Processes of Urban Transformation: Exploring the Nexus Between the Built Environment and Islamic Identity in Saudi Arabia (between 1938 and 1990)

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Abstract

This paper focuses on exploring the nexus between the patterns and form of the urban built environment and the nature of Islamic identity which increasingly defines the urban landscape of Saudi Arabia. The review is set within the wider urban transformation processes at play in Saudi Arabia during the period 1938 to 2005 when Saudi Arabia transitioned from an economy strongly focused on oil exploration to one which is now centred on oil plus the creation of ‘economic cities’. Islamic identity in the built environment is increasingly influenced by the adoption of both modern housing designs and western residential neighbourhood patterns. On the other hand, these physical forms and patterns also shape the nature and meaning of Islamic identity and its resulting spatial expression. In the twentieth century, the relationship between urban patterns, architecture, and people was highly compatible in Islamic cities in Saudi Arabia and the Arabian Gulf region as most were conservative societies. Within this context, this paper traces urban patterns, housing and neighbourhood designs from the period of discovering oil in 1938 until 2005 when economic diversity became a major driver of urban growth.

1. Introduction

The story of the urban development in Saudi Arabia is unique; oil has played a significant role in planning the modern city, while Islamic identity was the main feature of the traditional city. As a result, the traditional city may have visualised socio-cultural values either of the level of the urban pattern or the architecture. In 1973, the oil boom abundantly contributed to economic and urban development in Saudi Arabia. In this context, investigating the urban development within the context of Saudi Arabia has been divided into two main parts: the traditional urban pattern in the pre-modern oil modernisation and to contemporary urban fabric after discovering the oil in 1938 by the Arabian American Company Aramco.

2. The traditional urban pattern in Saudi Arabia

Homogenisation between the urban pattern and the architecture resulted in providing a unique example of the Islamic city. However, there are different factors contributing to shaping the unique urban fabric in the traditional cities in Saudi Arabia, which are religious, socio-cultural, economic, and environmental[1]. Islam is a “precise” religion as it forms the lifestyle of people within the city to ensure equality not only for the human beings but for all creatures. This relationship between the environment and creatures is derived from the Shari’ah (Qur’an and Sunnah), which informs the socio-cultural values of Muslims. Sociocultural values represent the Islamic Identity in the traditional city in Saudi Arabia through either the urban pattern or the architecture. The unique geometries of the buildings are difficult to comprehend from the first glance; for example the irregular outline of the buildings is a result of applying the Islamic principles that divide urban patterns and house designs into three degrees of privacy: public, semi-public, and private [2]. This can be...
clearly seen in the traditional urban pattern of the city through the transition between the narrow streets and the public spaces, from semi-public to public spaces. The same technique has been applied in designing the residential houses: the main entrance of the house that leads to the courtyard through narrow hallway which does not directly connect with internal courtyard, as well as spaces of the house to protect the privacy of the residents, especially women who live inside (Figures 1 and 2) [3]. This represents how the guests are always exposed to the architectural filtration system when travelling from the public to the semi-public parts and end with the private space.

3. The relation between the urban context and the socio-cultural values

The alleys played a significant role in the urban fabric of the old cities in Saudi Arabia. Thus, they were designed to treat several aspects such as the harsh climate circumstances, socio-cultural values, and religious practices at the city [5, 6]. For example, at the alleys, architects can see the overlap between the different circumstances has led to provide a unique outline of winding corridors. Providing convenient alleys is an essential demand as a result of the extensive use from the residents due to the different activities which take place in or passing through these corridors [5]. To begin with, one of the seven pillars in the Islam is performing the five prayers at Masjid for the men. As a result, the residents were walking through the alleys five times a day just for pray. During and after this journey people were sitting on the side of the alleys to communicate with each other, buying and selling groceries till muezzin starts in the azan to collect the people to perform their prayer at Masjid [7]. In terms of the socio-cultural matters, the majority of the people are using the closed end of the alleys to celebrate the official public Occasions, marriage celebrations for the men only where the women celebrating together at homes and watching the men when the performing traditional dancing from behind the Mashrabiya (this architectural element is used widely in the western region of Saudi Arabia especially Makkah and Jeddah cities), or to establish the condolence ceremony [5].

