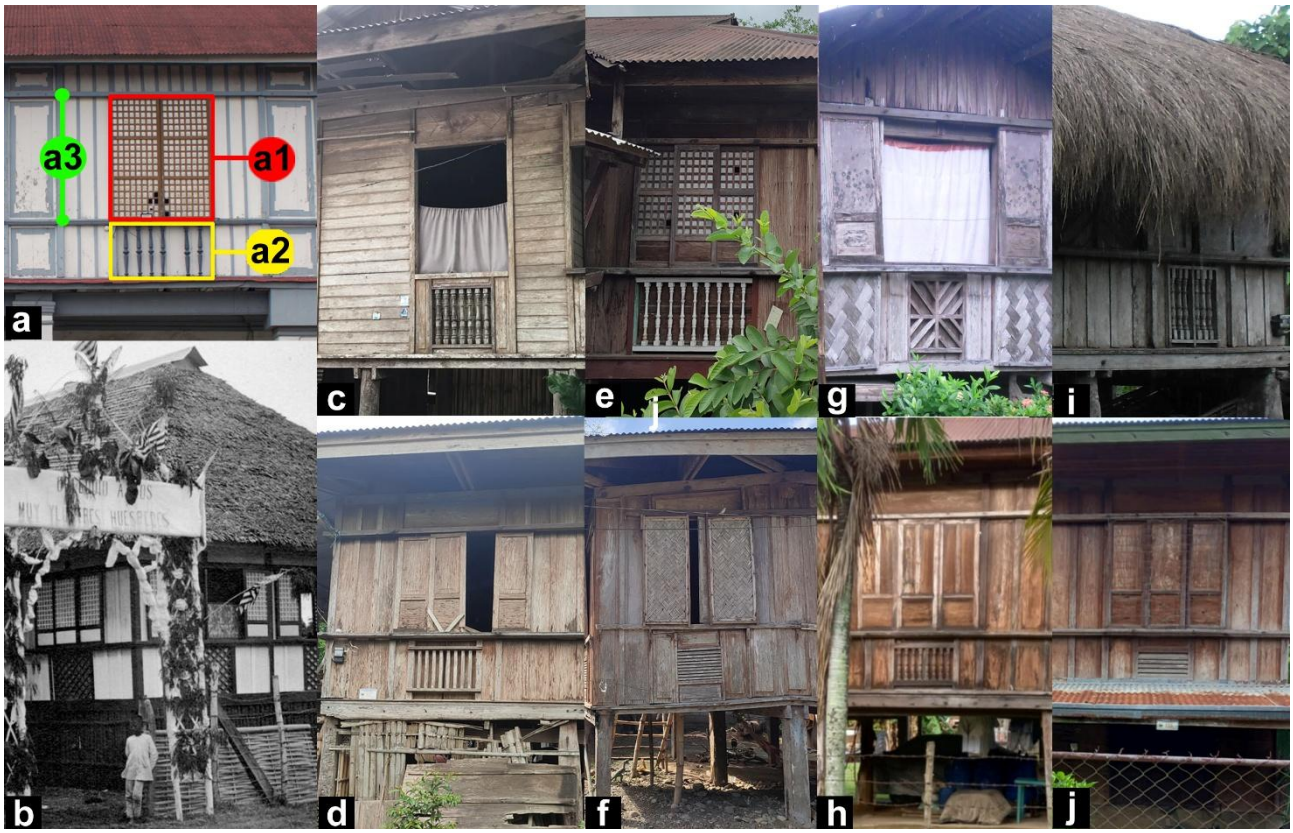

Figure 4. Bay Elevations of Fil-Hispanic "Balconets" or Sliding Windows with Ventanillas (SW-V).

As shown in Figure 4, houses uses wood planks for the windowpanes and facings, and other samples emerge with the introduction of oyster-shell panes in windows, whose origin not only traces to Manila or Ilocos regions in window technology, but has its roots as far as Goa – one of the colonial territories of Portugal in the 16th century (Pombo, 2022; Sonak, 2017; Laxmilatha, 2015). Both windows and the ventanilla function as air passageways well-suited with the local tropical climate and as additional device to admit natural light. Such technology, as mentioned by Luengo and other scholars (Magalhaes, et al., 2025; Luengo, 2017; Rustia, 2024), have been passed down up to the Spanish colonial Manila via trade and for the practicality of the use of the architectural feature both functional and aesthetically new as opposed to the indigenous counterparts in Cagayan (Tabao & Tablan, 2025). However, the sliding window action have well suited the taste of the locals since it is the common operational movement of indigenous windows throughout the country.

