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Analysis of the Historic Urban Landscape of Isfahan Based on the Cultural and Natural Foundations from the Beginning to the End of the Safavid Era

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ABSTRACT

The current paper attempted to recognize the historical city of Isfahan based on the Historic Urban Landscape (HUL) approach to investigate the key foundations of the formation and continuity of this city over time. The qualitative approach was used to achieve this purpose. Also, the historical-interpretive method was utilized to reread the evolution of Isfahan overtime by written resources based on its natural and cultural foundations. Indigenous knowledge, religion and faith, mysticism, and philosophy were investigated as the constituent components of the culture to analyze the foundation of culture. The research results indicated that nature and religion were two main foundations in the HUL of Isfahan that must be the center of each conservation measure or plan to achieve holistic conservation. Also, external cultural attraction and internal cultural repulsion were revealed as two influential factors in a HUL. Accordingly, it was explained that each conservation and development plan in the city must be implemented in accordance with its main constituent cultural and natural foundations to overcome the possible conservation and development challenges effectively. Based on the results of this paper, it was revealed that the planning in the conservation of the historical city of Isfahan must be based on the conservation of religion and nature. It requires that the atomistic approach to the constituent elements of the city, such as historical monuments and urban spaces, which is currently the main paradigm in the conservation and development strategies, must be directed to the conservation of its main constituent foundations.

Keywords: Historic Urban Landscape (HUL), Isfahan, Cultural and Natural Foundation, Historical City, Cultural Landscape.

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1. INTRODUCTION

At the beginning of the conservation, the historical regions were defined as immovable heritages. The historical cities and urban regions were defined as a set of individual historical buildings. Over the past thirty years, international conventions, charters, and documents have provided a more comprehensive definition of the city (Bandarian & Van Oers, 2012) and have achieved the late Historic Urban Landscape (Vienna Memorandum, 2005; Recommendation on the Historic Urban Landscape, 2011). The HUL is based on the landscape approach to the city, which considers the city as a historical continuum made of the layered of two foundations of nature and culture. Its intrinsic dynamicity has created a novel approach in the conservation doctrines (Eshrati, 2013; Fadaei Nezhad, Eshrati, & Hanachi, 2019). The HUL is a result of interaction between nature and culture over time. The people's culture, which shapes an urban cultural landscape is affected by the natural context and influences it. Hence, in the process of forming a historical urban landscape micro-ecosystems and culture change. Thus, the Historic Urban Landscape is a result of the change (Eshrati & Fadaei Nezhad, 2018). As a type of the cultural landscapes (Einifar & Eshrati, 2018) and a new approach in conservation, the HUL raises the scope of conservation beyond the historical complexes and buildings and includes the natural and artificial aspects of the city and the intangible dimensions leading to the cultural diversity. Although the inclusion of the cultural landscape in the operation guide of the UNESCO was a significant step to recognize it, it still faces fundamental challenges that are rooted in the natural complexity of the culture and landscape (Hanachi & Eshrati, 2011). The recognition of culture as one of the main foundations of the formation and survival of the cultural landscapes in the theoretical framework of this concept (Eshrati, 2013) is one of the first steps of the conversation of a cultural landscape. In the theoretical framework of this concept, the four channels of recognizing the ecosystem, i.e., indigenous knowledge, religion, mysticism, and philosophy of daily life, were introduced as the four main constituent components of the culture (Eshrati, 2013; Eshrati & Hanachi, 2016).

The Historic Urban Landscape is the product of a historical process. This process is a result of recognizing the whole ecosystem in the context of the micro-ecosystem obtained from four recognition channels, including knowledge, religion, mysticism, and philosophy. The significance and importance of having a holistic approach based on the two main foundations of culture and nature and the four sub-foundations of culture are due to the investigation and recognition of the city as an integrated whole in the sustainable interaction with its natural context over time. Consequently, the planning for its conservation leads to comprehensive conservation. Although this new approach seems to be effective in solving some of the current challenges in the historical cities, it has not been involved in the conservation rules of Iran yet. Also, the conservation rules and urban development plans have still taken an atomistic approach to the historical city in Iran (Eshrati, Eshrati, & FadaeiNezhad, 2018), following which, a comprehensive recognition is not realized. However, as one of the types of cultural landscapes, the Historic Urban Landscape presents a new and holistic approach to the historical city in the conservation instructions, which can be effective in solving these challenges. Therefore, it is required to increase the knowledge and awareness about the historical city.

Numerous studies have examined and presented a theoretical framework for the basic concepts of HUL conservation, including value (Masoud et al., 2020), originality (Eshrati, Fadaei Nezhad, Eftekhari Mahabadi, & Azad, 2017; Fadaei Nezhad, Eshrati, & Eshrati, 2015a; 2015b; Fadaei Nezhad & Eshrati, 2015) and integration (Fadaei Nezhad, Eshrati, & Eshrati, 2016). Although all these concepts are necessary for the successful heritage management of a HUL, above all, there is a need to accurately recognize the cultural and natural foundations that shape that HUL.

The current study is qualitative and interpretive-historical research that investigated the evolution of the historical city of Isfahan using documentary studies. It attempted to answer the following question in order to re-read the evolution of Isfahan using a holistic approach: what the main constituent foundations of the HUL of Isfahan? The purpose of re-reading is to reach an arrangement of information to scrutinize the most key foundations to reach holistic conservation.

2. RECOGNITION OF ISFAHAN BASED ON THE HISTORIC URBAN LANDSCAPE

This section studied the cultural and natural foundations in the cultural landscape of Isfahan.

2.1. Natural Foundations

According to the purpose of investigating Isfahan, the key factors were pointed out that play a fundamental role in the formation, survival, and development of this city in different periods in determining the natural foundations. The partial cases were consciously avoided to prevent deviating from the main purpose despite their importance. The fundamental factors, "water" and "suitable soil" for agriculture have provided the livability of the region in historical periods (Mousavi Faridani, 1999, pp. 9-10; Spooner, 2007, p. 410; Holod, 2007, p. 48).

