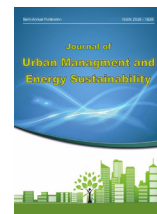


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CASE STUDY RESEARCH PAPER

The Evolution of Privacy Concept in Residential Architecture of Ferdows; From Collective System to Individual Identity**

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ABSTRACT

Privacy in Iranian residential architecture is not merely a physical attribute but a spatial embodiment of cultural, social, and moral systems, historically realized through introversion, enclosed central courtyards, indirect entrances, Andaruni–Biruni separation, and hierarchical access networks. Contemporary socio-political change modernization, urbanization, and the shift from extended to nuclear families has challenged this system, yet its evolution in small historic cities remains understudied, and comparative-historical accounts linking state policy, family change, and privacy decline are rare. This study examines how the concept of privacy has transformed in the houses of Ferdows, South Khorasan, from the Qajar era to the present, and identifies the cultural, social, and political factors driving this change. Using a qualitative, descriptive-analytical design with a comparative-historical strategy, the research combined documentary study with fieldwork on 22 purposively selected dwellings 11 traditional houses registered on the National Heritage List and 11 contemporary houses through architectural surveys, privacy checklists, and semi-structured interviews, analyzed by qualitative content analysis and cross-validated through triangulation. Findings reveal a marked decline in privacy-making elements from traditional to contemporary houses: central courtyards fell from 100% to 63.6%, indirect entrances from 100% to 27.3%, Andaruni–Biruni separation from 81.8% to 9.1%, spatial hierarchy from 100% to 18.2%, and visual control from 100% to 9.1%, while spatial depth contracted from three–five layers to one–two. These changes stem mainly from Pahlavi modernization, the transition to nuclear families, and imported Western patterns. Privacy has thus shifted from a collective, systematic order to an individualistic, symbolic, and fragmented one, demanding intelligent redefinition within the local cultural framework.

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INTRODUCTION

The concept of privacy (*Mahramiyat*) in Iranian architecture extends beyond a mere physical attribute, serving as a profound reflection of the cultural, social, and moral systems that have historically shaped the spatial identity of Iranian houses (Habibi, 2006). In traditional Iranian houses, privacy was realized through an integrated, coherent, and hierarchical system comprising introverted spaces, enclosed central courtyards, indirect and winding entrances, precise separation of private (Andaruni) and public (Biruni) areas, and controlled hierarchical access networks (Memarian & Brown, 2003; Pirnia, 2005). This spatial system not only responded to the climatic demands of the hot and arid desert regions but also served as the physical embodiment of Islamic-cultural values such as privacy, family sanctity, gender segregation, and controlled hospitality (Altman, 1975; Saghaye Islami, 2022). However, the socio-political transformations of the contemporary period, particularly during the Pahlavi era, led to the introduction of Western architectural patterns and the promotion of ideas such as “transparency” and “spatial openness,” which challenged the traditional spatial system (Memarian, 2010). These transformations, accompanied by changes in family structure from extended to nuclear, urbanization, and the reduction of private land, have had a profound impact on the spatial organization and the concept of privacy in Iranian houses (Moradi, 2014; Ghanbari, 2015). In this process, the concept of privacy has shifted from a collective and systematic state to an individualistic, symbolic, and fragmented one (Rastjou & Bemanian, 2019). The city of Ferdows in South Khorasan, due to its location on the Silk Road and its rich historical fabric with valuable houses from the Safavid and Qajar periods, provides a suitable context for studying the evolution of this principle in residential architecture (Tabatabaei, 2013). However, despite the architectural richness of this city, systematic studies on the evolution of the privacy concept in the transition from tradition to modernity

have received less attention from researchers (Tabatabaei et al., 2024). A review of the research background reveals that although numerous studies have been conducted on privacy and the evolution of residential architecture in Iran, three main research gaps can be identified in this field: First, most studies have focused on metropolises such as Tehran, Isfahan, and Shiraz, while smaller cities like Ferdows which, by preserving part of their traditional cultural fabric while simultaneously confronting modern patterns, provide a unique context for analyzing privacy transformations have received less attention (Hosseinzadeh, 2010). Second, many studies have addressed only one of the two periods, either traditional or contemporary, and a comparative-historical approach that can simultaneously examine the evolution of the privacy concept in a specific context is very rare (Karimi, 2010). Third, although some studies have referred to the Pahlavi period, the deep connection between government policies, changes in family structure, and the decline of privacy in local contexts has been less analyzed (Moradi, 2014).

On the other hand, changes in contemporary lifestyle, increasing individualism, and transformations in family relationships have more than ever revealed the necessity of revisiting the concept of privacy and its mechanisms of realization in contemporary housing (Karimi, 2010; Bemanian & Rastjou, 2017). Understanding these transformations is not only essential for recovering the identity of indigenous architecture but can also serve as a framework for contemporary residential designs that are both modern and compatible with the cultural needs of society (Habibi, 2006). As researchers have pointed out, vernacular architecture can only be sustainable when it is rooted in its cultural context, and historical-comparative studies in small cities can serve as a valuable resource for urban policy-making and architectural education (Memarian, 2010; Tabatabaei, 2013). Accordingly, the present study seeks to answer the fundamental question: What transformations has the concept

of privacy undergone in the houses of Ferdows from the traditional period to the contemporary era, and what socio-political and cultural factors have shaped these transformations? Answering this question can pave the way for identifying valuable privacy-making patterns in the indigenous architecture of Ferdows and providing a framework for redefining this concept in contemporary housing, thereby preserving cultural identity while responding to the needs of today's life.

