THE RELATIONSHIP BETWEEN BALINESE CULTURAL VALUES AND BALINESE HOUSE FORM

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ABSTRACT

THE RELATIONSHIP BETWEEN BALINESE CULTURAL VALUES AND BALINESE HOUSE FORM

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This study investigated the relationship between Balinese cultural values and house form. In this study Balinese cultural values were understood as cosmological beliefs in Bali associated with traditional house form. House forms were understood as consequential forms resulted by respondents adapting the house to meet their growing and changing needs.

In Bali, a traditional house was designed by an *undagi* (traditional architect) who follows rules in *lontars* (ancient architectural scrolls called *Hasta Kosala Kosali*). However, the *lontars* did not provide guidance for house adaptation. The need for house adaptation was big, in addition, cultural values in Bali changed rapidly in the past two decades. Thus, the research problem was whether 'Balinese maintain the traditional beliefs and use them as norms when making house adaptation. The task, therefore, was to relate two reciprocal factors: an evaluation of what people expressed as their beliefs and values on the one hand, and the analyses of the forms of the adapted house on the other hand. To find the answer to the research problems, three sub-hypotheses were proposed to be tested.

With regard to Balinese cultural values associated with house forms, it studies three attitude components : (a) beliefs (cognitive factor); (b) attitudes (affective factor); and (c) tendency-to-act (conative factor). These attitudes were assessed by attitude measurement using Likert scale. Observation of house form was focused on six elements (a) existence of traditional and new buildings; (b) layout of each building in the house lot; (c) the location of entrance gate; (d) building plan and shape; (e) building materials and techniques; and (f) area of house lot and floor area of each building. Traditional architectural norms were used to assess the adapted house form.

Findings showed village respondents held Balinese beliefs and values firmly than the urban respondents, however, in the examination under conative factor, urban respondents insist in maintaining the traditional house form, whereas the village respondents want the other way. Assessment of house form shows that the bigger the changes in a Balinese traditional house the bigger it deviated from the norms. Small, moderate, or large changes in house adaptation was related to respondents' beliefs and values.

This study concluded that in the process of house adaptation, the Balinese traditional house which formerly followed traditional cosmic order is now subject to change. Balinese cultural values, although maintained by respondents in general, were not used as norms and guidance by the inhabitants when they made adaptation to the house.

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DECLARATION

1 The candidate, Mauro Purnomo Rahardjo, while registered for the degree of Doctor of Philosophy, was not registered for another award of the CNAA or of a University during the research programme.

2 The candidate, Mauro Purnomo Rahardjo, while registered for the degree of Doctor of Philosophy, did undertake and complete advanced studies in connection with the programme of research in partial fulfilment of the requirements of the degree

Mauro Purnomo Rahardjo

DEDICATION

This thesis is dedicated to my father, Slamet Rahardjo
and to my teacher, Dr. Roland Newman.

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Chapter ONE:
I N T R O D U C T I O N

I.1. INTRODUCTION

This chapter attempts to explain briefly this research work in five stages : the background of the study; the nature of the research problems; problem statements, approaches and strategy, the main hypothesis; and the aim, use and importance of the study.

First, the background of the study explains how the research idea was derived. Because this study is a continuation of the writer's Master's thesis, a summary of the Master's stage is given and how it is related to the PhD stage is discussed. It is argued that Hindu Bali religion is to the Balinese their law, the force that holds the community together, and provides the significant cultural values for the Balinese. For centuries architecture has been governed by these religious values. However with the unprecedented rate of development in the past two decades things have changed . The idea behind this study is to examine whether the religious values can be the norms for the Balinese in generating architectural form, particularly in the form resulted by house adaptation.

Second, the research problem and its nature in the Balinese context is explored. There are five sources from which the problem emerged, i.e. : (1) worries expressed in the literature over the cultural discontinuity in Bali; (2) reports from local government; (3) interviews, whether formal or informal, with local authorities and laymen; (4) studies and research related to Balinese traditional houses; and (5) a preliminary visual observation in Bali.

Third, the research problem is stated. The architectural profession in general has been criticized for the denial of most users' social and cultural needs. In this study it was found that in Bali there is an indication of house changes, particularly those in villages in which inhabitants were trying to adapt their houses to create the

most appropriate house form to meet their social and cultural needs. The question is whether and to what extent the Balinese cultural values affect house owners' decisions when adapting their buildings.

Fourth, the approach to the research problem is focused on how cultural values are related to house form. Looking at culture as the main factor that generates architectural forms, in this instance house form is discussed. This discussion aims to arrive at the formulation of the main hypothesis.

Fifth, the aim, importance and use of the study are explained, and the extent to which the research problem was investigated is discussed. The limitations of time and funds at the disposal of the writer had has resulted in the limited data and information gathered in field survey.

