Application of Vernacular Architectural Ideas in New Saffein Village of Kish Island

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ABSTRACT

The vernacular architecture of Iran is a result of a long time process of both social and cultural developments which have expanded all over the country. The hot and humid region of Iran is situated in a long and thin coastal strip on the northern side of the Persian Gulf. Kish Island, with more than 1000 years of history, is located in this region with the same social and climatic factors. Kish was selected as the first Free Tourist Zone of the country in 1971. Following this, Masheh, the most flourishing village on the Island at that time, was relocated in an area adjacent to Old Saffein village, on the north-west coast. This new village is called New Saffein. It has a mixture of traditional and modern architecture. This study sought to emphasize the architectural concepts and ideas which are applied in the houses of New Saffein. The study also reviewed the background of the island in field of vernacular architecture through documental and observational studies. It also investigated the architecture of New Saffein in Kish as a case study in comparison with the vernacular architecture in Old Saffein. It will review the design and construction processes of the houses in New Saffein in relation to the traditional methods used in Kish Island. The article finally attempts to analyse the application of vernacular knowledge in designing New Saffein village to find strategies for guiding the process of developing contemporary housing appropriate for Kish Island and other similar places.

Keywords: Iranian vernacular architecture, Persian Gulf Region, Kish Island, Old Saffein, New Saffein

INTRODUCTION

Kish Island is one of the most important islands on the northern side of the Persian Gulf. The southern Iranian province of *Hormozgan* governs the Island. During the recent decades, this island, which was once considered a special place to live by the Iranians, has undergone dramatic changes. Kish was selected as a Free Tourist Zone in 1971. Following this, the residents of *Masheh* village, i.e. the most flourishing village on Kish Island at that time, were moved to an area adjacent to *Old Saffein*, on the north-west cost. It is now called New Saffein. The new development has

a mixture of traditional and modern architecture. *Mahmood Monsef*, the first General Director of the Kish Free Zone Organization (KFZO) and the principal architect of New Saffien, mentioned that the effects of the project would make positive impacts to the indigenous local people's living (Monsef, 1978). In contrast, 18 years later in an official report by the same organization, it was found that the people were not interested in leaving their family homes and moving to a new place. Consequently, this show of indifference towards some cultural and social aspects is blamed for some changes in the following years.

Now, after three decades, the questions about the appropriateness of this redevelopment are still being pondered upon. This study attempted to explain the socio-economic values which are evident in the original vernacular architecture on Kish Island. It also investigated the architecture of New Saffein in Kish as a case study in comparison with the vernacular architecture in Old Saffein. In addition, it also reviewed the process of design and constructions of the houses in New Saffein in relation to the traditional methods used in Kish Island.

VERNACULAR ARCHITECTURE ON KISH ISLAND IN THE NORTHERN EDGE OF THE PERSIAN GULF

The vernacular architecture of Iran is a result of a long time process of social, cultural and environmental developments which are extended all over the country. The hot and humid region of Iran is situated in long and thin coastal strip on the northern side of the Persian Gulf (see *Figs. 1* and *2*). Kish Island is located in this region with the same social and climatic factors.

Fig. 1: Map of Iran

Fig. 2: Hot and humid region, the north side of Persian Gulf

The Iranian vernacular architecture is based on five fundamental characteristics (Pirnia and Memarian, 1992), namely, the compatibility with needs of people (*Mardom-vari*), inward-looking (*Daroon-geraei*), avoiding un-necessities (*Parhiz az bihoodegi*), self-efficiency (*Khod-basandegi),* and structural rigidity (*Niaresh*). These codes are related to building quality from two aspects (Vakili-Ardebili and Boussabaine, 2006); firstly, concepts and ideas, and secondly, construction and technology. *Mardom-vari*, *Daroon-geraei* and *Parhiz az bihoodegi* address the quality of concept and idea (socio-economical aspects) which the article focuses on, whereas *Khod-basandegi* and *Niaresh* point out the issues related to construction and technology (physical aspects).

In this region, long summers are hot and humid and winters are short and mild. Humidity in all seasons is high (more than 60%) throughout the year. Its annual precipitation is very low, most of which is in the fall and winter. The yearly average rainfall is 145 mm. The mean temperature is between 30 - 34°C during the spring and summer. Sub-ground waters are saline in much of the region and vegetation all around this region is limited. The most important features of the vernacular architecture in this area are the adaptation to the environment and the consideration of economic factors through energy saving techniques (Babakrad, 1985; Pourjafar, 1996).

