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Evolution of the Urban Landscape of Hamedān during First Pahlavi Era; Impacts of Piercing Streets on the City Center

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Abstract

Problem statement: Hamedān city, with its historical pre-Islamic history, used to have a rich traditional landscape until the Pahlavi era. Karl Frisch, a German engineer, made great changes in Hamedān's urban landscape by constructing piercing streets. The construction of a vast square at the intersection of six piercing streets created a turning point in the landscape of Hamedān. This plan was developed in imitation of 19th Century European architecture and urban development to serve as a symbol of authority and modernity. It was like an industrial gear wheel passing through the historical texture, the center and bazaar of Hamedān. The intervention by Karl Frisch in the landscape was not aligned with what used to be practiced in the past and the amount of construction was so much as though Hamedān's image was fundamentally transformed.

Research objective: This study adopts a systematic approach to urban landscape analysis to examine the impact of piercing streets, an authoritative measure through urban management, on the urban landscape of Hamedān during the first Pahlavi era.

Research method: This historical-analytical study relies on the provided data on the spatial features of Hamedān urban landscape.

Conclusion: Extensive changes in the urban landscape during the first Pahlavi era through the construction of streets in major cities such as Tehran, Mashhad, and Rasht reinforce this idea that urban restructuring can lead to the transformation of the urban landscape. However, the results show that such interventions in Hamedān have not changed its urban landscape in spite of the wide transformation in the physical form of the city in terms of the street architecture and the creation of new paths of access. The main reason for no changes is the consistency in identifying the same center in spite of extensive interventions.

Keywords: *Piercing Street; Hamedān; City-Center; Spatial Organization; Urban Landscape.*

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Introduction

Hamedān is one of the ancient cities of the world whose formation dates back to the Medes era. Deioces succeeded in uniting Medes tribes in 217 BC and selected Ecbatana as the governmental and aristocratic place of the Medes and somehow established the foundation of Hamedān city (Hemmaty Azandariany & Khaksar, 2013). In the Islamic era, after the conquest of the city, the victorious army was not stationed in the city but created a new settlement for themselves by destroying the walls of the city, expanding the old city, and constructing a mosque and a bazaar (Le Strange, 1981, 210). The history of the grand mosque dates back to the first century. The bazaar of Hamedān consisted of three rows in the fourth century AC. The grand mosque was located among them. The Hamedān bazaar received much attention in the Safavid era; in addition, dozens of caravanserai were formed around it in the Qajar era (Fig. 1), as Lord Curzon and Hugo Grote have referred to them in their travelogue (Zarei, 2011, 55-74). The first organizational transformation in Hamedān urban landscape and its manifestations from the ancient period can be seen by shifting the center of Hamedān from *Ecbatana* to the grand mosque area and the bazaar. This can be seen in most Iranian cities in the Islamic era. According to Mansouri, the reason for this difference is related to the transformation of social thought and consequently changes in the city's spatial organization. The Spatial organization of an Iranian city had two distinct identities before and after Islam (Mansouri, 2013). Unlike the Islamic architecture which maintains and modifies the pre-Islamic architectural practices, the Iranian city has two distinct periods before and after Islam. The reason is the difference between their spatial organizations (Ibid, 51).

After the approval of the first law of urban management called "the construction and development of streets and passages" in the National Assembly in the first Pahlavi era on