The social relationships between the residents were very strong which contribute in reinforcing the use of the public spaces[1]. In the front of the majority of the houses there was a special place called Mastbah which is a platform which is raising from the street level by 3 to 4 stairs, while the other houses could have what called Mirkaz which is an outdoor sitting bench used by the dweller to meet his daily guests from the men [5]. During the summer the majority of the residents were starting in sprinkling water at the front space of their house before putting the Mirkaz to decrease the temperature of the air [5]. That kind of the sociocultural interaction was resulted in reinforcing the social relationships between the residents, so it became the norm how the neighbours could help each other in the daily duties as well as in the official occasions like wedding celebrations [5]. That trend has been expanded by the residents till they started to borrow the kitchen utensils from each other[5]. There were strong relationships between the neighbours which significantly contributed in extending the occupant’s domain. As a result, residents’ public awareness toward their public urban spaces has increased[5]. So the general attitude of the alleyways is to keep them clean as well as for the front space of each home in the neighbourhood they kept it clean like their houses’ rooms[5]. There were some socio-cultural factors
formed the human behaviour at the urban spaces such as the moving from one neighbourhood to another, and the degree of the privacy at the different urban spaces. One significant feature of the urban spaces at old cities in Saudi Arabia is there were no clear boundaries between the public, semi-private, and private urban spaces like any other traditional Islamic city, which contributed in designing specific architectural elements to provide effective communication with the urban spaces. The architecture and the urban pattern were compatible where we can clearly see that each of them is complement the other, this relationship between the architecture and the urban pattern has consolidated when they had harmonized with the sociocultural values of the people as well as environmental circumstances [5].

4. The oil boom in 1938

The arrival of the modernity in Saudi Arabia goes back to the discovery of oil by the Arabian American Company Aramco in 1938 [8-10]. Before that year, Aramco was unsure about the future of oil in Saudi Arabia and whether it would be fruitful or not, so it decided to build temporary basic shelters to accommodate its American workers [11]. By discovering the oil well Dammam No.7, which produced over 1500 barrels per day, Aramco became very confident about the future of oil exploration within Saudi Arabia [12]. As a result, the company started to set up a housing scheme to replace the basic shelters which had been built earlier. Raw materials such as steel and cement were imported to accelerate the construction process which paralleled the oil exploration process [13]. Aramco created a new urban development, which mainly aimed to meet the desires of the American workers and their families. As a result, new building typologies were introduced in Dahan such as shopping malls, medical centres, and educational facilities [10, 14]. The housing project which was built between 1938 and 1944, introduced both new urban pattern and housing typologies [14]. It was a sample of western urbanism, as it illustrated modern housing development which was connected by streets networks (Figures 3 and 4).

Faisal Al-Mubarak mentioned that:

“I argue that Aramco’s planners encouraged a policy of physical segregation, based on ethnicity and professional grade within its industrial (company) towns and fell short in aiding the nascent government in developing a genuine planning model suited for local society.” ([9], pg.32)

The American western lifestyle was introduced through the American workers’ community as an ideal of modern urbanism, as well as presented via media. According to early literature, the Sun and Flare magazine “was the most powerful medium that reflected the Aramco lifestyle” [13]. The magazine was reporting both local and foreign news (Figure 5), and focused on the sports and social activities of the residents within the company’s campus. It also discussed new sports activities that were introduced by the American workers in Aramco such as tennis and bowling games, which extended to include dancing classes [16].