In general, the characteristics of the vernacular architecture of the region are reflected by one-storey dwelling units with courtyards, high surrounding walls, large windows (towards the courtyard) (Azari-Najafabadi *et al*., 2006). In the houses, most of the bedrooms face east and small rooms are located on the other sides. In addition, due to the high humidity, there are no basements in the buildings. Natural ventilation and breeze are the main ways to reduce the high temperatures and to cool the spaces (Babakrad, 1985). The roofs, which are usually flat, are used as sleeping areas during summer nights. The houses typically do not have any windows on the external walls to prevent indoor activities from being viewed from the outside. Additionally, it creates a better thermal exchange. Natural ventilation takes place through the main entrance door of the houses. Adaptation to the environment and the use of natural energy are fundamental beliefs in their vernacular architecture (Pourjafar, 1996; Babakrad, 1985). Furthermore, the wind tower is the dominant feature in these coastal cities. The size and height are directly related to their distance from the sea. Furthermore, limestone and adobe are commonly used in the house. Both provide a good solar reflection; adobe due to its form and limestone because of its light colour (Azari-Najafabadi *et al*., 2006). All of the settlements in the region have similar local cultural and living aspects as well as traditional house construction methods. Kish Island which is located in the region has similar climatic factors as discussed above.

NEW SAFFEIN VILLAGE VS. OLD SAFFEIN VILLAGE

Kish Island has more than 1,000 years of history. It reached its zenith of progress between the 12th and 15th A.D. century. In the late 1970s, Kish Island gained prominence again due to its natural and geographical features. During that time, the island had around 10 small villages, out of which *Masheh* and *Saffein* were the two most flourishing ones.

Fig. 3: To replace Masheh village with New Saffein village

Due to Kish's new status as a Free Tourist Zone, the traditional lifestyle gave way to dramatic and modern changes. The north-east coast of the Island was selected as the main tourist area at the same location as *Masheh* village. Following this, all the residents of *Masheh* village moved to a new village adjacent to *Saffein*, on the north-west coast in 1975 (*Figs. 3* and *4*). It was called New Saffein. Wooden windows, plain mortar-covered facades disguising, modern concrete structures, and narrow winding paths have formed New Saffein into a contrast of old and new. The government built the houses for all of the residents of *Masheh* at appropriate places as compared to their original lands. The village was built to represent the traditional lifestyle and the typical vernacular architecture of the northern edge of the Persian Gulf for tourists to see. *Monsef*, the principal architect of the village, believes that these buildings present a transformation from old to new. He also mentioned that this project would have positive effects on the local people's living style (Monsef, 1978).

According to one of the KFZO's official reports, the residents of *Masheh* had moved to their new living and working places in New Saffein with interest and eagerness (Monsef, 1978). Nonetheless, based on the recent reports by KFZO[1] and also by Mokhtarpour, the residents of *Masheh* had not been interested to

[1]Kish Free Zone Organization.

Fig. 4: New Saffein in the neighbouring Old Saffein

move from their ancestral houses (Mokhtarpour, 2002). The government had changed their large lots to some new smaller lots. As a result, they did not have any place for their traditional vegetable and animal rearing practices at the new houses. Moreover, they lost much of their tradition and their historical culture through these changes. Today, the population of New Saffein is around 800 people who are living in 129 residential units and in a total area of 26,487 square meters.

Vernacular houses are the best examples of the harmony between humans, construction and nature. Hence, this article attempts to analyse the applications of vernacular knowledge in designing New Saffein village to find the strategies for guiding the process of developing contemporary housing appropriate for Kish Island and other similar places. For this purpose, this article presents a comparative study on site planning, specific building elements for the evaluation of the features of the vernacular architecture of Kish Island as used in New Saffein.

CONCEPTS AND IDEAS

This part of the article compares two general characteristics used in the vernacular architecture of Old Saffein and in the design of New Saffein village. This paper also covers site planning and specific building elements which are covered as sub-topics.

