



Mix Methods for Ethnic Acculturation Study on History of Architectural Elements: Vernacular Houses during Pontianak Sultanate

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Abstract

This study aims to find the embodiment of ethnic acculturation in the vernacular architectural elements of Pontianak's old houses showing multicultural culture in the past. The Pontianak community has been a multi-ethnic community from the start, with four dominant ethnic groups forming the Pontianak city, namely the Arab, Bugis, Banjar and Riau ethnic groups. The research used a qualitative-rationalistic method with the deeply observed in field case based on the mixed approach between the historical study of the role of each ethnic group and the typology study of architectural building elements. Research sample data in the form of Pontianak old houses are houses built between the early 19th century and the mid-20th century. The results of this study, firstly, the occurrence of ethnic acculturation on the elements of housing architecture in an integrated-assimilative manner. Secondly, the existence of the order of acculturation remained alive in traditional Pontianak community institutions until the mid-20th century shows a strong indication of the continuation of Vernacular Architecture discourse of the Pontianak Malay House.

Keywords: *Acculturation, interaction of ethnic groups, vernacular elements, Pontianak Malay House*

1. INTRODUCTION

Studying the history of urban settlements in the past was a part of efforts to strengthen cultural identity in order to preserve the potential of cultural diversity belonging to the community. This is a global movement in building cities and settlements which is qualified, safe and sustainable. This research is a part of efforts to explore the important, cultural riches of the past, especially to those who related to the history of Pontianak. The history of Pontianak began in 1771 when Syarif Abdurrahman al-Kadrie, an ethnic Arab with other ethnicities, led a process of

conquering the territory named Pontianak. According to Hasanuddin, & Kristanto (2001) the progress of Pontianak's development had encouraged a steady influx of migrants, from various ethnic groups, to interact and trade in the formation of Pontianak cities (Hasanuddin & Kristanto, 2001). At that time, Pontianak area was not under the control of any ethnic groups, including Dayak ethnic groups, so that the formation of character in the process of acculturation of social and multicultural cultures tending to be formed was newly integrative rather than assimilate. The developing social dynamics have shaped

various ethnics and social groups. According to Berry (1997) in acculturative terms they were always faced with the choice of whether to integrate or assimilate, or break away, or be socially marginalized (Berry, 1997). It was noted that the ethnic group members of the Sultan, who built Pontianak in the early period belonged to Bugis, Banjar, and Riau (Tambelan) in addition to Arab themselves.

The description of the background of social and political economic conditions in the initial formation of the city of Pontianak above, in accordance with what was stated by Berry (1997) that a positive pre-condition of "multicultural ideology" is needed, which has similar values, such as; low prejudice; positive reciprocity between groups; and there are similar bonds to certain identities (Berry, 1997), in which, there are similarities in the development of Pontianak. Figure-1 shows how the distribution of land tenure in each ethnic group is distributed wisely by the Sultanate of Pontianak without any conflicts. This also indicates the possibility that acculturation occurring is based on the same intention to build Pontianak. Within the scope of such cultural interactions, this study tried to examine in terms of the architecture of residences in the past, through typology studies of them on the physical elements of their architecture, and it will read how cultural interactions in the physical builders of their homes. It is hoped that the dynamics of acculturation will be read in the form of the dwelling, so that this will also mark the history of vernacular architecture at that time.

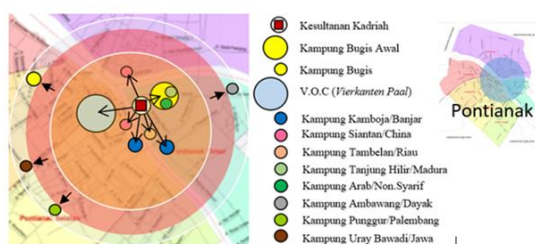


Figure-1. The Sultan's policy and allocating land for migrants of various ethnic diversity in Pontianak City

Related to the notion of vernacular architecture, this study refers to the statement of Robert Brown & Daniel Maudlin (2011) that:

“The study of vernacular architecture is as a study of 'traditional buildings': as a building product that is authentic from a particular place, by certain people, and has evolved forms over time, and are produced by 'ordinary people' who are not experts through shared knowledge that is passed down over time”(Brown & Maudlin, 2011).

The choice of the above understanding is in line with the direction of this research, among the various definitions of vernacular architecture that are very wide.

1.1. Vernacular architecture in a spectrum of cultures

When studying the culture of the past, historians always trace the existence of historical evidence that still exists that can be extracted and presented. According to Koentjaraningrat (in (Yuliaty, 2007) that cultural factors are always discovered in the elements; namely elements of religion, organizational elements, elements of language, elements of knowledge, elements of technology, elements of art and elements of livelihood. In the course of time, it will be more difficult to find these elements in their original conditions as they always change according to the changing momentum. Information extracted is always in the form of flux, which must be read in changes to the continuum, so that the chronic form of history can be summed up and marked. According to Sutrisno (1988) the most difficult element to change is the element of religion, followed by elements of knowledge and social elements (organizations). This can also be interpreted as an element that is difficult to integrate. The fastest changing element is the element of livelihood (economy) and technological/tool elements. On the other hand, the elements of language and elements of art are more supportive of integration (economic and technological/tool demands).