The concept of westernization was expanded to include broadcasting western programs and documentaries which targeted the Americans viewers who work in Aramco (Figure 6). At the same time, on the other side of the Aramco campus there were two traditional villages called Al-Hafuf and Al-Qatif, which were very different from Aramco’s campus both in terms of the built environment and socio-cultural values of the residents [8, 14]. Mashary Al-Naim pointed out that the early intervention by Aramco has deeply affected but not immediately on the Saudis [14]. Questions to raise such as how will Americans live there, What they do, and

![Figure 3. The satellite image on the left hand side illustrates Assalhiyyah Neighbourhood which is the first grid pattern with traditional building system inside the blocks in 1935 [14]](image1)

![Figure 4. The American Camp, which has been taken in 1949 – during this year the number of the employees jumped to 13.000 [15]](image2)
about how the existence of the Americans workers would contribute to changing the socio-cultural values of the native people [14]. At the beginning of the transformation toward the modernity the conflict between the traditional socio-cultural values and the westernisation was limited and did not have a wide effect, because the Saudis accepted what matched their socio-cultural values, and applied it to their lifestyles as well as their houses [10, 14]. Mashary Al-Naim stated that:

“... the contrast between traditional images and the new images in the minds of local people can be considered the beginning of physical and social changes in Saudi architecture…” ([14], p.128).
Later, a heated debate between old and younger Saudis arose about if their traditional neighbourhood pattern with its narrow and winding streets should be changed to adopt the modern layout which was presented on the other side of the city [8, 14]. The Aramco camp had introduced new spatial relationships both at the level of the internal arrangement of the house structure and where the houses were situated in relation to each other in the urban pattern. By examining what was presented in the Aramco camp, it can be seen they were opposite to the built environment in the two traditional cities [8]. Solon T. Kimball described the nature of the Aramco camp, which imported western urbanism features from the USA, by building single storey houses surrounded by a grassed yard [11, 14] (Figures 7 and 8).

The majority of Saudis at that time were still adherent to their indigenous socio-cultural values, which formed in a built structure sense [11]. As a result, the majority of the native people rejected the imported socio-cultural values and architectural forms, deciding to maintain their own traditional pattern (Figure 9) [8]. This led to social tension between the Saudi and American workers in Aramco. Therefore, when Saudi workers decided to bring their families and move to the Aramco camp to live there, they set up their own traditional settlements[11]. Any non-structured land was targeted by the Saudis workers, and they started to build their fenced settlements from available local materials at the site; settlements were separated from each other by setting narrow winding footpaths. This created “a community of mud-brick and timber houses built in a traditional and comfortable way” [14], p.128).

5. The first planned city in Saudi Arabia in 1947

It is fruitful to look at how Kimball described the position of the Saudi workers during their first socio-cultural contact with the American workers in Aramco camp. Kimball described the Saudi workers’ settlements as “neither planned nor welcomed” when he compared them to the Senior staff camp([11], pg.472) . Then he explained how the Saudi workers were trying to create sort of settlements who are familiar with and matching their socio-cultural values. According to Mashary Al-Naim:

“...Kimball recognized the insistence of the native people on their own identity through his description of the Saudi camp as ‘an emerging indigenous community life” ([14], p.129).

Early literature mentioned that urban transition usually taking time especially when combined with economic transformation, and that what exactly happened in Dhahran. The time frame to achieve any transition depends on several factors, the most significant factor is the role of the government as well as population behaviours in facilitate achieving the transition; Sovacool mentioned that:

“Moreover, transitions to newer, cleaner energy systems such as sources of renewable electricity or electric vehicles often require significant shifts not only in technology, but in political regulations, tariffs and pricing regimes, and the behaviour of users and adopters.” ([17], pg.202).

The native people at Aramco camp were still committed to their socio-cultural values, which made them reject the American workers’ modern lifestyle. However, that did not end the matter of sociocultural change for Saudis workers, change took time, and occurred slowly [8, 11, 14]. Comprehending the change in the physical environment and accepting the new spatial arrangements of the houses were basically dependent on how fast the Saudis were in accepting or rejecting changes to their existing socio-cultural values [8].

During mid-forties, the Saudi government and Aramco were not satisfied with the traditional settlements, constructed by the Saudis at the camp [9, 14]. As a result, the Saudi government asked Aramco to find a solution for the traditional urban sprawl by managing the urban growth in the areas around the oil wells [8, 11]. Through this decision, the first urban transformation in Saudi Arabia occurred and the government announced the first planned cities, which are Dammam and Al-Khobar (Figure 10) [8]. The urban design approach of the two new cities followed a gridiron pattern, which greatly differed from the traditional cities which followed a compact pattern [16]. The proposed urban pattern showed new spatial arrangements through three levels: the urban spaces in the city, the new outline for neighbourhoods, and the modern design of the houses (Figure 11).