MATERIALS AND METHODS

A systematic review of the research background is an essential step in identifying the scientific position of the study and determining the boundaries of existing knowledge in the field of the evolution of the privacy concept in Iranian residential architecture. Numerous studies have been conducted on traditional Iranian architecture, the concept of privacy, housing transforma-

tions in the contemporary period, and the impact of cultural-social factors on the spatial organization of houses. These studies can be classified into three main categories: first, studies that have addressed the theoretical foundations of privacy and the principles of traditional Iranian architecture; second, research that has examined the transformations of residential architecture in the contemporary period (particularly the Pahlavi era); and third, comparative studies that have compared traditional and contemporary houses from the perspective of privacy and spatial organization. However, most of these studies have focused on large cities, and a historical-comparative approach in the context of small Iranian cities is rarely observed. In this section, after reviewing domestic and foreign studies related to the subject, research gaps are identified, and the position of the present study among them is explained.([Tab. 1](#))

Table 1: Literature Review with Cultural-Historical Approach

No.	Researcher / Year	Research Type	Key Findings	Application in the Present Study
1	Memarian & Brown (2003)	Analytical-Comparative	Privacy in traditional Iranian houses is based on introversion and spatial hierarchy.	Theoretical basis for defining privacy in traditional houses
2	Habibi (2006)	Qualitative-Historical	Traditional Iranian architecture reflects cultural and moral systems in which privacy is central.	Explaining the relationship between culture and traditional architecture
3	Memarian (2010)	Analytical	Transformations in residential architecture during the Pahlavi period have reduced physical privacy.	Historical context for the second research hypothesis
4	Karimi (2010)	Qualitative-Analytical	The concept of privacy in contemporary Iranian architecture faces an identity crisis.	Justifying the necessity of redefining privacy in today's architecture
5	Al-Hagla (2010)	Analytical-Qualitative	Physical privacy plays a key role in quality of life and psychological security in Islamic societies.	Cultural-social justification of the research
6	Pirnia (2005)	Historical-Descriptive Studies	Explanation of Islamic architectural principles including introversion, hierarchy, and privacy	Theoretical basis for defining privacy
7	Memarian (1994)	Theoretical Studies	Introduction of introversion as a fundamental principle of Iranian residential architecture	Explanation of traditional architectural principles

8	Sefian & Mahmoudi (2007)	Theoretical-Analytical Studies	Explanation of physical and semantic dimensions of privacy in Islamic architecture	Analysis of privacy dimensions
9	Ghobadian (2013)	Historical-Analytical Studies	Examination of architectural evolution in Iran from Qajar to contemporary and weakening of traditional principles	Historical context for analyzing transformations
10	Soltanzadeh (1994)	Historical-Field Studies	Examination of residential architecture transformations in Tehran from Qajar to Pahlavi	Methodological model for comparative study
11	Heydari & Taghipour (2018)	Space Syntax	Identification of quantitative privacy indicators including depth, integration, and control	Theoretical foundations for measuring privacy
12	Bermanian & Rastjou (2017)	Comparative-Analytical Studies	Explanation of privacy transformation from an integrated system to selective strategies	Confirmation of privacy evolution in the contemporary period
13	Rastjou & Bermanian (2019)	Typological Studies	Presentation of a typology of contemporary Iranian house spatial organization based on privacy	Identification of contemporary patterns
14	Ghafourian et al. (2017)	Field-Analytical Studies	Identification of physical and value factors affecting privacy	Identification of factors affecting privacy
15	Zarghami et al. (2015)	Comparative Studies	Explanation of the relationship between privacy and physical form in past and present settlements	Comparative analysis of privacy
16	Madahi & Memarian (2018)	Field-Analytical Studies	Explanation of the relationship between lifestyle and spatial organization in vernacular architecture	Emphasis on the role of lifestyle
17	Saghaye Islami (2022)	Theoretical Studies	Development of privacy indicators at the urban scale	Explanation of macro dimensions of privacy
18	Tabatabaei (2013)	Historical-Field Studies	Identification of residential architecture patterns in South Khorasan with emphasis on Ferdows	Spatial context and empirical data of the research
19	Tabatabaei et al. (2024)	Descriptive-Analytical	In contemporary houses of Ferdows, the concept of privacy has shifted from a collective to an individual and symbolic state.	Empirical data base of the present research
20	Norouzi (2012)	Historical	The first Pahlavi period was a turning point in replacing traditional patterns with modern Western architecture.	Historical context for analyzing architectural transformations
21	Hosseinzadeh (2010)	Qualitative	In small Iranian cities, the conflict between traditional and modern patterns is more evident than in large cities.	Explanation of cultural and spatial characteristics of Ferdows context
22	Moradi (2014)	Comparative-Historical	Government policies during the Pahlavi period had a direct impact on the spatial structure of Iranian houses.	Support for analyzing political factors

23	Ghanbari (2015)	Qualitative-Analytical	Changes in family structure in the contemporary period have reduced the need for hierarchical spaces.	Explanation of social factors affecting privacy
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A systematic review of the above literature reveals that various studies have been conducted on privacy in Iranian architecture, cultural and historical transformations of residential architecture, and the impact of the Pahlavi period on the structure of houses. However, three main research gaps can be identified in the literature:

-Lack of Focus on Small Cities: Most studies have concentrated on metropolises such as Tehran, Isfahan, and Shiraz, while smaller cities like Ferdows which preserve part of their traditional cultural fabric while simultaneously confronting modern patterns provide a unique context for analyzing privacy transformations. Due to their distance from centers of power and less exposure to modernity, these cities have preserved valuable patterns of continuity and transformation in indigenous architecture ([Hosseinzadeh, 2010](#); [Tabatabaei, 2013](#)).

-Scarcity of Comparative-Historical Studies: Many studies have addressed only one of the two periods, either traditional or contemporary, and a comparative-historical approach that can simultaneously examine the evolution of the privacy concept in a specific context within the broader socio-political transformations is very rare ([Karimi, 2010](#); [Bemanian & Rastjou, 2017](#)).

-Lack of Comprehensive Analysis of Socio-Political Factors: Although some studies have referred to the Pahlavi period, the deep connection between government policies (including modernization policies, forced unveiling, and promotion of modern architecture), changes in family structure (from extended to nuclear), and the decline of privacy in local contexts has been less analyzed. This gap becomes even deeper when we consider that Pahlavi-era policies influenced not only the form and physical structure of architecture but also the value and cultural system of society ([Moradi, 2014](#); [Norouzi, 2012](#)).

