CHARMS

Social Groups and Interpretive Flexibilitie(s) in the preservation of Vernacular Wooden Houses in Chiang Mai, Thailand

Christine Richter, Nuchwaree Boonkumkrong, Henrik Beermann, Urban Kaiser

Photography by U. Kaiser

Thailand is well known for its diverse vernacular wooden architecture. Besides valuing these buildings as cultural heritage and for their touristic appeal, the preservation of wooden vernacular housing in cities can make a significant contribution to sustainable urban development in environmental, social and economic terms. Preservation through use can save materials for new construction, provides living space rather than clearing land for large-scale commercial business, and can foster mixed use neighborhoods. Continued use of these buildings depends not only on technical improvements, but also on several socio-technical factors that play out at different scales. Taking this bigger picture into account, our study's overall aim is to identify the requirements for the preservation of vernacular wooden houses in the city of Chiang Mai, especially those that are related to indoor comfort, from the perspective of different social groups in the city. In this paper we address this broader aim through two initial questions that have emerged during qualitative research in 2021 and 2022, namely: who are the relevant social groups in the city, depending on varying perceptions of the preservation of wooden houses, and how do the characteristics of houses and their immediate surroundings (potentially) mediate the perceptions of residents? The paper provides a glimpse into the study's path, where we make the (empirical as well as methodological) move from exploring groups, perceptions as well as contextual dynamics at city and regional scale to the more specific requirements of different social groups at the scale of the individual home.

บทคัดย่อภาษาไทย
ประเทศไทยขึ้นชื่อในด้านสถาปัตยกรรมไม้พื้นถิ่นที่หลากหลาย นอกเหนือจากคุณค่าในฐานะมรดกทางวัฒนธรรมและการดึงดูดนักท่องเที่ยวแล้ว อาคารเหล่านี้ยังแสดงถึงการอนุรักษ์ที่อยู่อาศัยพื้นถิ่นที่ทำด้วยไม้ในแต่ละเมือง ซึ่งมีส่วนสำคัญในการพัฒนาเมืองอย่างยั่งยืน

ทั้งในด้านสิ่งแวดล้อม สังคมและเศรษฐกิจ การอนุรักษ์โดยการใช้ประโยชน์ สามารถประหยัดวัสดุสำหรับการก่อสร้างใหม่ ให้พื้นที่ใช้สอยมากกว่าการใช้พื้นที่สำหรับธุรกิจเชิงพาณิชย์ขนาดใหญ่ และสามารถส่งเสริมการใช้พื้นที่ใกล้เคียงแบบผสมผสาน การใช้อาคารเหล่านี้อย่างต่อเนื่อง ไม่ได้ขึ้นอยู่กับการปรับปรุงทางเทคนิคเท่านั้น แต่ยังขึ้นอยู่กับปัจจัยทางสังคมและเทคนิคหลายประการที่ส่งผลในระดับที่แตกต่างกัน เมื่อพิจารณาถึงภาพรวมที่ใหญ่ขึ้นนี้ จุดมุ่งหมายโดยรวมของการศึกษาของเราคือ การระบุข้อกำหนดสำหรับการอนุรักษ์บ้านไม้พื้นถิ่นในเมืองเชียงใหม่ โดยเฉพาะอย่างยิ่งในสิ่งที่เกี่ยวข้องกับความอยู่สบายภายในอาคาร จากมุมมองของกลุ่มสังคมต่างๆ ในเมือง ในบทความนี้ เรากล่าวถึงจุดมุ่งหมายที่กว้างขึ้นผ่านคำถามเริ่มต้นสองคำถามที่เกิดขึ้นระหว่างการวิจัยเชิงคุณภาพในปี ๒๕๖๔ และ ๒๕๖๕ ได้แก่ กลุ่มใดคือกลุ่มสังคมที่เกี่ยวข้องในเมือง ซึ่งขึ้นอยู่กับมุมมองที่แตกต่างกันเกี่ยวกับการอนุรักษ์บ้านไม้ และลักษณะของบ้านรวมทั้งสิ่งแวดล้อม(อาจ)มีผลต่อการรับรู้ด้านความอยู่สบายของผู้อยู่อาศัยได้อย่างไร บทความนี้ให้ภาพรวมคร่าวๆ ในระหว่างการศึกษา ซึ่งเราได้มาจากการสำรวจจากกลุ่มทางสังคมต่างๆ (ทั้งเชิงประจักษ์และระเบียบวิธี) การรับรู้ ตลอดจนพลวัตตามบริบทในระดับเมืองและระดับภูมิภาค ไปสู่ความต้องการที่เฉพาะเจาะจงมากขึ้นของกลุ่มสังคมต่างๆ ในระดับของบ้านแต่ละหลัง