This led to accelerating the change in the socio-cultural values, not only in the two new cities but also extended to other traditional cities. For example, the native people who lived in one of the traditional cities, called Al-Hofuf, which was close to the new two planned cities, developed a new house typology that is called Bayt Arabi (Arabic house) [14]. According to Mashary Al-Naim the native peoples’ perception of the socio-cultural changes around them made them developed a new housing design and gave it an Arabian name [8]. However, in the past before the introduction of the new houses scheme by Aramco, house designs was almost the same across the urban areas of Saudi Arabia so there was no need to give them specific names when they were similar in terms of spatial arrangements and architectural images [8]. What the author asserts is that releasing a specific name for the type of houses is strong evidence demonstrating how the native people react towards the threat to their identity as a result of the development of the new cities’ scheme [14].
Figure 10. The first planned city in Saudi Arabia, Al-Khobar in 1947 [8]

Figure 11. The introduction of the western planning system at Dammam and Khobar cities in Saudi Arabia [13]

Figure 12. Saudi workers during the workshops of designing their homes. It is obvious that the Saudi workers started to adopt western lifestyle, as demonstrated by wearing shirts and trousers [13]

Figure 13. The modern streets in Dammam in the eastern region of Saudi Arabia. Right an American woman buying her groceries at a supermarket without wearing a Hijab [13, 18]

Figure 14. An American woman walking in the street in one of the most conservative societies in the Middle East [13]

Figure 15. The urban pattern of Riyadh in 1862 [8]

Figure 16. The Master plan of the new district Al-Malaz in 1953 [8, 10, 19]
6. Aramco home ownership program in 1950

The development of the Bayt Arabi, which was emerging in 1930, demonstrated a new type of housing that developed further to become known as a villa. Then in 1950, Aramco announced its Home Ownership Program for its Saudi Employees to encourage them to build their homes (Figure 8) [9, 14]. Saudi employees were required to provide a design for their homes in order to qualify for a Mortgage loan [14]. However, the Saudis were not qualified to design their houses and the number of the architects within Saudi Arabia at that time was too limited, so they relied on architects and engineers who work for Aramco to design their homes [13, 14]. The number of Saudi employees who applied for receiving accommodation was quite high and the number of architects and engineers who worked for Aramco was limited, so the company decided to develop a set of proposed designs for its employees to choose from. However, according to early literature (Al-Naim 2008, Al-Hathloul & Anisur-Rahmaam, 1985), the proposed designs did not incorporate the traditional design principles. Instead designers adopted a specific style called the ‘international Mediterranean’ detached houses scheme [9]. On one hand, the eastern region of Saudi Arabia has seen a wide urban transformation which results in some changes in the socio-cultural values of the native people between 1930-1940 (Figures 12, 13 and 14), while some indicators of changes in socio-cultural values were also occurring in the capital of Saudi Arabia (Riyadh) [9].

According to Mashary Al-Naim, Facy mentioned that the new neighbourhoods in Riyadh had been classified based on the economic and social status of the residents; however, the spatial arrangements of the houses and the construction methods were still traditional. He described the changes in Riyadh in the 1940s as:

“Despite the mushrooming development of the city outside the walls, traditional methods of construction continued to be employed. The local architecture had to be adapted to the creation of buildings for government and the royal family on a scale hitherto unimaginied by local craftsmen.” ([14], p.130).

In 1953, King Saud decided to modernise Riyadh city; Riyadh has seen series of urban development after announcing the transformation from traditional toward the gridiron urban pattern; in 1951 the Saudi government decided to build the royal residential district (Annasriyyah), however it was finished in 1957 [14, 19]. A significant highlight for this project is the use of the reinforced concrete as a building material for the first time in Riyadh [14]. Tension was growing during this period among the Saudis regarding the traditions and modernity after seeing the recent urban developments within Riyadh, which led to radical changes in socio-cultural values as well as in the built environment [14]. This was manifested in late 1950 by the decision of the government to construct the Al-Malaz neighbourhood (Figures 15 and 16) [8, 20].