The climate and topographic features of Isfahan have always played a role in the formation and development of the city and its physical characteristics over time. In terms of geology, Isfahan was founded on a sedimentary plain. Geologists and scientists have considered it as one of the most fertile plains of the Central Plateau of

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Iran. These sediments have suitable permeable water resources and reserves. The soil of Isfahan is among the fertile fine-grained soils and is very suitable for agriculture. Broad allocated agricultural lands in the region (Jey and Marbin) that have brought different ethnic groups to this city since ancient times, show the quality of the soil of this city (Omrani, 2005, pp. 38-39; Spooner, 2007, pp. 404-409). The most important river of Isfahan, Zayandehrud, along with man-made branches called Madi, has become the most important reason for the existence and survival of the city of Isfahan. Most scholars and researchers consider the Zayandehrud River as one of the obvious reasons for the development of the city. Therefore, it can be considered as one of the most important elements of the HUL of this city. In addition to its current role, this importance is due to the sediments that were left over during various geological periods and have enriched the soil.

2.2. Cultural Foundations

As mentioned in the introduction, four components of indigenous knowledge, religion, mysticism, and philosophy of daily life were used to investigate the broad and complex foundation of culture. These components were analyzed separately in the following.

2.2.1. Indigenous Knowledge Foundations

Isfahan, called Dar al-Alam, during the first centuries of Islam, fostered many scientific figures whose role and influence in Islamic culture and civilization is obvious. However, the knowledge, which was the product of the scientists' ingenuity was not influential in the Historic Urban Landscape as in the theoretical framework of the process of the formation and survival of the cultural landscapes and Historic Urban Landscapes in this paper, knowledge means indigenous knowledge. Every moment of the local people's lives was and still is based on the micro and macro knowledge overtime to the micro-ecosystem in which they lived. This knowledge encompasses a broad range of knowledge, most important of which in Isfahan are as follows: the knowledge of using water, agriculture knowledge, architecture and urbanism knowledge, economy, business, and trade knowledge (Shirazi, 2007, p. 308; Gregorian, 2007, pp. 382-383; Spooner, 2007, p. 427; Schimmel, 2007, p. 144). The significance of the business in Isfahan in the Safavid era, which was owned by the Armenians, was to some extent that Olearius (1984) stated: "There is no nation in Asia and all over Europe that has not sent its merchants to Isfahan". The knowledge of using and dominating water in the form of the aqueduct (Qanat) and Madi is another feature of the cultural landscape of Isfahan on which many studies have been conducted. Madis and aqueducts provided the ground for the formation of the Garden city of Isfahan and the development of the Chaharbagh pattern by developing the possibility of the broad drinking water system. The knowledge,

which was the product of the scientists' ingenuity was not effective in the Historic Urban Landscape because, in the theoretical framework of the process of the formation and survival of the cultural landscapes and Historic Urban Landscapes in this paper, knowledge means indigenous knowledge. Every moment of the local people's lives was and still is based on the micro and macro knowledge overtime to the micro-ecosystem, where they lived. This knowledge encompasses a broad range of knowledge most important of which in Isfahan are as follows: the knowledge of using water, agriculture knowledge, architecture and urbanism knowledge, economy, business, and trade knowledge (Shirazi, 2007, p. 308; Gregorian, 2007, pp. 382-383; Spooner, 2007, p. 427; Schimmel, 2007, p. 144). The significance of the business in Isfahan in the Safavid era, which was owned by the Armenians, was to some extent that Olearius (1984) stated: "There is no nation in Asia and all over Europe that has not sent its merchants to Isfahan". The knowledge of using and dominating water in the form of the aqueduct (Qanat) and Madi is another feature of the cultural landscape of Isfahan on which many studies have been conducted. Madis and aqueducts provided the ground for the formation of the Garden city of Isfahan and the development of the Chaharbagh pattern by making it possible for the broad drinking water system.

Studying the history of Isfahan showed that economic knowledge has been effective in the cultural landscape and Historic Urban Landscape. Therefore, it was investigated more precisely in the following. The economy of Isfahan has been based on agriculture since the beginning. Ebn Hoqal considered Isfahan equivalent to Fars, Jabal of Khorasan, and Khuzestan in terms of agriculture (Ebn Hoqal, 1966). Although industry played a significant role in the economy of Isfahan in the Safavid era (Gregorian, 2007, p. 392), Isfahan was one of the first cities that experienced the industrial movement and stepped into a new prosperous path by entering Iran into industrialization (In the First Pahlavi era). Therefore, the privileged production of agriculture, livestock, and business turned into industrial, agricultural, and business production (Omrani, 2005, p. 23). Isfahan then turned into an industrial and touristic hub. To turn Isfahan into an industrial hub, the governmental macro policy in the Pahlavi era opened a special window on the cultural landscape of Isfahan, i.e., the industrial landscape. The industrial landscape was the cause of the widespread migrations to the city due to the economic boom. Therefore, it had profound cultural and natural effects (including the change in the exploitation terms of the Zayandehrud) and turned Isfahan into one of the industrial cities of Iran in different periods, including Pahlavi and Islamic Republic eras (Mousavi Faridani, 1999, p. 12). Figure 1 presents that how the economic foundations were based on the natural foundations, which is useful in scrutinizing the Historic Urban Landscape of Isfahan.
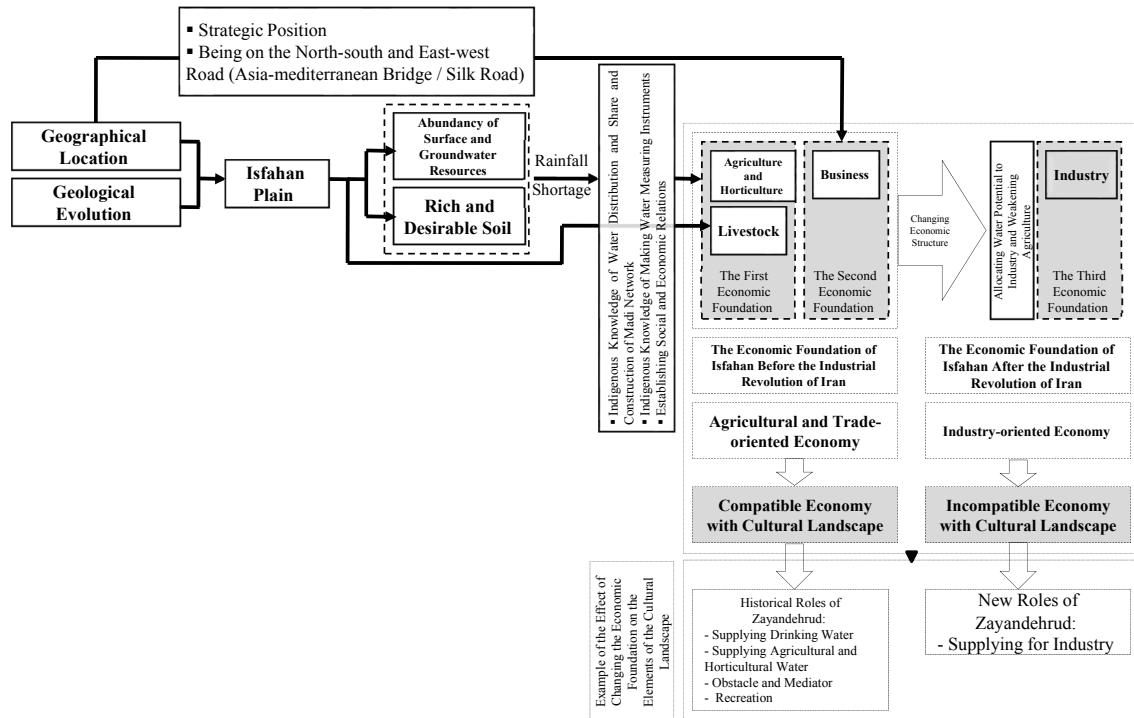
Eshrati, P. et al.

