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The influence of climate and privacy on indigenous courtyard houses in Diyarbakır, Turkey

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This article explores the effects of climate and privacy measures on the characteristics of indigenous courtyard houses in Diyarbakır. It compares the characteristics of courtyard houses in Diyarbakır, Turkey, to houses in some Middle Eastern countries. The study sample consisted of fifty historical courtyard houses in Diyarbakır. The results of the study revealed that, like the similar houses in Middle East, there is a horizontal movement around the courtyard all year long and a vertical movement in summer units. But, within the scope of the study, it was found that some houses in the area have spaces that can be used in spring or autumn, in addition to summer and winter units. The findings also revealed that privacy measures had an important role in the space organization of the houses.

Key words: Design with climate, Indigenous courtyard house, house with iwan, traditional house design.

INTRODUCTION

Courtyard houses

Courtyard houses are common in hot and dry climates and remain in many historical cities in the Middle East (Al-Azzawi, 1994). Environmental and cultural differences inform the diverse characteristics of courtyard houses because they are used by a variety of cultural groups in a large number of cities. For example, courtyards may be used as an inner garden or they may function as the focal point in the house. Thousands of years of inhabitation can explain the variations in courtyard house organization. The oldest cultural regions of the Middle East, including Sumer and Pharaonic Egypt, contain the oldest examples of courtyard houses (Usman, 1958; Abdulac, 1982; Akurgal, 1993; Naumann, 1991; Sevin, 1991; Ibrahim, 1998; Oliver, 2003; Ujam, 2006). Later on, this housing type was seen in western cultures, such as Greek and Rome (Abdulac, 1982).

Courtyard houses, which are common in regions with hot and dry climates, demonstrate strict territoriality and attempts to create private space for introversion. Such isolated lifestyles are not only the result of an attempt to conform to the climate, but are also a reflection of culture. The privacy measures that influence the design of the houses are representative of particular cultural norms. In this article, these cultural behaviors are examined by focusing on the indigenous courtyard houses in Diyarbakır, Turkey, which form the texture of the city. The main purpose of the article is to examine the influence of climate and privacy factors on the characteristics of these houses. The space design and the climatic usage of the houses were examined to determine how climate influences courtyard structure. Then, the effects of the privacy measures in house design were examined. Finally, indigenous courtyard houses in Diyarbakır were compared to similar constructions in some historical settlements in the Middle East.

Indigenous courtyard houses: climate and privacy

Eldem classified the traditional houses in Turkey into seven groups. According to this classification, Diyarbakır is in the group entitled “the Southeastern Anatolia Houses.” Prior to the integration of Diyarbakır into the
Ottoman Empire at the beginning of the 16th century, various Muslim nations had ruled the region for 800 years (Eldem, 1984). According to Eldem, the inhabitants, most of whom were Muslims, developed their own housing styles (Eldem, 1984).

Courtyards are the center of the plans of houses in Diyarbakır. Courtyard houses, which represent the cultural layers of the Middle East, also characterize the traditional houses in some neighboring countries, such as Syria, Iraq and Iran. However, it is impossible to separate this plan type from the Anatolian cultural layers, in which similar house plans exist (Usman, 1958; Tarhan and Sevin, 1977; Naumann, 1991; Akurgal, 1993). It is certain that the Turkish architectural tradition has had an effect on Diyarbakır house plans (Eldem, 1955). However, according to Kazmaoğlu and Tanyeli, the traditional house type in the Eastern parts of Turkey does not completely reflect the characteristics of the Anatolian-Turkish house type; instead, it “reflects the outer effects and some traditions inherited from the ancient civilizations of Anatolia” (Kazmaoğlu and Tanyeli, 1979: 33). This study examines the effects of some neighboring cultures on Diyarbakır’s courtyard houses, such as the Arabian culture and the Persian culture, with its strong architectural history of building homes in hot and dry climates.