1. Introduction

Thailand is well known for its diverse vernacular wooden architecture, which has also been the focus of much research (Shimizu, 2018; Sukwai, Mishima, & Srinurak, 2022; Pinijvarasin, 2017). Besides valuing these buildings as cultural heritage and for their touristic appeal, the preservation of wooden vernacular housing in cities can make a significant contribution to sustainable urban development in environmental, social and economic terms (Avrami, 2016; Dessein, et al., 2015; Ferretti, Bottero & Mondini, 2014; Go-Sam & Keys, 2018; Grossman et al., 2017a, 2017b, Ryrkema, 2006, Soini & Dessein, 2016). Existing wooden vernacular building stock constitutes a carbon storage and its preservation can help to avoid the greenhouse gas-intensive production of mineral based construction materials (Churkina, et al., 2020; Ryrkma, 2006). Continued use of these buildings depends not only on technical improvements to increase both energy efficiency as well as indoor comfort and air quality, but also on a number of socio-technical factors that play out at different scales. Our study's longer-term aim is to identify the requirements for the preservation of vernacular wooden houses in Chiang Mai, Thailand, from the perspective of different groups of residents in the city. Preservation is to take place specifically through (continued) residential use of the buildings.

Chiang Mai, the largest city in northern Thailand, located in the Northwest of the country, has attracted many tourists and researchers with an interest in the region's cultural history, social structure (Johnson, 2010, specifically points to social structure studies from the 1970s to 1990s by Bowie, 1997; Davis, 1984; Potter, 1976 and Rhum, 1994) as well as architecture, especially elements of what has come be known and promoted as "Lanna culture" (Johnson, 2010).

Against this broader framework, the present paper discusses specifically two questions that emerged during qualitative research in 2021 and 2022, namely who are the relevant social groups in the city, depending on varying perceptions of the preservation of wooden houses, and how do the characteristics of houses and their immediate surroundings (potentially) mediate the perceptions of residents? The paper provides a glimpse into the study's path, where we make the (empirical as well as methodological) move from exploring groups, perceptions as well as contextual dynamics at city and regional scale to the more specific requirements of different social groups at the scale of the individual home

2. Research Approach and Methods

Our research is inspired by literature on the social construction of technology (SCOT), an analytical approach to the study of innovation, which focuses on the dynamic influences of varying social groups, which are relevant to the development of technology (Bijker, Hughes, & Pinch, 2012; Bijker, 2010). The approach has been applied to urban geography in a few instances, for example by Aibar and Bijker (1997) in a historical study of Barcelona's development. In our study the approach translates into the assumption that different social groups in the city of Chiang Mai (potentially or actually) influence the various facets of vernacular wooden housing – both as singular artefact (the individual building) and as sociotechnical ensemble (the socio-technical context of the buildings) through their ideas, perceptions as well as different uses of the houses. The variation in meanings that the houses hold to different people is referred to as "interpretive flexibility" in SCOT vocabulary. The empirical material, which this paper is based on,