Fig. 1. Economic Foundations of Isfahan Based on the Natural Foundations

2.2.2. Religious Foundations

One of the features of Isfahan city is the co-existence of the followers of various religions and faiths over the historical periods (Omrani, 2005, p. 114). Until recently, when the neighborhoods of Isfahan had still maintained their integration and identity and people were located in the neighborhoods based on their religious roots, neighborhoods were consisting of Zoroastrians, Jews, and Armenians. The name of some of these neighborhoods was Gabarha (Zoroastrians), Jouybareh (Jewish), Jolfa, and Iravan (Armenians). Currently, the majority of people of Isfahan, i.e., 98.5%, are Shiite Muslims. The rest are Armenians, Jews, Zoroastrians, Assyrians, and the followers of other Christian sects (Shafaghi, 2002, p. 19-20).

Before migrating the Jews in the Achaemenid era, most of the inhabitants of this land were Zoroastrians. At the reign of Nebuchadnezzar of Babylon, some Jews refuged to the Achaemenid king of Iran and were settled in the current place of Isfahan and besides the main part of the city (Ebn Hoqal, 1966). The place where Jews settled was called Yahudieh or Dal-al Yahoud. The residents of the villages adjacent to Yahudieh were mainly Zoroastrians or followers of other religions. Thus, the migration and settlement of the Jews created two religious hubs.

After the overthrow of the Sassanid kingdom, Isfahan was conquered by Muslim Arabs in 19 AH, similar to other cities of Iran. In the last battle between the Isfahan army and Muslims, Muslims won. The peace and surrender terms were determined by Muslims as follows: " you are safe as long as you pay your ransom. You must pay ransom to your ruler, who will be determined every year, and do not hesitate to guide Muslims and direct them. Invite every new Muslim day and night and pay what you owe. If you do so, you will be safe. However, if you do not change anything or if some of you changed anything and did not surrender it, you will not be safe. If some of you insult a Muslim, you will get what you deserve, and if someone injures a Muslim, we will kill them" (Omrani, 2005, p. 114).

Despite the peace conditions, it took four centuries for the people of Isfahan to convert to Islam. Since then, Zoroastrians, Jews, and Muslims have lived together in peace. Yahudieh or Dar-al Yahud settlement existed until 5 AH (Omrani, 2005, pp. 120-121). After the spread and power of Islam, When Jews saw their position in danger, they changed the name of their settlement to Jouybareh, which was intertwined with the main center of the city due to the expansion of the city so that their place would not be attacked due its name.

Although different religious groups lived together in peace in most of the historical periods, internal conflicts would occur as well. As Ibn Battuta, 8 AH traveler, wrote when visiting Isfahan in 705 AH: "Isfahan is one of the cities of Persian Iraq. It is a large and beautiful city. However, a large part of it has been destroyed due to the conflicts between the Sunnis and Shiites. These conflicts continue, and the people of the city are constantly fighting and killing" (Ibn Battuta, 1980). When Isfahan was the capital in the Safavid Era, which lasted 148 years (1000-1148 AH), Shiite was the official religion of the country (Nasr, 2007, p. 270).

Christianity is one of the other religions of Isfahan.

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Although some Christian groups settled in this region before the Safavid era, the majority of them migrated to Iran in the Safavid era. Due to the wars between Iran and Ottoman Empire in the Safavid era, many cities of Armenia were destroyed, such as Jolfa and Yerevan. Abbas the Great was kind to the Armenians of Aras Jolfa due to their enmity with the Ottomans. He then sent them to Isfahan by financial help, horse, and camel. After migrating to Isfahan, Armenians were settled in the southern shore of Zayandehrud and in new neighborhoods and called this neighborhood New Jolfa to pay tribute to their homeland (Mousavi Faridani, 1999, p. 122; Gregorian, 2007, p. 383; Der Hovhanian, 2000).

2.2.3. Mystical and Philosophical Foundations[1]

"From the scholars' perspectives, there is a close relationship between the architecture of Isfahan and mystical and philosophical schools of this period" (Stierlin Introduction, 1998). Over its history, Isfahan has not been the origin of a considerable mystical movement yet has fostered great mystics (Schimmel, 2007, p. 95). However, what has been considered in this paper was not the biography of the mystics of Isfahan but their effect on the cultural landscape and Historic Urban Landscape of Isfahan intangibly or tangibility from the micro to macro scales (Mousavi Faridani, 1999, p. 113; Bakhtiar, 2007, pp. 44 & 52). Investigating the Historic Urban Landscape of Isfahan in terms of mysticism indicated that the trace of mysticism could be detected as one of the four components of recognition in different scales in Isfahan. For instance, the mystical interpretations of light in the Islamic and Iranian mysticism can be mentioned as the opposite of the darkness and a sign of knowledge against ignorance and its manifestation in the microscale and light details in Sheikh Lotfollah Mosque. It has been manifested the profound mystical concept of unity in plurality based on some of the researchers' opinions of Isfahan (Ardalan, 2007, p. 176). On another scale, light and shade in movement in the corridors around the Naqsh-e Jahan square have manifested the mystical concepts in the body, indicating the conscious or unconscious vision of the designers, artists, and professionals who created these works. This vision has been expressed beautifully in the poetic interpretations that "masters controlled the pulse of light" (Bani Ardalan, 2011). On a macro scale, mysticism is reflected in the structure of the city as the manifestation of the city as earthly heaven: "Hezar Jarib Garden becomes a symbol of the "world garden". Although it is thousands of acres, it is very small compared to a city that waits for the viewer after passing Si O Se Pol Bridge as a sign of a bridge between this world and another world. The city becomes a symbol of a paradise garden with its Chaharbagh after the bridge (Mousavi Faridani, 1999, pp. 114-115).