In the context of vernacular architectural research related to Pontianak Malay houses, the aim is to find an embodiment of ethnic acculturation manifested in the vernacular architectural elements of old houses in Pontianak which were built between the early 19th century (1801) to the mid-20th century

(1940), like the example Figure-2 below. This period was chosen in addition to represent all sample cases about the legacy of the past and still hold to this day. It also describes the time span of house construction of each sample that can explain the changes in the acculturation process occurring in this artifact.

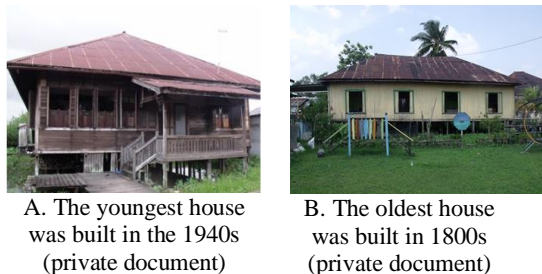


Figure-2. Examples of the youngest and oldest Pontianak traditional house

In multiethnic societies, people always experience acculturation processes including acculturation in architectural aspects and always depend on the strength of the role and cultural modalities of each ethnic group in shaping the multicultural society. They usually also research the phenomenon of acculturation requiring a long time to find the status of the acculturation process. So it is very important to pay attention to the research objectives to determine the time period over the subject studied, and the strength of the historical background accompanying it.

From the perspective of architectural history itself, Jameson (1990) explains how classical domestic architecture can be understood through archaeological, ethno-historical, and ethnographic data that can provide a clear picture of the relationship between buildings and spatial use from a diachronic perspective. According to Jameson (1990), this approach shows that architectural history is the social history of the community itself, by researching and exploring as many factors as possible that influence the form of use of the built space and environment, including economic, social, religious, material and physical environment (Jameson, 1990).

Another intense researcher with a diachronic view is Donley-Reid (Kent, 1990). By applying structural theory from Giddens, he attempted to understand (architecture) through the pattern of the relationship between the use

of space and the built environment. He argues that architecture plays an active role in compiling social hierarchies and is able to become an articulation of potential power in acculturation. Donley-Reid presents two aspects in human conception, namely behavior and (development) material culture which is an important aspect in understanding the interaction between space use and architecture, where social, political, and economic forces are important variables behind all interactions and roles between the parties in interacting and acculturating. Donley-Reid also mentioned the strong spread of Western culture and Islam, and showed how the spread of Islam resulted in changes in the use of space and architecture seen in some archaeological records (Kent, 1990).

The needs to use an acculturation approach should not be a problem for researchers, especially for archaeologists, because acculturation findings are not always intact, and sometimes they experience irregularities. However, through tracking consistent and continuous patterns, the original anomalies initially can be explained by acculturation (Kent, 1990). So this acculturation approach is a more accurate way to look at the past (Kent, 1990). A consistent relationship arises through the use of this cross-cultural approach (acculturation), where the greater number of sociopolitical complexities in the group (multiethnic), the higher the ratio that is functionally limited and the locus of diverse activities, and forms a more diverse form of architecture (Kent, 1990).

1.2. Historical exploration of inter-ethnic relations

In the context of research on ethnic acculturation, a strong historical assumption is needed, especially one related to the needs for the importance of understanding the context of events in the specified time continuum. This will involve several historical events that must be arranged in such a way that the momentum in the time continuum can be identified, and each level of the problem can be positioned in the study.

With the issue of acculturation, it is commonly associated with the migration of one group of

people or more than one region into another, which has a different cultural setting. There are two meanings, namely the immigrant group and the host community. This is for the first level acculturation. Advanced acculturation is the presence of a group of immigrants with different cultures, entering into the area of the local community but the community was formed from the previous acculturation. In this second case, which is common in developed cities, has become a pull factor in the process of migration or more precisely urbanization.

If residents of the local community who tend to facilitate separation does not participate in the acculturation process, it does not mean that acculturation does not occur. Acculturation can still occur between groups of migrants (fellow immigrants), where there is a tendency to become "native" (host) and some tend to influence in a limited way (interview: Heddy, 2016), depending on which ethnic group has the dominant one or more than cultural elements. With conditions like that, what effect on architecture, for example the ethnic group is superior in terms of technology/tools, or in terms of livelihoods and so on.

2. METHOD

2.1. Research Paradigm and Case Study Mix-Methods

This study uses the critical realism paradigm where the truth is at the intersection to the next truth which is increasingly fundamental, so that this research is rationalistic through the case study method as the chosen method to obtain the research findings. From preliminary observations, based on data that allows it to be traced, the case study approach takes embedded multicases, with the intention that the selected multicases is in a theme that is fixed, which is related to the phenomenon of acculturation in vernacular Pontianak Malay architectural elements (as an element of technological culture/tools) which manifests in the artifact (case) studied.

Research Framework

Based on historical basic assumptions formulated in preliminary observations, the research questions are formulated, which are how and why ethnic acculturation manifests

itself in vernacular architectural elements of Pontianak Malay houses built since the early 19th century until the mid-20th century.