RESEARCH METHODOLOGY

This study employed two stages to find the characteristics of the vernacular architecture of Old Saffein and assess the application of the same characters in New Saffein on Kish Island. The first stage overviewed the background of the architecture for the hot and humid region of Iran as a part of the Iranian architecture, and also the island in the fields of vernacular architecture through archival and observation study. For this purpose, the principle definitions of the Iranian architecture by *Pirnia* [2] were used as the basis of this study. As a result, all of the elements, which were studied in this research, refer to *pirnia's* definitions. The study also attempted to identify the socio-cultural characteristics of the local people of Kish Island and to understand the occupants of these houses. Moreover, it also reviewed several government publications, particularly the anthropological studies by *Mokhtarpour*, which included maps, photographs and statistics and information about Kish from 1960 to the present day. In this paper, the architectural study of the authors completed the investigation on *Mokhtarpour* for both the villages. In the second stage, there was also a study on the appearance of the vernacular houses through physical observation using photographs and free-hand drawings. In addition, some spatial dimensions were measured in detail for more clarifications. Moreover, the corresponding author was living and working on the Island for

[2] Dr Mohammad Karim Pirnia is known as father of Iranian architecture in the country.

more than six years. Therefore, he not only had access to the first-hand information, but also direct contact with the residents. Living in the research location could open up tremendous opportunities for observation and interactive data collection.

SITE PLANNING

Four factors related to the site planning of the vernacular houses were studied; these were orientation, organization, layout, and vegetation. The orientation of all the houses was the first factor to be considered in hot regions and it must be carefully determined. This is because a correct orientation can maximize the good effects of cool breeze and minimize the bad effects of the hot sunshine (Ardalan, 1976). In addition, the direction of Kiblah is also another important factor in the orientation of the Muslim settlements. The second factor is site organization which is affected by social, economical and environmental values of the community. The region's vernacular architecture normally consists of a series of spaces which are grouped around a courtyard. The third factor is the layout which clarifies the functions of the different parts of the houses. The old large houses include three different courtyards, each with different functions, namely the main yard, the guest yard and the back yard. Finally, the last factor is vegetation which has a very important role in creating valuable shade.

In this region, vernacular houses have short facades on the west and east sides to reduce the affects of strong solar radiation. In contrast, facades on the north side, and particularly on the south side, are long (Azari-Najafabadi *et al*., 2006). For this reason, the vernacular houses of the old Saffein have been created with summer and winter sections. The summer spaces look towards the gulf and the winter spaces are on the opposite side. On the contrary to the regional orientation of the houses which face southward, the vernacular houses in the old Saffein face northward in order to catch the valuable breeze coming from that direction. Moreover, the Kiblah plays an important role in the orientation

of these traditional dwellings. *Jame Mosque* is the heart of the village and all the buildings are built around it (*Fig. 5*).
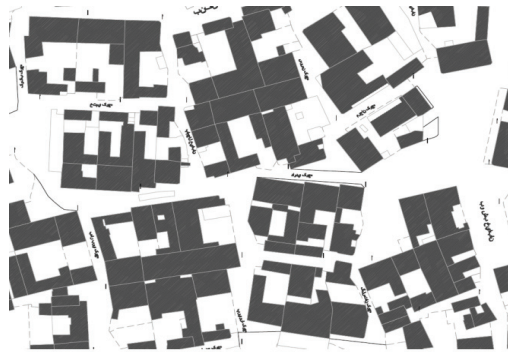

Fig. 5: Fabric of Old Saffein

Fig. 6: Fabric of New Saffein

In New Saffein, the designers considered the use of modern air conditioning systems. Due to this, they paid less attention to climatic features and the wind direction at the Island (Mokhtarpour, 1999). Moreover, the direction of the houses also varies. For some houses, the living area is located on the south side of the house and facing the gulf, and this is a climatic solution to decrease the high temperature and humidity. On the contrary, some other houses in the neighbourhood face the sun on the east and west sides (see *Figs. 6* and *10*). It was not found in other vernacular settlements of the region. As a result, during the first 10 years of the revolution in Iran, the residents of the village faced a lot

of problems involving power cut off because of some technical and economical reasons. In more specific, they needed electricity to cool off their houses but did not have the supply (Mokhtarpour, 2002).

The urban form of the Muslim environment is greatly contributed by the Islamic principles of the strong social interaction and neighbourly relationships. This foundation is supported by the compact urban form of the residential areas in the traditional Islamic environment of the hot regions (Mortada, 2003). In addition, compactness is another technique of minimizing the direct radiation of the sun on the outside facades of the houses (Ardalan, 1976). In the village, shadow network is formed by a number of different techniques. The most common component of the shadow network is a path, or *kucheh*. The shade is created by its narrow width and high walls which form its edge.