3. ANALYZING THE FORMATION, EVOLUTION, AND DEVELOPMENT OF ISFAHAN BASED ON THE FOUNDATIONS OF THE HISTORIC URBAN LANDSCAPE

Until the second AH, Isfahan consisted of relatively separate settlements (Mousavi Faridani, 1999, p. 10; Omranipour & Mohammad Moradi, 2012, p. 173) most important which were as follows: Jey (settlement 1), Khuzinan (settlement 2), Qal'e Tabareh (settlement 3), Yahudieh (Settlement 4), Two sides of the bridge (settlement 5). Jey and Yahudieh were older settlements (Mousavi Faridani, 1999, p. 13; Golombek, 2007, p. 22). Yahudieh was the largest. Qal'e Tabareh had a military plan and castle-like structure. Except for settlement 2, which was extended along the northern and southern sides of a bridge, all settlements were located in the north of Zayandehrud.

The stated bridge was the only bridge that connected the north to the south of the Zayandehrud in the pre-Islamic period and played military and business roles simultaneously. Spatially, it was in the proximity of Shahrestan Bridge located on one of the royal roads during the Achaemenid period. This bridge was destroyed over time, and another bridge was built near this bridge in the Sassanid era that subsequently created a settlement at the beginning and end of its area. In this settlement, business played a fundamental role in the economic structure in addition to agriculture. This business was owned by Zoroastrians because the central government was Zoroastrian. It led to the micro-scale migration of some of the Zoroastrian residents of Khuzinan to this part. Thus, this region was called "Gabrabad" (Gregorian, 2007, p. 378). Due to its greater prosperity, compared to Khozinan due to being on trade routes, the expansion of Khuzinan was slower than that of Je, Qal'e Tabareh, and Yahudieh. Richards considered this bridge a war and military bridge and an example of the war old bridges (Richards, 1964). In order to prove the military land use of this bridge rather than business or livelihood land uses, it can be said, it was built away from the settlements at that time, and its zone was somehow protected to be separated from other parts. Therefore, it was called Shahrestan later, i.e., a place or a city separated from the central city (Fig. 2).
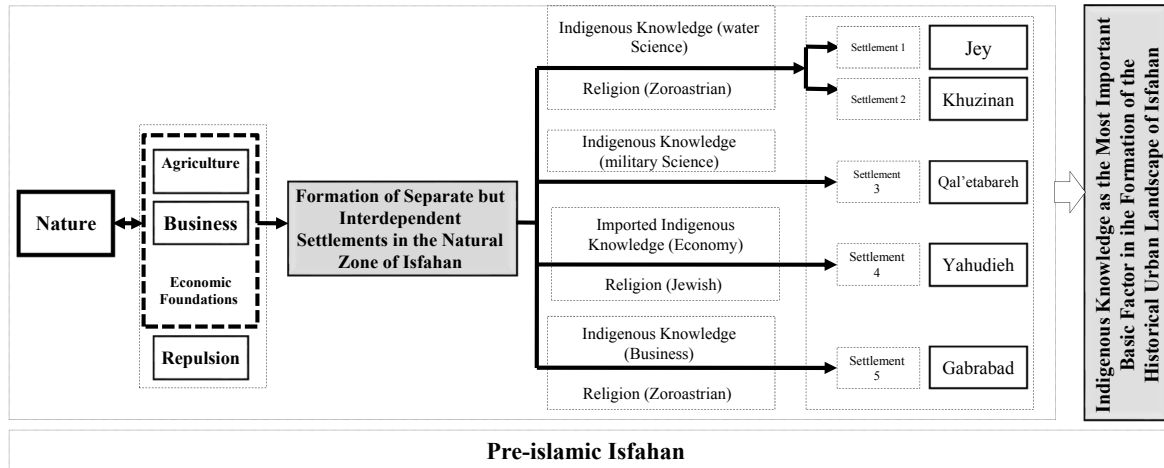
Pre-islamic Isfahan

Fig. 2. Evolution of Isfahan in Pre-Islamic Period Based on the Historic Urban Landscape Approach

In 150 AH, a place between Jey and Yahudieh was selected as the Muslim settlement due to the vicinity to Zayandehrud and giving independence to Yahudieh by Abbasi Governor (Mousavi Faridani, 1999, p. 10; Shirazi, 2007, p. 307; Golombek, 2007, p. 26). Easier agriculture in the vicinity of Zayandehrud due to the access to water and rich soil were among other reasons for the establishment of Arab people in this region to preach Islam and selection of the new settlement. The reason for the settlement of the Muslims in the margin and not inside the Jey neighborhood was that Muslims did not intend to disrupt the physical-social structure

and tried to treat people with peace.

Their establishment in the northern area of Jey was due to their proximity to the military headquarters. The first mosque constructed in Isfahan in Islam advent was located in the northwestern part of Jey, an area in the margin of Jey and the southern part of the military castle. Over time and by converting Iranian to Islam, Arab Muslims ensured that they were accepted in the social structure. It led to the integration of the military area in Qal'e Tabareh and the non-military area in Jey (Fig. 3).
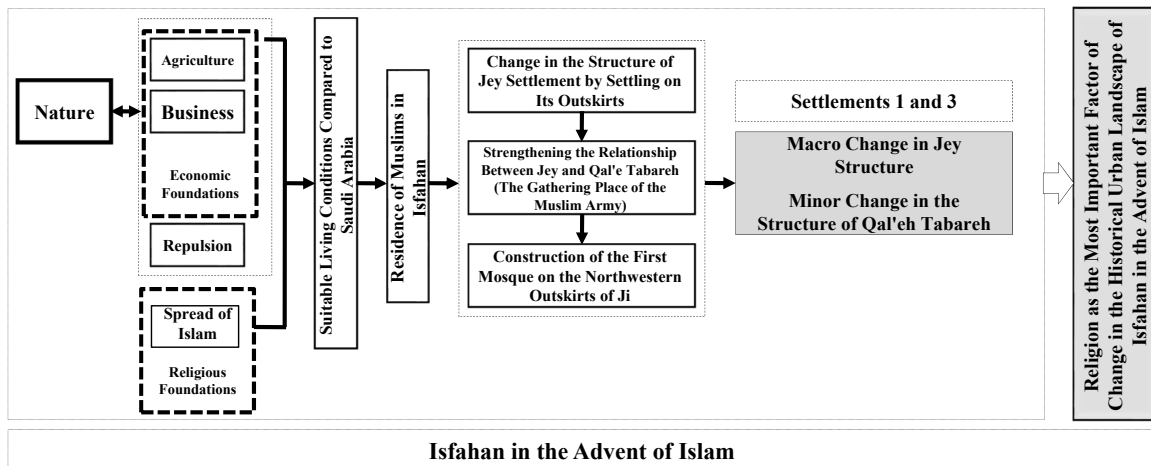