From the historical assumptions and research questions above, some of the propositions that can be put forward here are as follows:

- In the embodiment of the results of ethnic acculturation in the vernacular Pontianak Malay architectural element, which character is permanent (continuity) and which characters are a changeable nature.
- In both forms of character there should be a relationship of exchange of values associated with the realization of the vernacular Pontianak Malay architectural element.
- In the context of ethnic identity, the research conclusions will be used to measure the basic character of Pontianak Malay architecture.

2.2. Research Design

In this study, the data for the needs of typological studies of buildings and ethnic vernacular data was to be used as assessors/comparators in conducting data analysis. Both are carried out simultaneously, especially data about ethnic vernacular which organically follows the objectives of each substantive step (working hypothesis) towards the research proposition. So that in building the formulation of typology of acculturation that occurs, this leads to the formulation of inter-ethnic roles in the acculturation of forms that manifest in traditional Pontianak houses. It is expected that through the nomothetic (quantitative) approach, conclusions can be drawn from the level of the role of each ethnic in vernacular Pontianak's architecture. Schematically the research flow was carried out as shown in Figure-3.

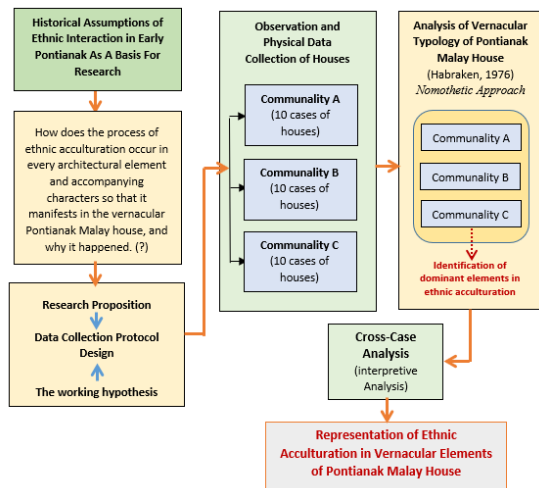


Figure-3. Research Flow Schemes with Case Study Mix-Methods

Based on the preliminary survey, some of the things set out in the design of this study - specifically those related to the direction of the case study method - are as follows:

- Formulating a number of historical assumptions related to any ethnicity that interacts or acculturates in the early period of Pontianak, the context that surrounds it, then traces the vernacular architectural elements of each ethnicity, according to Habracken's typology framework (Habracken, 1988).
- Conducting surveys (observations) of 30 units of vernacular (purposive) housing samples that were built over a period of + 150 years, namely between the early 19th century and houses built in the mid-20th century. All samples were grouped into 3 different communal zones, obtaining triangulation test related to 3 different neighborhoods. See Figure-4 below.



Figure-4. The three communal zones are thought to have the same vernacularity character

- Collecting physical data of buildings and their mastery in all three communal zones, following Habracken's theoretical framework of aspects of residential typology according to nomothetic approach. This data will meet the needs of an analysis of architectural typology of the results of ethnic acculturation that occurred.
- Interpreting the nomothetic results of each case unit and make inferences about the role and influence of each ethnic group in the process of acculturation in the vernacular form of Pontianak Malay Houses.

3. RESULTS AND DISCUSSION

3.1. History of inter-ethnic interactions in the formation of the City of Pontianak

Sultan Syarif Abdurrahman Al-Kadrie, the first Sultan of Pontianak, coming from Arab, from the beginning of developing Pontianak ethnic communities that existed at the time; namely Bugis, Banjar and Riau (Listiana, 2009). Through the Sultan's policy, they occupied the ethnic villages that had been established, such as: Tambelan (Riau) village, Arab village, Serasan village (Banjar), Bangka village, Siantan village (Riau), Cambodian village (Thailand), and Kuantan village (Malaysia) village (Listiana, 2009). The villages developed, which began with one family or a group of families, and continued to grow after experiencing the arrival of migrants according to their ethnic groups.

In the context of wider inter-ethnic meetings, as a result of inter-ethnic marriage, there is also an acculturation process that tends to be assimilative, especially ethnic groups who are acculturated socio-religiously, or because of the similarity of Islamic beliefs so that they merge as part of ethnic Malays in Pontianak. The term Malay is a big house for other ethnic groups, as a form of assimilation in socio-religious similarity. They become more suitable in the ethnic unit of Pontianak. The ethnic groups who immerse themselves in the Malays are Bugis, Banjar, Riau/Tambelan ethnic group, Bangka, and Arab non-Alawiyyin (*syech*) and some Arab Alawiyyin. Therefore, when referring to Malay in various

other regions such as Riau Malay, Palembang Malay, Johor Malay, the mentioning of Pontianak Malay also explains a variety of Malay cultures whose diversity occurs because of the flexibility of a distinctive identity form rooted in local culture (Simanjuntak, 2015). The distribution of ethnic villages could be seen in figure 1 In the framework of such historical assumptions. This study has a context on how ethnic acculturation occurs in the form of vernacular architectural elements of Pontianak's house, and how the Pontianak Malay context is understood from its cultural roots.