In New Saffein, although, the principle of compactness is applied in the design of most sections of the village (*Fig. 7*), but less attention is paid to this matter for the external part of the house. The traditional courtyard form is not commonly used in the houses. In addition, some of the houses have short external walls to present the residents' traditional lifestyle to the tourists (Monsef, 1978). However, this is not accepted by the local people because it allows outsiders to see internal part of the house, which is in contrast with their beliefs. As a result, the entire short walls were made higher by the owners in the recent years (*Fig. 8*).

Fig. 8: Short wall has become taller, New Saffein

The region's vernacular architecture normally consists of a series of spaces which are grouped around a courtyard. These create a semi-enclosed building which reduces the impacts of the outside hot air on the buildings (Azari-Najafabadi *et al.*, 2006), as the warm courtyard floor and the flat roof give out heat at night. In Old Saffein, the vernacular architecture is generally inward-looking. The majority of the houses are organized to have three sections, namely the main yard, the guest's yard, and the back yard (traditional privacy model) (*Fig. 9*). There are two different entrances in the houses, with the main entrance opens to the main yard and the guest entrance opens to the guest's yard.
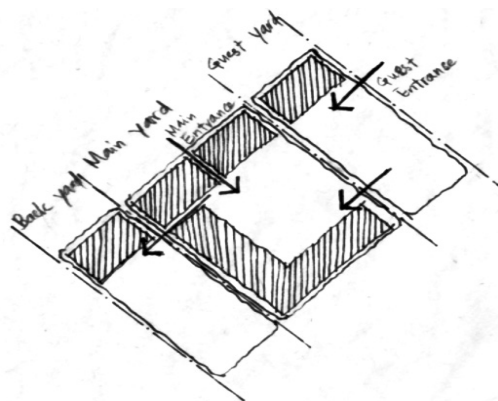

Fig. 7: A wide street, New Saffein
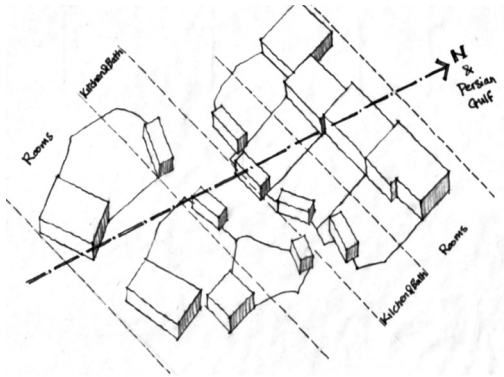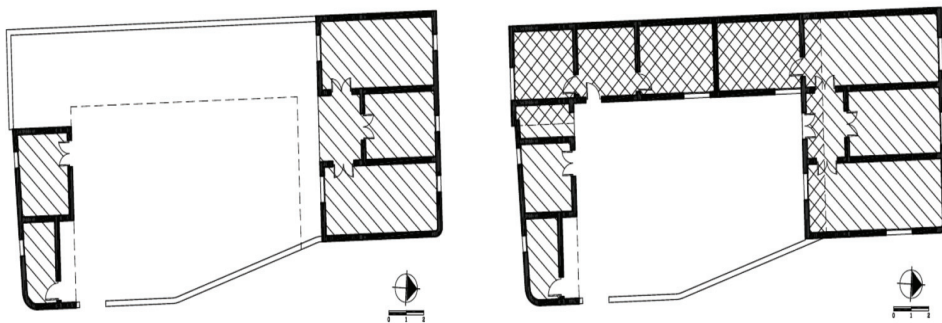

Fig. 9: Traditional privacy model

Fig. 10: Site organization, New Saffein

It is important to note that New Saffein is a Muslim settlement. Islam does not absolutely specify the size of the family. Due to this reason, most of the houses have expanded on their sites because the family size has increased during the recent years. The original houses are designed in two sections. The first section includes the rooms and the second section includes the kitchen, bath and toilet which are built on the other side (*Fig. 10*). *Figs. 11a* and *11b* present a typical house in New Saffein before and after the expansion. This house was designed as a one-family unit but it was changed to support two families in one house.