Finally, a brief summary of each Chapter and how it is related to the others is given at the end of this chapter.

I.2. BACKGROUND OF THE STUDY

I.2.1. The Master's and PhD stages of the study.

This study is a continuation of the writer's Master's research. The Master research studied 'meaning' in Balinese traditional architectural forms. These Balinese traditional architectural forms were examined under three headings : (a) the concepts/ideas about the form; (b) the physical attributes of the form; and (c) the use of architectural form. It was argued that in order for meanings in the architectural forms to be important, they must fulfil three conditions, i.e, the concept of the form must be matched with how thc form was used, and the attributes of the form must signify both the concept and the its use. This can be described in the following diagram :

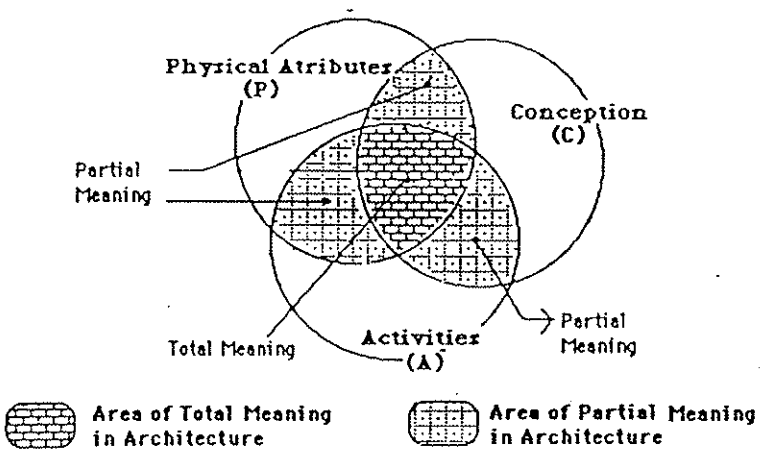

diagram I.1. Partial and Total
Meaning (in Rahardjo, 1988, p.21)

In the study it was found that most of the architectural meanings could only be identified partially. Partial meaning indicated that only two factors were satisfied by the forms. Very rarely was it found that a form could fulfil the three factors together, in order to form a 'total meaning' (see the diagram above). Therefore it was concluded that there were other 'meanings', whether they were new meanings or changed meanings, apart from the given traditional concepts or ideas about the forms which shaped the buildings. It was also found that not only had the concepts or ideas about the traditional forms changed, but the use of the forms had also changed.

Nevertheless, most literature about Balinese architecture wrote as though only minor changes had occurred, as though Bali was still in its former state. Therefore, the in the PhD stage the study explored further how the respondents expressed their values related to Balinese traditional beliefs and norms associated with house form, and how these values were related to the actual physical changes in the respondents' houses.

I.2.2. The cultural values and the house form in Bali.

Hindu-Bali religion so dominates the Balinese culture that almost all aspects of the life of the Balinese are governed by their religion. This phenomenon, which has been passed down over centuries, was manifested explicitly in the traditional architecture, including the Balinese traditional house.

The religious cultural values in this study are particularly those associated with the Balinese traditional architectural norms which were written in the ancient *lontars,* called Hasta Kosala Kosali. The research carried out in the writer's earlier study gave a considerable measure of support to the proposition that these Balinese traditional beliefs had contributed greatly to the generation of Balinese traditional architecture (Rahardjo, 1989). Each building compound in a house was not only arranged according to the cosmological axis, but also almost every detail of the buildings was designed and constructed in accordance with the traditional norms.

Parimin (1986) and Wiranto (1985) also found in their studies that buildings in villages were aligned to the sacred-profane axis, and therefore spatial formation in villages is not neutral, as in Cartesian space. The sacred-profane concept is deeply ingrained in the Balinese psyche. The daily attitudes and behaviour of the Balinese reflect this highly orientational/ directional space. For example, most Balinese sleep with his or her head towards either *kaja* (towards the mountain) or *kangin* (towards the sunrise) direction. Guests of a household are usually seated in the sacred direction. Many house inhabitants would not put a door to the closet on the sacred side of a bedroom.

I.2.3. The culture that remains intact.

The culture of Bali is traceable back to the 'golden age' of the Majapahit Hindu kingdom in East-Java in the 14th and 15th centuries (see also Chapter Two).

With the growing influence of Islam in this period, the last king of Majapahit decided to flee, together with thousands of people from the royal family, priests, soldiers, scholars and artists, to his last colony, Bali (Mulyana, 1976). This influx not only led to great political changes in Bali, but more than that, formed the basis of a flourishing cultural and social life based mainly on religion. According to many sources this culture has lasted until the present day (Ramseyers, 1977; Boon, 1977; Yunus, 1985; Setia, 1986; Mabbett, 1985; Eisenman, 1989; Eisenman, 1990). This is open to question.