3.2. The form of Vernacular Architecture of each Ethnicity

This research takes an important assumption and becomes a reference in the research design. In the context as described above, the vernacular architecture of Pontianak's Malay houses was understood as a manifestation of the cultural choice of inter-ethnic acculturation in initiating the formation of the Pontianak region, through the development of the initial settlement of the Kadriah Sultanate in Pontianak. This assumption is still in line with the general definition in vernacular architectural planning, by sharpening the role and inter-ethnic modalities in acculturation and is culturally selected and preserved in the early stages of the settlement construction process. Furthermore, this research must establish a comparison of the concepts and modalities of each ethnic group in interacting and producing choices that manifest in the physical form of the house being built. The basic reference is needed about the vernacularity of each ethnic as a comparison or examiner of the sample data that was successfully surveyed. Of the four (4) main ethnic groups, namely Arab, Bugis, Banjar, and Riau, some of the vernacular characters from each ethnicity can be described as follows:

a. Arab

The knowledge of Arab Alawiyyin migrants about building architecture is an architecture building with mud brick construction, which is very different from the regional conditions and how to build house construction in Kalimantan, which uses a lot of wood material

(Al-sabahi, 2005). Knowledge in building architecture is still limited to an understanding of the form of acculturation carried out by its predecessor (Arab Alawiyyin) when visiting from one city to another that he visited. Habib Husain Al-Kadrie himself in the course of his life, fully followed what was built by the local sultanate when it began to settle and become a Qadhi/judge in the kingdom of Matan and in the kingdom of Mempawah. Some aspects that allow experiencing acculturation are in the aspect of fulfilling the functional needs of activities and instilling spiritual values in building the meaning and function of space and the environment.

b. Bugis

In terms of the vernacularity of buildings, the Buginese vernacular architecture has the following characteristics (Akbar, 2007).

- The houses are wooden stage buildings.
- The Buginese has a very strong in the cosmological aspect both in its landscape (*macrocosmos*) and in homes (*microcosmos*). Syncretism is very strong in the ethnic Bugis vernacular. The concept of “Kepala-Badan-Kaki” is still believed to depict three different realms (upper realms/world/*rakkeang*, middle realm/world/*ale bola*, underworld/*bad/awe bola*).
- The Buginese has the concept of head: The shape of the gable (direction sideways), with space above the ceiling which confirms the existence of the upper nature (*Rakkaeng*). The number of blades (*Timpa Laja*) on the cliff of the screen reflects the social-stratification the Bugis community.
- The homes have an Aliri Pole, a single pole as a home/cosmological pillar (such as beliefs about Axis Mundi). From the Aliri pole, the pole position of the entire house is determined, the configuration is set (forming the bridge). It is a pole that will be said when setting it up.
- The main part of the house has two facades: Front facade (one door with many windows), and side facade (one window on each trave).
- The house has two foot concepts: a) Stage Poles with Umpak and Planting Foundation and b) Indirect stairs (short porch).

- The house has spatial building functions; The main building is a configuration of the form of building trave (called lontang), at least there are 3 traves (lontang); a) the front (lontang risaliweng), the middle part (lontang ritengah) and the back (lontang rilaleng). The Bugis house does not have a hierarchical affirmation through differentiating the height of the floor (main house). Porch/terrace is short enough. There is insulation in the room, especially the bedroom. The porch and kitchen (Jongke) are fused, separated from the main building after the Dutch's influence.

c. Banjar

In terms of the vernacularity of buildings, the Banjar vernacular architecture has the following characteristics (Semana & Irhamna, 2001):

- The houses are wooden stage buildings.
- The head concept is: Gable Roof (forward direction) called High Ridge Roof following sequential function of inner space in the main building, winged saddle shaped character.
- The house has a Main Mast; which consists of four columns as a pillar of a house which is said to be at the time of its construction.
- The house's body concept consists of: front facade (one/several doors without any windows), and side facade (one window on each trave).
- The house's foot concept consists of: a) Stage Poles with the foundation of the kacapuri system and b) The foot of the stairs leads directly to the Main door.
- The house is a building with spatial functions; a). There is an affirmation of the inner hierarchy of space by differentiating the height of the floor, b) The porch/terrace is along the width of the building, c) There is no blocking of inner space, d) Private space (sleeping space) is made by adding to the side (Anjung) with a window towards the front, e) The service room and kitchen are separated in the rear treble.

d. Riau

In terms of the vernacularity of buildings, the Banjar vernacular architecture has the following characteristics (Wahyuningsih & Abu, 1986):

- The houses are wooden stage buildings.
- The head concept of the building is: the gable roof that is called a longitudinal/melting house, It does not have a ceiling (following the slope of the roof) only covered with patchwork/patterned colors.
- The house has series of pole (name): in the number of five poles. These series of pole are read at the time of the pole erection.
- The main part (body) of the house has: front facade (one door with a window), and side facade (one window for each trave)
- The Concept of Legs consists of two parts: a) Stage poles with the foundation of the drawer system (without base), sometimes it is Umpak System, b) The foot of the stairs leads to the main door or sideways left-right and symmetry.
- The house has a spatial function Building: a). Affirmation of space hierarchy is not based on differentiation of floor height, b) Porch extends the width of the building, c) There is insulation of inner space d) Service room and kitchen are separated in the rear trave.

3.3. The Character of ethnic acculturation in the vernacular element of Pontianak's Malay house

This sub-section will explain the results of the strategic research approach, through an assessment of the level of distribution of the variables or elements of the vernacular architecture manifesting in each case (artifacts).