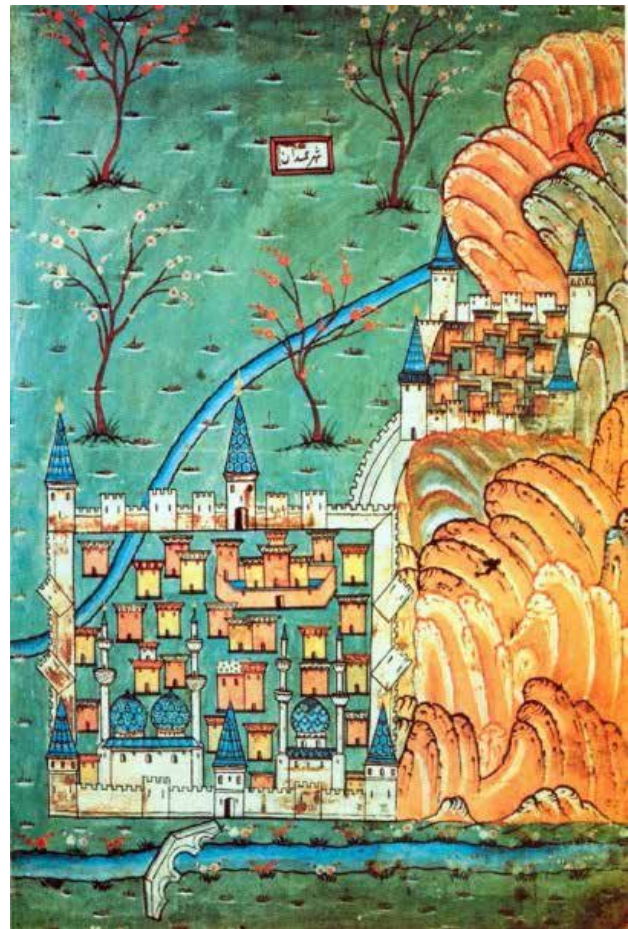


Fig. 1. Gates were the main symbols of the city's expansion in the historical periods which expanded along the main structure and the center. According to the Metraghchi's drawing, Hamedān had four gates during the Safavid era but this number increased to ten during the Qajar era (Metraghchi, 2000).

November 17 in 1933, changing the physical form of the city began by constructing the piercing streets in Hamedān for the first time. Reza Shah's modernist thoughts emerged in the plan developed by a German group with the presence of Gerhard Roudberg, Graham Ler, and Stoelbach. The Iranian engineer Sayyafullah Khan Soleimani, and an engineer from Russia (former Soviet Russia) named Vladimir Charoleev also contributed to this plan under the direction of Karl Frisch. Based on this plan, six piercing streets were constructed. The construction of the three streets of Hamedān namely, Sheverin (Shohada), Dariush (Shariati), and Buali, began respectively in 1933, 1934, 1935, and ended in the late 1930s. The streets of Babataher,

Ecbatana, and Takhti were also built in the 1940s (Izadi & Sharifi, 2015, 17). At the intersection of these streets, Imam Square (previous Pahlavi) was built at a little distance from the south of the grand mosque and the bazaar. Various pieces of evidence suggest its role in highlighting the importance of the old city center (bazaar and grand mosque) and its effect on the use of urban spaces (Karami et al., 2014, 53); (Fig. 2). The experience of creating piercing streets (Atashinbar, 2015) and the first Pahlavi's nonconformist origin have raised a question about the changes made by the construction of six long piercing streets (i.e. streets running through the traditional texture of the city, and a square, as a modern center). The question also investigates the contribution of such changes to the quality of the urban landscape of Hamedān. Many people believe that the plan of Karl Frisch has destroyed the old texture of Hamedān and the old city center (Ibid); also, some of the authors believe that the Karl Frisch's design has destroyed the structure of the bazaar and its main function (Nejad & Ebrahimi, 2018). In the process of evaluating the impact of street construction on the landscape of the city, people's dissatisfaction with the destruction of their houses and the construction of a modernist plan was also significant: "The respected government first keeps the nation's honor, then decorates and develops the city" (Safari, Sheikhnouri & Yousefi 2014, 43). Another petition considered the drawn map impractical and argued that it would lead to nothing but destroying the houses of some poor people (Ibid, 50). In addition, Etelaat Newspaper of Hamedān in 1978, referred to a subsequent change in the urban plan: "Nearly for one year, after the approval and issuance of permission to construct a large street in the city of Hamedān, the agents of Hamedān's municipality had been planning and installing red banner above the roofs of the houses... , but after a while, it was not known why the map changed and the red banners were removed from the old roofs and were placed

on the roofs of other houses. After two days again, the map changed and the banners were installed on other roofs, and now they have decided to construct a street that is not aligned with the city's situation" (Fendereski, 1978).

Research Question

How has changing Hamedān's historic city center from the Jami Mosque to the Grand Square (Imam Khomeini Square) influenced the urban landscape and the spatial organization of the city?