According to some writers mentioned in the above paragraph, the culture which started to form its roots in the 14th - 15th centuries does now remain largely intact. Writings and publications which were made one hundred or more years ago (for example by Sir Stamford Raffles, 1821 , and Cool, 1894) and from the 1920's until the 1980's show that the Balinese belief system underwent only minor changes. (Krause, 1920; Powell, 1930; Covarrubias, 1937; McPhee, 1944; Swellengrebel, 1960 and 1969; Hanna, 1976; Lansing, 1983; and Vickers, 1990). According to these sources, only little change had taken place in Balinese culture and its associated architectural forms. Even during the period of Dutch (starting only in 1908) and Japanese occupation (1942-1945), it is generally accepted that colonial buildings were, as a matter of practical policy, largely confined to administrative buildings suitable for an occupying power.

This means according to some interpretations that Balinese are "primitive" because they have undergone little change. Thus an impression of the present situation in Bali could be described as : 'The world of "primitive man" is "a world which has no development as we understand it". Gutkind asserts that 'change means a break in the established and reciprocal relationship between man and his environment, and would destroy the unity between man and natural phenomena' (Gutkind, 1953 : 59).

However this statement needs to be scrutinized. Oliver asked 'Are we right to assume a world without change, evolution or decline so that its static state makes the existing examples of certain societies comparable with "primitive man", their dwelling serving as examples of building prototypes ? Some anthropologists would contend that they are not' (Oliver, 1969 : 9). Certainly, much development and change took place before the Balinese traditional house was looked.

I.2.4. Cultural change and value changes

In the period 1945 - 1965 Bali's physical development slowed down. Indonesia had been very 'busy' in maintaining her independence since 1945. Wars with the Dutch, who wanted Indonesia back as a colony, and Sukarno's programmes opposing imperialism and neo-colonialism, local riots and separatist movements, had made the country's economy difficult to expand. It was hard for Indonesia to launch a development programme. Mt. Agung's explosion in 1963 put Balinese development into an almost stagnant situation. The plague and calamity in 1965, as a result of abortive coup d'etat by the Indonesian communist party, brought tens of thousands of deaths in Bali.

Thus, earlier statement in Chapter I.2.2. which indicates that there were no modifications in Bali is not completely true.

With a very weak economy, the majority of people could not afford to make significant changes to their houses. It was only in 1969 that the New-Order government under Suharto's regime started the five year development plan. Economic progress has flourished since the 1970s. When tourism boomed in Bali in the early 1980s, the government began tourist development programmes on a massive scale (see also Chapter II.2.6).

After more than two decades of development, there were many changes in

Bali. These changes did not occur only in the physical environment but also in the mental attitudes of the people; according to some authors there were also changes in cultural values (see for example, Bagus, 1980). Now, with a more stable and steadily growing economy, there are more people who can afford to spend money on their houses, buying or building a new house, or making necessary changes to their dwelling.

I.2.5. Development and its consequences.

Obviously, a rapid pace of development in Bali brought changes, notably in the built environment and in the people's values. Several consecutive questions arose from the above discussion: Do the Balinese still maintain their traditional beliefs ? Does development affect their attitudes towards those beliefs ? Would changes in attitudes towards the traditional beliefs cause some Balinese to adapt their traditional house ? To what extent do present Balinese house forms differ from the traditional norms ? Is there any correlation between changes in beliefs and changes in house form ?

Such questions are difficult to examine and answer. On the one hand, if the traditional values are maintained, would this guarantee that the traditional house form is also maintained ? On the other hand, if there are changes of attitudes towards traditional beliefs, does it automatically lead the Balinese people to change their houses according to the current values. This study attempted to examine the relationship between changes in attitudes towards Balinese traditional beliefs associated with Balinese house forms and the changes, if any, in Balinese house form as a result of people making such adaptations.

I.3. THE NATURE OF THE RESEARCH PROBLEM

I.3.1. Worries over cultural discontinuity in Bali.

Miguel Covarrubias was possibly the first author to state his worries over the cultural continuity in Bali. 'Balinese culture is a living culture that is doomed to disappear under the merciless onslaught of modern commercialism and standardization' (Covarrubias, 1936 :xxv). Commercialisation seems to be the term that haunts Balinese cultural survival. Similar concern has been expressed : 'Bali is really commercial, this place is going to hell' (Setia, 1986 :1). Yoeti (1985) gave many examples of how Balinese culture was threatened by commercialisation. Commercialisation is regarded by many tourist planning authorities and Balinese artists, musicians and dancers as the major threat to their culture, degrading the standards of their art, and detracting from the religious purity of their work.

