

Evaluation of Factors Affecting on Architectural Identity in Dhamar City

Ahmed A. Al-Nehmi* Mohammed N. Juaim* Akram A. Alabsi**

* Architectural Engineering Department, Engineering Faculty, Thamar University, Yemen

**College of Architecture and Urban Planning, Fujian University of Technology, Fuzhou China.

*Corresponding Author: ahmedabdurabu7@gmail.com

Abstract

Architecture is considered one of the most prominent achievements of human civilizations, as the form of architecture is a living and sincere expression of the intellectual values of society, making it a reflection of the society's identity. With the development of contemporary architecture, concerns have arisen about the loss of the connection between architecture and local culture. Architecture has transformed into molds of standard concrete blocks that only serve material functions, without considering the intellectual content or cultural identity. This study aims to understand the Yemeni architectural identity and measure the extent to which contemporary Yemeni architecture achieves its local identity by identifying the factors affecting the continuity of architectural identity in the city of Dhamar. The study adopts an analytical methodology based on building a multi-criteria model that represents the theoretical framework for the research problem. It includes social, religious, environmental, and cultural criteria, in addition to a set of sub-elements under each of these criteria. Through this model, the continuity of achieving architectural identity was measured based on the influencing factors. The results showed that social and religious criteria are the most realized in contemporary architecture, as they are closely related to the daily life of society, while the participants rated cultural criteria lower. It was also found that the visual aspect of architecture, which is related to the modern use of traditional vocabulary, has begun to lose part of its identity due to the declining attention to traditional architectural designs in contemporary contexts. The study recommends employing traditional architectural elements in a modern and contemporary style, with the aim of emphasizing Yemeni architectural identity and achieving communication between the old and the new, which enhances the continuity of cultural identity in contemporary architecture.

Keywords: Architecture, Culture, Identity, Architectural Identity, Cultural Identity, Yemen, Dhamar City.

DOI:

<https://doi.org/10.59421/0dbwzy34>



THIS WORK IS LICENSED UNDER

A CREATIVE COMMONS

ATTRIBUTION 4.0

INTERNATIONAL LICENSE.

تقييم العوامل المؤثرة على الهوية المعمارية في مدينة ذمار

د / احمد عبدربه النهي د / محمد ناصر جعيم د / أكرم احمد العبيسي

* قسم الهندسة المعمارية، كلية الهندسة، جامعة ذمار، اليمن.

البريد الإلكتروني: ahmedabdurabu7@gmail.com

المخلص

تعتبر العمارة من أبرز إنجازات الحضارات الإنسانية، حيث يُعتبر شكل العمارة تعبيراً حياً وصادقاً عن القيم الفكرية للمجتمع، مما يجعلها تعكس هوية هذا المجتمع. ومع تطور العمارة المعاصرة، أصبح هناك قلق حول فقدان ارتباط العمارة بالثقافة المحلية، حيث تحولت إلى قوالب من الكتل الخرسانية النمطية التي تؤدي وظائف مادية فقط، دون مراعاة للمحتوى الفكري أو الهوية الثقافية. تهدف هذه الدراسة إلى فهم الهوية المعمارية اليمنية وقياس مدى تحقيق العمارة اليمنية المعاصرة لهويتها المحلية، وذلك من خلال تحديد العوامل المؤثرة في ديمومة الهوية المعمارية في مدينة ذمار. تعتمد الدراسة على منهجية تحليلية تستند إلى بناء نموذج متعدد المعايير يمثل الإطار النظري للمشكلة البحثية، ويشمل المعايير الاجتماعية والدينية والبيئية والثقافية، بالإضافة إلى مجموعة من العناصر الفرعية التي تندرج تحت هذه المعايير. من خلال هذا النموذج، تم قياس استمرارية تحقيق الهوية المعمارية بناءً على العوامل المؤثرة. أظهرت النتائج أن المعايير الاجتماعية والدينية هي الأكثر تحقيقاً في العمارة المعاصرة، حيث ترتبط ارتباطاً وثيقاً بالحياة اليومية للمجتمع، في حين تم تقييم المعايير الثقافية بشكل أقل من قبل المشاركين، نظراً لارتباطها بالمستوى الجماعي. كما تبين أن الجانب البصري للعمارة، الذي يرتبط باستخدام المفردات التراثية بشكل حديث، بدأ يفقد جزءاً من هويته بسبب تراجع الاهتمام بالتصاميم المعمارية التراثية في السياقات المعاصرة. توصي الدراسة بتوظيف العناصر المعمارية التراثية بأسلوب حديث ومعاصر، بهدف التأكيد على الهوية المعمارية اليمنية وتحقيق التواصل بين القديم والجديد، مما يعزز استمرارية الهوية الثقافية في العمارة المعاصرة.