As mentioned above, the old large houses of Old Saffein include three different courtyards with different functions[3] namely *Hoy_al_beyt* (the main yard), *Hoy_al_majles* (the guest yard) and *zaribe_al_saghirah* (the back yard). The living room (*moraba'eh*), bedrooms (*otagh*), kitchen (*matbakh*) and toilet surround the main yard. Adjacent to all the bedrooms is a place for bathing and this is known as *qati'eh* (*Fig. 12*). *Qati'eh* is separated from the *otagh* with a wall that is increased to the height of 70 cm below the ceiling. *Otaghs* is accessed through a corridor called *Sabat*. At a corner of the yard, there is a place for storing fishing tools and crops (Mokhtarpour, 1999). In the vernacular architecture of Kish Island, the male visitors never enter the main yard. They are brought inside through a special door that opens to the guest's yard. The *mozif* (a special room for the guests) is located in this yard (*Fig. 13*). If the site is too small for a guest's yard, there is a direct door to the *mozif* from the street. Indigenous people keep animals in the backyard. It is separated from the main yard by some low walls. The houses are also flexible to allow for expansion when the families increase in size.

[3]All the local (Arabic) words in this article are borrowed from the book entitled, "Two Years with Indigenous in Kish Island: The Anthropological Study" written by Rajabali Mokhtarpour.

Figs. 11 a and b: A typical house (Mr. Sedaghat's house) in New Saffein, before and after the expansion
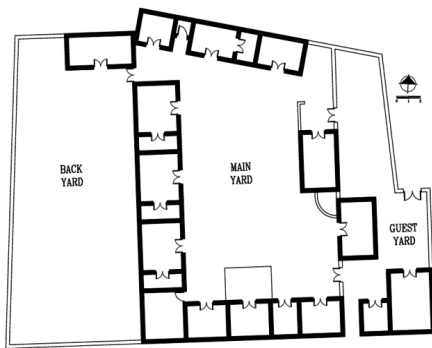
Fig. 12: Vernacular house, Old Saffein

Fig. 13: A mozif in a vernacular house

In New Saffein, on the other hand, the houses only have one courtyard. Most of the spaces are located on two sides of it, and directly open to this courtyard. Rooms are located on one side, whereas the kitchen and bath are on the opposite side. These houses do not have functional spaces, such as *majlesi* and *qati'eh*, which are necessary for the usual lifestyle of the local people. Moreover, Islam encourages an extended form of family in order to maintain strong family ties. Taking all measures to prevent the splitting up of the family and a preference for the extended family living in a single house are two important principles of the Muslim communities (Mortada, 2003). The people of the village follow these beliefs. As a result, any increase in the family members brings
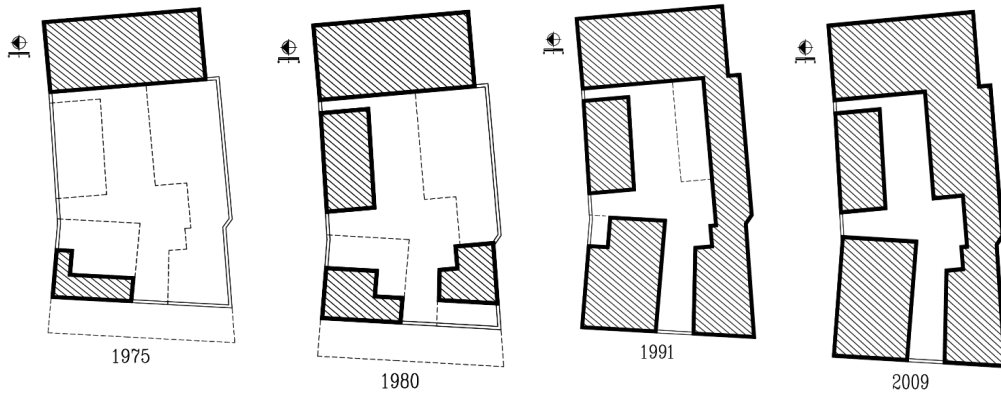
about problems to them. Therefore, many of the owners have expanded their buildings inside their land although they do not have enough area for to do so (*Fig. 14*). Based on an official report, more than 70% of the owners have extended their buildings in their house. Today, 159 families are living in 98 family-units in this village.

Vegetation plays an important role in the vernacular architecture of Kish Island because of its valuable shading properties. *Kahoor* (Prosopis Cineraria) and *Loor* (Ficus benghalensis) are two tree types which are not common to the region but are indigenous to the island. In addition, in the houses of Old Saffein, the backyards are used to cultivate summer crops.

Some local trees in New Saffein, such as *loor*, *kahoor*, and *nakhl'e khorma* (Phoenia dactylifera), are cultivated although there is not enough space. Local trees give some particular visions of the local architecture as well as improving the tourist's visual understanding of the local environmental features (*Figs. 15a*, *b* and *c*). However, the residents do not have any backyard to cultivate these crops, as in their previous houses.