consists of summaries of 8 preliminary interviews from October and November 2021 and 13 additional in-depth interviews from different points in time between April to July 2022, with interviewees from architecture, city development, civil society organizations and media (including social media), with a close affinity to the topic of cultural heritage and/or urban development and construction in Chiang Mai. In April 2022 two focus groups with residents of the pilot neighborhoods were conducted. In addition, we draw on field notes and notes from three informal conversations taken during a visit to Chiang Mai from 12th until 22nd of July, including site visits to Lam Chang, Wat Ket, Chang Moi neighborhoods, various (wooden) temples, the Lanna Cultural Center, and the Chiang Mai University's outdoor museum of vernacular housing. The discussion is also tangentially informed by notes of 5 project meetings that took place between July 2021 and February 2022 and aided in developing the methodological approach. The results presented here are based on first reviews of these empirical materials and focuses on the two selected themes of social grouping and housing characteristics. Other themes, that emerged as important during review and preliminary analysis, for instance the influence of regional policy or labor dynamics, are not discussed here due to word count limitations.

3. Relevant Social Groups and the House as Mediating Circumstance

In the first of the following sub-sections, we describe how social groups can be differentiated in terms of the meanings that wooden vernacular houses hold for them reflected in people's perceptions of and requirements for preservation, as well as different actual uses of wooden vernacular houses. In the second sub-section, we illustrate how varying characteristics of houses themselves and their immediate surroundings act as mediating circumstances to residents' uses of the houses and perceptions regarding their preservation.

3.1. Relevant Social Groups and their Relationship to Vernacular Housing

We identified social groups at two different scales. At city scale, people are included, who do not currently live in or are soon expected to buy or inherit wooden houses. These social groups are akin to an "indigenous typology" (Bryman, 2016, p. 586) in the sense that they have been identified by our interview partners as groups holding specific views on wooden houses. This scale of grouping is important in the long run to address various groups in the city appropriately when communicating about the preservation of wooden houses at policy and planning levels. A second social grouping involves all those people who own, rent or otherwise use vernacular wooden houses now or expect to do so in the near future, for instance through inheritance. At this scale, we differentiate between social groups based on the socio-economic characteristics of an individual and/or household. These groups provide more specific insights into the requirements and perceptions of wooden house owners and residents that are important for the preservation at household and neighborhood levels. In the following, we describe each of these groupings in a very synthesized form.

Social groups at the city scale include businesspeople, who own shops, coffee houses or guest houses in a neighborhood, for instance, and who profit from proximity to well-maintained wooden houses if these help to attract customers, for example young people following a favorite past-time, which we might call "coffee shop hopping" where they visit various coffee shops across the city to socialize and take photos of the surrounding place. Hence, customers of these businesses, both tourists and young Chiang Mai residents come to play a role as a social group as well, albeit more implicitly, because to them wooden houses mean a specific sought-after aesthetic indicating "northern Thai tradition." The local community, organized through the neighborhood's temple (or in some cases mosque or church, for example in the Wat Ket area of Chiang Mai) may come to constitute a social group to whom wooden houses hold a common meaning. For instance, young people and tourists may value a neighborhood as a cultural heritage site partially in lieu of its wooden architecture. Within local communities, carpenters and other craftspeople working specifically with wood constitute a social group, whose connection to wooden houses goes

beyond the house as a singular artefact, extending into the needs to preserve the skill sets that have historically developed. The loss of wooden houses as residential buildings in everyday life also means the loss of these skills and craftsmanship. Various migrant groups may hold specific views on vernacular housing. For instance, because rental prices may be lower in old wooden houses, they are important shelter options for migrant laborers from Myanmar. "Digital nomads" from Europe, on the other hand, might prefer living in a vernacular wooden building of the old city and surrounding neighborhoods, because of its "traditional feel."