It is possible to observe the existence of courtyards in traditional houses in other cities in Turkey. However, the courtyards in these cities are in the form of an inner garden, which differs from the courtyard houses in the Southeastern Anatolia Region (Naumann, 1955). The houses in Diyarbakır show some similarities to the other Northern Mesopotamian cities within the borders of Turkey, including Şanlıurfa and Mardin, two neighboring cities of Diyarbakır. These cities are similar in that they are all very hot in summer. For example, in Diyarbakır, the average temperatures in July and August are 37.9 and 38.4°C, respectively (the highest temperatures are 44.7 and 44.8°C, respectively) (Turkish State Meteorological Service, 2009).

The Southeastern Anatolia region, which includes Diyarbakır, shows some similarities to the hot climate of the Middle East region. Some studies about courtyard houses in the region indicate different types of movement around the courtyard. It has been emphasized in these studies that there is a movement around the courtyard according to the season and the time of the day (Cantacuzino and Browner, 1976; Abdulac, 1982; Scudo, 1988; Herdeg, 1990; Al-Azzawi, 1996a and b; Memarian and Brown, 2003; Ragette, 2006). Figure 1 below indicates examples of horizontal and vertical movements in Arabian houses.

**Figure 1.** Seasonal horizontal movement (left), seasonal and daily vertical movement (right) in traditional Arabian houses (Ragette, 2006: 86).
In this study, one of the main concerns of the researchers was to determine whether this climate similarity resulted in an architectural similarity of the houses in the two regions. Another purpose of this study was to examine the effects of privacy on the architecture of the courtyard houses in Diyarbakir. The form and organization of a house is shaped according to the cultural environment, which reflects socio-cultural factors, such as religion. The structure of the family and society are also important components of culture that affect buildings and artificial environments (Rapoport, 1969). The physical environment is a reflection of these socio-cultural connections and attempts to create the private world of family life.

In traditional cultures, novelty is not desirable (Rapoport, 1969: 7). For that reason, there are no radical changes in architecture. Even minor adaptations showing the effects of individual preferences are consistent with traditions and traditional life spaces. The measures that are taken to separate the public space from private space are the extensions of the same behavior.

In traditional Middle Eastern Islamic culture, it was very important to separate males and females and to protect the house against outsiders (Al-Kodmany, 1999). Houses were designed to create physically separate spaces for males and females, as well as to prevent visual contact between the sexes (Abu-Lughod, 1993; Bahammam, 2006; Raquette, 2006; Zako, 2006). In this context, there were some measures taken to design the positions of openings and the height of living spaces to avoid visual contacts.

Explaining of the importance of privacy in the Middle East as solely a function of Islam does not present the whole story. Jews and Christians were also part of the social life in the Middle East. As suggested by different scholars, privacy is both a universal value and a behavior exhibited in every society (Hall, 1966; Altman, 1975; Rapoport, 1976, 1980; Altman and Chemers, 1980; Gür, 1996). According to Gür (2000: 76),

“although most of the privacy control mechanisms are conceptual, archeologists and architects dealing with this subjects can easily decide whether a space in a house is private or for social use. Because, the understanding and practice of privacy can be traced from the strong marks in the human-built environment.”

These marks are cultural reflections of various mechanisms transmitted from one generation to the next.

Within the scope of this study, the courtyard houses in Diyarbakır were examined in terms of inner space designs and the privacy measures that separate inner and outer spaces. There are two important factors that affect this design, climate and privacy, which have been taken into consideration to show the physical results of these factors. Finally, the designs of the houses in Diyarbakır were compared to similar houses in the Middle East region that differ in climate and privacy measures.

MATERIALS AND METHODS

This study focuses on the indigenous courtyard houses in Diyarbakır, a city located in the Southeastern Anatolia Region of Turkey. The main characteristics of these houses in Diyarbakır have been described in a number of studies (Erginbaş, 1953; Bekleyen, 1993, 1999; Cengiz, 1993; Dalkılıç, 1999; Özen, 1999; Tuncer, 1999; Dalkılıç and Aksulu, 2001; Gedik, 2004; Murt, 2006; Sözen and Gedik, 2006). However, the need for the present study emerged because although some of the studies mentioned the effects of climate and privacy measures, none of them compared the houses in Diyarbakır to similar constructions in neighboring countries. Detailed examinations and face-to-face interviews with occupants were conducted for this study. The researchers also carefully examined the physical traces in artificial environments. Finally, the researchers in this study consulted books by various authors that include detailed drawings of Diyarbakır courtyard houses.