3.3.1. Continuity Elements

It is called a fixed architectural element because the element is very dominant (> 75%) in all the research samples tested. This indicates that the element continues to survive as part of the building even though time keeps changing. This was a collective agreement at that time and is maintained by the next generation of elements which remains in continuity. Also referred to a fixed feature

element as an element that remains in the context of the built environment (Rapoport, 1984; Al-Naim, 1998).

The results of the distribution value of the very dominant elements of vernacular architecture can be seen in Table-1 below:

Table-1. The dominant elements in Pontianak's Malay vernacular architecture (*fixed feature elements*)

Elements	Character Data Distribution	Pontianak Vernacularity		Ethnic influence on forms				Embodiment of Acculturation Findings
		Dominant character	(%)	Arab	Bugis	Klau	Banjar	
1 Plan		Grid	93	--	√	--	--	The Trave Unit is a grid module forming the Lontang concept floor plan in a Bugis vernacular house.
2 Roof		Limas	87	--	√	--	√	Limas shape as transformation/ integration of roof orientation form between Bugis vernacular and Banjar vernacular
3 Space of Roof		Plafond	77	--	√	--	--	Bugis Vernacular requires space under the roof as an illustration of the concept of Rakkeang (upper world) in Bugis cosmology.
4 Floor Height		Flat Floor	100	--	√	√	--	All ethnic groups agreed not to make distinctions in the floor of the main house (as a form of the principle of equality)
5 Fondati-on		Laci Galam-Peg System	100	--	√	--	√	A new engineering form of the Foundation system, as a transformation / integration of the Banjar kacapuri system with the Bugis peg system.
7 Main Column		"Tiang Seri"	100	--	√	√	--	Trust in the Main / First Pillar (as axis-mundi), such as the concept of the Aliri pole in the Bugis vernacular

• **The plan**

The plan is the main element (core) in the spatial system which is an important form in the realization of the vernacular architecture of the house as a whole. The concept of lontang in Buginese ethnic vernacular chosen by most ethnicities (93%), indeed in configuration has the most flexible forming structure of all ethnic groups. It is particularly in the formation of internal space plan organizations, but still can form a sequence in the hierarchy between internal spaces. The concept of Lontang in Bugis ethnicity (*Risaliweng-Ritenggah-Rilaleng*) is a combination of space modules in units of building traits that facilitate the formation of a space plan

organization. When related to the element of completeness of space, the completeness of space in all research samples shows that the dominant distribution in terms of minimum completeness is fulfilled in the spatial system of each case of the house (Habraken, 1988). Even with the Lontang system above, people can still form 3 spatial patterns, with their own comfort choices that are in accordance with their lives and livelihoods. Although it has consequences that the pattern of the chosen family room affects the relationship (accessibility) with the next room (connecting corridor) and the next (kitchen). Percentage of each pattern is consistently followed by other spaces and oriented to the choice of patterns in the main house. This is clearly solely for the smooth mobility of activities in the traditional house.

The three forms of variation patterns of the plan or formation of space organizations in their homes, and the formation of patterns based on the position of the Family Room as an important orientation point in the mobility of activities in the home are as follows:

The first, the Family Room has a centralized position and dominates as a shared space, so there are a number of cases (houses) which reduce some of the needs of their private space. It has the nature of relief in accommodating activities, with adequate lighting and ventilation. (See Figure-5)

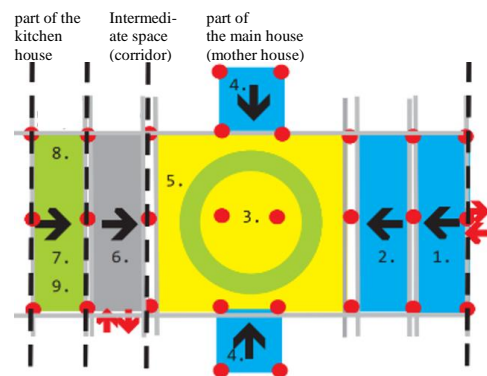


Figure-5. The position of the dominant family room (orientation center)

The second, the family room is in a position in the middle as a shared space and a space between other spaces, especially because of the need of adequate private space (sleeping space). It lacks of lighting and airing. (Figure-6)

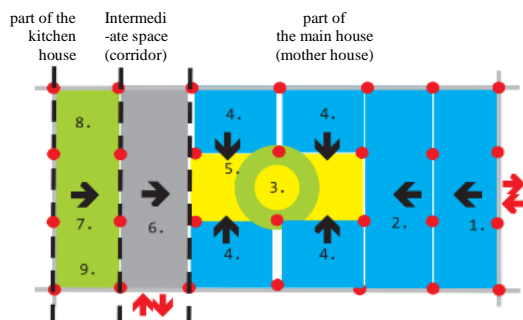


Figure-6. The position of the family room in the middle (as a corridor)

The third, the Family Room is in a position on the edge as a shared space and a space between, with sufficient lighting and airing. Generally this occurs in smaller traditional houses, with fewer columns/pillars than the previous 2 patterns. (Figure-7)