Consequently, the present study, by focusing

on the city of Ferdows, employing a historical-comparative approach, and simultaneously examining cultural, social, and political factors affecting the evolution of the privacy concept, takes a step toward filling these research gaps. This research attempts to identify valuable privacy-making patterns in the indigenous architecture of Ferdows, explain how modernization policies and changes in family structure have influenced the evolution of this concept, and ultimately provide a framework for redefining privacy in contemporary housing.

Methodology

The present study aims to investigate the fundamental transformations of the privacy concept in the houses of Ferdows from the traditional period (Qajar) to the contemporary era and to identify the cultural, social, and political factors influencing these transformations through a comparative-historical approach. In terms of purpose, this research falls within the category of applied research, as its findings can serve as a framework for designing contemporary housing with an identity-oriented and culture-centered approach. In terms of nature and method, this research is descriptive-analytical, conducted with a qualitative approach and utilizing a historical-comparative strategy ([Groat & Wang, 2002](#); [Hafeznia, 2010](#)). The choice of a qualitative approach stems from the fact that the concept of privacy, beyond a mere physical attribute, is rooted in cultural, social, and moral systems, and for a deep understanding of it, qualitative and interpretive analysis of data is required ([Creswell, 2003](#)). Additionally, the use of a historical-comparative strategy enables the examination of privacy concept transformations over time and in comparison with each other, as well as the identification of underlying factors contributing to these transformations ([Sefian & Mahmoudi,](#)

2007; Moradi, 2014).

The research population includes traditional and contemporary houses in the city of Ferdows. Given the historical nature of the research and the necessity of selecting significant and authentic samples, non-probability and purposive (judgmental) sampling was employed (Sarmad et al., 2013). For this purpose, 11 traditional houses (remaining from the Qajar and early Pahlavi periods) registered on the National Heritage List were selected as representative samples. These houses are all located in the Sardošt neighborhood (the aristocratic quarter of old Ferdows) and possess considerable physical and historical authenticity (Tabatabaei, 2013). Additionally, 11 contemporary houses (including villas and apartment units) were selected from across the city of Ferdows to enable comparative analysis between the two periods. The criteria for selecting contemporary samples included diversity in spatial organization patterns (with courtyard, without courtyard, double-courtyard), diversity in construction type (villa and apartment), and spatial distribution across different urban fabrics (Tabatabaei et al., 2024).

Data collection methods in this research were designed as a combination of library and documentary studies and field studies. In the library and documentary section, authoritative sources including specialized architectural books, domestic and foreign scientific articles, Qajar-era travelogues, historical and military maps, registration documents from the Cultural Heritage Organization, research reports, and relevant dissertations were examined. The aim of these studies was to identify the theoretical foundations of privacy, extract its key components, understand the historical, geographical, and cultural contexts of Ferdows during the Qajar period, and identify the socio-political transformations of the contemporary period (particularly the Pahlavi era) affecting residential architecture (Altman, 1975; Memarian & Brown, 2003; Tabatabaei, 2013; Ghobadian, 2013). In the field studies section, precise physical surveys of selected samples

(including preparation of plans, elevations, and sections), architectural photography, completion of assessment checklists based on privacy components extracted from theoretical foundations, and semi-structured interviews with elderly residents and local experts were conducted. The interviews aimed to understand the lived experience of residents in traditional and contemporary spaces, identify perceived changes in the privacy concept, and record oral narratives of cultural and social transformations in the region (Heydari & Taghipour, 2018; Ghafourian et al., 2017).

Data analysis was conducted using qualitative content analysis and comparative methods. Qualitative content analysis was employed as a systematic method for identifying, coding, and interpreting patterns in textual and visual data (Hsieh & Shannon, 2005). In this regard, data collected from various sources (documents, maps, interviews, and field observations) were first organized and initially coded. Then, based on the theoretical framework of the research (including key privacy components such as spatial hierarchy, introversion, visual control, spatial zoning, and Andaruni-Biruni separation), the data were classified and analyzed (Sefian & Mahmoudi, 2007; Rastjou & Bemanian, 2019). In the next stage, the spatial structure of traditional and contemporary houses was compared from the perspective of privacy-making elements, and their similarities and differences were identified. Simultaneously, the socio-political transformations of the contemporary period (particularly modernization policies of the Pahlavi era, changes in family structure from extended to nuclear, and the influence of Western architectural patterns) were analyzed based on historical documents and previous studies to identify the relationship between these transformations and the decline of physical privacy in contemporary houses (Memarian, 2010; Moradi, 2014; Ghanbari, 2015). Finally, by integrating the findings from qualitative content analysis and comparative analysis, the transformation of the privacy concept in Ferdows houses from a collective and systematic

state to an individualistic and symbolic one was explained, and the necessity of redefining this concept within the local cultural framework was proposed (Karimi, 2010; Bemanian & Rastjou, 2017). To validate the findings, triangulation method using multiple data sources (documents, field observations, interviews) was employed, along with review of the findings by architecture and conservation experts to ensure the accuracy and reliability of the results (Denzin & Lincoln, 2005).

The Concept of Privacy (Mahramiyat) in Iranian-Islamic Architecture

The concept of “Mahramiyat” (privacy) originates from the root “Haram” in Arabic, meaning something that is forbidden to approach for anyone other than its owner, and in Iranian-Islamic culture, it transcends a merely physical concept, serving as a moral-social principle that influences all aspects of individual and collective life (Habibi, 2006; Aminpour & Norouziyanpour, 2014). In comparison with the concept of privacy in Western culture and Mahramiyat in Iranian culture, solitude has a more individual aspect and relates to the individual and their level of interaction with others, whereas Mahramiyat has a socio-cultural dimension and concerns a group of people who have a special relationship with each other and are defined in relation to others (Altman, 1975; Aminpour & Norouziyanpour, 2014). In other words, a private space is a space that provides material and spiritual conditions for the user to achieve privacy in all its various dimensions (Sefian & Mahmoudi, 2007). The realm of privacy has different dimensions, including visual, auditory, olfactory, kinetic, and psychological aspects (Hamzehnejad, 2021; Aghabli Moghaddam & Ahmadi, 2024). From the perspective of scholars, Altman (1975) defines privacy as the control of an individual over others’ access to themselves or their group, and Rapoport (1969) considers it a mechanism for preventing unwanted interaction and achieving desired interaction. In architecture, privacy in an environment means

not intruding or obtaining information from it without the permission of its owner (Sefian & Mahmoudi, 2007).