Hypothesis

Preserving the center as the main component of

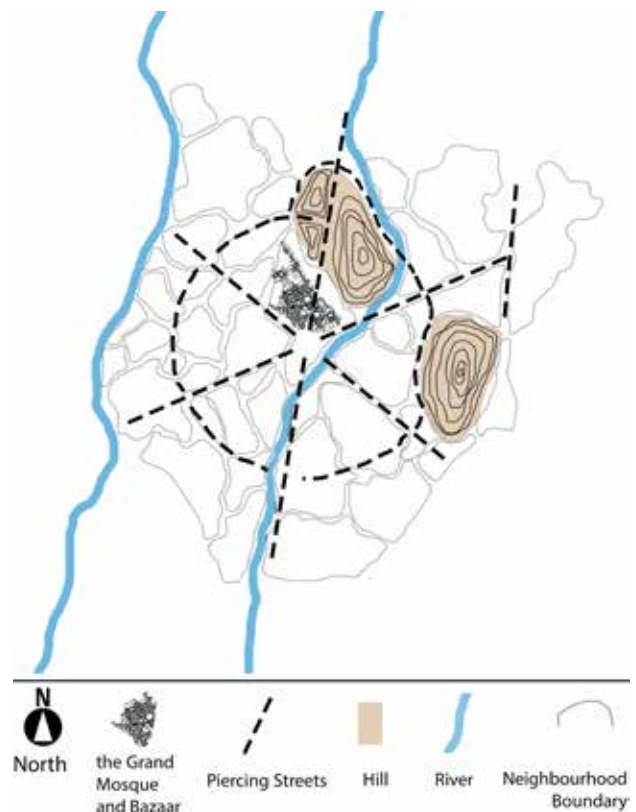


Fig. 2. Karl Frisch's plan for the construction of six piercing streets and the new city center, to some extent, was in line with the old structure of the city, that some of the piercing streets were on the border between the neighborhoods and unlike the concept of piercing street, they did not split the traditional texture of Hamedān. Comparison between the Neighborhoods Map in the Qajar era (before the construction of the square and the six streets) and Map of Karl Frisch (after the construction of the square and the six streets) in Hamedān. Resource: adopted from Azkaya (2001); Le Strange (2011); and Zarei (2011). Drawn and revised the maps by authors.

the city contributes to maintaining the quality of life and urban landscape. In the city of Hamedān, though the construction of piercing streets and a central square at their intersection has not changed the spatial organization, it has improved its quality by creating a large area next to the mosque and market, as the old city center. The new city center is a combination of the Imam Square (formerly Pahlavi) and the Jami Mosque and Market.

Method

This is analytic-historical research. In this study, the city center's changes, as the most important components of urban landscape, were evaluated by systemic investigation of the city and its spatial organization. The analysis was carried out in relation to the concept of the city center and its criteria. Gathering data in this study was carried out through field research method and by referring to the historical documents and maps. First, developments in the city center were studied by analyzing the historical data. Then in the field visits, the conformity of the old city center's criteria to the new city center was evaluated. Also, the maps of two historical periods before the construction of the square and the six streets (late Qajar), and after the construction of the square and the six streets (first Pahlavi) were prepared by the authors of this study. Then, the city center criteria were developed by analyzing and comparing the maps. Finally, the evaluation of the importance and relevance of the traditional and new center of Hamedān in the urban landscape were carried out by inferring the data of the spatial organization.

Literature review

Studies that have analyzed six piercing streets and the new Hamedān square can fall into two general categories: Some studies have investigated the issue from a conceptual view. These studies have largely compared the urban structure of Hamedān before the construction of Karl Frisch's plan with reliance on sources and historical documents.

The results of these studies have often shown the negative effect of piercing streets on the structure of the city of Hamedān (Azkaya, 2001; Zarei, 2011; Rahimioon, 2016). Another set of studies has developed technical software such as Space Syntax to examine the structure and city linkage before and after the piercing streets. The results of these studies at the macro-level show that the plan has been aligned with the city and its traffic. However, at the micro-level, Karl Frisch's plan has not been aligned with the bazaar and has been evaluated as a poor plan (Izadi & Sharifi, 2015; Varmazyar & Sajadzadeh, 2014).

Definitions and theoretical framework

• The image and urban landscape

Literally, in Persian language, these two words are often used interchangeably but in landscape, they are completely different. The term image is a city's physical form directly focusing on the physical aspect of a city, while the term landscape is the audience's interpretation of the physical phenomena (Mansouri, 2007). The intervention based on Karl Frisch's plan has shown its great physical effects on the historic district of the city. However, analyzing the effects of the intervention on the city's landscape has not been investigated and this is the concern of this study.

• Urban Spatial Organization

In the framework of system theory, the city is a purpose-oriented system whose components contribute to the different and defined functions. In this view, the changes in the city's components cannot be separately studied. In evaluating the changes, apart from physical changes in different components of the city, their relations with other components and functions should be examined. In the evaluation, perception of the audience are important. The Iranian city, as a historical example of the world's urban tradition, has its own system whose most important organs are introduced as center, structure, boundary (edges), and small

wholes (neighborhood) (Mansouri & Dizani, 2016; Mansouri, 2013). The center is the most important component of the citizens' perception of the city because the preservation of the city depends on the maintenance of its center. In most definitions, the term center is defined as an important node where most of activities are carried out and there are large number of people traveling and commuting. However, a few consider the city center as a symbol of the community's political power used by audience to convey its message to the ruling power (Mansouri, 2013; Ballard, 2005). Therefore, the most important way for its recognition is the formation of popular events to which the government does not contribute when it comes to management (Mokhles, 2017). Therefore, the concept of the city center cannot be limited to a geometric form or an independent historical and economic identity; this part of the city can turn into a memorable space because of the formation of various events, the presence of important and functional elements of the city. However, changing or transferring the center leads to stirring up common memory of the city. In most cases, access, function, and space architecture, are affected by the plurality, density, and types of events. There are different criteria for describing and evaluating the functional and spatial importance of the city center by which the explanation and changes of the historical center of Hamedān have been measured.