However, is continuity of Balinese culture really under threat ? The description of what is going on in Bali in the above paragraph has a negative tone, but there is also a positive view. For example it has been claimed that the Balinese have, for a long time, been good at filtering out those parts of foreign culture which can be absorbed (Setia, 1986 :4). It is argued that there is a dynamic process which adopts outside influences only for the Balinese good. Another view suggested that massive tourism makes Balinese more aware of their exotic culture, and this propels them towards a cultural revival. Relationship with outsiders increases a desire to find and strengthen the Balinese identity. This is supported by the belief-system, values and norms of the original culture (Melalatoa, 1989 : 36).

Concern about Bali's cultural survival is based on a number of different premises: (a) that there is a fixed, authentic and unalterable Balinese culture; (b) that it should be maintained and protected, to stop it becoming unstable, unauthentic, un-Balinese; and (c) that preserving Balinese culture is in the interest of the Balinese,

who can be considered a homogenous entity (Vickers, 1990 :196-197). However, Balinese culture has been the main reason for the tourist trade. There are examples in which the three premises that Vickers proposed are weakened, e.g., ritual performance in the form of dances and music are simplified in length and the process, to fit tourist programmes; traditional architectural forms, such as the *candi bentar, paduraksa, bale kulkul* and stone shrines are copied in modern buildings (hotels and offices); and temples are used for ordinary marriage. Some of these activities are arranged by the Balinese themselves.

I.3.2. Official reports

There is ample evidence that the number of Balinese traditional houses over the island is decreasing (Bali Pos, 29 Maret 1989; Bali Pos, 14 September 1990); unfortunately there are no firm figures available. In 1974, the Balinese government drew up building regulations (Perda No.2 / 3 / and 4, 1974) which were expected to guide the Balinese into maintaining the traditional characteristics of building design, at least in certain respects. However, there was a tendency for the people to ignore these regulations (Soemadi, 1982 :3) and a general lack of their enforcement. Violation of the regulations was identified as the result of a lack of understanding of the function of building permits and the 'pollution' of Balinese architecture which had already spread over the island. Architectural 'pollution' was suspected to have a snow-ball effect in that there were a lot more buildings, domestic or non-domestic, copying the 'inappropriate' style.

In 1984 a meeting (*sabha*) between government officials, Balinese seniors, priests and scholars was held in Denpasar. A guidance book: 'Rumusan Arsitektur Tradisional Bali' ('The formulation of Balinese Traditional Architecture') was produced from the meeting. There was an apparent concern amongst the Balinese

about the fate of traditional buildings, including Balinese traditional houses. This guidance was meant to support the official building regulations of 1974, so that the rules and regulations might be implemented. However, the book's emphasis was largely on the Hindu-Bali philosophy rather than on technical guidance, which would have been essential for implementation. Therefore these regulations were found to be largely not practical for their intended purpose.

In the case of traditional houses in Bali, the recent trends show that, as a result of the influence of tourism and other outside influences, basic principles creating traditional buildings according to *Hasta Kosala-Kosali* have been ignored, and many architects have stepped outside the traditional beliefs associated with the erection of buildings (Patra, 1985 :132). It is also reported that residential buildings in the urban areas do not show identity with the life and culture of Bali, instead they look like buildings in a high density environment, while in rural areas, the houses copy the style of '*umah kantoran*' (office building). These phenomena occur in different part of the island (Soewarno, 1982 :25).

Another report from the Department of Public Works in Bali concluded that the development of architecture (including housing) that took place in Bali had put the Balinese into a cultural 'trap' (Sularto, 1971 :6). Cultural 'trap', as Sularto explained, indicates two things : first, that the Balinese were not (mentally) ready to receive such massive development programmes; and second, that they were in a state of not knowing which direction to take to produce a proper building (such as a house) style.

I.3.3. Non-official reports

It has been hinted that there is a trend among the Balinese to think that something new is worth copying; new things are argued to increase a person's prestige in society. The Balinese started to adopt modern or Western culture without

realising that a negative impact might occur (Sukada, 1982 :13). There are a considerable number of residential and public buildings in Bali which blindly imitate foreign architectural styles.

Various newspapers and magazines revealed evidence of the cruciality of the problem. House provision in the urban areas has been impeded by lack of land. Land manipulation results in the high price of land for housing. The land that can be obtained for housing projects is divided into small lots that make it impossible to build houses which accord with local culture (Bali Post, 29 March 1989). In fact the developers ignored the model of housing development which had been a tradition for hundreds of years (Irsyad, 1988 :65).

The control of cultural activities, which in the past was organized by royal families in the *puris* (palaces), had declined. The bankruptcy of puris' influence was, among other things, caused by the decline of adherence of the Balinese to the traditional norms (Redana and Santeri, 1992b :2). Present administrative and bureaucratic controls of the local government over the form of houses do not seem to be as effective as the controls were under the *puris*.