Isfahan in the Advent of Islam

Fig. 3. Evolution of Isfahan in Advent of Islam Based on the Historic Urban Landscape Approach

With the spread of Islam, when Jewish felt threatened to lose their centrality and significance due to the spread of new religion, they welcomed Muslims to their territories for business reasons (Golombek, 2007, p. 276). Therefore, Jame' mosque of the city was built one of the Mithraism temples in the margin of Yahudieh in 150 AH (Mousavi Faridani, 1999, p. 10). The new mosque could maintain its role in the structure of the city because it was on the business route, which crossed Yahudieh as its business center of that region. These trade routes intersected on the north-south and

east-west axes on the outskirts of Yahudieh. The reason for their intersection in the periphery and not in the center of Yahudieh was the efforts of the Jewish people to maintain the body of their religious integration. At the intersection of these two axes, an opening was formed as a place for caravans to stop, and gradually, with the location of the said mosque next to it as a place for caravans to pray, it expanded more and became the center of the city (Fig. 4).
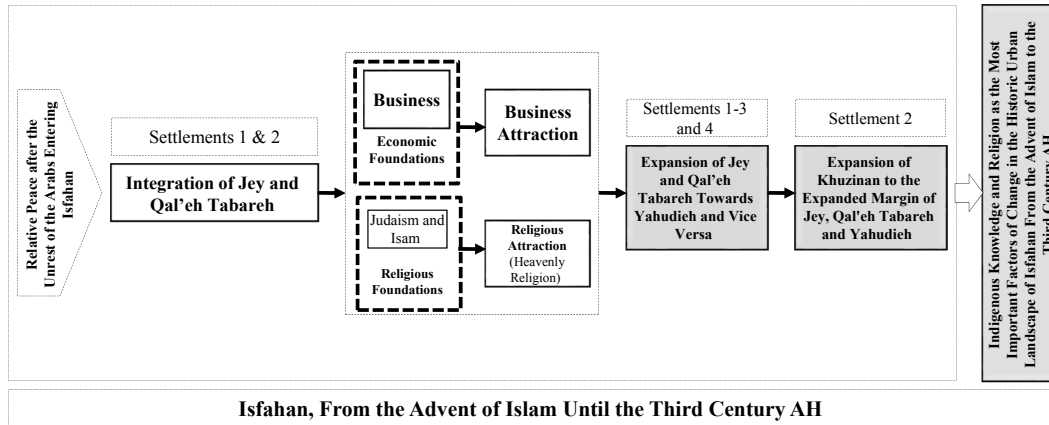
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Fig. 4. Evolution of Isfahan from the Advent of Islam until Third Century AH Based on the Historic Urban Landscape Approach

Thus, two settlements of Jey and Qal'eh Tabare were gradually combined and integrated with Yahudieh. It was because of the companionship between the Muslims and Jews as believers in heavenly religions and the commercial market that was generally controlled by the Jews and the interest of the Muslims in receiving goods from them and the interest of the Jews in selling them to the Muslims (Shirazi, 2007, p. 308). The Zoroastrian region of Khuzinan was also integrated into this expansion. Therefore, until the third century AH, the city of Isfahan gradually emerged as a single city and not several separate settlements, which was still known as the old Sepahgan, i.e., the gathering place of armies (Mousavi Faridani, 1999, p. 14).

Therefore, before the Safavid era, Isfahan consisted of two centers. The first center included the assembly of Jey, Qal'eh Tabareh, Yahudieh, and Khuzinan settlements that were integrated due to expansion. The second center was two settlements of Gabrabad and two sides of the bridge. Thus, Isfahan did not have an integrated centrality before the Safavid era (Fig. 5).
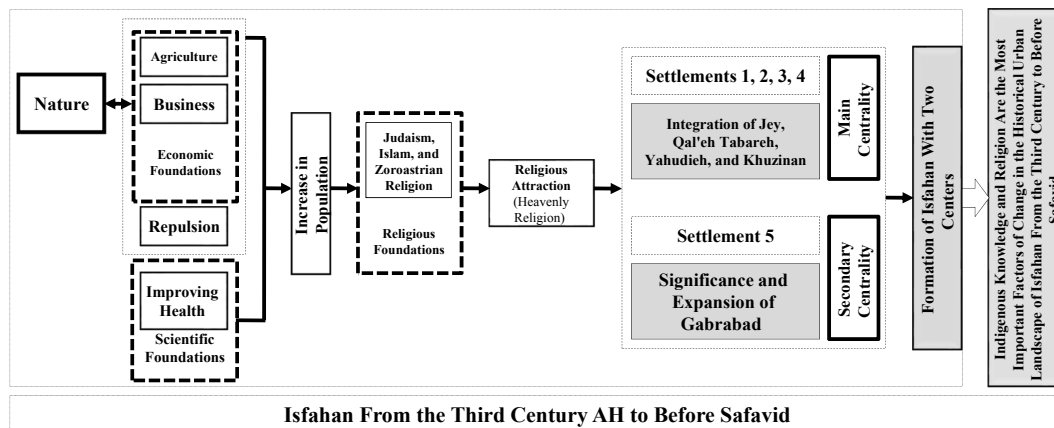

Fig. 5. Evolution of Isfahan from the Third Century AH Until Before the Safavid Era Based on the Historic Urban Landscape Approach