The same urban perspective was also applied in developing Dammam, Khobar and Riyadh, however there were major differences between the earlier urban developments. In the case of the urban development in Dammam and Al-Khobar, the project was totally controlled by Aramco, which is a private company [14].

Another significant difference that is Aramco gave the workers the right to design their houses. However, in the case of the Annasriyyah and Al-Malaz districts in Riyadh, the project was controlled by governmental agencies, which were responsible for the different stages of the project from the beginning until the construction of the housing units [8]. The residents were given no choice to take part in the designing process nor express their desires and opinions about their future houses. In terms of describing the emerging urban design Mashary Al-Naim stated that Yousef Faden described the recent urban development in early fifties as: “…a completely different conception of a house, cluster, and neighbourhood has been introduced. It starts from the tiny details of the house construction, and spreads to the internal spatial organization of the rooms and finally to the external appearance and the relationship of the house to those in the neighbourhood.” ([14], p.132).

The new housing pattern which was built in Dammam, Khobar, and in Riyadh were acceptable for the employees of both governmental agencies and Aramco for different reasons. One significant reason that most of the Saudi employees at that time studied abroad and they spent time with people from other socio-cultural backgrounds, so they were not concerned about the...
Figure 18. Left: The traditional urban pattern as well as the courtyard houses. Right: The modern urban pattern where the narrow streets have disappeared and, the multiple storey buildings have been constructed instead of traditional houses [14]

Figure 19. The master plan of the modern Riyadh showing the future expansion by Doxiadis in 1968 [19]

Figure 20. The urban transformation in the neighbourhood pattern between 1935 and 1973 in Dammam [21]
new housing pattern. Another important reason was that the rest of the employees were not Saudis and had experienced different socio-cultural values during their working journey. However, in the modern residential districts in Riyadh that were mentioned above, the Saudis searched for answers to critical questions about designing the new houses [14]. People's perceptions about the changes in the physical environment in Riyadh were like what had happened in Dammam and Al-Khobar. Until the late 1960s most of the people who were living in the traditional areas still conserved their traditions as well as socio-cultural values, which formed their houses. The indigenous society was resisting the socio-cultural changes as well as the changes in the physical environment [8]. However, Mashary Al-Naim has mentioned that some people in the traditional areas at that time had made some minor changes in their houses to imitate the architectural features of the new houses in Al-Malaz [14].

The urban sprawl of the traditional cities outside its indigenous boundaries were a significant indicator on how people absorbed modernity in Saudi Arabia. New houses that, had been constructed outside of the traditional cities, demonstrated both local and modern images; residents tested the modern aspects of building practices before applying them to building’s facades [14]. As a result, they accepted what agreed with their socio-cultural values and rejected anything else. Mashary Al-Naim conducted a visual survey for the new neighbourhoods which had been built outside the boundaries of the traditional cities in Riyadh. The survey revealed that, the built environment in terms of the form was similar to those in the traditional districts, however the residents started modifying some of the local architectural elements to communicate modernity (Figure 18) [6].

According to Al-Said who also discussed the changes in the traditional neighbourhoods in the Eastern Province of Saudi Arabia in Dammam and Al-Khobar cities, he found some evidence that matched what had already happened in Riyadh. Al-Said focused on studying the growth of the traditional settlements in two neighbourhoods, which were Dammam and Al-Dawaser (Figures 19 and 20) [21]. In the first city, Al-Said noted that the number of the houses in the neighbourhood dramatically grew from 56 to 250 residential units between 1930 and 1970. Moreover, the outline of the houses was still the same and, the courtyard was still in the middle of the house and was surrounded by the rooms. The situation in Al-Khobar was quite similar, the architectural style of the houses was derived from the traditional settlements in the region [8]. There were some modern houses that had been constructed within the two cities as a part of Aramco’s Houses Ownership Program, but most of those residents still adherent to the local traditional socio-cultural values, which was reflected in the form of their settlements at that time.