The sample in this study consisted of fifty houses. Twenty-two samples were chosen from the detailed studies of Bekleyen (1999), five samples from Erginbaş (1953) and 23 samples from Tuncer (1999). Houses that have been destroyed or drastically changed were not included in the study.

RESULTS

Climate-related design characteristics of indigenous courtyard houses in Diyarbakır

Diyarbakır city has a hot and dry climate, and its historical settlement is in a limited area surrounded by city walls, which were built hundreds of years ago (Figure 2). Because of these two factors, houses were built adjacent to one another.

Erginbaş interpreted this fact rather interestingly by claiming that the adjacent placement of houses and the use of high walls stemmed from the need to create other methods of defense in addition to the city walls (Erginbaş, 1953: 9). The courtyard houses were surrounded by high walls (the average thickness of the walls is 50 cm) within the compact urban texture and were built to protect the inhabitants from both the extreme heat in summer and any disturbances caused by outsiders.

In all of the houses examined within the scope of the present study, a center courtyard exists, providing air and light for the other spaces surrounding it. In other words, the windows of all rooms on the ground floor have a view of the courtyard, and they do not have a direct connection to the outer part of the building. Planning in this way is suitable for hot climates; the space is designed for users in a way that blocks sunlight in summer and allows sunlight in the winter. Consequently, the spaces around the courtyard are designed appropriately for seasonal usage.

In the summer, the spaces in the south part of the courtyard are used. These spaces are cooler because they face north and are not exposed to direct sunlight.
The ceilings of the rooms are high, and there are wide windows that are always kept open in summer (Figure 3). They also have additional upper windows close to the ceiling. The cool air comes into the room through the windows, and after it gets hotter, it flows to the courtyard through the upper windows. This creates a kind of ventilation. Even if the lower windows are closed, the upper windows are always kept open. In some samples, these windows do not contain glass; instead, they have ornamented wire fences. Thus, the warm air in the room is continuously exchanged through these openings. In the 50 houses that have been examined, only two lack summer rooms (4%). Along with the summer rooms, the most widely used spaces in summer are the iwans (Figures 3 and 4). There is an entrance to the summer rooms from the iwans, as well as from the courtyards. In the indigenous houses of Diyarbakir, this semi-open space faces the courtyard, has high ceilings, and contains a small pool inside or in front of it. Examination of the houses showed that the pool is in front of the iwan (in the courtyard) in 37 houses (74%), in an indefinite place in the courtyard in 7 houses (14%), and in the iwan in the remaining 6 houses (12%). Generally, the rectangular- or oval-shaped pool (Figure 5) contains three stone basins,
Figure 4. View of iwan (a) and serdab (b) from courtyard (left); the interior view of serdab (right).

Figure 5. Examples of pools in the courtyards.

one in the middle and two on the sides that have continuously flowing water and cool the place by evaporation. The iwan is the most functional place in summer and is where the users spend most of their time, especially the morning and evening hours.

There is a special room specially designed for very hot days. This is the serdab, a special room placed underground (one-third or one-half of its space height is placed under the level of courtyard) (Figure 4). According to the interviews, people traditionally spent the afternoon in the serdab, as that is the hottest period of the day. Today, there are only four houses that have examples of serdabs, including Iskender Paşa House, and the houses of two famous poets of Turkey: Cahit Sitki Taranci and Ziya Gökalp. Because the serdab is placed underground and its opening faces the north, it is the coolest place in the whole house. The unit gets air and light from the upper windows facing the courtyard, and a small pool is present to decrease the heat. Drawings prepared by Erginbaş show that serdabs existed in three other houses besides the Taranci house. Although it is not possible to find it today, an additional part called the selsebil (a miniature water fall that sends its water to the pool) can also be seen in the drawings of Erginbaş of the Gökalp house (Erginbaş, 1953: 20, 22, 24).