With the spread of Islam and the transformation of Iran into an Islamic country, the Yahudieh neighborhood did not expand physically anymore. The people focused more on defining physical and non-physical borders to preserve their originality. This protection was done well due to the role of the Old Square as the religious-business center that could fix its place on the business routes. It was until the Safavid government selected Isfahan due to its strategic location and climatic-natural coordination with the Safavid kings' desire to plant gardens. The desire for power and competition with the Ottoman court (Mousavi Faridani, 1999,

pp. 46 & 51; Gregorian, 2007, p. 373), which were manifested more than the desire for wealth, made Shah Abbas change the city center (Bakhtiar, 2007, p. 43) to create a new center away from the Jewish center by implementing extensive construction works (Shirazi, 2007, pp. 308-309; Omrani Pour & Mohammad Moradi, 2012, p. 177). Awareness of the location of the Jame' Mosque, known as the Yahudieh Mosque, on the place of another religious temple was also effective in persuading Shah Abbas - with high religious prejudice - to change religious centrality (Fig. 6).
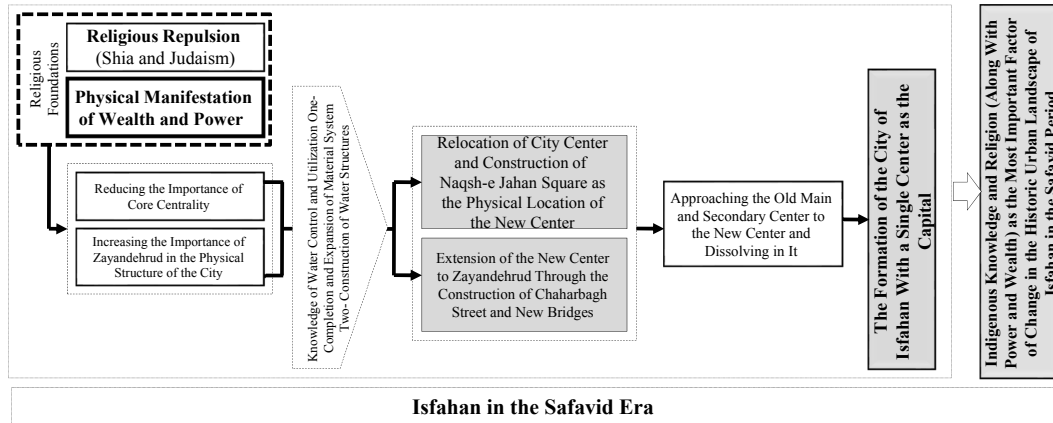
Fig. 6. Evolution of Isfahan in the Safavid Era Based on the Historic Urban Landscape Approach

Most experts emphasized the axial expansion of Isfahan as stated: "Regarding the evolutionary physical expansion of Isfahan, the amazement of the urbanism measures in the historical periods, especially in the Safavid period, was that it was constantly tried to preserve the linear system and extension and continuity of this axis in its development periods. It is why this axis had organic evolution and expansion over the development history of the city. It can be said with confidence that in the world, the less old city has the privilege of having such a strong structure so that during several centuries the physical form of Isfahan and its development has supplied the life and efforts of the people. The present structure of Isfahan is based on two perpendicular axes: the natural axis of Zayandehrud and the central axis of the city" (Omrani, 2005, p. 24; Omranipour & Mohammad Moradi, 2012, p. 176). Despite the significance of axial development, there is another type of development in Isfahan that is radial development. Thus, two general types of development in Isfahan can be identified: A) radial development, B) axial development.

At the beginning and before Isfahan had a city-like structure, the development led to the integration of the settlements and the formation of Isfahan (Golombek, 2007, p. 19). Gradually, the radial development was the result of an increase in population, similar to what happened in other cities of Iran. This development occurred around the historical center of the city and provided the new residents with the facilities of the city center.

Axial development with a new axial definition branched off from the historical core and created a new path for development regarding the emerging capabilities for greater interaction or mastery of nature. This new path was defined in the Safavid era by the formation of the Naqsh-e Jahan Square and its extension through Chaharbagh Street towards Zayandehrud. The possibility of the extensive use of Zayandehrud water to irrigate lands and control the possible floods of Zayandehrud was provided using the advancing material technology. Urban designers and planners' insight, such as Sheikh Bahaei, in the Safavid era (Hoseini Abri, 2000) and their recognition of the micro-ecosystems were to some extent that their selected path in later periods, such as the First Pahlavi era, has been continued and applied until now with the extension of this man-made axis towards 3-rahe Malek. These two approaches determined the development in the Second Pahlavi era and after the Islamic Revolution. In the Pahlavi era, the radial development was conducted by disporting the axes of the historical textures and implementing the grid system in its margin. After the revolution, the system of construction of settlements, which is a function of linear development, was considered (Shirazi, 2007, pp. 311-312) (Fig. 7).
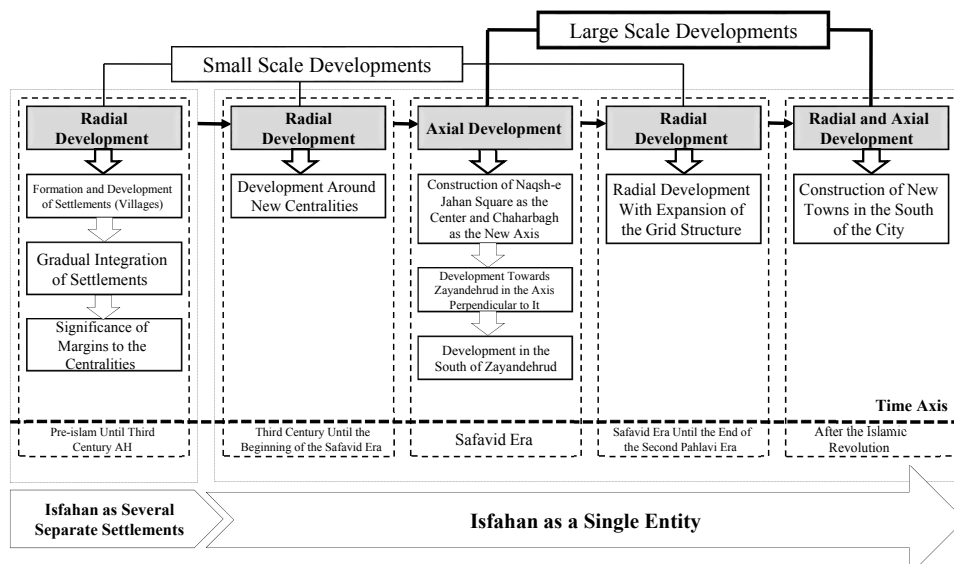
Fig. 7. Axial and Radial Development of Isfahan over Time

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Two main and influential axes can be identified in the axial development: A) the man-made axis (the gradual-sudden formation), B) the natural axis (Shirazi, 2007, p. 309). The man-made axis begins in a north-south direction with a gradual formation from the site of the Jome' Mosque and continues towards the south along the bazaar. Then, at once, by joining Naqshe-e Jahan Square, after including the Safavid palaces, it is connected to Chaharbagh (Stevens, 2007, p. 153). In the following, it reaches Zayandehrud and leads to the southernmost and highest part of the city, which was the location of the historical gardens of Hezar Jarib, by crossing the river along the Chaharbagh-e Bala.