Introversion as a Fundamental Principle of Privacy

Introversion, as one of the principles of Islamic architecture, has manifested itself in the organization of various parts of buildings, particularly in traditional houses (Pirnia, 2005). This is derived from the importance of family life and its sanctity, as well as the self-esteem of Iranians, which led to the formation of introverted patterns in the architecture of this country. Introversion in Iranian residential architecture is manifested in two concepts: “the lack of visual connection between interior spaces and the exterior” and “the organization of house spaces around a central space (courtyard)” (Memarian, 1994). In traditional Iranian houses, introversion is achieved through elements such as high walls without windows facing the street, indirect and winding entrances, and the arrangement of living spaces around a central courtyard (Heydari & Taghipour, 2018; Pirnia, 2005). These features, while ensuring the security and psychological comfort of residents, are consistent with culture, environment, and religious principles (Ghafourian et al., 2017). Pirnia (2005) introduces introversion as one of the principles of Iranian architecture that has always been aimed at preserving the privacy and hierarchy of houses. In the contemporary period, influenced by Western architectural patterns, the principle of introversion has gradually given way to extroversion and visual transparency (Ghobadian, 2013; Bemanian & Rastjou, 2017).

Spatial Hierarchy and Its Role in Realizing Privacy

Hierarchy is one of the principles that has the greatest influence on the formation of privacy in the physical fabric of traditional Iranian architecture and urban planning (Heydari & Taghipour, 2018). Spatial hierarchy is based on the principle of depth of access; as spatial depth increases, the position of a space relative to the entrance increases, and to reach it, one must pass

through a greater number of spaces (Memarian & Brown, 2003; Heydari et al., 2017). In traditional Iranian houses, this hierarchy can be identified in three layers: the first layer (public) includes the vestibule and entrance hall, the second layer (semi-private) includes the courtyard and living room, and the third layer (private) includes the inner quarters and bedrooms (Saghaye Islami, 2022). Spatial zoning, as another key component of hierarchy, involves the separation of spaces into public, semi-private, and private realms, realized in traditional Iranian houses through the Andaruni-Biruni system (Saghaye Islami, 2022). This hierarchy is clearly distinguished using filter elements (such as blind walls, openings, wooden screens, and winding paths). According to Norberg-Schulz (1980), settlement is realized in two categories: “identity achievement” and “position determination,” in which spatial hierarchy plays a key role in achieving both. Heidegger (1971) also considers dwelling as equivalent to being and believes that dwelling is only realized when building and thinking are placed together. In the contemporary period, with the change in family structure from extended to nuclear, traditional spatial hierarchy has been weakened, and spaces have moved toward integration and reduced depth (Ghanbari, 2015; Rastjou & Bemanian, 2019).

Spatial Organization and Its Patterns in Iranian Residential Architecture

Spatial organization, as a manifestation of spatial order, is a type of abstraction of spatial relationships that is perceived by humans (Soltani, 2011). Types of spatial organization include central organization (in which spaces are organized symmetrically or radially around a central point), linear organization (in which spaces are formed continuously along an axis), radial organization, and grid organization (Ching, 2014; Norberg-Schulz, 1971). In Iranian residential architecture, central spatial organization centered on the courtyard is considered the most prominent pattern of spatial organization, giving an elemental identity to its

center and paving the way for the realization of privacy and spatial hierarchy (Pirnia, 2005). Spatial organization in traditional Iranian houses, through the use of geometric shapes and proportions, the characteristics of spaces (function, hierarchy, zoning, enclosure, and connectivity), and the order of mass and void, has been able to create a type of introversion and integrated privacy (Heydari & Taghipour, 2018; Pirnia, 2005). Rapoport (1969) emphasizes the role of culture in shaping the form of the house and believes that the house is a manifestation of the culture, values, and lifestyle of a society. Cooper (1979) also considers the house as a symbol of the self and believes that the house is a reflection of how a person sees themselves. In the contemporary period, under the influence of Western patterns, courtyard-centered spatial organization has gradually been replaced by linear, grid, and open organizations, which have been accompanied by a reduction in privacy and spatial hierarchy (Bemanian & Rastjou, 2017; Ghobadian, 2013).

Cultural-Social Transformations and Their Impact on the Concept of Privacy

The cultural-social transformations of the contemporary period, especially from the late Qajar period and more seriously during the Pahlavi era, have had a profound impact on the concept of privacy and the spatial organization of Iranian houses. The most important of these transformations are: first, government modernization policies that, by emphasizing “transparency,” “open space” and “modernity” promoted Western architectural patterns (Memarian, 2010; Moradi, 2014). Second, the change in family structure from extended and multi-generational to nuclear, which reduced the need for numerous and hierarchical spaces and emphasized personal and private spaces (Ghanbari, 2015). Third, urbanization, increasing population density, and the reduction of private land, which limited the possibility of forming extensive and enclosing courtyards (Karimi, 2010). Fourth, the mandatory unveiling in 1935, which gradually eliminated

the traditional boundaries between female (Andaruni) and male (Biruni) spaces and had a direct impact on the spatial organization of houses (Norouzi, 2012; Moradi, 2014). Collectively, these transformations caused the concept of privacy to shift from a collective and systematic state to an individualistic, symbolic, and fragmented one (Karimi, 2010; Bemanian & Rastjou, 2017). In this process, instead of privacy serving as an integrated cultural-physical system shaping the spatial identity of the house, it has become a selective feature dependent on the function of each space (Rastjou & Bemanian, 2019). However, the cultural resistance of part of the local community, especially in smaller cities like Ferdows that are further from centers of power, indicates the existence of capacities for redefining privacy based on the local cultural context (Hosseinzadeh, 2010; Tabatabaei, 2013).