الكلمات المفتاحية: العمارة، الثقافة، الهوية، الهوية المعمارية، الهوية الثقافية، اليمن، مدينة ذمار.

DOI:



THIS WORK IS LICENSED UNDER

A CREATIVE COMMONS

ATTRIBUTION 4.0

INTERNATIONAL LICENSE.

Introduction

Architecture occupies the highest and greatest human civilizational achievements as the product of the interaction of intellectual values on the one hand and material values on the other. The architecture form is an honest expression of the intellectual values of society; in other words, the architecture form reflects the identity of any society. The concept of architectural identity is mainly dependent on the idea that elements, forms, and architectural vocabulary reflect community lifestyles, including lifestyle habits, traditions, religious beliefs, ethical principles, and social values. The architectural identity is part of the cultural identity of the peoples; the architectural pattern cannot be standardized because it is the cornerstone of the diversity of cultural life in each geographical area ^[1]. In fact, the universal pursuit is to make architectural and urban design globally typical, not to observe the diversity of local values and identities for each region. These factors have created a modern architecture not related to the traditional urban environment or local culture and have allowed global traditions to fit into its modern template without any consideration of local communities' identities ^[2]. Therefore, the issue of architectural identity has become a real global concern, especially in the past three decades, when many cities began to lose their personality. Identity is a comprehensive term used in every area of social sciences used by an individual to describe itself as a distinct and unique entity ^[3]. A combination of similarities and differences generates a sense of uniqueness in the identities of individuals and communities. Accordingly, this research is to study identity in the architectural and urban context of Dhamar city and to examine the factors that affected the concept of architectural identity.

Literature Review

Many of the previous studies dealt with the subject of architectural identity from several aspects, and most of the studies addressed a study of modern challenges. Asfour adopted an analytical approach to understand the negative impact of modernity on Arab architecture. It shows that Western culture influences the architectural identity of Arab countries by transferring global cultural ideas into another cultural region ^[4]. Mahgoub discussed the design strategies for the expression of cultural identity through a three-dimensional matrix as a tool to understand the relationship between globalization and identity ^[5]. Salama analyzed the visual elements of the buildings from a new perspective on the topic of architectural meaning. It focuses on the optical analysis in the construction of facades to determine the physical aspects of architectural identity through classifying environmental components such as walls, windows, entrances,

and others ^[6]. Al-Naim tried to study the analysis of the change event in architecture, using an analytical approach to clarify how people accept new forms in their environment. The study shows that the architectural identity can be changed and modified over time. It emphasizes that the cultural basis is more important than the external appearance of architecture because the change authority cannot succeed in transforming the core values of architectural identity ^[7]. Baper and Hassan dealt with the factors affecting the continuation of the architectural identity in Iraq, including mass, openings, architectural details, building materials, and façade arrangements. The study proved a positive relationship between these factors and architectural identity continuity ^[8]. Torabi and Brahman noted that identity is an environmental phenomenon working to distinguish between a specific region and other regions. It can be a physical thing such as shape, size, construction style, and others, or it can be activities or practices in the environment ^[9]. Belanche et al. mentioned that the identification process of identity is affected by the variation of cultures, religion, customs, traditions, the local environment, and social changes such as age, sex, level of education, and others ^[10]. Othman defined identity as a group of physical, biological, psychological, and cultural signs that distinguish everyone, group, or culture from another. Identity indicates human perceptions and visions; therefore, it has two sources: the first, it is a tool for controlling people's minds, and the second, it is a power source to form new communities ^[11]. Boussaa focused on the role of urban renewal in activating historical regions and using it to enhance the urban identities of cities ^[12]. Garg emphasized that the conservation of cultural identity for a place or region makes people feel a sense of place. Therefore, in order to create a sense of place, it is essential that people relate to the region or place through interacting with the architectural structure ^[13]. Abu Ghazala discussed the solutions and values that the ancestors gained from the surrounding environment in Saudi cities. The study examined identity in light of globalization dominated by modern projects ^[14]. Kumaraku and Pula explained the interaction between identity and architectural forms. The various buildings express identities that depend on historical, political, social, and cultural conditions ^[15].