Although the natural axis, i.e., Zaynadehrud axis, along east to west (Shirazi, 2007, p. 308) has been the main factor of habitation in the region, it did not play a special physical role in the city's space organization and was mostly dedicated to agriculture and horticulture in the past. However, it gradually became important in the structure of the city due to the radial and axial development of the city and played a recreational and entertainment role[2]. Figure 8 presents the evolution of Isfahan before Islam to the end of the Safavid era.
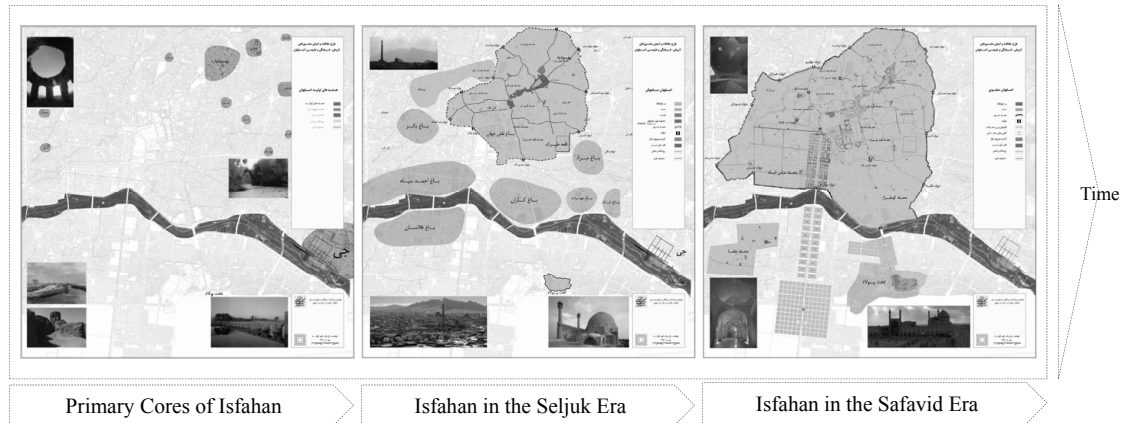

| Primary Cores of Isfahan | Isfahan in the Seljuk Era | Isfahan in the Safavid Era |

Fig. 8. Evolution of Isfahan before Islam until the End of the Safavid Era
(Authors Based on Bavand Consultants, 2012)

4. DISCUSSION

In the current paper, the key foundations of the Historic Urban Landscape of Isfahan were analyzed based on the culture and nature relationship. Then, its cultural and natural foundations were identified, including philosophical-mystical and scientific foundations. Recognizing the natural foundations of a Historic Urban Landscape means recognizing the roles to select the most stable role over history, which was given to the different elements of a micro-ecosystem by cultural groups. Accordingly, the most significant natural foundations of Isfahan were recognized as climate, elevations, soil type, and water resources, especially Zayandehrud.

Among the scientific foundations, the knowledge of using and mastering water was of significant importance. The knowledge of using water made two main changes in the Historic Urban Landscape of Isfahan. First, it provided the possibility of agriculture and horticulture using Madi water instead of the aqueduct at a very large level. Madi was recognized as the main unique feature of the cultural landscape of Isfahan. Second, it provided the possibility of the expansion of the city from the north of Zayandehrud towards its south and supplied the use of the rich lands of the southern part of Zayandehrud. According to this scientific foundation, Zayandehrud was included in the spatial organization of the city as the natural axis.

By studying the religion and faith in Isfahan, it was revealed that the structure of Isfahan indicated the role of religion in the formation of the spatial organization of the city. Its most important effects can be seen in the Safavid era. The religious repulsion between Shia as the official faith of the country in the Safavid era and Judaism as the most influential religious community in the economic and business foundations of the city in that area, along with the kings' desire for power and monopolization changed the development path of the city from radial development to the axial development along Chaharbagh. Also, the formation and combination of the settlements based on religious attraction and repulsion could be interpreted by analyzing the process of the formation and development of Isfahan. It is also clearly understood in the segregation of the neighborhoods based on religious roots. It has led to different qualities. On a smaller scale, religion affects the formation of Historic Urban Landscapes. It has caused different spatial qualities in the neighborhoods of Isfahan[3]. Furthermore, the studies indicated that along with religion and faith, mysticism and philosophy were also influential in the meaningfulness and symbolizing the architecture on the micro-scale, structure of the city on the macro scale, development, and its type, including radial or axial development.

The Historic Urban Landscape of Isfahan was formed and survived based on the four foundations following which agriculture and business formed the main axes

of the economic life of the city in different historical periods until the contemporary era. By investigating and analyzing the livability of Isfahan based on the Historic Urban Landscape, the physical form of the settlement was recognized and speculated in the form of nearby settlements but at a distance. Then, the settlements were developed and gradually integrated due to the significance and expansion of Isfahan. Resultantly, a unit centrality was formed for them in the connected margins. However, the settlements formed by the religious minority retained their shape and borders with other neighborhoods to a large extent. An important point revealed by the study of the Historic Urban Landscape of Isfahan is the effect of two components, "external cultural attraction" on the one hand and "internal cultural repulsion" on the other hand, in shaping the spatial organization of Isfahan. External cultural attraction means the practical freedom that has existed for different religions, nationalities, and ethnicities to live in Isfahan in some historical