FINDINGS AND DISCUSSION

The research findings are presented in three main sections: first, documentary findings from

the review of historical sources, maps, and travelogues of the Qajar period; second, field findings from the physical survey of 11 historical houses and 11 contemporary houses in Ferdows; and third, comparative analysis of the evolution of the privacy concept from the traditional period to the contemporary era.

Documentary Findings: Historical and Geographical Context of Ferdows in the Qajar Period

The review of historical sources indicates that the city of Ferdows, during the Qajar period, enjoyed strategic and commercial importance due to its location on the southern branch of the Silk Road. Its geographical position on trade routes, as well as its desert climatic conditions (hot and dry), had a direct impact on the formation of the city's house architecture. Historical sources indicate that Ferdows enjoyed relative stability during the Qajar period, which contributed to the preservation of traditional architectural patterns. (Fig. 1 and Tab. 2)

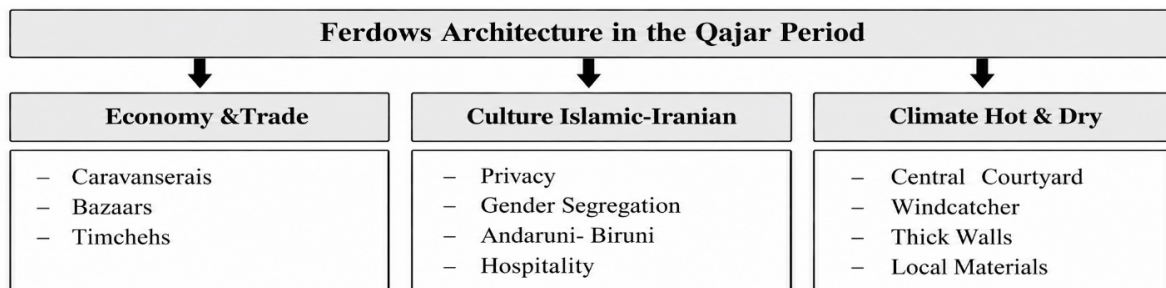


Figure 1: Factors Influencing the Formation of Ferdows Architecture in the Qajar Period

Table 2: Geographical and Historical Characteristics of Ferdows in the Qajar Period

Indicator / Component	Description and Analysis of Findings	Data Collection Method	Researcher's Interpretation and Inference
Geographical Location	Ferdows is located in southeastern Iran on trade routes, including the southern branch of the Silk Road.	Review of historical sources, Qajar maps, and travelogues	The city's connective position was a factor in trade prosperity and influenced the form and function of the urban fabric
Climatic Conditions	Hot and dry desert climate with very hot summers and mild winters	Field observations, meteorological data	Climatic conditions shaped the formation of the central courtyard pattern and introversion

Political and Social Stability	Historical sources indicate relative stability during the Qajar period, which prevented sudden changes in urban structure	Content analysis of historical sources and travelogues	Political and social stability contributed to the continuity of vernacular architectural patterns
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Documentary findings also reveal that during the Qajar period, although modernity entered Iran through the capital and major cities, it had less impact on cities like Ferdows. The closed social structure and geographical distance from centers of power prevented rapid cultural trans-

formations. Extended and multi-generational families lived in large houses with diverse spaces (courtyard, Andaruni, Biruni), and this social structure required a multi-part and hierarchical spatial organization.(Fig. 2)

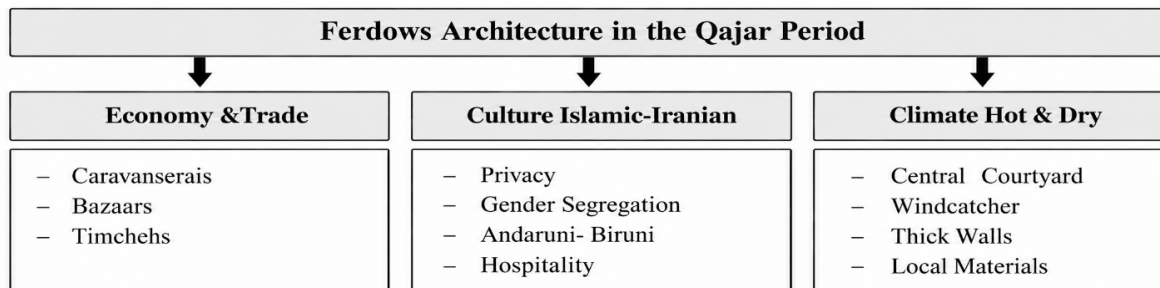


Figure 2: Social Structure and Spatial Organization in Ferdows during the Qajar Period

Field Findings: Comparative Analysis of Privacy Elements in Traditional and Contemporary Houses

Field surveys of 11 traditional houses and 11 contemporary houses in Ferdows reveal that

privacy-making elements are systematical-ly and integrally present in traditional houses, while in contemporary houses these elements appear in a fragmented, symbolic, and non-systematic manner.

Table 3: Field Findings of the Research on Historical Houses of Ferdows

Historical House	Land Shape	Mass Shape	Typology	Symmetry Type	Visual Balance	Access to Courtyard	Courtyard Shape
Azad	Rectangle	Central Courtyard	Asymmet- rical	Has	With Hierarchy	Vertical Rectangle	
Badi'i	Rectangle	Central Courtyard	Transverse Axis	Has	With Hierarchy	Vertical Rectangle	
Afrashteh	Rectangle	Central Courtyard	Asymmet- rical	Does Not Have	Direct and/or With Hierarchy	Vertical Rectangle	
Rahi	Rectangle	Central Courtyard	Transverse Axis	Has	With Hierarchy	Horizontal Rectangle	
Rasa'i	Square	Central Courtyard	Asymmet- rical	Has	With Hierarchy	Vertical Rectangle	