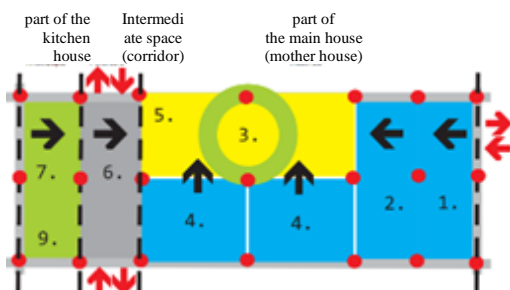
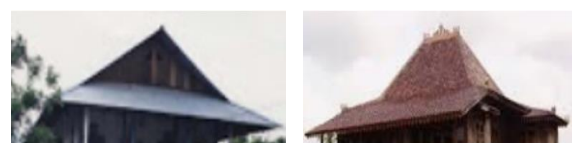


Figure-7. The position of family room on the edge (as a corridor)

- **The Roof**

The Roof is also the main element (*core*) in the physical system (*physical system*) which is an important form in the realization of vernacular architecture of the house as a whole. Almost all ethnic groups want the form of Limas (*pyramid-like form*) (87%). The rest choose the pelana shape that is inherited from both Bugis and Riau. In tracing the vernacular literature of ethnic Riau houses, it turns out that the Limas roof shape was not known until the late 19th century and

became popular in the early 20th century. Riau was more familiar with the concept of Transverse or Long Housing or the concept of Pelana like Bugis. So how is the form of Limas appear on Pontianak's vernacular architectural elements? Is this ingenious as a decision/compromise between the existing ethnic groups? Limas is formed as a form of merging one of the saddle roof models on the Bugis ethnic and the high ridge roof model on the Banjar ethnic, (in Java it is referred to the roof shape of Julang Ngapak), as what is shown in the following Figure-8:



A. Pelana shape (private document) B. Limas shape (private document)

Figure-8. The form of Pelana shape transformed into the Limas shape of the roof elements of the Pontianak vernacular architecture of Pontianak houses.

If this is the case, it means that the Bugis ethnic group has sacrificed the lost of the decorative form of the Timpa Laja. This is a compromise between the Bugis ethnic group and other ethnic groups, especially the Banjar ethnic group and the Riau ethnic group. Timpa Laja is a layer if on the pelana roof facade is to show the owner's social strata. This also means that the incident illustrates that the Bugis ethnic group in Pontianak has been willing to let go of the signs of differentiating social status in the Bugis community.

- **The roof space/ceiling**

The roof space/ceiling is also the main element (*core*) in the spatial system which is an important form in the realization of vernacular architecture of the house as a whole. All ethnicities have a ceiling element, even though this element is only known in Buginese ethnic vernacular, 77% is a functional space under the roof as evidenced by the presence of ascending ladders, while the remaining 23% is an ordinary cover ceiling without a ladder

up. So why is the ceiling still made in the vernacular architecture of this Pontianak Malay house? One thing that may be tested further is that there may be a cosmological belief of the owners/builders/artisans who have maintained the religious aspects in the Buginese vernacular, demanding all ethnicities to respect. As it is known that the religious system of the Bugis community believes (to date), the existence of the upper realms (*Rakkeang*), the middle realm (*Ale Bola*), and the lower realms (*Awa Bola*). Therefore the attitude of the carpentry becomes a picture in the modalities of the Bugis ethnic community and tends to keep making it, even though the choice is only limited to the ceiling, or the ceiling which is also the roof space as a sacred place, where offerings are placed. If this phenomenon is true, it means that there is a form of attitude in an acculturative way to tolerate religious attitudes from other ethnic groups, even though the house is their own house.

- **Distinction of Floor Height**

Distinction of Floor Height, is also the main element in the spatial system which is an important form in the realization of vernacular architecture of the house as a whole. In the absence of hierarchical distinction through the differentiation of floor height in the concept of Pontianak's vernacular house-building plans (100%), perhaps this is not a problem for Riau and Arab. However, what happens is that the ethnic accepts this flat floor concept, which is very different from the vernacular concept of the Banjar high ridge house confirming the existence of floor differentiation, as a differentiation of social strata. This shows the assimilationist's attitude of the Banjar ethnic community.

- **The Foundation of Tongkat (Pillar)**

It was realized that Pontianak's initial settlement environment was in the Kapuas delta, which brought together the Kapuas Kecil River and the Landak River. The need for building houses on stilts is a common choice

for all ethnic groups with acculturation. So that the condition of the place to build settlements is important and decided to be a joint choice between ethnic groups. *Tongkat* Foundation (Pillar) which is a core element in the physical system of wood construction, is an important element in the vernacular architectural engineering of the house as a whole.

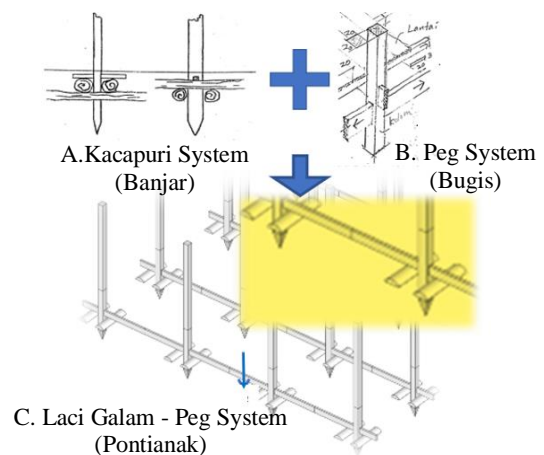


Figure-9. Integration between the Kacapuri (*Banjar*) and Peg (*Bugis*) into the Galam Wood Drawer System with the Peg System (*Pontianak*)

In Figure-9 above, the engineering that took place (as a result of acculturation) is a new ingenious locus that integrates the concept of the Kacapuri system (*Banjar* ethnicity) with its stake system (*Bugis* ethnicity).