SPECIFIC BUILDING ELEMENTS

In this part, the article looks at some building elements in the villages. These elements have common functions in all the settlements in the hot and humid region, based on their similar environment and culture. In particular, the openings, transitional spaces, special shading devices, and architectural elements are specific to the vernacular architecture of the region. In the hot and arid region of Iran, most of the openings are oriented towards the courtyard, due to the harsh climate of the outdoor environment. Furthermore, this is a principle idea in the vernacular architecture of Kish Island, in which visitors should never view directly into the house. This shows the importance of the transitional spaces in the vernacular houses. In addition, maximizing shading is another significant feature of the local architecture of the Island. Due to this, the sunshades prevent

Figs. 14a ,b, c and d: The transformation of a typical house (Mr. Jafar Waez's house),
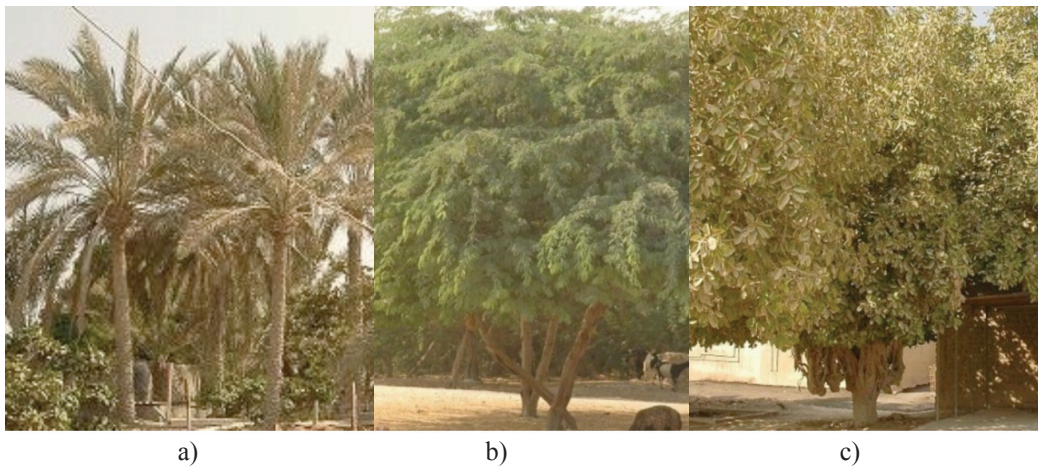*New Saffein*

a)   b)   c)

Fig. 15: (a) Nakhl'e Khorma; (b) Kahoor; (c) Loor

the penetration of solar radiation into the house. Finally, wind-catchers are one of the most important elements in the vernacular architecture. It is important to note that this is a significant climatic solution to bring the cool sea breeze into the houses.

In this region, cross ventilation for internal spaces is used to reduce the heat using small openings which are built on the street-side walls, whereas windows on the courtyard-side walls are often built opposite each other. Moreover, rooms usually have openings on the sides with positive and negative pressures. Meanwhile, windows or porticos are mostly not on the street side but are open to the main yards (Azari-Najafabadi *et al*., 2006). Houses in Old Saffein follow these fundamental features (*Fig. 16*).

Fig. 16: A house without any outside opening, Old Saffein

of the main entrance, and it is about 2 meters in height (*Fig. 18*). The length of the *estar* is dependent on the width of the door, and this is to prevent the internal part of the house from being viewed from the outside. In some cases, small halls are used to enter the residence.

In New Saffein, on the contrary, most of the central yards have direct connection to the streets without any transitional space (*Fig. 19*). This is a principle idea in the vernacular architecture of Kish Island, and this is done to prevent visitors from viewing or looking directly into the house (Mokhtarpour, 1999). In term of transitional space, the design of the houses in New Saffein has not adapted to the local beliefs and culture.

Fig. 17: Wider openings built at New Saffein

Fig. 18: An estar, Old Saffein

The houses in New Saffein were designed using the new technologies which are meant to cool off the internal part of the rooms. For this reason, the architects have not provided enough openings on the street-side walls to adapt to the appropriate environmental conditions. Furthermore, natural lighting that comes from the central yards is frequently not from acceptable directions and cab cause discomforting solar radiation to the rooms. Hence, small windows were made wider and some new openings were created on the north side or facing the Persian Gulf (*Fig. 17*).