Center of Hamedān

• City center serves different functions

A city center is a place to work, trade (buy and sell), and run business affairs and it is the economic, political, and cultural heart of the city (Ballard, 2005, 235). Ballard also argues that different spaces in the city center define their key and strategic position of the city. City centers are among the geographic spaces that do not have a definite boundary (Burrough & Frank, 1996). The city center is the core of the city including a multitude of social-economic activities

(Anas, Arnott & Smal, 1998, 1426). In the heart of the city, Sirt and his colleagues argue that the city center means the concentration and convergence of the community and public transport system (Tyrwhitt, Sert & Rogers, 1952). In this approach, the center's most important indicators are small business spaces, administrative centers, and spaces including high-rise buildings (Thurstain-Goodwin & Unwin, 2000, 307). According to Murphy and Vance (1954), the city centers of England include commercial spaces, offices, and high-rise buildings. Moreover, their pedestrian and vehicle-spaces have received attention and the value of land around these spaces is high. Thompson et al., (2015) believe that commercial spaces, both large and small malls, are the main pillars of city centers and their absence will stop fueling city centers' boom. As a result, the crowded downtown areas, such as pedestrian, street, museum, theater will be provided with more facilities and services and this raises the value of lands in these areas (Bertaud, 2004). According to Ballard (2005), the city center has always been the center of power and trade but nowadays, it is the center of leisure, comfort, and business.

By considering a city center as the place with different functions, we can claim that Hamedān's city center has become stronger than the past after the intervention based on the plan of Karl Frisch. The reason is that the plan of Karl Frisch has saved the structure and function of the bazaar, but also led to a boom fuelled by the more accessibility to the historical center and expansion of more services in the realm of historical center. By the prevalence of commercial activities in the square's body, this space can be considered as Hamedān's economic pole. Varmazyar and Sajadzadeh (2014) believe that the main reason for the creation of commercial spots in the central square of the city is its adjacency with bazaar and a link which has been created between the bazaar and the square. The main sign of the importance of this financial center is the construction of the National (Melli)

bank of Iran in Imam Square and the establishment of Saderat and Tejarat banks (adjacent to the bazaar) on *Ecbatana* Street (Asadollahi & Zakerhaghighi, 2015). The important point is that the small pieces reflect the dominance of private ownership and, consequently, the presence of the general public.

Although, one of the piercing streets, Ecbatana, has blocked the bazaar complex, the remained shops from this detachment are still active and have turned to independent rows of guilds such as frippery, Saregozar, and rug sellers. The piercing street of Babataher goes through the bazaar too. As a result of Babataher's block, a few rows of the bazaar, the glass seller's bazaar and the goldsmith's bazaar are separated from the core of bazaar and still continue their work. There are commercial spaces along Ecbatana and Babataher streets that connect the commercial complex of Imam Square to the bazaar. After the construction of the square, six streets, and grand mosque's Iwan, the spatial and functional relationships between Imam Square

and the old city center have been established (Fig. 3).

Center as a lively social space

According to this view, city centers refer to a lively atmosphere (Caves, 2005, 193). The vitality of a city center preserves its identity and architecture, and a lively city center is the main reason for a city's prosperity (Collis, Berkeley & Fletcher, 2000; Powe & Hart, 2009). According to Evans (1997), a city center is a place in which there is a historical flow of civil life, and people are busy working, buying and communicating. In his book, Evan introduced four main factors for the evolution and gradual development of the city center: commercial spaces, administrative spaces, industry, and automobiles. A city center serves as the memory and heart of the city's social life and it is the place of public activity and collective memories (Mokhles, 2017). City centers are the social spaces of cities, and are a place where people meet each other. If the spaces are not attractive, the presence of people in the spaces will be faded away unless they are forced to use them (Thompson et al., 2015, 232). Portas (2014) also characterizes the city center as a place where people meet. In this definition, the vitality criterion relates to the presence and interaction of citizens in space.