Sadr al-Sadat	Rectangle	Central Courtyard	Transverse and Longitudinal Axis	Does Not Have	Direct and/or With Hierarchy	Vertical Rectangle	
Ferdowsi	Rectangle	Central Courtyard	Asymmetrical	Does Not Have	Direct and/or With Hierarchy	Vertical Rectangle	
Ata'i	Rectangle	Central Courtyard	Transverse and Longitudinal Axis	Has	With Hierarchy	Vertical Rectangle	
Majd al-Ashraf	Rectangle	Central Courtyard	Asymmetrical	Does Not Have	With Hierarchy	Vertical Rectangle	
Moqaddam	Rectangle	Central Courtyard	Asymmetrical	Does Not Have	With Hierarchy	Vertical Rectangle	
Mo'ezzi	Rectangle	Central Courtyard	Asymmetrical	Has	With Hierarchy	Trapezoid	

Table 4: Field Findings of the Research on Contemporary Houses of Ferdows

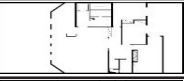
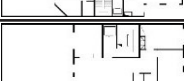
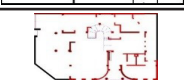
Contemporary House	Land Shape	Mass Shape	Typology	Symmetry Type	Visual Balance	Access to Courtyard	Courtyard Shape
Rahimi	Rectangle	Apartment (Double Courtyard)	Symmetrical	Has	Without Hierarchy	Horizontal Rectangle	
Razavi	Trapezoid	Apartment (Double Courtyard)	Asymmetrical	Does Not Have	Without Hierarchy	Formless	
Zahmati	Rectangle	Apartment (Double Courtyard)	Symmetrical	Has	Without Hierarchy	Horizontal Rectangle	
Farrokhi	Square	Apartment (Single Courtyard)	Symmetrical	Has	Without Hierarchy	Horizontal Rectangle	
Khalilian	Trapezoid	Apartment (Single Courtyard)	Asymmetrical	Does Not Have	Without Hierarchy	Horizontal Rectangle	
Khosh Chehreh	Rectangle	Apartment (Single Courtyard)	Symmetrical	Has	Without Hierarchy	Horizontal Rectangle	
Pazhoham	Rectangle	Apartment (Single Courtyard)	Symmetrical	Has	Without Hierarchy	Square	
Eskandari	Rectangle	Villa (Duplex)	Asymmetrical	Does Not Have	Without Hierarchy	Horizontal Rectangle	
Kazemi	Rectangle	Villa (Duplex)	Symmetrical	Has	Without Hierarchy	Horizontal Rectangle	
Mohammadi	Rectangle	Villa (Duplex)	Symmetrical	Has	Without Hierarchy	Horizontal Rectangle	

Table 5: Comparative Analysis of Privacy-Making Elements in Traditional and Contemporary Houses of Ferdows

No.	Privacy-Making Element	Traditional Houses (11 samples)	Contemporary Houses (11 samples)	Transformation Analysis
1	Central Courtyard	100%	63.6%	Significant decrease
2	Indirect Entrance (90-180 degree turn)	100%	27.3%	Severe decrease
3	Andaruni-Biruni Separation	81.8%	9.1%	Almost eliminated
4	Spatial Hierarchy (3 or more layers)	100%	18.2%	Severe decrease
5	High Walls without Openings to Street	100%	9.1%	Almost eliminated
6	Intermediate Spaces (Hashti, Dalan, Ivan)	100%	36.4%	Significant decrease
7	Windcatcher	54.5%	0%	Complete elimination
8	Central Pool	90.9%	18.2%	Severe decrease
9	Visual Control (No overlooking)	100%	9.1%	Almost eliminated

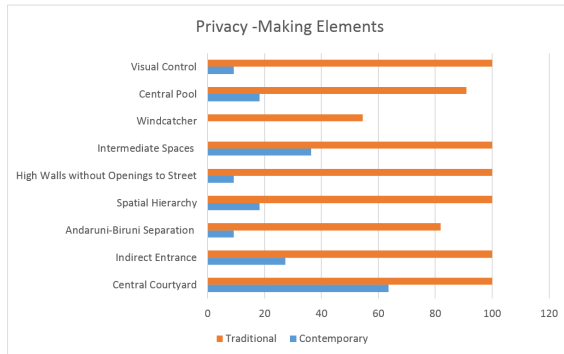


Figure 3: Comparison of Percentage of Privacy-Making Elements in Traditional and Contemporary Houses of Ferdows

Analysis of Spatial Organization and Access Hierarchy

Analysis of the plans of traditional and contemporary houses in Ferdows reveals that the spatial organization of traditional houses is based

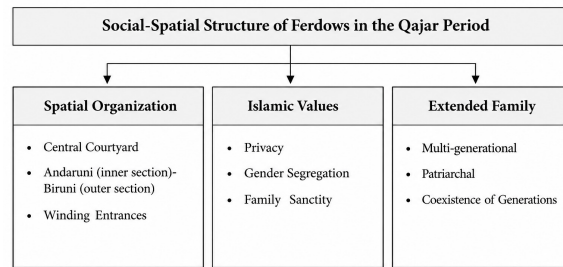


Figure 4: Transformation of Privacy-Making Elements from Traditional to Contemporary

on a hierarchical and synergistic system of public, semi-private, and private realms. In contrast, contemporary houses lack this hierarchy, and spaces are designed in an integrated manner without spatial zoning.