In an interview, Mr. Henri Dharmawan, head of the Building Information Centre (B.I.C) in Denpasar, stated that in his opinion, the Balinese, particularly those from lower income groups, do not really care about cultural values. Their time is spent in the household economic struggle, so they do not bother about traditional beliefs. The majority of these people are 'drowned' in the current economic (capitalistic) system.

I.3.4. Studies of Balinese housing.

Studies related to Balinese traditional houses have been made on different topics. Basically these studies were concerned with formal aspects of the house. There

are not yet any studies which specifically explore the relationship between concepts and values of Balinese traditional belief and the Balinese house form.

Saliya (1975) studied the spatial system in the Balinese traditional house to find out whether there were possibilities of developing this concept into an architectural design guide. Wiranto (1984) made a descriptive study of the morphology of space and building and concluded that, in principle, the traditional order has not changed either in qualitative and quantitative terms. Parimin (1986) observed village structure in different parts of Bali, to identify various spatial formation systems and patterns. Sulistyawati (1989) detected formal transformations of Balinese houses in Kuta in order to classify the extent of physical changes. Rahardjo (1989) researched the relationship between the formal aspect of Balinese traditional architecture and its meaning, and came to the conclusion that there were no 'fixed' meanings pertaining to the Balinese architectural forms. Meganada (1990) was looking for the most suitable Balinese spatial order to be implemented in low-cost modern housing. There is as yet no attempt to relate changes in beliefs adopted by Balinese people to the formal aspects of Balinese houses.

The emphasis of the above studies was on the application of traditional architectural norms in modern buildings. They found it not only difficult to devise a proper design system, but also no certainty whether any such system this method is suitable. There was also generally a lack of discussion on the respondent values associated with the building form.

I.3.5. Preliminary visual observation.

As part of the research for this study a preliminary visual observation was made. Two different types of Balinese housing were observed : the low-cost modern houses in urban areas, in Monang-Maning and Sawung Kangin, and traditional houses

in villages, in Jimbaran, Kuta, Ubud, Peliatan, Singapadu, Kintamani, and Tenganan.

Low-cost modern houses (Perumnas housing) were introduced into Bali in 1983. The design of this housing was nationally uniform; house form and design were extremely similar in different parts of the Indonesian archipelago. This modern house form which was generated by functional design tended to disregard the Balinese cultural factor. The form of the new housing plan is a single building in which rooms are organised under one roof, whereas the traditional buildings consist of a number of buildings in the house compound.

A large proportion of the houses in Monang-Maning, Southern Denpasar, were changed drastically by the owners. Minor and drastic actions were taken to adapt the buildings: repainting walls, replacing fences, reorganizing rooms, extending rooms, extending buildings in a way such that the roofs needed to be adapted, and demolishing the whole building and erecting a new one. Sometimes the original form cannot be identified any more. Concern has been expressed about the money wasted as a result of the inhabitants having to adapt their houses, especially in demolishing parts of the buildings to rebuild conforming with traditional Balinese beliefs.

Informal interviews during visits with about ten residents who were living in a modern housing scheme in Monang-Maning indicated that to a large extent they still maintained the traditional beliefs associated with Balinese home environments and applied them in many cases in their new housing scheme whenever possible. The residents admitted that after living in modern housing schemes, most felt satisfied to a certain degree with their new adapted houses.

Preliminary visits to several villages gave the impression that a number of alterations to existing traditional buildings do occur, and new building construction take place. These alterations consist of house extensions, changes of building materials, and new buildings on the house lot, and so on. However, it is worth noting

that these changes often took on the form and shape of buildings which do not have traditional characteristics.

Although there were changes in traditional houses in villages, these were not as drastic as those to low-cost modern housing. This was particularly true of the arrangement of buildings on the house lot. A Balinese traditional house usually consists of several buildings clustered around an open courtyard. The house shrine and one or more traditional buildings on the house lot were still maintained. However there were significant additions of new buildings on the house lot. Some of the new buildings seemed to have traditional characteristics, but most did not. They were plain walled buildings which were in contrast with the open traditional pavilion. The house functions seemed to expand as well. There were indications that some new buildings were used by the inhabitants to accommodate non-domestic functions, such as work activities related to home industry.

A Balinese traditional house compound for ordinary people consists of four to six buildings : (a) *Pamerajan*, the house shrine; (b) *bale adat* for family ritual ceremonies; (c) main sleeping room (*uma meten*); (d) second sleeping room (*bale dauh*); (e) kitchen (*paon*); (f) rice granary (*jineng*). In some cases, *bale dauh* and *jineng* were not built. In the course of time the need to accommodate more and new functions arose. Because the existing traditional buildings were minimal, more rooms were needed. This is a simple explanation of why house adaptations in Bali took place.