Analyzing urbanization tradition in Iran shows that the historical center of Hamedān also had enjoyed the city's social and vibrant prosperity. The construction of six streets and a square provided a new opportunity for the access to the center of the city. However, understanding the new reasons and motivations for voluntary attendance and citizen engagement of people requires the field survey on people's presence in the new place. Preservation of the historical landscape in its old condition and new attractions and additional up-to-date functions in the realm of the city center provide the evidence for strengthening the city center

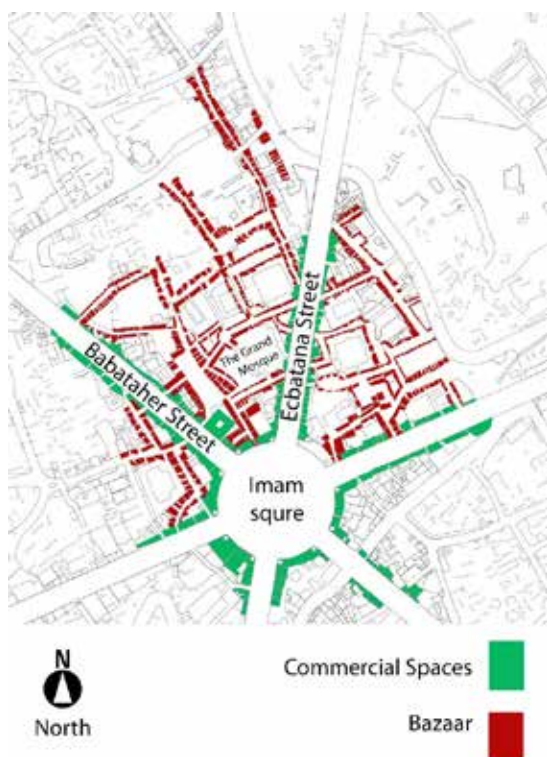


Fig. 3. Connections between the microeconomic business activities of Imam Square to Bazaar. Source: Authors.

of Hamedān after the implementation of Karl Frisch’s plan. At the same time, the semiotic value of this complex reinforces the former values of the complex (mosque and bazaar) and emphasizes on “concentration” and its alignment with previous capacities (Fig. 4).

Center as the place for the emergence of power

Although we are all aware of the existence of the city center and sometimes we have experienced being in the city center, no specific criteria have been developed for precise measurement of the city center (Thurstain-Goodwin & Unwin, 2000, 307). A city center is the most important component of the spatial organization of a city on which the main part of urban landscape perception is dependent, and its function verifies the dependence of the various elements of the city on its city center. The city center is not only the historical memory of a city, but also a place for different public activities. During the medieval ages, city centers served as initial core contributing to the development of cities, and the church was its symbol (Ballard, 2005). In the Renaissance, with regard to designs’ symmetry and geometry, governmental institutions were located in the geometric center; in the 18th and 19th century and



Fig. 4. The vivacious social space of Hamedān city center.
Photo: Farshad Bahrami, 2016.

simultaneous with the industrial revolution and the enlightenment era, municipalities became the center’s symbol; in the twentieth century and with the presence of capitalist powers, large buildings such as commercial centers became the symbol of the authority’s power (Mansouri, 2007, 51). City center as the place for the power emergence presents a different perspective on the space sociology which is proposed by sociologists. This is the place selected by people for gatherings, meetings, expressions of demands and opinions and its function has not been determined by government. In fact, it is the center of power. This space is a place where the hidden energy will be put into use. Examining the political and social events of recent decades shows that the gatherings have been formed in the new center of Hamedān: “On the morning of the Nowruz 1978, a lot of religious students and shopkeepers gathered at the grand mosque and shouted some slogans to support Imam Khomeini. During the ceremony, one of the religious clerics was arrested” (Historical Documentation Center, 1998). “On May 19, 1973, commemorative ceremony of martyrs was held in Grand mosque. The Kayhan newspaper reported that after the protesters chanted revolutionary slogans in the mosque, the officers fired at them and one was wounded” (Ibid, 283). “The marchers held the congregational prayer in Pahlavi square and shot the officers in the square. Mohammad Taghi Alami, a famous cleric of Hamedān, gave a speech at the ceremony and named Pahlavi Square as Imam Khomeini Square” (Fendereski, 1978).

Apart from political gatherings, religious, and ritual ceremonies take place in this square. Among the ritual and religious ceremonies, Muharram and Safar religious mourning are the main events that take place in Imam Square. To hold such ceremonies, groups of citizens move from six main piercing streets and various neighborhoods towards the final destination namely Imam Square (Fig. 5).

Participation in social activities such as spontaneous gatherings of people in the central Square and Grand mosque on September 27, 1987 to collect people's gifts for the warriors at the battlefields and to establish Imam relief committee bases¹, highlight the importance of this square in citizens' mind. Also, holding small gatherings in the form of social campaigns such as "no to plastic bags" with the presence of artists and celebrities of the city, has transformed the square into a vibrant space (Fig. 6).

Different Architecture

Buildings in city centers are symbolic and they can be found in different forms such as government buildings, sports stadiums, modern museums, commercial, and office buildings (Caves, 2005). Murphy and Vance (1954) believe



Fig. 5. The noon prayer of Ashura in the square of Imam. Source: Tasnim News Agency (2016), Photo: Abdolrahman Rafati.