> **A wooden house located in the city must provide a broad range of benefits, including convenience, comfort, stability, security, and social status. It is this complexity that makes the house valuable.**

Another social group are commercial land developers, who influence land use and housing changes, the distribution of land values and corresponding sales of houses. Developers also influence, explicitly or implicitly through their supply, the taste and consumption patterns in the housing market, e.g. by attracting increasing numbers of people to master planned (sometimes gated) communities and through targeting specific consumer segments. To local government officials vernacular housing holds meaning in so far as it constitutes an object of planning and property regulations. An influential group consists of what we might call here preservation advocates and cultural (heritage) researchers in Chiang Mai, especially with backgrounds in architecture and planning, who, for different reasons, leverage various meanings of wooden vernacular housing to advocate for its preservation. This group has overlaps with people, whom Johnson (2010) refers to as "cultural brokers" in his research in Chiang Mai, as well as the media, specifically social media in our study. The "heritage advocate group" also includes members of the younger generation seeking to establish sustainable ways of life and values while at the same time preserving traditional craftsmanship. Wooden vernacular houses to this group means treasured personal memories from childhood, and an indicator of history and cultural heritage of Chiang Mai, especially as a representation of the much promoted "Lanna culture" of northern Thailand, and it is seen as an asset in the promotion of Chiang Mai as tourist destination and its designation as UNESCO World Heritage site. At this instance, a final social group requires at least mentioning here, although it takes us beyond the city scale and Chiang Mai's center, namely the Royal family of Thailand, who have a fair amount of influence on Thai architecture and its role in national imagery and narrative also at local levels[1], through urban development and cultural heritage preservation agencies (for more details on their role, see Grossman, et al., 2017b; Krairiksh, 2013; Lertcharnrit, 2017; Pimonsathean, 2013; Sakulpanich, 2013).

At the second scale of social grouping, at the scale of individual houses and their immediate surroundings, we consider those people, who have a comparatively closer connection with wooden houses than groups at the city scale. These may be current owners or renters, people who are likely to inherit or consider buying vernacular wooden houses, specifically for residential use and preserve the house as such. Important distinguishing characteristics are age and income, with older people generally more inclined to live in and maintain wooden family houses than the younger generation; and because the maintenance of wooden houses can be quite costly the household requires a minimum amount of income for repairs and upgrading. We found the dichotomy "old versus young generation" evoked in the context of urban change more generally, going beyond differences in the perceptions of vernacular housing. Rather than constituting a measurable variable (age above or

1 Johnson (2010) also points to the influential role of the national government under Northern-born Prime Minister Thaksin Shinawatra, as one of the "largest force[s] influencing construction and re-invention of space in the city [Chiang Mai]" (p. 334).

Figure 1: Wooden residential house in the Chang Moi neighborhood with kalae
Photography by C. Richter, July 2022

below xy) to explain variations in perception in a statistical sense, the evocation of the age dichotomy might be interpreted as part of a more general narrative representing urban transformations in Chiang Mai in different aspects. Important to people's perceptions is also whether they have lived in wooden vernacular houses during their childhood or even at a later point in time and made pleasant memories. Not surprisingly, this increases the openness to considering the reuse of existing wooden buildings and their maintenance. In addition, crafts related skills of household members themselves or knowledge and connection on how to access craftspeople influence how current and future preservation of houses are viewed. We further distinguish between owners and renters as these not only have different attachments to the houses (e.g. as home of family ancestors in the case of owners, who inherited the house), but also have different ties to the surrounding community and different decision making powers with respect to the house. The prevalence of various social norms and values within a household influences perceptions and views on what to do with the home. For example, inheritance practices might demand of the oldest daughter to take care of house in some families, whereas in other families profit orientation may prevail leading to a somewhat more relaxed attitude towards selling the house.

3.2. Houses and Indoor Comfort as Mediating Circumstances

Characteristics of the house itself and its surrounding areas constitute a mediating circumstance in so far as they influence the views of owners, renters or (potential) users and buyers regarding the houses' preservation. Our pilot districts are the Lam Chang neighborhood, a predominantly Buddhist community around Wat Lam Chang, located in the eastern sub-district of Si-Phum of Mueang Chiang Mai and Wat Ket, an old merchant community of Muslim, Buddhist and Christian residents located in the eastern Wat Ket sub-district of Mueang Chiang Mai along the Ping River. Both neighborhoods are characterized by strong neighborhood ties. The wooden houses in these neighborhoods range in age between 20 to 90 years and to this day are still used for residential purposes or mixed residential-commercial uses. While materials and styles have changed through time, e.g. from wood masonry and clay tile roofs to post-modern minimalist styles with mixed materials, wood as a material dominates in its stylistic contribution and as a core structural element in the houses being studied. Structures often contain elements that evoke a Lanna past or tradition, especially the kalae (carved wooden crossing attached to the gables of the house, see figure 1). As indicator of a past taken into the future, the kalae also decorates many new structures, even if steel, concrete and glass dominate the structure.