Research Problem

The Arab identity is exposed to many challenges, trying to lose its privacy, as a result of western international methods that usually overlook humanitarian, environmental, and cultural aspects. Modern Arab and Yemeni architecture is no longer part of the cultural component of society. It has become a typical template, which performs its physical function without the content of the architecture or the

local form that represents all cultural aspects. In the modern Yemeni city, the urban fabric is no longer appropriate for the traditions and culture of society and does not achieve the high values of Islamic religion. The urban fabric of cities is no longer characterized by configurable unity, giving a sense of disintegration and isolationism. The main reason is the imitation of the principles of Western architecture that do not fit with Yemeni customs and traditions. Urban growth and expansion in Dhamar city, the result of population increases and internal migration to the city, led to the loss of the architectural and historical identity of the city. Therefore, all relevant stakeholders should be adopted to maintain the architectural and historical identity of cities. There is a need to study the architectural identity to find out whether contemporary architecture remains its identity or not. So that, the rapid urban growth may lose its local identity through similarity between urban schemes, despite the different characteristics of the spatial region and its heritage dimensions. The current research seeks to answer the question: to what extent does contemporary Yemeni architecture retain its identity? The research assumes that contemporary architecture in Yemen, especially in Dhamar city, no longer achieves place identity with a percentage greater than 50%. As well as the question: What are the factors affecting the continuity of architectural identity in Dhamar city? The research assumes that the most influential factor on the continuity of architectural identity is the cultural factor.

Research Objectives

The research target is to emphasize the phenomenon of architectural identity. Therefore, the objectives are to evaluate, measure, and rank the influence of factors on the continuity of architectural identity and to examine the perceptions of respondents toward the continuity of architectural identity in Dhamar city. The importance of the research lies in its understanding of the architectural identity of the Yemeni and its familiarity with its characteristics, and principles, as well as the possibility of dealing with identity in contemporary architecture. The results of the research aspire to achieve humanitarian needs that are available in contemporary architecture to be closer to humans.

Research Methodology

It depends on building a multi-criteria model that represents the theoretical framework for the dimensions of the research problem. It provides the background that supports the concept of continuity in achieving architectural identity. It consists of groups of criteria; under each one, there are a number of factors

through which the continuity of architectural identity can be measured. The model displays a conceptual framework to achieve the role of those factors in building the architectural identity of Dhamar. To obtain existing information in the field area, all possible tools were used, such as observations, photography, and personal interviews, as well as using the questionnaire to measure different aspects. Thus, the questionnaires were built to obtain the required information, consisting of factors in the form of questions. The sample required was chosen to consist of architects who live in the study area. The sample was chosen for two reasons: first, they are the most understandable group of the subject from the theoretical and practice aspects, and second, they live in the region and know the reality and dimensions of the problem. The study adopted a systematic framework based on the use and employment of a group of scientific research approaches, so that each approach is used to study a particular aspect of the research problem. These approaches include the descriptive approach, which was used to collect relevant data from literature, studies, reports, and specialized scientific references to build a knowledge base about the different theoretical aspects of the research problem. Analytical approach, which was used to apply the theoretical results reached in the previous approach to Dhamar city. Accordingly, the research variables involving the identity concept, place identity, architectural identity, and Dhamar location and architecture are discussed.