3.1.2 Architectural Ornamentation

As presented above, some of the exterior building envelopes have changed from the traditional weaved bamboo walls (Fig. 4g) into wooden planks. In this section, it will present also the ornamentation that could be attributed to Fil-Hispanic Architectural style and also showing other "experimentations" of forms and shapes in the exterior (Figs. 5a-h) and interior (Figs. 5i-l) decorations as a result also of modern carpentry tools (Fig. 7). Some exterior decorations are (1) abstracted plant like leaves, buds, and flowers (Figs. 5a-e), lotus and bud (Fig. 5i, inverted lotus and bud in Fig. 6b); (2) celestial like the full moon, star, and the crescent moon (Fig. 5j) and the sunburst (5c); (3) classical as the lathework (locally termed as "torno" in balusters, Figs. 5g & 5h); (4) religious like the Latin cross and the Star of David (Figs. 5b-c); and geometric shapes and patterns like circles, triangles, and diamonds (Figs. 5f, 5k-l). These patterns and designs are typical to the Spanish colonial period that it also appears to other houses in different locations in the Philippines, e.g. the study of Morales (2013).

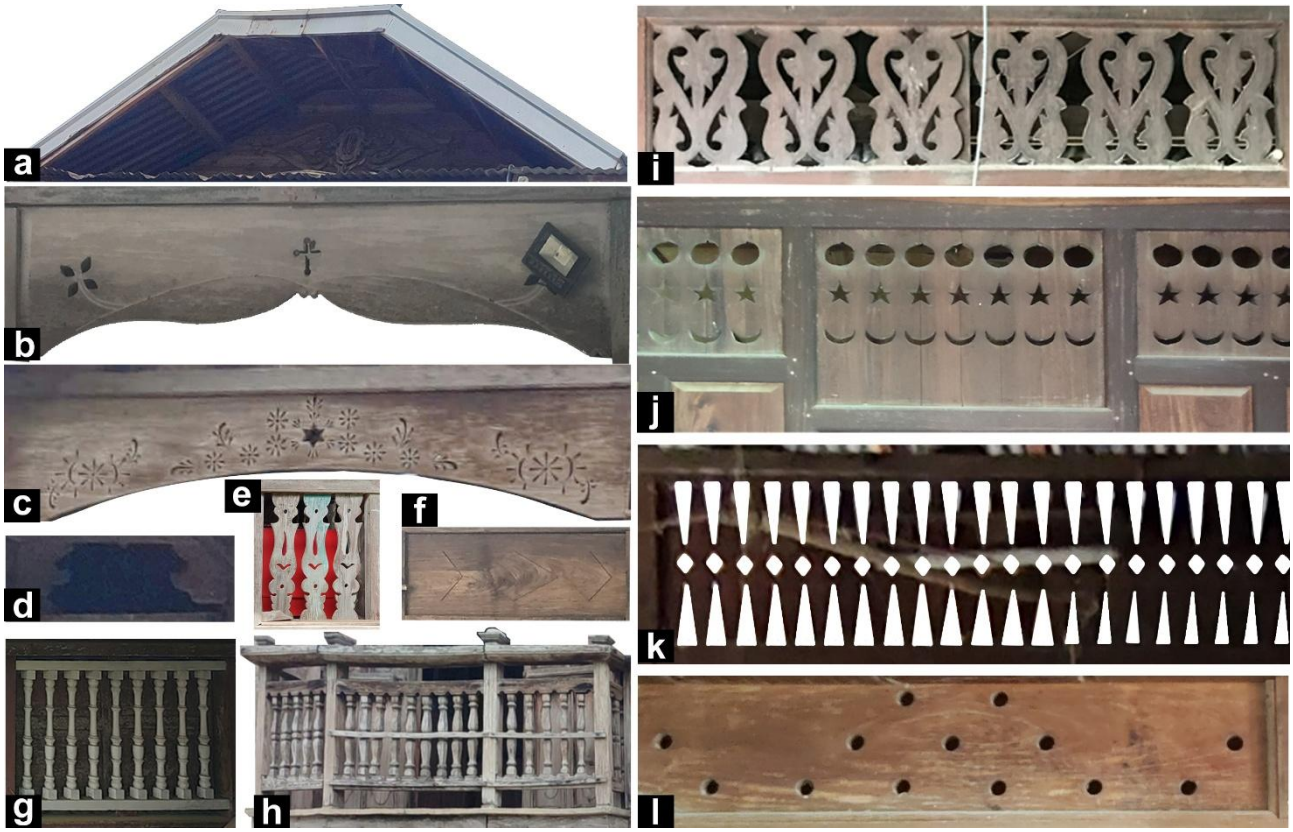

Figure 5. Architectural Ornamentations found in Selected Fil-Hispanic Samples (not to scale).