- **The Main Column Pole**

The Main Column Pole is also a core element in the physical system which is an important manifestation in the realization of the vernacular architecture of the house as a whole. In general, the pole sizes of all ethnic groups are the same, except for Arabic, with dimensions of 15x15cm or 20x20cm. The difference is the determination of the main pole which was first put into place and carried out with each traditional ceremony. The case that Pontianak people believe that only one main pillar is designed is the same as the Bugis people who believe that, only one pole is ritualized (as axis mundi) and it is called the Aliri Pole. On the other hand,

the Banjar believes there should be 4 main pillars, and the Riau believes that there should be 5 main pillars which are carried out through the pole planting ceremony. Therefore, in this case the belief in Pontianak vernacular follows the Bugis people, but in naming the poles they follow the naming of the Riau. They call it, the planting ceremony of the Pole Series.

From all the descriptions of all the dominant and fixed vernacular elements (fixed feature element) in the Malay vernacular architecture in Pontianak, it emphasizes the existence of a fairly strong vernacular modality of Bugis ethnicity than others. However, in its realization in Pontianak there were a number of compromises with other ethnicities, which was acculturative-integrative-assimilative in the realization of Buginese vernacular in Pontianak, which proved to be very different from the original Bugis architecture itself.

The relational relationship in acculturation reflects the strong dialectical relationship between the culture of the Bugis and the Banjar, and there is a slight decrease in the Riau and the Arab. The Arabs tend to be acculturated assimilatively to the compromise that occurs, because they do not have conformity in the vernacular aspects, which are vernacular origin from the country of Yemen (hadhramaut) with mud-brick architecture. What is compromised in acculturation is a form of comfort for the Arabs living in a tropical climate environment. Some cases are found related to the use of space that is connected to religious demands from the aspect of Islamic faith beliefs.

On the other hand, the Riau, in its historical search has a background that is in line with the Bugis diasporas, so there are some similarities in their vernacular elements.

3.3.2. Changeable Elements

This is called an element of architecture that is easily changed because the element is very weak in the distribution of data, because it is

divided into various variants of choice. (See Table-2).

Table 2. Elements that are easily changed in the vernacular architecture of Pontianak Malay Houses (*semi-fixed feature elements*)

Elements	Character Data Distribution	Pontianak Vernacularity		Ethnic influence on forms				Embodiment of Acculturation Findings
		Dominant character	(%)	Arab	Bugis	Riau	Banjar	
1 Doors		The choice does not reflect ethnic suitability	53	--	--	--	--	This is an element that does not refer to its ethnic origin but rather to fashion trends, technological development, and development of building materials
2 Windows		The choice does not reflect ethnic suitability	34	--	--	--	--	
3 Porch		The choice of terrace is influenced by the character of the door and window not referring to ethnicity	57	--	--	--	--	

There is even no demand that the choice of variants does not come from the ethnic path. It means free as a choice of symbolic values and aesthetic values. This indicates that the element is volatile and easily affected by new technological elements/new equipment so that it is changeable (Al-Naim, 1998). This is an aesthetic freedom that is collectively quite fluid and not related to the provisions and values of the ethnic origin. Also referred to as semi-fixed feature element as an easily shifting element in the context of the built environment (Rapoport, 1984). Table-2 above illustrates how the frequency (%) of each element, which shows how the various choices of certain elements are to be decorated in their homes.

- **Porch (*Serambi*)**
Porch (*Serambi*), is an element that is tested in relation to the possibility of consideration of the hierarchical value of space that determines whether the portico must be long or short. However, the results of the distribution of existing data show that this element is included in the elements of aesthetic tastes and is not tied to the aspects of their ethnic origin. This is a new way of looking at the aspects of the hierarchy of the house, and the new good values that arise.
- **Doors and Windows**
Doors and Windows have the same character as the porch elements which

come from free choices that are not bound by any ethnicity. They are just that when a contingency analysis test is conducted, it shows that there is correspondence that describes the closeness of the data and the closeness of the phenomenon (with p-value = 0.0257, $\alpha = 0.05$), in a statistical sense there are 2 to 3 data from 30 deviant data. This means that there is an attitude of corresponding behavior when determining the functional aspects and aesthetic aspects of the choice of shapes from doors and windows. All ethnic groups behave the same way that doors and windows are important vehicles of social and visual communication which is in addition to being functionally fulfilled also in term of prestige as they are made to be as attractive as possible. Moreover, at the time there were many choices of doors and windows from both the ethnic vernacular sources and other ethnic groups. This also acculturatively has no taboos or prohibitions in relation to the use of certain symbols chosen/favored from other ethnic vernaculars.

Other elements, especially in the category of stylist systems tend to fall into this category Semi fixed feature elements, are elements that are structurally and easily replaced or updated or easily done. Examples of elements related to style systems with other aesthetic ornaments and motifs are roof edge, roof ornaments, fences, and stairs. Their characteristics, in addition to being easily installed, are not related to the main structure of the building.