Fig. 6. Spontaneous gathering of people on October 4, 1987. Source: Ganj News Agency, Photo: <https://ganj.info/slider/slider-jehad/4268>.

that the tallest buildings are built in city centers. Thurstain-Goodwin and Unwin (2000) argue that the density of the buildings is one of the main features of city centers.

In the city center, different functions are gradually being shaped; the special architecture associated with the functions has a sign in the landscape of the city. An opportunity was created for constructing new architecture by building piercing streets and the new square. Such architecture embodied a modernist wave and Westernization. This may explain why new buildings were built on the edge of the newly built streets and the city square. The architecture of buildings around the central square of Hamedān is Baroque style (Varmazyar & Sajadzadeh, 2014, 50). These buildings have Iranian decorations; also, they are functional and are made of brick. For its landscape, two metal domes are built on either side of six streets. Designing and constructing buildings with different walls in this square emphasizes its centrality in urban landscape management (Fig.7).

Accessibility

The attraction of a city center is related to the diversity and convenience of public transport which can enhance the sustainability of a city by reducing the use of private transport (Heath, 2001). In other words, the term city center refers to a place where there is an easy access to public transport (Newman & Kenworthy, 1989; Banister,



Fig. 7. Baroque-style buildings in Hamedān Imam Square. Photo: Farshad Bahrami, 2016.

1992; Newman, 1992; ECOTEC, 1993; Heath, 2001), and cheap access to city centers is crucial to the viability of cities (Evans, 1997).

A crossing can serve as a physical sign to recognize the city center. City centers can connect the center to other parts of cities through Different roads. Therefore, according to the urban planners' point of view, a center is the place where the main roads of the city meet one another (Caves, 2005). After the implementation of Karl Frisch's plan, it can be said that the direct geometry of these six piercing streets, connecting surrounding areas of Hamedān to the square built at their intersection has made Imam Square the most important access point in the city. The radial design of Hamedān city center allows cars to move to the city center and this prevents the center (Varmazyar & Sajadzadeh, 2014, 64). Moreover, the geographic location of Imam Square relative to the bazaar and grand mosque increases the importance of the city's landscape role of this center and this importance is reinforced by strengthening the transportation system relying on their centrality (Fig. 8).

Discussion

Two decades of extensive construction promoted by the piercing streets in the city in the first Pahlavi era, and a vast square at their intersection, transformed the structure and image of the city. It



Fig. 8. The presence of public and private vehicles in the city center. Source: Banbak, 2018.

was expected that this new form of the city would have collapsed its traditional structure and the presence of the square as a new center would have changed or faded the function of the mosque and Bazaar as the old center. The city map narrates the fundamental changes in the spatial organization. As a result, the urban landscape of Hamedān could have been transformed. The criteria used for identifying the center show that the location of Imam square, adjacent to the Grand mosque and the bazaar as the old center of Hamedān, have not damaged their main functions in the city but it has reinforced the functions. Therefore, Imam square and its piercing streets, especially Ecbatana Street, have become an open area for the old city center. Nowadays, the center of Hamedān includes the area of Imam Square, Ecbatana Street, Grand mosque and Bazaar. However, these areas are perceived as parts of a whole.

Karl Frisch's plan has not made any changes at the center of the spatial organization of the new city, consciously or unconsciously. This result may be due to the shape of the land and the boundary of Hamedān which is surrounded by three hills and two rivers. In other words, due to its decisive geometry, Karl Frisch has put his plan in a special place to be responsive to the predicted order; Sheverin street, as the first piercing street, has been constructed between the two ancient hills namely, Hegmataneh and Mosalla, and somehow is on the thalweg of these hills; the stretch of this street named Shariati stands between Hamam Ghaleh and Kulanj Neighborhoods. Buali Street has been built along the Alvasjurd River and located in the boundary of two neighborhoods, and along this street, Ecbatana Street, passes through an area between the old center and the topography of the city. The two remaining streets due to a 60-degree angle pass through a place defined in the plan (Fig. 9). Hence, it seems that the imposed order in the plan and its location in



Fig. 9. Map of the city's natural elements, piercing streets and the new city center. Source: authors.