3.2 Evolutionary Carpentry Methods

This section answers the research question, what are the evolutionary carpentry methods employed? Though the preceding discussion also touched on this, especially the appearance of ornamentation in houses, both interior and exterior, the following investigates carpentry instruments, materials (albeit mostly unchanged from the vernacular materials), building technology methods, and finishes that is different with the Itawit indigenous archetypes and traditional building methods. Looking into the carpentry instruments and building technology methods that is different with the Itawit indigenous archetype and evolved into a folk version, i.e. modernized style of timber architecture, this study shows significant changes and instances where the indigenous vernacular has begun evolving into its modern look. First, flooring materials and assembly have begun introducing the plank-type plain leveled floor as opposed to the traditional bamboo slats typically used in vernacular houses. However, other houses documented have shown not only the immediate use of plank-type (e.g. the tongue-and-groove carpentry, Figs. 6b & 6d) but also the oversized planks planed (Fig. 6c) into about 40 cm width. The sampled houses feature the modern usage of planks in walls and floors as presented in Figures 3, 4, and 6. Some floors where there are wood planks with same wood by different color/tones have been used to have an alternate pattern (floor in Fig. 6d). The walls are also carved and paneled with geometric centers or borders that appear also in sliding windows and doors (Figs. 5f, 4e-f, 4h, 4j, 5f, & 6b) and the tools used to do these are mostly the hammer, marker, chisel, and planer (Figs. 7g-j). When planks are not milled that panels do not have a rabbet or tongue and groove joint, carpenters used wooden slats outwards (both sides will only be in lap joint) to cover the gap between planks as seen in Figure 4d and 4i. This introduction of the wooden panel made possible the introduction of arches and decorative panels (Figs. 5a-e) and friezes ("calado" in Arquitectura Mestiza terms) in interior partitions (Figs. 5i-l, 6a-b). The friezes function as additional interior air passage and admission of natural light in response to the tropical climate.

Structural systems such as the true truss (Fig. 6b) have eventually replaced the vernacular rafter method (Fig. 6a) due to the introduction of bolts and nuts for the inclusion of king posts, queen posts, diagonal braces, and the bottom chord. Such usage of the iron bolts and nuts were also found in the column to beam connections throughout the house from the floor girders to the roof girt/beam. Iron nails were also extensively used for the carpenters not depending on traditional joints (e.g. mortise and tenon) to secure dimension woods (commercial lumber), from the girder to floor joists, to the rafter and purlins, up to the fastening of roofing sheets, whichever is convenient. These dimension wood (commercial lumber) were once sourced manually in nearby forests (felled using axes and machetes like in Figs. 7l-n), seasoned, and were assembled almost "as is" or having no specific size; but the introduction of imperial measurements (inches and in feet) have economized and maximized the potential of timber to be cut in specific sizes, sometimes referring to lumber sizes (until now) in inches expressions like "dos-por-dos" (meaning two-by-two inches) in Spanish terms.

Furniture and fixed displays in the domestic setting is also a feature in these houses, where chairs are included with carvings and designs (Fig. 6c), and sometimes highlighting a religious image or symbol (Fig. 6e). This taste in carved furniture may be influenced also by the Spanish, especially with reference to surviving Spanish-period church furnitures in museums at present in the area. Dowels for the fine joineries of these furnitures were sometimes made from bamboo, specifically *bayug* (Dendrocalamus merrilliamus Elm.), fashioned using a machete (Fig. 7n).

Figure 6. Architectural Interiors from Selected Fil-Hispanic Samples.

3.2.4 Carpentry Tools Used and Adapted by the Itawit

This section presents modernization of Itawit carpentry as evident in their tools themselves. While Tabao and Tablan (2025) discussed the indigenous vernacular architecture of the Itawit in the Northern Philippines, the article does not include yet in detail the carpentry tools used by the Itawit. This is because the vernacular architecture in Cagayan depended heavily on using knives, machetes, and axes in cutting and hewing wood for the main structural members or even trimming fine indigenous materials like cogon grass (for roofing), rattan (for fastening), and bamboo (for floors, walls, and roofs). Although this article's discussion on these carpentry tools is not new when it comes to public knowledge, this paper presents the sampled actual tools (antique in age) that were used by the carpenters (Respondents) in their profession as shown in Figure 7 below.