Identity Concept

Identity is the possibility of distinguishing a place with certain properties from other places. There is a broader concept used in the social sciences known as uniqueness for a person or something from different perspectives, such as personal, political, or social identities ^[16]. It is the background of the person specifying individual identity associated with the place features ^[17]. Moreover, it is not something touched but is an effect recognized and known by civilizations throughout history ^[18]. On the other hand, identity is defined as a complex system formed from different determinants of the political and social systems. It indicates how individuals and groups are distinguished in their social relations with others ^[19]. It indicates the difference between individuals, groups, and others. In other words, how to determine the uniqueness of a thing and its characteristics of the same kind or another kind ^[13]. It has social and cultural dimensions formed from signs determined by people in a particular place and a certain period of time ^[17]. The relationship between culture, identity, and architecture is a reflection of the relationship between the human environment, the building environment, and the intellectual environment for society ^[9]. Identity consists of the content referring to

people or things and the context referring to culture and the environment, which appear as a group of physical, biological, psychological, and cultural symbols that distinguish every culture from others ^[20]. Some researchers believe that it indicates human perceptions; thus, it is a tool for controlling people's minds as well as a source of power to form new societies ^[11].

Place identity

Place identity is a set of main characteristics that enhance the uniqueness of a place in the memory of people. It is a collective product of the individuals' memory to determine the place through the physical environment ^[17]. It appears in essence when the individual remembers a privileged place for other places as a result of the relationship between perceptions and physical qualities ^[20]. People interact with it in terms of belonging to specific places where they have had previous experiences. These places are characterized by continuity, which makes them able to raise their senses through some of the characteristics described. The senses of individuals are affected by meanings with three interrelated components. The components are physical bodies, psychosocial and social processes, and place activities ^[19]. The identity associated with the place indicates both self-deficiencies and objectivity, such as consciousness, physical memory, and symbolic meaning related to places. The identity of the place is linked to all tangible and non-tangible aspects of the place. It is another form of identity that can be compared to social identity to show the extent to which perishable fabrications of the material occur ^[21]. In fact, there are crucial relationships between the living environment and the place's identity. Some studies have been made in recent years to develop place identity ^[22]. On the other hand, the geographical concept of place refers to the context of events and procedures, including natural elements and human constructive elements. A physical object is an occupancy of a specific part of the area and has a range of meanings and associated symbols ^[20]. The important thing is that physical elements play a very important role in the self-perception of individuals with regard to the physical environment through beliefs, including memories, concepts, interpretations, visions, and related feelings about some physical environments ^[3].

Architectural Identity

Architecture is one of the greatest achievements of civilizations; it is part of the identity and carries values, concepts, and characteristics attributed to society, and it depends on geography, history, traditions, and knowledge of society ^[9]. The architecture can reflect a certain cultural identity through signs and symbols. The

architectural identity can be classified under the following categories: aesthetics, functional, historical and urban context, and human influence ^[16]. In fact, architecture is the best way to give identity to people and places because it reflects the local lifestyle of communities. Architects do not only identify the architectural identity, but society is also involved in the process of configuration and design and local cultural interpretation by residents, as well as the contextual conditions of the built environment ^[2]. Architecture is the representation of society and its physical presence, which depends on context, users, and historical conditions. The cultural features of architecture determine its architectural identity, whether national, religious, or cultural ^[15]. There are two important factors in the formation of architectural identity; the main references are time and region. The time is associated with history, while the region is associated with geography. In addition, the basic elements contribute to the formation of identity: characteristics, physical characteristics, appearance, functions, meanings, and symbols ^[1].