Mashary Al-Naim argued that native people at this time chose to maintain their traditional house designs because they were familiar with it and it was easy to apply [14]. However, he touched on a significant matter: during this time the government had not yet announced the building regulations system, and as such this allowed the Saudis to have the freedom to design and build their own houses that agreed with their socio-cultural values [14]. Another important point Al-Naim raised was how the houses’ features, which express the modernity become communication tools between the residents and the built environment, which led him to raise significant questions:

“...Was it an internal mechanism developing to absorb the new? Did the localizing of these new images by associating understandable social meanings form the main step towards internalizing these images in the collective memory? If so, this internalization of the new images was the first stage towards generating a new identity in the home environment.” ([14], p.135).

To conclude, this era had seen significant changes in urban pattern as well as the houses’ design; several lessons can be learned about how the residents have dealt with the modernity. For example, most the residents continued in their own socio-cultural values, which formed their local identity at that time. By using architectural elements, the native people have achieved communication between the architectural elements, urban pattern, and socio-cultural values. So, when they decided to replace the traditional communicative elements with new ones, the people to evaluate the new elements to determine if they coincide with their held socio-cultural values or not prior to applying them to the houses. This process has been described as a ‘filtration’ process [14]. This process illustrates how the native people gradually absorbed the new architectural elements, which informed the built environment until it became a part of the local architecture in the country [8]. Consequently, new architectural forms have emerged due to merging new elements into the traditional architecture, which resulted in expressing new local meanings. Some early literature described this period as the identification era, when the native people struggled to form the modern Saudi home environment which matched their sociocultural values [14].

7. Modernisation of capital cities at Saudi Arabia in the 1970

Modernity was greatly growing in Saudi Arabia and the aim of some Saudis and the government during late sixties was to modernise their traditional physical environment. Thus, a new challenge arose for those who
accepted some changes, and they do not have any concerns to accept more changes to achieve the aims of the modernisation process. By 1970, the Saudi government decided to widely modernise the physical environment in Saudi Arabia because previous attempts were having a limited impact on the people’s perceptions of the changes in their physical environment as well as their homes [14]. To achieve that aim, the government was working on three matters to show the importance of the modernity to the public, which were: changing the economic situation after the discovery of the oil, necessity of developing the education sector, and finally improving the communication system in terms of how that would have effects on Saudi families [8, 19]. The previous matters when merged together contributed to make great changes in the traditional socio-cultural values of the Saudis which led later to change the houses’ design. The modern media played a very significant role in introducing the modern housing design to the people of Saudi Arabia; the media campaign coincided with some other radical changes in the economic sector which made the people feel more comfortable regarding the modernisation process [8].

At that time, important questions started to surface about modifying Saudi identity to absorb modernity, especially the houses, which were designed based on the traditional socio-cultural values, and how that design might change in the modern era [14]. The majority of the cities in Saudi Arabia have witnessed dramatic changes in the physical environment to achieve the transformation to become a modern country. Achieving modernity in Saudi Arabia was based on imitating the western lifestyle, and this trend extended to adopt western house design and apply them widely within the country [14]. The Saudi government was working on facilitating this vision by applying planning policies and regulations [19]. Early literature mentioned that the first building in the history of Saudi Arabia, which followed the building regulations was in 1960; before that date the urban growth within the country was slightly controlled by the government because most of the previous attempts, to regulate the urban growth had failed or had only minor impacts [21]. Al-Said mentioned that:

“the turning point in [the] Saudi Arabian contemporary built environment physical pattern and regulations. It requires [d] planning of the land, subdivision with cement poles, obtaining an approval for this from the municipality, prohibited further land subdivision, controlled the height of the buildings, the square ratio of the built [are] require setbacks ..” ([21], p.258).