Figure 7 (scale bar in centimeters) below shows the documented carpentry tools from the respondents. The designation that follows is its Itawit or indigenized terminology and parenthesized beside is its English equivalent or meaning: (a) *martilyu* (hammer, modern); (b) *masu* (sledge hammer); (c) *barina* (hand-driving drill); (d) *barina* (hand-crank drill); (e) *garamilyo* (wood marker for jambs and joinery); (f) *besin* (plumb bob); (g) *pitik* (marker with oil as ink); (h) *aggavu* (chisel); (i) sapliya (wood planer for jambs and joinery, this particular planer is used for door and window jambs); (j) *sapilya* (planer for dimension wood); (k) *ganggal* (saw, rip saw); (l) *katcha* (hand ax); (m) *watay* (ax for felling trees and hewing them to be used as structural timbers), and (n) *bunang* (machete for cutting bamboo). Also, in Figure 7, despite the Itawit's usage of these modern carpentry tools during their usage, some of the tools still retain indigenous terms, e.g. "aggavu", "ganggal", "bunang", and "watay"; but other tools were "Itawitized" into e.g. "katcha" (originally "hacha" in Spanish [Sp.]), "barina" (orig. Sp. "barrena"), "sapilya" (orig. Sp. "sepilla"), "sapilyadu" (orig. Sp. "sepillado"); and some has an original Itawit term based on the function of the tools such as "besin" (in Itawit means "to hang" for plumb bob) because the bob should be "suspended" for it to function and "pitik" (Itawit "flicking") because the blackened yarn marker needs to be flicked transverse to the longitudinal axis of lumbers for planing. These tools are owned by respondents from Solana, Cagayan: Mr. Addun (Fig. 7f), Mr. Ignacio (Figs. 7a-c, 7e, 7i-l), and Mr. Soliva (Figs. 7d, 7g-h, 7m-n).

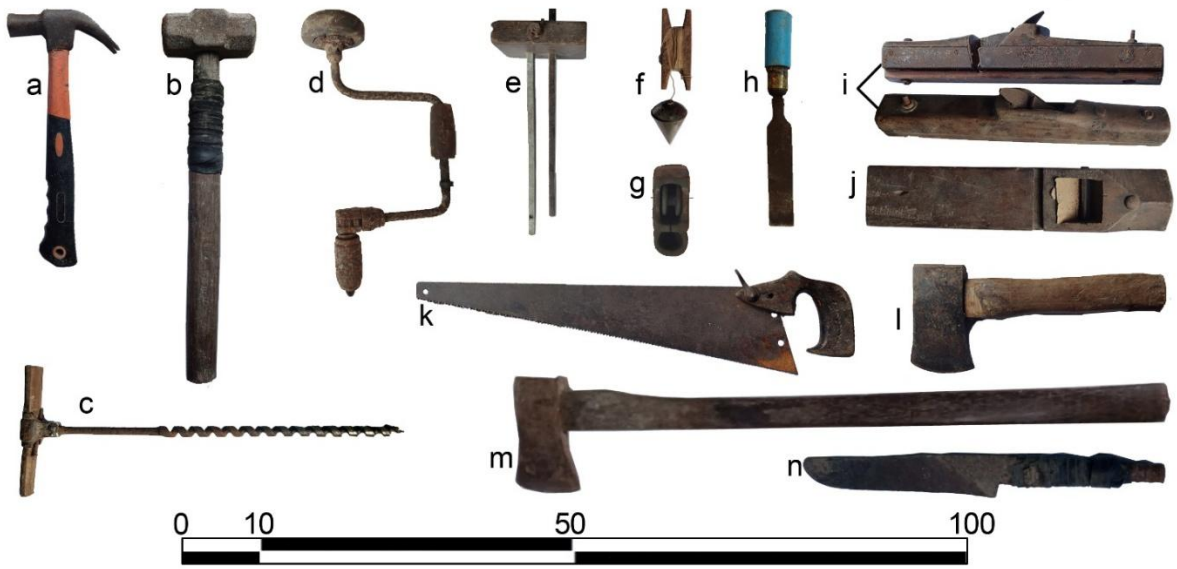

Figure 7. Carpentry Tools owned by Respondents.

3.3 "Vocabulario" in Fil-Hispanic Architecture of Cagayan

This section answers the third research question: how are they preserved in the modern language? This examines instances in the Itawit terminology traces of Spanish influences or, if present, even religious practices.