periods (Mousavi Faridani, 1999, p. 99; Stevens, 2007, p. 137; Gregorian, 2007, p. 386) who could easily live in separate neighborhoods as they wished to live with their religious, national and ethnic culture, customs and rituals; This has encouraged their attraction or survival in Isfahan. Internal cultural repulsion has arisen due to the existence of religious and ethnic conflicts that have prevented cultural mixing between them as expected, despite relative freedoms. For example, the role of Zayandehrud can be mentioned in the separation between Muslim communities in the north and Christian and Zoroastrian in the south (Shirazi, 2007, p. 309; Gregorian, 2007, p. 377; Lockhart, 1967, p. 33; Golombek, 2007, pp. 33-34). This is evident in the type of arrangement of neighborhoods next to each other and the spatial organization of the city, which has finally created a special form of the Historic Urban Landscape in the context of the micro ecosystem over time (Fig. 9).
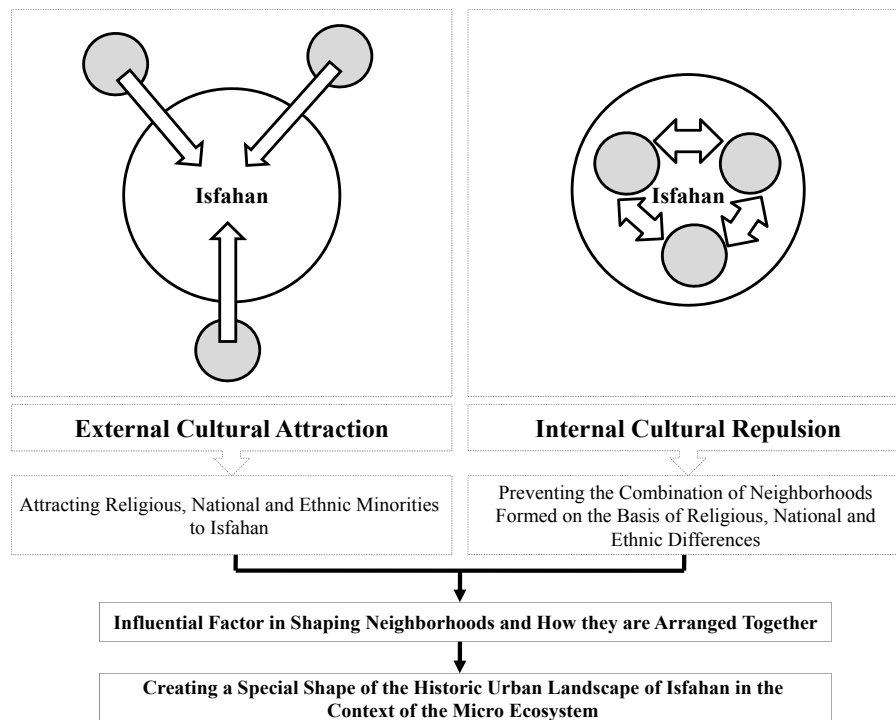

Fig. 9. Cultural Repulsion and Attraction as the Causing Factor of a Particular Form of the Historic Urban Landscape of Isfahan

5. CONCLUSION

In the current paper, the culture and nature were analyzed as the main constituent foundations of the Historic Urban Landscape of Isfahan. The results indicated that the most influential cultural factors in the formation of the Historic Urban Landscape of Isfahan that played a role in the survival of the city over time were indigenous knowledge and religion, leading to a particular form of the Historic Urban Landscape due to the interaction with the micro-ecosystem. As the results and analyses indicated, the philosophical

and mystical foundations were also effective in the Historic Urban Landscape of Isfahan, and studying Isfahan would be incomplete without considering them. The results of this paper also revealed the effect of external cultural attraction and internal repulsion in the particular form of the Historic Urban Landscape of Isfahan. Such recognition from Isfahan, not only as a historical city but also as a Historic Urban Landscape in a stable interaction with the natural context over time, can be applied as a new approach to this city in the stable interaction between historical management

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and its development planning in accordance with the cultural and natural foundations.

The results of this paper showed that the theoretical framework of the process of formation of cultural landscapes based on the four channels of knowledge about the ecosystem, in different examples according to the type and importance of knowledge about the ecosystem, could be used to recognize the most key components of the cultural landscape and consequently Historic Urban Landscape. The four channels of recognition, which stated as the basis for the formation of culture and, consequently, the cultural landscape and the Historic Urban Landscape as a subset of the cultural landscape in this paper, need a deeper study to determine the role and importance of each of these four channels to recognize the focal points of the cultural landscape and the Historic Urban Landscape. This role can be manifested physically in various scales. It is noteworthy that the Historic Urban Landscape is a different approach than a new subject, which can be used to read the historical city differently. Through this reading, the conscious and unconscious insights of the people who create it in interaction with the micro-ecosystem can be recognized at different scales. In other words, the Historic Urban Landscape approach is a new approach to the historical city to recognize it through which, the comprehensive recognition of the city is possible. It must be mentioned that the constituent foundations of the Historic Urban Landscape affect each other and are influenced by each

other. Indeed, the Historic Urban Landscape seeks to recognize the layered and complex phenomenon of the historical city using its constituent foundations. Since this separation is not possible practically and in each period, the natural and cultural foundations had interactive effects on each other (including indigenous knowledge, religion, mysticism, and philosophy, the Historic Urban Landscape approach seeks to recognize the most significant foundations in each historical city to make policy in order to realize the integrated conservation and development.

It is hoped that through this holistic approach, solutions will be found in solving the challenges of conservation and development - which generally arise from an atomistic point of view - in the historical cities of Iran. Based on the achievements of this article, it is hoped that planning for the realization of conservation and integrated development in the city of Isfahan be directed from an atomistic perspective based on the protection of single buildings and historical collections to a holistic view of landscapes based on the two main foundations of nature and religion to realize the stability of the conversation strategies in order to protect values in a changing and dynamic urban environment. Addressing this subject requires future studies and continued by other researchers. Accordingly, recognition of the HUL of Isfahan provides an opportunity review the detailed plan and the special plan of the historical region of the city and redefine the historical area of the city based on the cultural and natural foundations.

END NOTE

1. Philosophy hear means the philosophy of the daily life of the ordinary people not what philosophers seek. Mystics also means the quality aspect of the recognition to the eco-system.
2. Regarding recreation on the outskirts of Zayandehrud, the Izmeo Italian Research Institute has conducted comprehensive and valuable studies.
3. As the difference between Jolfa and other urban regions is obvious.

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