In most houses of Old Saffein, a short divider known as an *estar* is erected in front
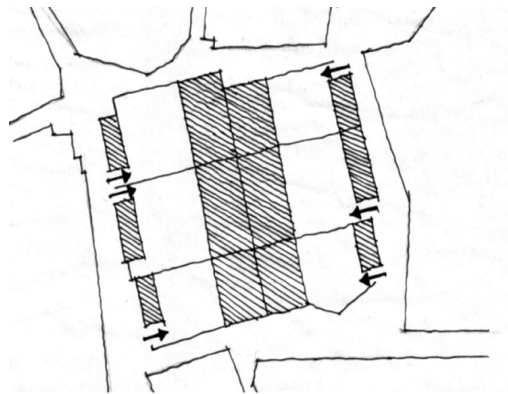

Fig. 19: A direct connection to inside of a house in New Saffein

Maximizing shading is one main objective of the significant features in the local architecture of the Island. In Old Saffein, most of the entrance doors have sunshades (*Fig. 20*). This shading device prevents solar radiation from penetrating into the house. In fact, a large number of the traditional houses have corridors which prevent solar radiation from entering the rooms. Additionally, it is a connector between the yards and the rooms. The use of large windows for natural ventilation, on the yard side of the spaces, can also receive a great amount of sunlight, and thus, it can increase discomfort. However, using large overhangs which are supported on columns is a common method to solve this problem. In this region, the porticos are another solution to protect the building against solar radiation.

Fig. 20: A typical entrance, Old Saffein

Fig. 21: A typical entrance, New Saffein

The houses in New Saffein have rooms which are typically protected against sunshine through a small covered space. It represents the traditional techniques of maximizing shadow. Moreover, there is no shading device used for the openings on the outside facades of the houses in the village. Most of main entrances open to the yards directly without any sunshade (*Fig. 21*).

Wind-catchers or *bad-gir* are among the most important architectural elements in the vernacular architecture of the island. This is a traditional method used to bring the cool gulf breeze into the houses. The shape and size of the wind-catchers in Old Saffein are different from the wind-catchers which are built in other places of the country. In the houses of this village, they have *bad-gir* which is a recess on the facades, with a split on its floor (*Fig. 22*). Strong winds will stream through this split into the rooms.

In addition, Kish Island is also a coral island. Therefore, 'coral stone' is a main building material which gives a very special feature to the vernacular architecture of Old Saffein. For this reason, the colour of the facades of the buildings is particularly bright white (coral's colour).

Fig. 22: Bad-gir, Old Saffein

Fig. 23: Bad-gir, New Saffein

In New Saffein, the form, facades shapes, and some climatic elements of the Kish's rural fabrics are used to make the village similar to its original place, namely Masheh and Old Saffein. The facades are covered with white mortar-cement that is similar to the vernacular facades. Moreover, some regional architectural elements (such as the usual Iranian bad-gir) are repeated in New Saffein to remind us of the original form (*Fig. 23*).

SUMMARY

Table 1 shows that in the socio-economic aspect, there is a significant contrast between the architecture in Old Saffein and New Saffein although the residents of both are the same.

TABLE 1
Vernacular architecture characters in Old Saffein and New Saffein

Vernacular Architecture of Iran			Kish Island	
			Old Saffein	New Saffein
Vakili Ardebili, Boussabaine (2006)	Proposed categories by the authors based on Pirnia (1992)		Self observation by the authors, Mokhtarpur (1992, 1996)	Self observation by the authors
Characteristics of Vernacular Architecture — Socio-economic Aspect (Concepts and Ideas)	Site Planning	Orientation	▪ Mostly on north-south direction ▪ Importance of attention to Kiblah direction ▪ Summer section faces to the gulf	▪Different direction ▪Do not paying attention to Kiblah direction
		Organization	▪ Compact urban form ▪ Shadowing network with tall walls ▪ Summer and winter sections ▪ Different spaces around main yard	▪Less pay attention to compactness ▪Wide streets with short walls ▪Living and services sections ▪living section on the back of front yard
		Lay Out	▪Concept of traditional privacy model ▪Separated function with specific entrances ▪Expandable plan based on family size	▪Less consideration to family privacy ▪Only one entrance into the front yard ▪Non-expandable plan
		Vegetation	▪Important role of trees in the houses ▪Local trees *Loor, Kahoor, Nakhl-e khorma* ▪Crops cultivation in back yards	▪Not enough space for vegetation ▪Local trees in some of the houses
	Building Elements	Openings	▪ Mostly no windows on street side ▪ Cross ventilation to reduce the heat	▪Less natural ventilation because windows are mostly open only to inside yard
		Transitional Spaces	▪ *Estar*: (short divider) prevent inside from outsider	▪Main entrances open to the central yards directly
		Shading Devices	▪ Main entrances have sunshade ▪ Most of the spaces connect to yard through a corridor	▪No shading device on main entrances ▪A small cover space for entering to rooms
		Architectural Elements	▪ Specific wind-catcher which is a dent on the facades ▪ specific bright colour of coral as basic local material	▪There is no wind-catcher ▪Facades are covered with white mortar-cement similar to the vernacular facades