While Table 1 below is not the most extensively surveyed phonetically adapted Spanish wordlist (N=150) into Itawit pronunciation, it shows a glimpse on how these words have endured up to the modern usage in Cagayan, Northern Philippines, where C=carpentry; H=parts/anatomy of the house; M1= masonry; M2=metals; S=spaces/structures; T=tools; and O=others. These terms have been ingrained with the old and modern Itawit today that most of the localized Spanish (Itawitized version) terms are still used in the construction industry. The terms (N=150) in Table 1 (and each words are also assigned into multiple categories) are used in pre-construction, construction, anatomy of the house, i.e.: C (N=71, 47.33%), H (N=61, 40.67%), M1 (N=38, 25.33%), M2 (N=22, 14.67%), S (N=27, 18%), T (N=15, 10%), and O (N=7, 4.67%). These Spanish loanwords show a hybridization and influence of European (colonial) building technology that reshaped the vernacular residential construction into a more modern version.

Additionally, Table 1 can be interpreted in many ways, it can be thematized into the evolution of (1) materials, (2) structure, and (3) space. First, the wordlist captures a transition of material use in folk architecture of the Itawit (see M1 & M2) from temporary to "permanent" building materials: e.g. usage of masonry loanwords "fundashon" (foundation), "fuente" (bridge), "pader" (masonry wall, while "partishon" for wood interior partitions), "samyentu" (cement), and "palitada" (plaster) primarily on large permanent structures (e.g. churches). The presence of masonry in residential houses is one of the marks of hybridization due to its permanence and combined with structural timber for the higher floors. Also, metal-related words (M2) are associated with valuable tools (e.g. sapilya, lyave, martilyu) and structural fasteners (e.g. tornilyu and twerka) used also for truss work and post-and-beam connections, which shows a shift also towards mechanized and tool-dependent jobs. Not only that, the shifting from vernacular roofing technology (i.e., cogon grass, see also Fig. 3h) towards the modern metal sheets in roofing is also present (e.g. yerro and liso; many Itawit use "sim" [from the English "seam" to refer to corrugated galvanized iron roofing sheets]).

Second, Table 1 also shows dominance of house anatomy (Fig. 8) and carpentry terms that includes very specific structural terms like "arihi" (column, corrupted from Sp. "harigue"), "kilos" (rafters, trusses), "bobida" (ceiling). It even shifts into specific terms for rooms showing the evolution of spaces previously separated from the main house, e.g. "banyu" (bathroom) and "kusina" (kitchen) and the fixtures related to them like "kubeta" (toilet), "lavabo" (lavatory/kitchen sink), "grifo" (faucet), "poso negro" (septic tank), "poso negra" (open canal), etc., terms which are "advances" in sanitary technology. In a formal sense, terms like the compound word "titulu-lusak" (land title, where "lusak" is a native word for land), or the direct usage of the foreign terms "amilyar" (land tax), "plano" (plan), "iskwala" (square), and "linya" (line) are used also in pre- or during the construction stage of buildings. This formalization of the construction stage gave rise also to specialized workman titles "inhinyero" (engineer), "karpinteru" (carpenter), "kanter" (stonemason), "piyon" (laborer), and "pintor" (painter). Figure 7 also shows an idea on the collection of the tools a carpenter uses in their trade that exemplifies the change or even the improvement of the skill.

Lastly, Itawitized Spanish terminologies in spaces is more frequently used than the indigenous Itawit terms as parenthesized and English equivalent in square brackets: salas (kamonayan [living]), kusina (pallutwan [kitchen]), kwarto (duba [room, bedroom]), bodega (abayaw [storage]), banyu (pazzihutan [bathroom]), kasilyat (toilet [cubicle, or the fixture itself]); but other indigenous terms are still in use e.g. (1) they almost never use "casa" (except for "casa fuego" or matchbox) for "house", hence they retain "balay", or (2) "escalera" (except for the "escalera" move in mahjong) for "stairs" but they retain the indigenous "addan", or even "comedor" for "dining" yet still use "pangnganan".

The collection of terms in Table 1 and others visualized in Figure 8 presents undeniable proof on the intangible influence of the Spanish language to the local Itawit in architectural, construction, and even legal terms in the continuity of building transactions through the years, though mostly unappreciated and understudied, merits additional investigation by linguists.

Table 1. Wordlist of Spanish loanwords into Itawit with English equivalent.