3.3.3. Binding Elements

It is called a binding element because almost all the elements tested below are the same experience in inter-ethnic collective memory that is acculturated (Wattimena, 2016). Suddenly they have the same parameters about the new built environment in the Pontianak area, so that it raises similarities in collective communication that is very well related to the development of the vernacularity of Malay houses. These are all exceptions to Arab, who tend to "accept" all the compromises occurring in acculturation processes.

The numbers in the distribution below are not optimal because of the natural factors of decayed materials and technological developments that eventually substitute new materials. However, people's memories are still tied to the form/model of elements from the old vernacular. Table-3 below illustrates how certain elements of the building, have been familiarly understood by all acculturated ethnic groups, so that they become the same bond of knowledge that expands every development communication between them.

Table-3. The Binding elements are positive in the development of Pontianak's Malay vernacular architecture.

Elements	Character Data Distribution	Pontianak Vernacularity		Ethnic influence on forms				Embodiment of Acculturation Findings
		Dominant character	(%)	Arab	Bugis	Riau	Banjir	
1 Construct ion		Stilt House Concept	93	--	√	√	√	Except Arab ethnicity, all three ethnic groups have the same basic general knowledge about house-stage construction.
2 Material		"Belian" Timber	87	--	√	√	√	
3 Wall		Vertical Arrangement	80	--	√	√	√	
4 Floor		Transverse Arrangement	100	--	√	√	√	
5 Kitchen Area		Connected by a corridor (Pelantaran)	77	--	√	√	√	

From the elements of vernacular architecture that manifest permanently (Table-1), it turns out to be the main element of the building or the core elements forming the building. Thus, these elements can be made of a relatively intact model, the Vernacular Architecture model of the Pontianak Malay House, and can be illustrated in the following figure-10:



Figure-10. The vernacular architectural model of the Pontianak Malay house

Nevertheless, the above model still needs some supports from other related studies, especially related to the completeness of other residential cultures and forming a complete embodiment of Pontianak Malay House Architecture.

3.4. The existence of research findings on other related research results

This section is from searching of existing research journals, so far there have not been found any vernacular architectural research products related to the issue of inter-ethnic acculturation that began with the formation of inter-ethnic community collectivity in the past. In the sense that acculturation occurs as a form of inter-ethnic dialectic culture carrying all its cultural attributes/elements. While from a number of existing vernacular studies, vernacular architecture is still related as a unique cultural unit of ethnic housing that is uniquely formed and develops along with social developments in the traditional ethnic community (Rapoport, 1984; Balo, 2018). There are also many vernacular architectural studies that are associated with the theme of acculturation, but are usually limited to the context of certain ethnic migrations from other countries entering a new country (Kokurina, 2006; Hashimah & Ismail, 2012). Or also the case of acculturation in certain elements of other cultures that affect changes in the form of housing and urban (Sokienah & Tan, 2019). From various related studies above, it shows that some studies are divided into two groups, namely vernacular architecture which is studied from the original, traditional and vernacular architecture which is studied because it is influenced by aspects of cultural acculturation because of the changing times that affect the development of residential forms in society. The problem of vernacular architecture in relation to the original tradition has done a lot of research, as many people see the problem of vernacular architecture is limited to that. Whereas what is meant by the original tradition in terms of vernacular architecture is developing, following the development of time, especially related to materials, methods, and techniques in building cultures in society which might have shifted from the roots of the original tradition, both

related to the shift in material selection, construction techniques to the value of the norms contained and understood by the builders in the collectivity of society. The results of this study and the method show that fragments of the development period in the span is almost one and a half centuries, from the old 1800 and the youngest of 1945. It showed that the generation factor had the character of "keeping old values", so that within this range there were not many changes in architectural elements vernacular.

4. CONCLUSION

From the discussion above, this research can draw several important conclusions. First, this research has succeeded in finding an embodiment of ethnic acculturation in the vernacular of Pontianak Malay houses in the past, through a search of its architectural elements. Second, the strength of this study is the meeting of vernacular acculturation elements that appear dominant in the majority of samples that have a long development span, 150 years. This confirms the existence of fixed elements (*continuity elements or fixed feature elements*) that are chosen, maintained and continuously built by the building community for generations. Third, there is a collective memory inherent in both the building group and the community to continue to maintain the vernacular value of this Pontianak Malay house. In a sense, even though the building group was from a different ethnic group (China, late 19th century), and not from the Buginese ethnic group, it turned out to be the same manifestation of vernacular architecture. This is a picture of a typical past generation that has more to maintain the old values. This shows that the generation has different characters. Fourth, *changeable elements (semi-fixed feature elements)* are a very dynamic picture of value freedom. Fifth, the binding element is a catalyst for simple vernacular values that are commonly understood by the community, specific to this case because they have the same coastal cultural roots, such as the form of a stage house with waterproof wood material and various material using wood to complement the existence of other residential functions.

Finally, the results of this study illustrate a number of dominant vernacular architectural elements derived from Bugis vernacular values, solely because the modality of the builders in the early days were dominated by ethnic Bugis builders. This is also supported by tracing its history. But still, its manifestation in Pontianak Malay vernacular is different from the original vernacular manifestation of the Bugis ethnicity. It is a new embodiment as a result of acculturation and wisdom from each ethnic group. So, it needs to be emphasized here that this study does not have the slightest intention for the purpose of purifying certain ethnicities.

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