Another part of the house that is used in summer is the flat roof of the house, called the dam in the local language (Figure 6). On hot summer nights, people sleep
on these cool places, which are covered with earth. Local people used specially designed beds called taht, which stand on high legs of 70-80 cm. Although the earth floor on the roof may have been hot from being exposed to sunlight all day, the heat would not have affected these beds.

Because Diyarbakir is in the northern hemisphere, the sun’s path arches across the south. The organization of space in the houses is designed according to this basic rule. As a result, in indigenous Diyarbakir houses, all the spaces used in the summer are in the southern part of the courtyard and all the windows of this part face north. Likewise, winter rooms generally exist on the north side of the house (27 houses, 54%) and face the south to receive sunlight (Figure 7). Some deciduous trees are grown in the garden so that they will provide shade in summer; in winter, these trees drop their leaves and do not form a barrier for sunlight. In order to make extreme use of the sun, which has a path in a low arch, the windows are wide and upper windows may also be used in winter. This design may only be effective if the room is placed correctly in the sun’s path. On days when the sun cannot be seen, the shutters are pulled down to keep the heat inside of the room. The height of the ceiling is lower compared to the summer room in order to decrease the overall size of the room. In indigenous Diyarbakir houses, the winter living spaces are not always placed facing north. If the space of the building land is smaller than necessary, then it is not always possible to build winter-summer rooms that come face to face. In this situation, it is observed that the position of the summer rooms is never changed, but that winter rooms may be placed on
the western or eastern parts of the courtyard. In the sample houses, while the summer rooms are always on the south, winter rooms are located on the eastern side in 14 houses (28%), and in 9 houses (18%) they are located on the western side. The tradition of using open or semi-open parts of the house in daily life continues in winter by the use of winter iwan in addition to the courtyard (Figure 7). The role of these spaces in winter is to provide a place for sitting under the sun on sunny days. The winter iwans are generally placed on the upper floor to maximize use of sunlight.

Informal interviews with elderly occupants revealed that the rooms were heated in winter with special containers of charcoal that were burnt in the courtyard until the poisonous smoke containing carbon dioxide was gone. Then, these containers, called mangal or mantız, were brought into the room to make it warmer. Family members living in the house wore thick clothes made of wool to keep warm.

Some of the houses contain rooms that can be used in spring or autumn (Figure 8). These living spaces may exist on the east side (10 houses, 20%), on the west side (6 houses, 12%) or on both sides of the courtyard (4 houses, 8%). These spaces may also contain iwans (10 houses, 20%).

The findings obtained from this study show that there was movement around the courtyard all year long. The southern parts are used in the summer, while the northern parts are used in the winter. The service areas like kitchens, toilets and cellars, were parts of the houses that were always used in all seasons of the year. In the summer, it was also possible to observe a different kind of movement (vertical movement) during the day. The occupants of the houses used the iwan, the serdab, or the roof depending on the time of the day and the level of heat. The ability to live in an open space in the summer was the central goal of this housing design. Seasonal movement was easy because the decoration elements were light and functional, such as simple sofas or cushions of different sizes. Thus, the movements around the courtyard in different seasons and during the day, paying extra attention to avoid sun in summer, show that the housing design in Diyarbakır was affected by the climatic factors.

**Design characteristics related to privacy measures**

Diyarbakır, a city where Jewish, Christian, and Muslim inhabitants once lived together (Erginbaş, 1953: 16), is a place that has many cultural influences. As a result, indigenous house of Diyarbakır is a reflection of the attempts of users with different religious, cultural or economic backgrounds to create their own private spaces. Because of the lack of official records, it has not been possible to identify the houses that were previously owned by Jews. However, a comparison of the designs of houses belonging to Christians and Muslims showed no important differences. This similarity can be explained by the common social value of isolating private family life, regardless of religion (Kankal, 2004).