Spanish loan-words into Itawit	English	C	H	M 1	M 2	S	T	O	Spanish loan-words into Itawit	English	C	H	M 1	M 2	S	T	O
agrimensur	land surveyor		x						kwarto	room	x	x					
alambri	wire		x		x				kwatro agwas	hipped roof	x	x					
allampran	lamp		x		x				lagwerta	garden					x		
amilyar	land tax		x			x			lamesa	table	x	x					
anchohos	eyeglasses						x		lancha	stage	x		x				
andamyo	scaffold	x		x					lapis	pencil	x		x			x	
aparador	cabinet	x	x						lavabo	kitchen sink		x					
arihi	column	x	x						linya	line	x		x				
arku	arch	x							liso	plain sheet	x						
baldosa	cement tile			x					lyana	trowel			x			x	
balkon	balcony		x			x			lyave	wrench				x		x	
banyu	bathroom		x			x			lyave-tubo	pipe wrench				x		x	
banggera	oriel, counter					x			lyave-katala	adjustable wrench				x		x	
bangku	bench	x	x						martilyu	hammer	x			x		x	
bangkito	small bench	x	x						masa	concrete			x				
bara	block	x	x						maseta	flowerpot		x					
barateha	purlin	x	x						media agwa	half roof	x	x					
bareta	digging bar	x		x			x		molye	leaf spring				x			
bareta de cabra	crowbar	x		x			x		munisipyo	town hall					x		
barina	drill	x							ochovadu	octagonal	x						
barote	horizontal stud	x	x						nafigura	beautiful	x		x				
bashada	rabbet	x							orat	hour							x
basura	trash							x	orma	form	x						
benta	window	x	x						ornu	oven			x		x		
biga	beam			x					pader	wall	x	x	x				
bisagra	hinge	x	x						palitada	plaster			x				
bobida	ceiling	x	x						panchon	tomb			x				
bodega	storage room		x						partishon	partition	x	x					
bolada	overhang	x	x						pasamanu	handrail	x	x					
bombilya	lightbulb		x						paseyo	park					x		
bomba	pump		x						pintor	painter	x						
diya	day							x	pintura	paint	x						
dos agwas	gabled roof	x	x						piso	floor level		x			x		
dos manu	2-hand saw	x					x		piye	feet	x						
dos piso	2 floor		x			x			piyon	laborer	x		x				
espeho	mirror/ glass		x						plancha	iron				x			
fondo	accumulate			x				x	plano	plan	x		x				
foror	lamp		x		x				platera	china closet	x	x					
fuente	bridge			x					plaza	plaza					x		
fundashon	foundation			x					poso	well			x				
fundi	melt				x				poso negro	septic tank		x	x				
fundidu	alloy				x				poso negra	open canal		x	x				
galineru	grilled cage	x	x						poste	post	x	x					
grava	gravel			x					puerta	door	x	x					
grifo	faucet				x				ransu	village					x		
guijo	*shorea guiso*	x	x						rehas	railing	x	x					
hamba	jamb	x	x						rumyenta	tools	x		x				
iglesia	church			x		x			sala	living room		x			x		
inhinyero	engineer	x	x	x					samyentu	cement			x				
interu	all/ intact							x	santo	religious image		x					x
iskwala	square	x		x			x		sapatut	shoe/ footing			x				
iskwaladu	squared	x	x						sapilya	wood planer				x		x	
iskwela	school					x			sapilyadu	planed lumber	x						
kaban	chest	x	x						sementeryu	cemetery			x		x		
kabayu	horse/iron board		x						sentro	city center					x		
kadena	chain				x				serra	close	x						
kahon	box	x		x			x		shudad	city					x		
kalesa	horse carriage							x	silyerat	floor joist	x	x					
kanal	channel/ gutter	x			x				silyon	lazy chair	x	x					
kanto	corner	x	x						sinefa	fascia board	x				x		
kanter	stonemason			x					suelo	floor	x	x					
kareta	cart			x					tabla	plank	x						
karga	carry	x		x					tantya	estimate	x		x				
karpinteru	carpenter	x							tienda	store					x		
karsel	prison					x			tirante	wood beam	x	x					
kasilyat	cubicle	x				x			titulu-lusak	land title					x		
katcha	axe				x		x		tore	tower					x		
kilos	rafter	x	x						tornilyu	bolt/ screw				x			
kornesa	cornice	x							torno	lathework	x			x			
kubeta	toilet		x			x			trabahu	work	x		x				
kurtina	curtain		x						tubo	pipe				x			
kurut	cross					x			tuberu	plumber				x			
kuryente	electricity		x		x				twerka	nut				x			
kusina	kitchen		x						uno piso	1 floor		x			x		
kutchara	spoon/trowel			x			x		yerro	roofing sheet	x	x					