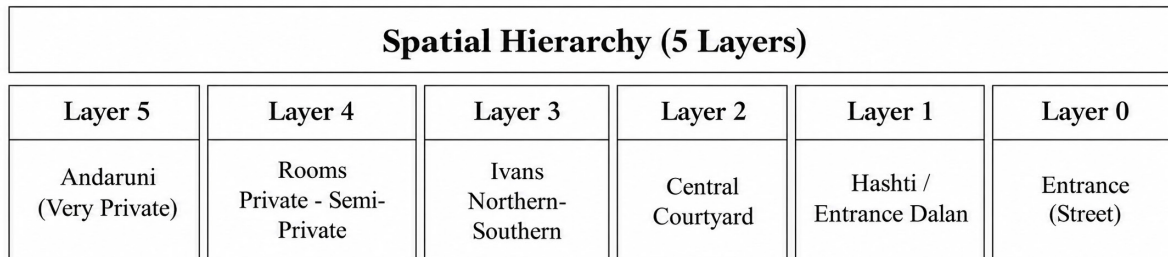


Figure 5: Spatial Hierarchy in Traditional Houses of Ferdows

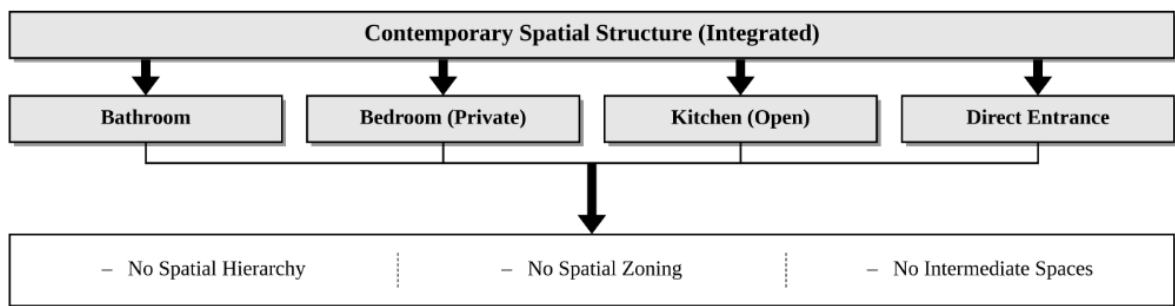


Figure 6: Spatial Structure of Contemporary Houses in Ferdows (Without Hierarchy)

Table 6: Comparative Analysis of Spatial Hierarchy in Traditional and Contemporary Houses

Indicator	Traditional Houses	Contemporary Houses	Transformation Interpretation
Number of Spatial Layers	3 to 5 layers	1 to 2 layers	Decrease in spatial depth
Average Depth of Private Spaces	3.5 to 4.2	1.5 to 2.1	Significant decrease in depth
Presence of Intermediate Spaces (Hashti, Dalan)	100%	36.4%	Severe decrease
Separation of Public-Private Realms	Completely Separate	Integrated	Elimination of separation
Access Control	Hierarchical	Direct	Elimination of spatial filters

Socio-Political Factors Affecting the Evolution of Privacy (Pahlavi Period)

Documentary and field findings indicate that

the evolution of the privacy concept in Ferdows houses was mainly influenced by four key factors during the Pahlavi period:

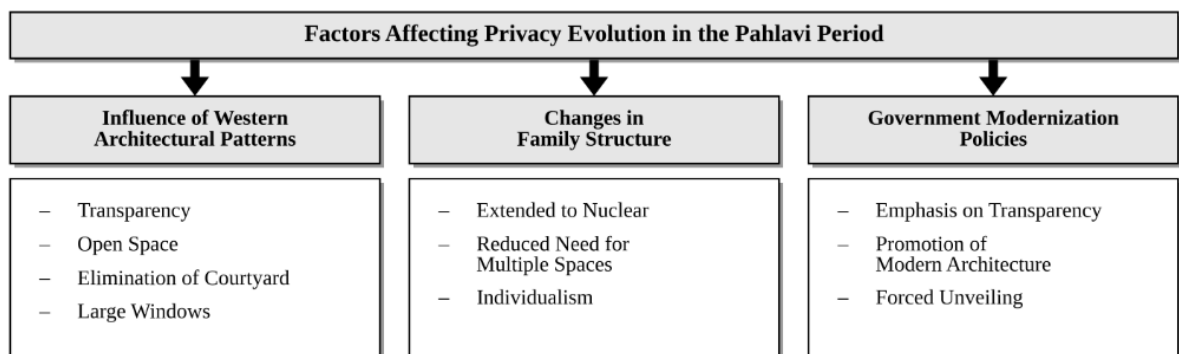


Figure 7: Factors Affecting the Evolution of Privacy during the Pahlavi Period

Table 7: Socio-Political Factors Affecting the Evolution of Privacy during the Pahlavi Period

Factor	Description	Impact on Privacy	Evidence in Ferdows
Government Modernization Policies	Emphasis on "transparency," "open space," and "modernity" during the first and second Pahlavi periods	Weakening of introversion and its replacement with extroversion	Introduction of modern architectural patterns in Ferdows in the 1960s
Changes in Family Structure	Transition from extended and multi-generational family to nuclear family	Reduced need for multiple and hierarchical spaces	Reduction in house sizes and elimination of Andaruni spaces

Influence of Western Architectural Patterns	Arrival of foreign architects and return of European-educated students	Replacement of visual transparency and functional fluidity instead of introversion	Construction of villa-style houses with large windows in Ferdows
Forced Unveiling (1935)	Elimination of traditional boundaries between female (Andaruni) and male (Biruni) spaces	Elimination of gender segregation and removal of Andaruni space	Gradual elimination of Andaruni in Ferdows houses

Analysis of Privacy Concept Evolution from Collective to Individual

The research findings demonstrate that the concept of privacy in Ferdows houses has trans-

formed from a collective, systematic, and physical system in the traditional period to an individualistic, symbolic, and fragmented concept in the contemporary period. This evolution can be illustrated in the following diagram:

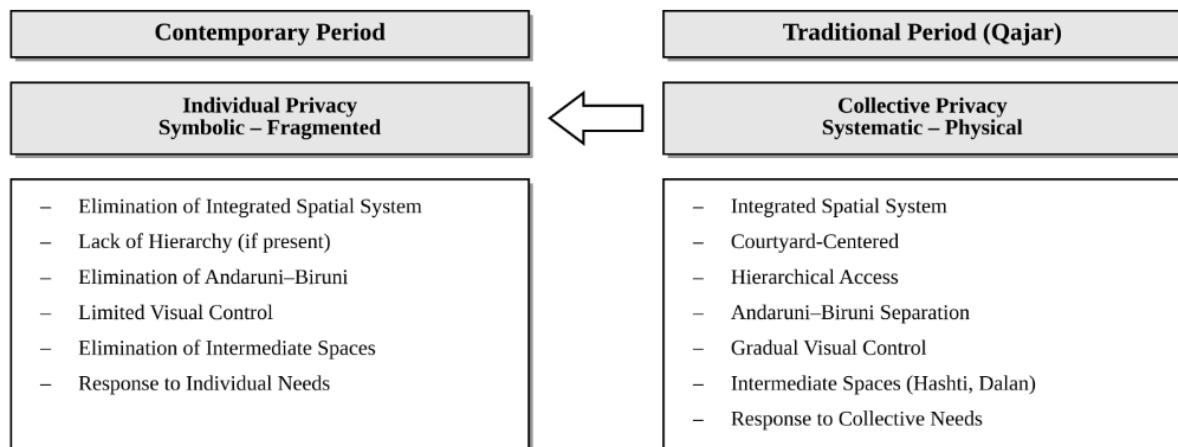


Figure 8: Evolution of the Privacy Concept from Traditional to Contemporary

RESULTS AND CONCLUSION

The research findings clearly demonstrate that the concept of privacy in Ferdows houses has undergone a fundamental transformation from the traditional period to the contemporary era. In traditional houses, privacy was realized through an integrated, coherent, and hierarchical system comprising introverted spaces, enclosed central courtyards, indirect and winding entrances, precise separation of Andaruni and Biruni, and controlled hierarchical access networks. In contrast, in contemporary houses of Ferdows, influenced by three main factors—namely the modernization policies of the Pahlavi period, changes in family structure from extended to nuclear, and the influence of Western architectural patterns

this integrated system has been replaced by a fragmented, symbolic, and non-systematic structure. Key privacy-making elements such as central courtyard (from 100% to 63.6%), indirect entrance (from 100% to 27.3%), Andaruni-Biruni separation (from 81.8% to 9.1%), spatial hierarchy (from 100% to 18.2%), and visual control (from 100% to 9.1%) have experienced significant decline. Nevertheless, the cultural resistance observed among segments of the local community, particularly in older neighborhoods, indicates a persistent demand for redefining privacy based on indigenous cultural context.

The present study, conducted with the aim of investigating the fundamental transformations of the privacy concept in the houses of Fer-

dows from the traditional period (Qajar) to the contemporary era and identifying the cultural, social, and political factors influencing these transformations, employed a comparative-historical approach. The findings derived from documentary studies, field surveys of 11 traditional and 11 contemporary houses, and comparative data analysis provide a clear answer to the main research question: The concept of privacy in Ferdows houses has undergone a fundamental transformation from the traditional period to the contemporary era, shifting from a collective, systematic, and physical system in traditional houses to an individualistic, symbolic, and fragmented concept in contemporary houses (Karimi, 2010; Bemanian & Rastjou, 2017).

In traditional houses of Ferdows, privacy was realized through an integrated, coherent, and hierarchical system comprising introverted spaces, enclosed central courtyards, indirect and winding entrances, precise separation of Andaruni and Biruni, and controlled hierarchical access networks (Memarian & Brown, 2003; Pirnia, 2005; Heydari & Taghipour, 2018). This spatial system not only responded to the climatic demands of the hot and arid desert region but also served as the physical embodiment of Islamic-cultural values such as privacy, family sanctity, gender segregation, and controlled hospitality (Altman, 1975; Saghaye Islami, 2022). Graphical analysis of spatial hierarchy revealed that traditional houses in Ferdows possess 3 to 5 consecutive spatial layers from the entrance to the deepest private spaces, with elements such as Hashti, Dalan, Ivan, and the central courtyard functioning as spatial filters.

In contrast, the research findings indicate that in contemporary houses of Ferdows, this integrated system has been replaced by a fragmented, symbolic, and non-systematic structure. Key privacy-making elements such as central courtyard (from 100% to 63.6%), indirect entrance (from 100% to 27.3%), Andaruni-Biruni separation (from 81.8% to 9.1%), spatial hierarchy (from 100% to 18.2%), and visual control (from 100%

to 9.1%) have experienced significant decline. This transformation has occurred mainly under the influence of three primary factors: first, the modernization policies of the Pahlavi period emphasizing “transparency,” “open space,” and “modernity,” which promoted Western architectural patterns (Memarian, 2010; Moradi, 2014). Second, the change in family structure from extended and multi-generational to nuclear, which reduced the need for multiple and hierarchical spaces and emphasized personal and private spaces (Ghanbari, 2015). Third, the influence of Western architectural patterns through the arrival of foreign architects and the return of European-educated students, which brought about the replacement of visual transparency and functional fluidity instead of traditional introversion (Norouzi, 2012). The forced unveiling in 1935 also gradually eliminated the traditional boundaries between female (Andaruni) and male (Biruni) spaces, directly impacting the spatial organization of houses (Moradi, 2014).

Nevertheless, the cultural resistance observed among segments of the local community, particularly in the older neighborhoods of Ferdows, indicates a persistent demand for redefining privacy based on indigenous cultural context. This cultural resistance, evident in the continuity of certain traditional architectural elements in houses of the Sardošt neighborhood, demonstrates that despite extensive transformations, the concept of privacy remains alive in the mentality of the local community and can serve as a basis for recreating this principle in contemporary housing (Hosseinzadeh, 2010; Tabatabaei, 2013).

In sum, the present study demonstrates that the evolution of privacy in Ferdows symbolizes the cultural-architectural rupture in the transition from tradition to modernity. This rupture has occurred not only in the physical fabric of architecture but also in the value and cultural system of society. The recreation of the privacy concept in contemporary housing necessitates its intelligent redefinition within the local cultural framework and the integration of valuable traditional

principles with the requirements of contemporary life, thereby preserving indigenous identity while responding to the needs of today's society (Habibi, 2006; Rastjou & Bemanian, 2019). As the findings of this research have shown, privacy in traditional architecture was not an ancillary feature but a fundamental and organizing spatial principle that can inspire contemporary architects in creating identity-oriented housing that is responsive to cultural and climatic needs, while simultaneously being compatible with the demands of modern life.

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