In most houses, there are some privacy measures incorporated into the design of the main entrance to provide the isolation mentioned above. It is not possible to clearly see inside the house (the courtyard) when the street door is opened. Typically, private spaces, like the iwan, kitchen and toilet, cannot be seen from the street. In 39 of the houses (78%), it is not possible to see those spaces when the street door is opened. Some of the precautions that provide privacy include the existence of a small entrance hall (Figures 9 and 10) between the street door and the courtyard (29 houses, 58%), placing a
The houses in Diyarbakir may not necessarily have only one courtyard. There are some houses with two or more courtyards. The houses that belonged to wealthy Muslim families were designed in two different parts, called harem and selamlik (4 houses in the sample, 8%).

Figure 9. View of the entrance hall from the street.
The *harem* is the part used by female members of the family and female guests, and it contains the kitchen of the house. The *selamlık*, on the other hand, is used by men in the family and male guests. The entrances of these two parts are separate, which means males and females enter the house from two different doors. *The harem* and *selamlık* are connected by a door. An interesting detail between these two parts is the existence...
of a whirling cupboard (Figure 11). According to the informal interviews with the occupants, food prepared in the harem part was placed within these cupboards by the women and then it was revolved. The male members of the family or male servants in selamlik part could reach the food without seeing the females. This detail is an example of the strict rules against visual contact between males and females.

The Diyarbakir courtyard houses keep some design measures related to private life. For example, toilets are
placed near the street door to make it easier to send the sewage from the pipes under the streets. In summer, when all members of the family were in open spaces like the courtyard or iwan, the occupants preferred not to use these spaces because of the lack of privacy. Usually, there was another toilet reached from a door in the kitchen or in a less noticeable part of the courtyard. In the study, it was generally observed that when the toilet is in a less noticeable place, another one does not exist (36 of 38 houses, 72%). Twelve houses with a toilet in a visible area had secondary toilets (24%).

Diyarbakir house is an example of planning that reflects utmost introversion. The spaces between the street and the house are very limited. The houses do not have any connections with the streets, and a pedestrian can only see the walls of the house apart from the street door and the small openings of the toilets, or kitchens that are placed quite high to prevent curious eyes. It is impossible to see inside of the building from these tiny windows, which are planned for ventilation and lightening, because the walls have a thickness of 50 cm. There are some barriers between the street door and courtyard, which is the common living space of the house. In the upper floor, above the level that a pedestrian can see, there are windows over the part called *cumba*, (oriel) that allow a one-way visual connection. However, this is rather limited and controlled. The passers-by cannot see inside of the rooms because of the iron bars or screens outside the window. The windows are placed on both narrow sides of *cumba*, and not in the middle of the wall that faces the neighbors living opposite of the street (Figure 12). This way, the occupants of the house can see the street clearly, but not the neighbors. It is known that there was a strict tradition forbidding other types of window positioning, which may limit the privacy of neighbors. It is possible to place the window in the middle of the outer wall only if it is placed very high with the purpose of providing more light. There are also some rooms that are built on the streets (Figure 12) and integrated into the wall of the opposite neighbor’s house. These rooms provide shadowy passages on the streets that are called *kabalti* in the local language. It is possible to see either directions of the streets (or only one direction in some cases) from the windows of these rooms. However, the main concern is the privacy of the neighbors. In fact, the number of the rooms with windows facing the street is also limited. As a result of a detailed analysis, it was found that there are 19 houses with *cumba* (38%), and there is only one house with a room built on the street. Namely, there are 20 houses (40%) with upper floor windows looking outside of the house, which means 30 houses that were examined (60%) do not have an upper floor window oriented towards the street. More than half of the examined houses do not have any visual connections to the outside of the house.

Another measure taken to provide the privacy of the neighbors is reflected in the height of the houses. Adjacent houses do not have more than two floors. It is
especially important that the courtyard of the neighboring houses cannot be seen from the openings of the second floor. This rule is an indication of a centuries-old tradition that shows extreme respect for the privacy of neighbors.