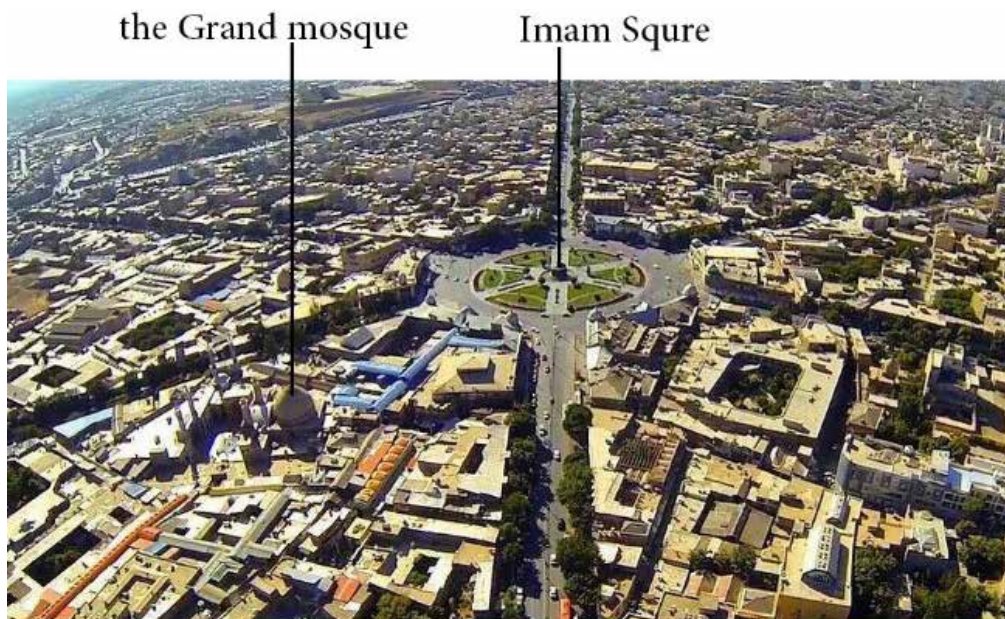


Fig. 10. Imam Khomeini Square, Great Mosque and, Bazaar as a new city center. Source: https://www.instagram.com/p/_H1nDgSX31/?utm_source:ig_share_sheet&igshid=oy0jys3t8stn.

natural land has created a product whose new center corresponds to its old center (Fig. 10).

Conclusion

City center is a key concept in the urban landscape, which affects the quality of citizen's lives of a city as the main component of the spatial organization. The city center, as the most valuable perceptual space, improves the quality of urban landscape; therefore, changing it at different time span will lead to changes in the spatial organization and the perception of the city by citizens. In the city of Hamedān, the impact of constructing piercing streets on transferring the old center to the modern center has been insignificant; however, it has made a contribution to the urban landscape. Although the modern structure of the city differs from its traditional structure, the establishment of the center and its reinforcement through the presence of new elements has maintained the quality of Hamedān's landscape. Today, Hamedān is no longer bi- or multi-polar city, and, various intellectual movements are present at the same historical-social center. This area represents the intellectual streams of society and demonstrates that the general mindset of the society believes in this place. All streams believe that being present at this place ensures their authenticity. In other words, the ruling power hears the voice of people from this point. Improving the modern and traditional center of Hamedān as a whole unit including Imam square, Grand mosque and Bazaar has led to the growth and sequence of the landscape concept as a whole city.

Endnote

1. It refers to a charitable organization whose target is to support poor families.

Reference List

- Atashinbar, M. (2015). Impacts of Piercing Streets on Paris Urban Landscape. *MANZAR*, the Scientific Journal of landscape, 7(30), 54-61.
- Azkaya, P. (2001). *Letters` Hamedān*. Hamedān: Madistan,

Iran.

- Anas, A. Arnott, R. & Smal, K. (1998). Urban Spatial Structure. *Journal of Economic Literature*, 36(3), 1426-1464.
- Asadollahi, M. & Zakerhaghighi, K. (2015). Investigation and Analysis of Spatial Structure of Metropolitan Hamedān Using Alen Bertod Model. *WALLA Journal*, 31(2), 67-73.
- Ballard, P. (2005). The Church at the Centre of the City. *The Expository Times*, 116(8), 253-258.
- Banister, D. (1992). Energy Use, Transport and Settlement Patterns. *Sustainable Development and Urban Form*,
- Banbak. (2018). *The central square of Hamedān the symbol of modern urbanism*. Retrieved from <http://www.banbak.com/Hamedān-imam-square/>.
- Bertaud, A. (2004). *The Spatial Organization of Cities: Deliberate Outcome or Unforeseen Consequence?* UC Berkeley: Institute of Urban and Regional Development.
- Burrough, P. A. & Frank, A. U. (1996). *Geographic Objects with Indeterminate Boundaries*. London: Taylor and Francis.
- Caves, R. W. (2005). *Encyclopedia of the City*. London and New York: Routledge.
- Collis, C. Berkeley, N. & Fletcher, D. R. (2000). Retail Decline and Policy Responses in District Shopping Centres. *Town Planning Review*, 71(2), 149-168.
- ECOTEC Research and Consulting Limited. (1993). *Ecotec Research and Consulting Limited*. London: HMSO.
- Evans, R. (1997). *Regenerating Town Centers*. Manchester: Manchester University Press.
- Fendereski, S.R. (1978). The Islamic revolution in Hamedān. *Etelaat Newspaper*, 22 November, 1. Retrieved from <http://22bahman.ir/show.php?page=post&id=15399>.
- Ganj News Agency. (2015). *Bold backup line*. Available at: ganj.info/slider/slider-jehad/4268 (Accessed 20 Nov. 2018).
- Heath, T. (2001). Revitalizing Cities: Attitudes toward City-Center Living in the United Kingdom. *Journal of Planning Education and Research*, 20(4), 464-475.
- Izadi, M. & Sharifi, A. (2015). Evaluating Karl Frisch's design on spatial structure configuration concerning old contexture in Hamedān (using space syntax technique). *Bagh- e Nazar*, 12(35), 15-26.
- Hemmaty, A. E. & Khaksar, A. (2013). A view of Hegmatane hills in the context of Hamedān City. In: *Conference of archaeological Hegmatane*, Tehran, Iran, 23 December, pp. 139-148. Iran: Iranian cultural Heritage, Handcraft, and Tourism Organization.
- Karami, S. Fakhrayee, A. & Karami, S. (2015). Studying the Effect of Accessibility and Vitality on Urban Space Efficiency