As mentioned previously, the vernacular architecture of Iran is a result of the long-time processes of the social, cultural, and environmental developments which have been extended all over the country. Due to this, the people and the environment are two bases for every design based on vernacular architecture. Misunderstanding about the people's needs in the design process of New Saffein has caused some difficulties for the people. The following examples further clarify this issue.

The principle idea of the design is to design a village to represent the local lifestyle for tourists (Monsef, 1978). It is significantly different from the traditional and religious values of the Arab Muslim community. Furthermore, the new houses were not adapted to the local's social ranking. The House of *Sheikh*, i.e. the most important person in the community, was not adapted with his social level in the village, and his big family. It is because of this fact that his house has become dilapidated and the *Sheikh* and his family have migrated from the island to other country (Mokhtarpour, 2002).

In addition, the strength of the local community has also changed due to the new design. Housing lots do not support the household members' needs. The local people are living in a patriarchal society. Most fathers still try to play their traditional roles in the society, and they have extended their houses after the marriage of their sons, but limitations in the lot areas do not permit this (see *Fig. 14a, b, c, d*). However, traditional values are meaningful values. The people have created a place in their house like an *estar* or all the short walls have been increased in height to prevent outsiders from seeing or peeping into their homes because the main entrances enable the outsiders to see the internal parts of the houses (see *Fig. 8*). They also made some sunshades on the wide streets of the village, as shown in *Fig. 7*). Furthermore, in the vernacular houses, stores for fishing tools and ovens for traditional cooking are very important elements which there were also not included in the houses. The bathrooms in their new houses are also attached to toilets, the concept which contradicts with their religious beliefs (see *Figs.*

11a, b). These examples show that the people have not completely understood the design of New Saffein.

DISCUSSION AND CONCLUSIONS

The Iranian vernacular architecture is based on five fundamental characteristics (Pirnia and Memarian, 1992). Three of them (namely, the compatibility with the needs of the people, inward-looking, and avoiding un-necessities) concern building quality from concepts and ideas (Vakili-Ardebili and Boussabaine, 2006). Kish Island is one of the most important islands in the northern part of the Persian Gulf. It is located in the hot and humid region of Iran, with the same social factors. In general, the characteristics of its vernacular architecture reflect the Iranian vernacular architecture. Kish was selected as the first Free Tourist Zone of the country in 1971. Following this, *Masheh* village, the most flourishing village on Kish Island at that time was moved to an area adjacent to *Old Saffein*, on the north-west coast. The new village is called *New Saffein*. It has a mixture of the traditional and modern architecture.

In the above discussions, the architecture of Old Saffein and New Saffein has been elaborated in relation to site planning and building elements. In the light of the above discussion, it can be stated that the basis of the vernacular architectural has been ignored in the design of New Saffein. Moreover, it has been reported that the government, scholars and the residents have recognized the social and climatic problems by this ignorance.

In conclusion, Manzoor (1989) stated that "the prevailing traditional architectural forms, community and urban settlement patterns have followed the same evolutionary process, creating a distinct environmental system, i.e. a process of rural-urban evolution during which local and human factors have transformed the built environments into integrated living community". An architectural identity can be founded by understanding the people. For this reason, all the social, cultural, and environmental variables must be understood before applying

of any architectural characteristic. Moreover, traditional values are meaningful values which are the products of long and complex social and cultural evolutionary processes with environmental adaptation. The architectural patterns and systems have evolved to meet certain needs of the people, and they rooted in certain elements of the environment. The application of the vernacular architectural values should not mean a simple copying of the monumental traditional forms and features. The underlying vernacular characteristics and their relationships with the people and their surrounding environments should be carefully understood. More importantly, it is important to highlight the fact that modifying the local images without understanding their values can cause a tragic result as has happen in New Saffein.

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