In summer, when family members slept on the roof on special beds, privacy was obtained by the use of textiles called *sitare*, which were used to cover the sides of the bed. By using these textiles, people could prevent stares from strangers, and block the light and heat from the early morning sun (Figure 13).

**DISCUSSION**

The traditional structures of courtyard houses developed as a result of environmental and privacy factors. The climate in the Middle East region is generally hot and dry. A courtyard is a simple strategy to protect from the heat. The created space used to escape from the extreme heat outside reminds one of an oasis in a desert. Most of the spaces views into the courtyard, for the spaces get air and light from this central part of the house. When examined within the compact structure of the city, the design of the courtyard house can be evaluated more realistically. The adjacent placement of the houses can prevent the direct exposure of the sun to the side walls. Narrow streets allow transportation in relatively cool areas. In hot climates like the Middle East, especially in cities, the traditional living spaces consist of houses that are designed in this way (Herdeg, 1990; İbrahim, 1998, 1999; Memarian and Brown, 2006).

The traditional urban texture of Diyarbakır has a com-
pact design, similar to other cities in the Middle East. In such designs, only walls facing the courtyard are generally exposed to the sun. Therefore, the courtyard becomes the center of the house. The movement around the courtyard according to the changing weather conditions in different seasons is part of a simple and practical adjustment. Examples of movement can also be seen in traditional Arabian (Scudo, 1988; Al-Azzawi, 1996a, b; Ragette, 2006) and Iranian houses (Cantacuzino and Browner, 1976; Memarian and Brown, 2003). In addition, courtyard houses in some parts of Turkmenistan have been designed for movement (Herdeg, 1990). While the movement in an Arabian house takes place both between the living spaces in the north and south parts of the courtyard (seasonal horizontal movement) and between different floors (seasonal vertical movement), in the examples in Iran and Turkmenistan, only a horizontal movement is observed. In the indigenous courtyard houses in Diyarbakır, a horizontal movement can also be seen. There are many examples that contain summer rooms on the south and winter rooms on the north of the courtyard. In addition, in some examples, east and west sides are also used in autumn and spring respectively. In Arabian and Iranian houses another example of movement can be observed in summer: there may be a vertical movement during the day, which can also be seen in Diyarbakır houses. During the summer season, the iwan is used in the morning and evening while the serdab is the place people live in the afternoon. At night, household members go to the flat roof to sleep.

The effects of the Middle East plan type in Diyarbakır can also be observed in the semi-open parts (iwans) as well as the courtyard. It can be said that iwans, which are generally placed between two rooms and opens to the courtyard or garden, have a Middle East origin (Kuban, 1975) and have spread out to a wide area from Turkistan to Egypt. The same tradition exists in Afghanistan and Iran. It is possible to see similar examples of the following spaces in Diyarbakır houses: Maq'ad (loggia) of Cairo house, qa'a (main hall of a house, comprising a durqa and two iwans) or durqa (centrel space of the qa'a) in Cairo or Damascus; serdab (basement or “soğukluk”) in Baghdad house or the high iwans with selbebil in Damascus or Aleppo (Akin, 1985). It is also possible to see examples of the serdab, parts of which are placed underground, similar to the ones in cities Yazd, Shiraz and Isfahan (Memarian and Brown, 2003, 2006). The construction of the iwan and serdab is the result of the cultural and climatic conditions in the region (Bekleyn et al., 2004). The fact that these spaces face north is the result of a strategy used to cope with the regional climate.

A number of cooling elements are added to the design of the courtyard houses. These can be seen in different cities, with minor differences, and most of them are based on the idea that water has a cooling effect (Laffah, 2006; Tabba, 1986). There are two main effects of these elements: a physiological effect and a psychological effect. This artificial environment, which is the result of a rational insight and the attempt to create a comfortable environment, forms the core of the house design strategies used in hot climate areas. In Diyarbakır houses, examples of these strategies are selbebilis, which add a cooling effect of water to the serdabs and the small pools with water fountains in the courtyard. Additionally, earth roofs mitigate heating effects from sun during the day and serve as sleeping areas at night. These strategies, which are the results of hundreds of years of experience, show similarities to Arabian and Iranian houses.