The age of the house itself is a mediating circumstance. One academic, with whom we discussed the topic explained that this can be likened to the value ascribed to cars. New wooden

houses, often in Scandinavian or Japanese looking styles and mixed with concrete elements are highly valued as modern luxury items. Very old wooden houses are also highly valued as cultural heritage. But there is an age span in between, that cannot be unequivocally defined, where a wooden house may simply be regarded as not modern enough (in terms of indoor comfort and aesthetics) and hence worth the extra expenses of maintenance by some people, for instance young buyers, or it may be considered worthwhile preserving by others, for example due to its value as family heritage. In the addition, there is variation in terms of use. Some houses, regardless of age, may be considered more suitable for commercial, for instance touristic use, while others remain at least partially residential (see figure 2). It is this sort of "middle-range" residential housing, which we now briefly discuss, and which will constitute a more prominent focus of the research in the immediate future.

In case of residential use, indoor comfort of current and future residents mediates people's perceptions on the preservation of residential or mixed-use wooden houses. In the following very brief discussion we draw on material from the focus groups only, i.e. insights from relatively homogenous groups of respondents (mostly 50 years of age and older, who either used to or currently live in wooden houses) to show how perceptions differ for this group due to the house's characteristics in relation to its surroundings. Overall, respondents attribute wooden houses a peaceful, harmonious, beautiful atmosphere with close associations to nature. These meanings of the houses are mostly associated with the material (wood) itself, but often also with the characteristics of the immediate surroundings, especially trees and shade.
The surrounding area's influence may partially explain contradictions in residents' perceptions of indoor comfort, especially thermal conditions. While some residents state that wooden houses are cool and well ventilated in summer, others point out that they become stuffy and dusty requiring either an A/C to be installed, which can be costly, or windows to be enlarged for better ventilation. Residents specifically mention planting trees as an important factor to support the preservation of wooden houses (see figure 3).

Perceptions of indoor comfort are quite individual[2]. For example, while one focus group respondent finds the indoors comfortable in summer, but too cold in winter, another stated that "the wooden house is suitable for the local climate's airy summer, and in the winter it has the warm feeling of living in the woods." The latter quote is interesting as it possibly hints to the perception of warmth associated with the "feel" of wood rather any actual, measurable temperature. In addition, there are perceived differences between floors. While the higher floor may be too hot in summer, the lower floors are still comfortable. The older generation

Figure 2: The lower floor of these buildings in the Wat Ket community is used for commercial purposes, while the upper floor of the buildings is for residential use. The building on the far-right side of the photo also shows how materials are often mixed with concrete or cement being used for the lower floor while the upper floor remains wooden (Photography: School of Public Policy, CMU, December 2019)

2 It should be noted that this may have epistemological reasons. For instance, while we assume that responses reflect people's actual, subjective perceptions of indoor comfort, there is a possibility that the responses regarding this topic reflect to some degree how much people value wood as a material and seek to advocate for the preservation of wooden houses. An especially poignant example is the interview with a housing developer, who makes the opposite argument, namely that concrete absorbs the heat better and therefore an A/C is more likely to be required in a wooden building. He later explained that he "trusts" concrete more. In other words, questions and responses about indoor comfort may tell us as much or more about the value of different materials among people than the perceived comfort in terms of air quality and temperature.