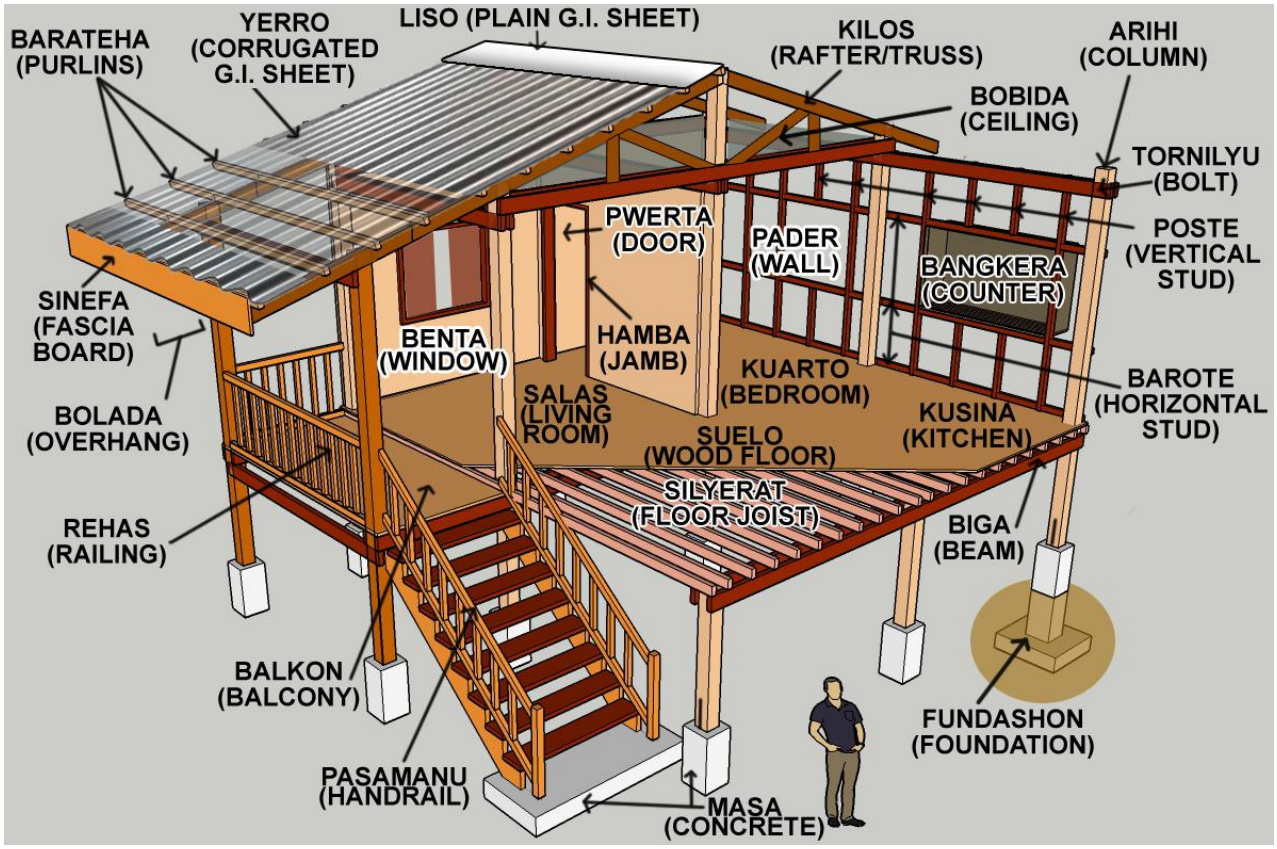

Figure 8. Anatomy of a Fil-Hispanic House in Cagayan, Northern Philippines with Spanish Loanwords.

4. Discussion

Stylistic results have been observed also in other regional styles in the Philippines directly related to the period mentioned by Zialcita and Tinio in the 1850s-1930s on these ancestral houses that appeared in the Philippine capital, and other locations in Northwestern Luzon: especially the Vigan UNESCO World Heritage Site. Other academic discussions, e.g. the book of Morales (2013), that the "Balay Ukit" (carved houses) were also found in Mindanao (Alvarez-Piñer, 2011). This case in the Itawit of Solana, Tuao, and Piat shows not the "Bahay na Bato" (stone house), but near to similar with the carved houses described by Morales (2013) and is no doubt the result of years of Spanish influence in design, execution in carpentry, and borrowed language. As available literature shows, influences resulting to the Cagayan version of the Fil-Hispanic Architecture in the presented houses were Portuguese (capiz shell windows), Spanish (technology and terminology), and the local vernacular style (Luengo, 2017).