However, to effectively apply the building regulations within the country it took around fifteen years. Al-Hathloul et al iterate the delay in applying the building regulations was until the government confirmed the master plans of all Saudi regions between 1968 and 1978 [22]. Between 1968 and 1973 the government announced the first master plan for a Saudi city Riyadh, which was designed by Doxiadis (Figure 21) [8]. The proposed master plan of Riyadh was similar to Al-Khobar’s master plan in terms of approving the buildings’ setback regulations and some other aspects [8]. The grid pattern of the houses, which were joined together by street networks, was the dominant urban approach within the country. This officially started at Riyadh and then was widely applied in other cities. Although of applying the building regulations at the beginning of changing the built environment in Saudi Arabia however it failed in regulating both the architectural forms as well as urban spaces in the country [8]. Some early literature suggested that situation arose because of the absence of having an official governmental body to control the application of building regulations in the developing Saudi cities [14].

In 1975 the government decided to establish the Ministry of Municipal and Rural Affairs and Real Estate Development Fund (REDF) and it realised the necessity of regulating the construction of the houses of the citizens who received Real Estate Development loans [14]. However, the rules which were enforced by those governmental bodies were quite strict and left the citizens with no options except constructing the villa as the only type of residential building, as it was the only type of structure which meet the government’s requirements [14]. By going back to Aramco’s developments, which took place at Dammam and Al-Khobar between 1938 and 1950 by establishing Aramco’s home ownership program, which considered as the first spark of the physical contradiction in the built environment, which manifested later in both the urban pattern as well as the architectural forms at Saudi Arabia. The impact of the proposed housing design pattern when it was announced in the Aramco home ownership program in 1950 was huge and continued in to spread until the government announced the building regulations system, which was in line with what Aramco had done to encourage its employees to own modern houses twenty years ago [14]. As such, the Villa or also known as the ‘detached house’, became the dominant style in the country and it was symbolised both personal and social identity [14]. According to Mashary Al-Naim there was a relationship between the peoples’ income and the types of their residential buildings. He linked the wide-spread construction of the villas to the emergence of the middle class in Saudi Arabia in 1950 [8]. The middle class group at Saudi Arabia at that time included people from different cities within the country, however the majority of them were working either in Aramco or other governmental bodies [14]. This group of citizens
Figure 21. The spatial arrangements of the houses have been changed in Al-Malaz between 1960s -1991 [8]

has experienced socio-cultural changes as a result of living side by side with expatriates who were mostly from western socio-cultural backgrounds [20]. Moreover, they were highly educated compared to the rest of the population, which made them try to express their status by living in a villa. In addition, this type of dwelling was widely constructed in the Middle East during the colonial era in some countries, and the villa expressed the social status of the landlords [8].

The people in Saudi Arabia were adherent to their traditions which were expressed through socio-cultural values, which contribute to forming the built environment. By introducing the villa into the society as a tool to achieve modernity, people started to create individual identity through their villa’s designs. Moreover, the popularity of this kind of dwellings led to social tension between Saudis where fans of individualism who preferred the modern lifestyle and saw the native people who still lived in the traditional dwellings, and adhered to the traditional socio-cultural values as a backward group [14]. There was some evidence for the spread of this attitude in some cities in Saudi Arabia. Mashary Al-Naim mentioned that Jomah has pointed out that this socio-cultural attitude was represented the transformation from being ‘tradition directed’ to becoming a ‘self-directed’ in the Saudi society [14]. He also extended that to includes how the traditional dwellings considered the spiritual aspects of the residents, while the modern ones focused more on physical and spatial aspects [14]. The villa was developed as a device by the Saudis to express their new socio-cultural status through the architecture. Mashary Al-Naim stated that:

“... In that sense, the home can be seen as a dynamic dialectic process between individuals and their community (Altman & Gauvain, 1981)”. While the Saudi family expressed its wealth and modernity by owning and living in a villa, they used the uniqueness of their villa form to represent their personalities....” ([14], p.139).