The traditional buildings in villages were altered into different forms, or they were attached to another room for extension. In some cases the traditional buildings were demolished and new buildings were constructed to replace them. Free space on the lot was utilised for new buildings.

The form of the entrance gate was changed, sometimes into an abstract form,

not traditional in character. The steps in the entrance gate were levelled to allow motor cycles to enter, and whenever the owner needed to put in a car or motor bikes, a second entrance was built. According to the traditional norms, the location of the gate was important and should not be moved from its former location. Thus, it was obvious that the majority of traditional buildings in villages were not adequate to accommodate new needs that were growing in importance.

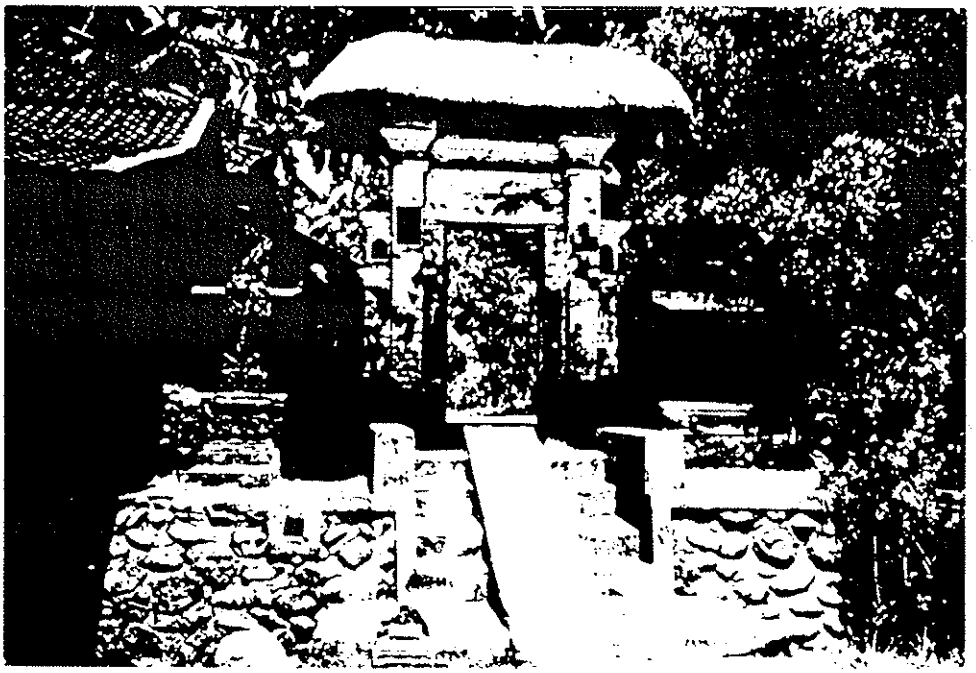

Figure I.1.

Enterance gate of a Balinese house.
Adaptaion is made on the steps to allow motor bikes to pass

I.4. PROBLEM STATEMENT AND THE MAIN HYPOTHESIS.

I.4.1. The research problem.

Worries over the cultural continuity in Bali are not without reason. In Balinese housing, these worries were also shown in respect of both traditional houses and low-cost modern housing schemes. Adaptations which consumed a large amount of money and resources become a 'hidden' burden for the house occupants. But the worries are not only financial.

Official and non-official reports indicated deep concern over the decline of Balinese cultural values, particularly as reflected in the housing sector. Efforts to improve this situation have not been fruitful. Building regulations as mentioned are not yet effective.

Visual observation in the urban fringe and in villages had shown that both Balinese traditional houses and low-cost modern housing which did not conform to traditional architectural norms were subject to changes; the question was how the inhabitants made the decision to make these changes, considering that the *lontars* do not prescribe house expansion. Although there have been studies and research into the Balinese traditional house and low-cost modern housing, the majority were focused on the formal aspect of the building. There is lack of discussion on the relationship between cultural values and the house form.

Thus there were two possible problems that were identified for research; changes of house form in the modern schemes and those in traditional settings. Housing adaptation in low-cost modern housing in urban areas was seen to be more drastic compared to that in the villages, however, the initial form of the modern housing did not follow traditional architectural norms, besides those who live in modern housing environment come from various backgrounds compared to those who live in village houses. If the impact of people's beliefs are to be studied, then

respondents from similar cultural backgrounds were clearly preferable for the research purpose. Therefore changes of house form in villages was selected as the research topic.

Summarizing thus far in villages in Bali, traditional houses were not sufficient for accommodating the growing activities of their inhabitants; consequently, the owners made adaptations to the house compound to make it more suitable to live in. However, traditional architectural norms did not provide guidance to make these alterations. Thus the problem is:

> **What is the role of Balinese beliefs and traditional architectural norms in generating traditional house forms ? Do the Balinese maintain these beliefs and are they norms for inhabitants when making house adaptation, or do people change their beliefs and alter their house accordingly ?**

This problem can be explored in a number of ways. However, in this research the attitudes of the respondents towards the traditional Balinese beliefs and values were measured and analyzed to find out in which way they were related to the physical changes of the adapted house form.