As presented, these houses in the pre-World War II Cagayan fit into descriptions by Zialcita and Tinio (1980) and Morales (2013) on the timeline and appearance of Fil-Hispanic ancestral houses in the Philippines, and in this case, the first article to present such architectural phenomenon in this region in the country, and such occurrence not only happened to prominent regions, e.g. in Manila (capital) and in Vigan, Ilocos Sur, to name a few (Javellana, et al., 1997; Tettoni & Reyes, 2013; Rodriguez, Abella, & Adame, 2022). Key aspects include the occurrence of the sliding window with ventanilla, (Fig. 4), carvings in many forms especially in the interiors (Fig. 5), and changes in carpentry assembly and tools (Fig. 6 & 7). More "complicated" floor plans, interiors, and building volumes were also beginning to emerge in the Itawit of the sample locations that began showing the taste for carvings in friezes, lathework (especially in balustrades), furniture works, and even in domestic images of saints. This phenomenon may have stem from the long Catholic history of these towns, in which each of them has their own church built during the Spanish colonial period - namely the church of San Vicente Ferrer in Solana, the Holy Guardian Angels in Tuao, and the Santo Domingo church of Piat (Jose, 2021; Tabao M. T., 2024; Luengo, 2021). These colonial influences undoubtedly prepared the Northern Philippine ethnic architecture and even the people to gradually change into the modern domestic architecture found in the American colonial period (1898-1945) up to the present, not only the more modern materials of reinforced concrete and paint, but also the integration of the kitchen and toilet and bath spaces into the interior- a major shift from the vernacular archetype where the kitchen and the latrine are a separate buildings on their own (Galvan, 1997; Tabao & Tablan, 2025).

Language in terms of the loanwords of the Itawit from the Spanish have found its way into the everyday vocabulary of not only the construction professionals, i.e. carpenters, masons, architects, and engineers, but even to the civilian population. Such was the use of the tabulated terms that it can still be used today in trade and construction industry, hence a very significant role in communicating between professionals, homeowners (clients), and construction workers. Not only that, but even the practices of believing on the Zodiac and combining the existing beliefs in the Arte of the Itawit, the hybridization of beliefs is still evident in old generations of the Itawit as observed in this area, though a more complex belief system is found in Amulung, Cagayan (Tabao, 2025). Another belief system creeping into the locals is the Spanish "oro-plata-mata" (gold-silver-death) in avoiding the staircase steps to be divisible by three (last step in the "mata" count). This makes the Spanish influence in the Philippines deep that it needs more further study even in superstitions related to architecture or their lives in general.

5. Conclusions

The Spanish colonial methods of carpentry prepared the locals to the modern architectural movement in the American period as well as post-World War II Philippines in the usage of dimension wood (i.e. commercial lumber), tools with metals, and architectural decorations and structural simplicity, for example, metals were used primarily on tools rather than as a fastening devise for the interconnection of structural components such as nails, bolts, screws etc. Such was their value in iron that the surveyed houses that used such materials were typically well-off families, hence located in town centers, e.g. Centro Solana and on their immediate vicinity. This also gives additional point in discussing the conservation and further research and funding for native wood species related to these houses for their future use also in repair and rehabilitation works in the future.

The Fil-Hispanic style had also a lasting effect (both in carpentry and in language) during American colonial period on civic architecture when borrowing existing Spanish colonial styles as they appear also to early civic buildings designed by the American Architect William Parsons on the standardized designs of school buildings (Gabaldon Schoolhouses) and Town Presidencias (now town halls) with almost the same method: using existing styles to blend with the modern reinforced concrete structures of the age.

In the publication of these findings, albeit very limited and having a modest scale and sample, merits the preservation and conservation of architecture, carpentry technology, and terminologies directly related to it. Local heritage professionals, local academia, and government agencies (e.g. cultural departments) should identify, document, digitize, and publish more findings into the Fil-Hispanic Cagayan houses that are still standing in this part of the Philippines to strengthen the love and value to built heritage and shared history with Spain, similar to approaches in ecclesiastical built heritage in the province (Barretto-Tesoro, et al., 2023; Lising & Barretto-Tesoro, 2025; Fadriquela, 2025). This is through making it also a subject of investigation for students in the High School and College levels as research projects or thesis. After the publication of these findings, local policy, in the town/city to the provincial and regional level, must include these houses as Important Cultural Properties or Presumed Cultural Properties as defined by the National Cultural Heritage Act of the Philippines. As a potential income-generating asset of the towns or the homeowners because of their contribution to local tourism, these houses could be given tax incentives (and even exemptions) or added protection to further conserve them (Republic Act 10066, 2009; Republic Act 11961, 2023).

In this sense, then, while Fil-Hispanic houses have been discontinued due to far modern designs of domestic architecture in this part of Northern Philippines, it is still one of the physical evidence that shared architecture, while colonial, is a reality and a matter of serious academic discussion especially in the age where globalization, post-colonial movements, and even decolonial movements have made architecture and the world more accessible and can freely be molded into hybridity (mestiza): a natural trade and exchange of knowledge and culture showing that art and architecture is human and shareable.

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