Urban Identity

Urban identity is a social link between man and the environment and between space and its dimensions. The spatial levels of the environment produce various aspects of urban identity, which can be identified in different ways. It is a concept of the physical, cultural, social, economic, and historical features of the place ^[23]. Evaluation of the value of the urban context and content is the process of the relationships between physical objects and people experienced in their daily interaction with the surrounding urban area ^[21]. The interaction between the human and place through interpreting persons to the environment and the contribution of the physical environment in forming a unique place for the psychological elements. However, architecture is the physical aspect of the analysis of place identity ^[20]. The urban identity is mixed from physical heritage, heritage culture, and environmental context. Identity consists of content that connects people, things, and cultural and environmental contexts. Moreover, the urban identity of the place consists of three components: activities, meanings, and symbols ^[12]. On the other hand, urban identity is classified into three aspects: the physical aspect, including the physical environment, physical fabric, and open spaces. Activities are aspect of the interaction between people and the method of using physical fabric. The meaning aspect connects behaviors and expertise, including signs and symbols ^[21]. It can be distinguished between two perspectives for urban identity: identity related to itself (objective perspective) and identity referred to as individual experiences (self-perspective). The self-perception of a place is characterized by people's experiences in a particular location.

Nevertheless, objective elements are geographical, natural, and industrial elements. Thus, objective elements and self-perceptions constitute the urban identity ^[23].

Elements Carrying Identity

Architecture is part of society's identity and carries the concepts and characteristics attributed to it. Therefore, it depends on the geography, history, traditions, and intellectual visions of the society. There is no doubt that architecture, urbanism, building design, and exterior facades are clear manifestations of the civilization and culture of every society ^[20]. Moreover, Al-Naim mentioned that identity is not something given to society but something that arises from interaction and participation between members of society and between the entire society and the surrounding physical objects ^[7]. The architectural identity arises as a result of the use of certain architectural elements and methods, and therefore the architectural product is the effective means through which a society can express its identity and distinguish it from other societies ^[24]. Some studies have revealed that the main factors that affect the design of building facades are related to composition, shape, texture, and color. Therefore, analyzing the façade's architectural structure provides important information for understanding its identity because the social and cultural performance of facades is an indicator of architectural value ^[8]. The identity of the built environment appears in its character, which consists of a set of features and characteristics that give the building a distinctive character. These features appear on the facades and their elements, and the construction of the visual elements has distinct effects on the idea of identity. Accordingly, facades and their details are very important elements in creating the identity. In addition, the arrangement of the architectural façade elements and their aesthetics provides an additional advantage to achieving an identity ^[19]. The factors affecting the design of the architectural facade play a prominent role in shaping the visual facade, which reflects the visual identity of the urban structure. In general, a building represents a cultural phenomenon whose form is affected by the local climate, building materials and techniques, and social, cultural, and economic aspects. All of these aspects play a major role in giving the facade its architectural character and identity ^[8]. Cultural symbols are one of the most important means of conveying identity and are represented in cultural elements such as clothing, the arts, and architecture. Therefore, the relations between society and environment are embodied in the symbolic function of architecture, which is laden with meanings, because identity formation is a continuous process that arises from the diversity of experiences and attitudes of

community members ^[19]. The house is designed according to the needs and requirements of its occupants, and its physical form is affected by many cultural factors and values. It contains many meanings that come from social relationships, social interactions, self-identity, privacy, continuity, and others ^[25]. The interactions between identity and building take place through form. Each architectural style has a special identity expressed through the formation of the building's facades, such as arrangement, formation, proportions, aesthetics, technology, and materials ^[20].

Factors effecting the Identity of Architecture

Rapaport emphasizes that humans resort to building defensive architectural systems to preserve their identities and achieve continuity for civilization ^[26]. Customs and traditions represent social regulations and the law, which takes its authority in the form of symbols and legislation. They also represent behavioral patterns that are passed down through generations, since these customs provide regulations for society, capable of setting punishments for those who commit social mistakes ^[27]. Identity plays a pivotal role in shaping the architectural features of each region. It represents a basic measure for determining the extent of success achieved by the urban fabric and urban structure. It is achieved through certain levels: individual sensory identity level, collective sensory identity level, individual moral identity level, and collective moral identity level ^[18]. Some studies have identified the factors constituting architectural identity and classified them under three sections: identity terms, architectural identity, and the comparative study of contemporary works of architecture. The results indicate that there are seven factors, including spatial organization, temporal organization, semantic organization, general design principles, the shape of the building, building materials, and the relationship with the context, which are effective factors in creating the architecture identity ^[9]. Some studies pointed to the factors that constitute urban identity, which are urban features, historical and cultural values, social structure, geography, culture, local traditions, lifestyle, terrain, climate, location, transportation lines, economic structure, and other factors ^[23]. The factors that influenced the identity of contemporary architecture can be divided into cultural factors, social factors, economic factors, and educational factors ^[24]. Place identity is the product of a collective memory or set of individuals' memories ^[20]. The truth is that architectural identity is linked to cultural beliefs and social values. In addition, social factors and meanings greatly influence the design of the built environment ^[25]. One of the social factors that influence identity is the idea of privacy as a characteristic of the built environment