Figure 3: Wooden residential houses in San Pa Tong, at the outskirts of Chiang Mai, surrounded by greenery and trees. Photography by U. Kaiser, April 2022

represented in the focus groups also emphasizes the important role of wooden houses at the neighborhood scale in strengthening communal ties and identity, upholding family identity and lineage, being the pride of owners and as reference point to learn about traditional, especially Lanna, ways of life. Focus group representatives expressed concerns regarding the maintenance of wooden houses specifically due to high costs, low availability of affordable materials, high cost of repairs and the damage caused by termites and the bending of wood through time, as well as the need to lower fire risks, especially by improving electrical infrastructure in and surrounding the houses to avoid short circuits (see figure 4).

On the other hand, younger respondents, with whom we have mostly talked informally, and to a lesser degree as part of the interviews and focus groups so far, may have specific concerns living in wooden houses. They remember, for instance, being afraid as children to walk on higher floors with large cracks between the planks or the noises of screaking floorboards that would upset the adults and elders in the family. Their perspective will be explored in more depth in future steps of the study.

4. Reflection and Future Research

The research so far shows that social groups and their perceptions are dynamic and scale dependent, influenced by a number of what we called here "mediating circumstances." Here we focused on the house and its immediate surroundings as mediating circumstance, but others including changing household situations through time and regional dynamics also play an important role. For example, at the scale of the households living in wooden houses and/or the owners of wooden buildings, we see various possibilities, in which factors influencing the perceptions and requirements for preservation through use overlap and combine with one another, e.g. a household's income, the building's age, and the land prices in the surrounding neighborhood constitute unique conditions and situations, which lead to certain perceptions and actions.

In brief, the meanings houses hold for people and the corresponding social groups are the conglomerate outcome of social, physical and locational influences. Conceptually speaking this means that "interpretive flexibility" has a double significance in this case. First, it pertains to the flexible meanings over vernacular wooden houses depending on social groups. Second, it also relates to the scale-dependent dynamics in and between these social groups, which unsettle stable sets of social criteria that would allow for a social structuration unequivocally associated with perceptions and uses.

Therefore, *future applied research* needs to relate socio-economic characteristics of (current and potential) residents and their corresponding perspectives to specific locational situations and building characteristics, as a basis for the identification of requirements to preserve houses through residential use across the city.

At a more summative level and cutting across the double-significance of interpretive flexibility, the different meanings of wooden houses described in this paper are reflected in Soini's and Birkeland's (2014) "four political and ideological contexts,... which provide ... perspectives on the political ideologies and policy arenas to which cultural sustainability may refer," (p. 213) and which the authors identified based on storylines evident in the discourse on cultural sustainability. In the first, the conservative perspective, tangible and intangible

culture are seen as a capital to be preserved for future generations and carry value for the creation of collective identities. This view is represented in our analysis especially by the "heritage advocate group," but may also be held by members of the older generation and those people, who have lived in wooden houses before or in their childhood. The second perspective on cultural sustainability, namely a neoliberalist view, emphasizes culture as a resource for economic development, which in our case is represented, for instance, by businesspeople, who benefit from proximity to well-maintained wooden houses if these help to attract customers or by house owners and young people inheriting houses, who change the function of the house to commercial uses. According to the third, communitarian perspective, "culture is considered broadly as a process and as a diversity of ways of life [and] values, ...where cultural development is to be treated in the specific and local cultural context, a community" (Soini & Birkeland, 2014, p. 219). For example, older members of the focus groups in our study emphasize the important role of wooden houses to strengthening communal ties and identity. And finally, the environmental perspective, where "culture is considered in terms of the human-nature interface" (Soni & Birkeland, 2014, p. 219) and ecological reasoning dominates, finds expression in our study, in people's appreciation of wood as a building material, because of its "natural feel" and recyclability as well as the importance attributed to natural surroundings of wooden houses, especially trees.

The technologies of housing (preservation, construction, renovation, etc.) are likely to take on different shapes depending on these four political and ideological contexts. Accordingly, *future conceptual research* may document and identify pathways of stabilization of technology according to these respective socio-political contexts, in which they evolve.

Figure 4: Electrical wiring in front of wooden house in Wat Ket
Photography by: School of Public Policy, CMU, Chiang Mai, December 2019