8. Understanding sociocultural transitions through the housing industry and planning in Saudi cities

In the late seventies, people’s passion and desires for achieving satisfactory social status by owning a villa or an apartment led to an unstable situation in the housing industry, which combined with the approval of the building regulations by the government that made the situation even worse. People usually employed architectural forms as a communication device to translate their socio-cultural values when dealing with the environment and constructing their houses [14]. As a result, people started to make some interior and exterior changes in their villa to match their socio-cultural values [8]. Bahammam discussed the previous changes, which led to a contradictory situation in the contemporary housing design in the country [23]. There were evidences which supports that point of view; for example, in one of the modern residential districts that had been constructed at Riyadh and was called the Al-Malaz project, the residents started to change plans of modern villas to meet their socio-cultural values. Some of the early literature took people’s reactions at that time as an evidence for not accepting the houses imposed on them by the government, especially when they started to change their outlines to express their socio-cultural values [4, 14]. For example, Mashary Al-Naim mentioned that Al-Said was studying the urban transformation that happened in Al-Malaz between 1960 and 1991 (Figure 22); Al-Said was asserting on that the changes, which occurred in the houses at Al-Malaz were a result of hidden rules which were agreed upon between the residents; he described them as “unwritten rules” ([14], p.140). Al-Said also said that: “those hidden rules were derived from the traditional Arab-Muslim territory type” ([21], p.266).

In relation to the same case, Bahammam also pointed out that the majority of the residents living in the same region have changed their house’s pattern to meet their socio-cultural values [23]. However, Mashary Al-Naim mentioned that Al-Hussayen had discussed the matter from different perspective; when he interpreted the
changes which had been made by the people to meet their sociocultural values which they were a result of ignoring the designers as well as governmental bodies to the role of the women in the Saudi society [14].

9. Conclusion

The main key drivers that have resulted in the urban transformation in Saudi Arabia are: (i) unifying the country and changing of political circumstances, (ii) revising the settlement policy as applied to populations, (iii) the discovery of the oil revenue in 1938, (iv) adopting modern planning approaches (Figure 22).

The focus of the paper has been on the role of oil in conducting economic transition within the country from 1938-1990 (Figure 22). The economic leap resulted in changing form, structure, and pattern of Saudi cities by adopting new trends in planning and designing policies as well as building regulations. At the local scale, the traditional neighbourhood layouts and profiles have changed due to using new urban patterns as well as modern designs for houses. Thus, a socio-cultural conflict has taken place in Saudi society between inhabitants, governmental and private organizations as they trade-off between accepting socio-cultural change and protecting the local Islamic principles. This socio-cultural change has led to a change in the urban morphology of the residential neighbourhood at the local scale. Thus, residential neighbourhoods in the major cities in Saudi Arabia can be divided into three main types: traditional, transitional and modern.

The traditional neighbourhoods have been planned by residents and builders commensurate with Islamic principles and local socio-cultural frameworks. This type of residential neighbourhood has changed in Saudi Arabia since the discovery of oil, like most neighbourhoods in and around historic Jeddah. The transitional neighbourhood emerged in the wake of the oil boom of the early 1950s in Saudi Arabia by non-Saudi practitioners who were responsible for developing the masterplans of the major cities as well as housing design. The urban pattern of the transitional neighbourhood differs from the traditional one. However, they share with each other some similar characteristics such as public spaces and some architectural elements. However, the alleyways have converted to streets, and building facades have become simpler and partly open outward. This type of residential

![Figure 22. The key drivers of the urban transformation in Saudi Arabia](image-url)
neighbourhood emerged after the oil boom until the early 1990s, as most of the residential neighborhoods that developed around the traditional neighbourhoods in Jeddah followed the oil boom. Finally, contemporary neighborhoods emerged in the early seventies which the urban characteristics of these neighborhoods differ from the two former types of residential neighborhoods. This type of residential neighborhoods has widely emerged at the north of Jeddah. The main features of this type are the wide dependence on car use instead of walking. Second, districts are extended horizontally without developing the infrastructure parallelly. The housing designs have been imported from other countries, thus inhabitants have modified their houses to satisfy their socio-cultural needs. For example, the wide glass windows in most of the contemporary houses were greatly open to streets without using any architectural treatments to protect the residents’ privacy. Thus, residents started to modify their housing design to resolve such issues (Figure 24).

References


Figure 24. The most popular types of the neighbourhoods in Saudi cities, [24] modified by the authors
F. Zsuzsanna: “Local Database as Crucial Factor of Sustainable Architecture”, pp. 17–31