I.4.2. House form and culture.

Fear of the disappearance of certain cultural values related to home environments has been expressed in many studies. Rapoport argues that since environments and life-styles are shaped by cultural 'templates', the process includes sets of cues which are encoded in the environments (Rapoport, 1980 : 7). Culture, particularly change in cultural values, could be man's most important instrument of adaptation. One of the manifestations of change in cultural values related to home environment is in the attitudes toward the house. It is said that there are two distinct differences in attitudes toward the house: i.e., those adopted by collectivistic society

and those by individualistic society (Duncan, 1981).

In selecting or designing environments, people make choices so as to match their images of desirable places. The final house form should be appropriate for the kinds of people which the particular culture sees as normative and for the kind of life-style which it regards as significant and typical of the group (Rapoport, 1976 : 35). Change in cultural values seems to be unavoidable, and it affects the way people construct their shelter. This study attempts to deal with the issues of how change in cultural values have changed house form in Bali.

> House form is in turn modified by climatic conditions and by methods of construction, materials availability, and technology (the tools and methods for achieving the desired environment). Cultural forces are primary and other factors secondary or modifying factors.
>
> (Rapoport, 1969, 17)

Thus Rapoport argued that house form is not solely the result of physical forces or any single causal factor, but is the consequence of a whole range of socio-cultural factors seen in their broadest term. This statement is important because it leads to the proposal that cultural factors are the main attributes that generate house form. It is closely related in this study in the sense that it can be the thought from which the main hypothesis in this study is derived, thus it is subject to testing.

I.4.3. Strategy and approaches to the research problems

The problem as indicated in Chapter I.4.1. is that in villages in Bali there are no specific norms concerning how to extend a house. Having observed this in the preliminary investigation, the question of which norms the inhabitants hold in adapting their houses arose because the traditional architectural norms in the *lontars* do not prescribe how changes can be done.

The strategy in this study was to find out how far Balinese traditional values affected the inhabitants when making adaptations to their houses. These could be

obtained from what respondents said about the values. The findings were cross-checked by comparing the statements about values to actual physical changes in the house. Thus in this case the house adaptations were indicators of values.

Although the traditional houses in villages were selected for the study, a minor survey of urban dwellers' attitudes towards the Balinese traditional beliefs would make a complement to the study of villagers. The urban dwellers selected were the ones who live in the much adapted low-cost modern housing and adopted Hindu as their religion.

In order to be able to make comparison between house changes driven by domestic or non-domestic forces, two villages subject to contrasting conditions were selected: one strongly affected by tourism, and the second village little affected by tourism. Tourism is believed to be the force propelling respondents to make adaptations to meet the non-domestic functions in the house and so non-domestic functional change might be seen in the first village, whereas respondents and house samples in the other village were likely to provide evidence of house adaptations largely driven by domestic functions.

I.4.4. The main hypothesis

The socio-spatial characteristics of houses are endowed with personal values and meanings (Lawrence, 1985 :129). 'In the case of housing, giving meaning becomes particularly important because of the emotional, personal and symbolic connotation of the house and the primacy of these aspects in shaping its form as well as the important psycho-social consequences of the house' (Rapoport, 1968 :30). It is therefore important to account for personal attitudes and values affecting home environments. Lawrence and Michelson asserted :

> The organization of domestic space, objects, and activities is the reflection of ideas; these ideas are the generators of spatial lay-outs, objects and actions in the home. This implies that research should not merely focus upon manifest things but on implicit structure of the household (Lawrence, 1985 :131).

> The design solution is not a hypothesized mode of accommodating a specified number of goals and desires. The genius of a solution is not in its logic or in how well it photographs, but rather in whether it works or not. And there is no way to find the latter except to examine explicitly (Michelson, 1975 : 6)

Therefore there is a need to examine two things : (a) the degree to which the house inhabitants believe in the Balinese cosmology; and (b) the form of recent traditional houses and modification of older ones as a result of the inhabitants adapting houses to modern needs.

The measurement of the degree of belief is on a scale between two extremes: strongly maintaining, and, ignoring the values. Similarly, the measurement of house form is between two extremes of conformity : accordance with the traditional architectural norms, or disregard of them. Logically, it would be expected that those who maintain traditional beliefs are inclined to produce house forms agreeable with the norms; and those who ignore the traditional beliefs are inclined to produce house form different from the norms. Thus a general hypothesis can be formulated (this hypothesis is elaborated further into sub-hypotheses in Chapter Three) :

> **Individuals who maintain the Balinese traditional beliefs and values will have favourable attitudes towards those values and they will maintain the traditional architectural norms when making adaptation to their houses to produce a house form according to those norms.**

Conversely it is likely that there are individuals who ignore Balinese traditional cosmology; in this instance what could the traditional architectural norms be maintained when they made adaptation to their houses.