In the Middle East, privacy is a very important concept in social life. The effects of this value can be seen in the house designs. In an adjacent, compact city structure like those in the region, a house that is surrounded by walls and shaped around an inner courtyard is the most important strategy that provides privacy. There are special precautions to limit visual contact between people that may come to the street door and occupants sitting in the courtyard. In order not to interrupt the neighbors, residents never consider adding a third story to the traditional two-story houses, so as to not intrude on their neighbors' privacy. Planning that prioritizes privacy, such as the examples given above, is the common feature of the courtyard houses in Turkey, Syria, Iraq and Iran. The characteristic is common in all Muslim houses in the region. As Erpi (1991: 246) states;

"... characteristic of the house, i.e. the introvert setting, can be attributed to the constraints imposed by the Moslem religion. Islam is a men's world. Women in Moslem societies are segregated from daily life. Their direct contact with the outer world beyond the home is frowned upon. Women are kept under their outfit and veil and behind window grills. Consequently, the house where women live, does not expose itself to outside traffic, but shuts itself in an introvert setting."

Because of religious factors, women were until recently kept out of social life. This means that there are barriers between the inner spaces of the house and outer interruption. Because the windows generally face the inner courtyards, most houses do not contain any windows that face the street. In the examples of houses that contain windows on the walls of the second floor rooms the facing the streets, extreme caution was taken to make the room invisible to outsiders. In Diyarbakır houses, iron screens or bars were used to provide privacy. Iron or wooden bars were used in the examples in the Middle East. The most controlled (very closed) examples of wooden screens can be seen in the traditional houses of Medina, Cairo and Damascus (Abdulac, 1982; Behrens-Abouseif, 1989). The entrances of the houses are strictly controlled, especially in Iranian
(Memarian and Brown, 2003) and Arabian houses (Bahammam, 2006; Ragette, 2006; Zako, 2006). The same behavior can be seen Diyarbakır houses, which shows the effects of common social values. For example, the harem and selamlik parts in Diyarbakır house can also be observed in Arabian or Iranian house. This house design, which was adopted by wealthy families in the region, stemmed from the tenets of Islam. An interesting finding obtained from this study was that the houses that belonged to the middle class Christian and Muslim families shared many similarities. This can be explained as the effect of common social and cultural values that were accepted in the region, regardless of religion.

Conclusions

In this study, the architectural design of indigenous courtyard houses of Diyarbakır has been examined in terms the effects of climate and privacy measures. The design of these houses is the result of both climate and the social structure of those societies. Because of the hot and dry climate in the region, the houses were designed around an inner courtyard to prevent extreme heat in the summer season. Another benefit of to the courtyard design was to protect privacy. Because of the cultural and social values shared by the inhabitants of the city regardless of religion, privacy was an important factor. Extreme care was taken to limit interactions between male and females. The effect of Islam can especially be observed in the houses that belonged to wealthy Muslim families, which were designed to have two separate sections. In these houses, even the entrances to the houses were separated, such that men and women entered the house from different doors. As a result, it can be said that the indigenous courtyard houses of Diyarbakır show the effects of both climatic and privacy measures. However, it should also be added that these house plans, which were adjusted to the needs of inhabitants for hundreds of years, are in danger of disappearing. Now, only a limited number of protected examples exist. The new inhabitants of the city live in a modern world, and they do not have the time and space to make lifestyle changes every season. The houses are smaller now, and because decorative elements have changed, it is not easy to move modern furniture seasonally. Because of the effects of Western lifestyles, the importance of privacy decreases every day. Therefore, the houses mentioned in this study are in danger of deterioration. However, they should be protected to make future generations aware of their past values. It is also important to understand the basic concepts behind the design of these houses because they may give inspiration to modern day architects.

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