in Iran (Case Study: Hamedān City). *International Journal of Architecture and Urban Development*, 5(1), 33-40.

- Rahimioon, A.A. (2016). *In reaching the identity of Hamedān City*. Hamedān: Ministry of Roads and Urban Development Islamic Republic of Iran.
- Le Strange, G. (1981). *The Lands of the Eastern Caliphate*. [s.l]: Cosimo Classics.
- Mansouri, S.A. (2007). Spatial organization of Iranian city in tow periods: before and after Islam based on testimonies of evaluations of the city of Kerman. *Bagh- E Nazar*, 4(7), 50-60.
- Mansouri, S. (2013). The Spatial System in the Islamic City of Iran. *Journal of Art and Civilization of the Orient*, 1(1), 51-62.
- Mansouri, S. & Dizani E. (2016). *The evolution of spatial system of the city of Qazvin*. Tehran: Nazar research center.
- Metraghchi, M. (2000). *Beyani Menazil*. Tehran: Cultural Heritage Organization of Islamic Republic of Iran.
- Mokhles, F. (2017). The Muti-Nucleus Structure of Moroccan Medinas. *Journal of Art and Civilization of the Orient*, 5(16), 15-22.
- Murphy, R. E. & Vancem J. E. (1954). Delimiting the CBD. *Economic Geography*, 30(3), 189-222.
- Nejad, S. E. & Ebrahimi, A. (2018). Form worn-out texture to improvement and reconstruction. *Herald National Academy of Managerial Staff of Culture and Arts*, (2)1, 189-196.
- Newman, P. (1992). The Compact City: An Australian Perspective. *Built Environment*, 18(4), 285-300.
- Newman, P. W. G. & Kenworthy, J. R. (1989). Gasoline Consumption and Cities. *Journal of the American Planning Association*, 55(1), 24-37.
- Safari, S., Sheikhnouri, M.A. & Yousefi S.H. (2014). People's

protest for urban renewal during the first Pahlavi era (studying documents of the National Assembly of Parliament – Sixth to eighth Majles). *Social history studies, Humanities research, and cultural studies*, 4(1), 29-60.

- Portas, M. (2014). *Why Our High Streets Still Matter: A Think Piece*. London: Portas Agency.
- Powe, N. & Hart, T. (2009). Competing for the custom of small town residents: exploring the challenges and potential. *International Journal of Retail & Distribution Management*, 37(9), 732-747.
- Tasnim news agency. (2016). *Ashura Noon mourning ceremony in Hamedān*. Retrieved from <https://tn.ai/1210802>. (Accessed 28 Sep. 2018).
- Thompson, J., Benson, M. & McDonagh, P. (2015). The Social and Economic Impact of Improving a Town Centre: The Case of Rotherham. *Local Economy* 30(2), 231-348.
- Thurstain-Goodwin, M. & Unwin, Davidm. (2000). Defining and Delineating the Central Areas of Towns for Statistical Monitoring Using Continuous Surface Representations. *Transactions in GIS*, 4(4), 305-317.
- Tyrwhitt, J. Sert J., L. & Rogers, E. N. (1952). *The Heart of the City: Towards the Humanization of Urban Life*. London: Lund Humphries.
- Varmazyar, M. & Sajadzadeh, H. (2014). The Role of Urban Structure in Pedestrian-Orientation Capability (Case Study: Hamedān City). *Merit Research Journals*, 2(4), 48-64.
- Zarei, M.I. (2011). The physical-space structure of the Hamedān city from the beginning of the Islamic era to the end of the Qajar era based on the evidence. *Archaeologist's letter*, 1(1), 57-82.

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