I.5. AIM, IMPORTANCE, AND USE OF THE STUDY

I.5.1. Aim of the study

The purpose of this study is to examine whether the arrangement of the architectural elements in traditional houses in selected villages in Bali enables the users to readily live in accordance with their current cultural values. In order to examine this, three things are necessary :

(1) To identify and evaluate the role of Balinese social and cultural factors in generating the form of traditional houses.

(2) To assess the cultural values associated with the house form of the Balinese at present in order to identify their attitudes towards those values.

(3) To evaluate the appropriateness of the form of the adapted houses in the case studies in Bali to current Balinese cultural factors.

I.5.2. Importance and use of the study

Two things are important in this study:

(1) Understanding the formative factors in given architectural forms is likely to increase awareness of their cultural constituents.

(2) Evolution of an architectural form may be said to be in harmony with the inhabitants when cultural factors of the users are understood and applied.

This study demonstrates that rapid changes of physical attributes of house form need not disturb the harmonious relationship between men and the built environment

if users' cultural values were respected and applied to the house design.

It is hoped that this study contributes a little more knowledge about Balinese architecture, particularly in residential buildings. In addition, findings of the study might be useful for housing policy and design, whether for the government or for architectural profession.

I.6. SUMMARY

I.6.1. The research problems and the main hypothesis.

The research problems can be summarized as follows :

(1) There is a growing concern in Balinese society and in government circles about evident changes of Balinese architecture, particularly in Balinese housing design, both in modern and traditional houses. The question is whether this change of architectural form is related to the attitudes of the Balinese towards their traditional beliefs associated with Balinese traditional houses.

(2) The role of the Balinese cosmological belief in generating architectural norms is therefore the subject of this study. The problem is do the Balinese maintain the traditional beliefs, and do these beliefs become norms for house inhabitants when making house adaptation while the traditional architectural scrolls do not provide guidance for this.

(3) Balinese traditional houses in villages were selected instead of the low-cost modern housing for two reasons: (a) the form of low-cost modern houses have changed drastically and from the outset the form did not reflect Balinese cultural values; (b) the low-cost modern houses which are located in urban areas are inhabited by people from different various places - whether Balinese villages from different regions or non-Balinese who are immigrants from other Indonesian islands. It was

important to select respondents from the same regions to ensure that as much as possible they had a similar cultural background. Balinese from different regions inherited different - albeit - similar kinds of belief-system.

(4) The hypothesis to be tested argues that individuals who have favourable attitudes towards Balinese cultural values will make house adaptations that conform with the traditional architectural norms; conversely individuals who have unfavourable attitudes towards Balinese cultural values will make house adaptations that are different from the traditional house forms.

I.6.2. Structure of the thesis.

This study is organized in eight chapters. **Chapter One** is concerned with the nature of the problem and the formulation of the main hypothesis. The way in which a Balinese traditional house was generated by the Balinese beliefs and the traditional architectural norms was the topic of **Chapter Two.** The aim of this chapter is to identify aspects of two variables : Balinese cultural values (in this case the Balinese beliefs and the traditional architectural norms) and the elements of the Balinese traditional house. This is important in order to select aspects of the two variables that can be observed in the field.

To test the main hypothesis, two things are necessary : the main hypothesis is subdivided into sub-hypotheses so that the concepts can be operationalised, and a research design is devised for gathering evidence from the field. 'Emic-etic-emic' approach was proposed to assess the Balinese cultural values. These are done in **Chapter Three.**

Chapter Four describes research activity in the field, how data and information were gathered. Three activities on different schedule were carried out in the field : preliminary field work, pilot study and the field survey. The preliminary

field work was to realize the 'emic' approach, i.e., by what people perceive about the Balinese cultural values. These information are important to devise questionnaires and interviews in the 'etic' approach. The pilot study was useful to test the first-draft questionnaire so that refinement could be made before the actual field survey was carried out. Finally, interviews after the field survey were necessary to realize the last 'emic' stage.

In **Chapter Five, Chapter Six** and **Chapter Seven,** the data and information were analyzed. The results of this analysis are presented under three headings : (a) evaluation of respondents' values; (b) classification of the form of the adapted houses; and (c) assessment of the respondents' expressed values and the form of the adapted houses.

Conclusions on the main hypothesis are dealt with in **Chapter Eight,** which also discusses agreement and disagreement with other similar studies to define future studies. The implications of the findings are presented to show the possibility of their implementation in housing projects and the architectural profession.