as a means of protection from environmental conditions. These needs have produced a place that provides both security and privacy to communities. Privacy is not only a human need, but it also has ties to the issue of architectural identity [19]. The physical and social factors that cause loss of identity in the urban planning of cities include the physical structure of the city, roads in the urban environment, squares, social spatial templates, social structure, and social and cultural factors [23]. In addition, religious beliefs and teachings are considered the most important factors influencing any society. Religion has existed in many forms since the dawn of history, and societies have been practicing many rituals for a long time. These rituals are considered the laws of society, and their legislation is essential in organizing society's life and ways of living. Islam is clear in terms of its teachings regarding social relations and encourages social interaction, respect for individual privacy, family affairs, and women's privacy [27]. A study indicated that the influence of religion is very important and relevant to fulfilling the needs of privacy, family interaction, space configuration, and orientation [5]. Urban identity elements are divided into two categories: social identity elements and environmental identity elements. Environmental identity was classified as characteristics of the natural environment and features of the artificial environment. Accordingly, there are three components of urban identity: the characteristics of the natural environment, the features of the artificial environment, and the features of the social and cultural environment [3]. Environmental factors play a major role in shaping architectural identity, and climate is one of the important factors that plays a main role in creating shelter [27]. Another researcher adds the adoption of traditional ideas in terms of guidance for buildings with regard to climate. This means that the climatic factor has a significant impact on building architectural identity [4]. The five aspects of place identity in the urban context are sustainability with one's past, attachment, familiarity, commitment, and external evaluation [22].

Traditional Architecture in Dhamar City

Dhamar is one of the cities of the Republic of Yemen, which is located in a central region on the western highlands. It is south of the capital, Sana'a, and approximately 100 km away (Figure 1). Its climate is affected by its location within the tropical zone in the highland region, and the main rainy season is in the summer [28]. It is one of the Yemeni and Arab cities that has preserved its planning and characteristics for a long period. It has remained steadfast, preserving its ancient architectural style, which has an ancient history dating back to B.C., and still maintaining its original and distinctive features [29]. One researcher believes

that al-Houta neighborhood is the first nucleus of the city (Figure 2), as evidenced by the close proximity of its buildings and the narrowness of its streets and corridors [28].

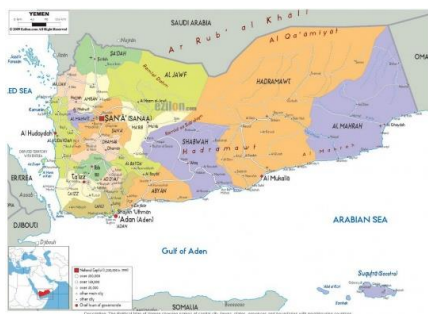


Figure 1: A Map of Yemen Shows the Location of Dhamar (Internet)
Figure 2: Old City of Dhamar (Google Earth)

The buildings of the historic city are distinguished by their multiple floors, ranging from two to four floors, which were constructed of stone, clay, and brick (Figure 3). The construction style and method of implementing the architectural elements are compatible with the climatic factors. Religious, social, and functional factors played a role in the presence of architectural elements such as the Mashrabiyyat and Qamariyyat [30]. The city contains traditional houses that are distinguished from an architectural and historical perspective. The lower floors are built of black stones and are mostly devoid of windows and openings. On the upper floors, the walls are built from brick and mud, and the windows and openings are large in area and numerous in number. Most of the houses in the historic city contain an open courtyard on their last floors, designated for women's use, providing privacy and blocking the view, and it is rarely found in the architecture of Sana'a and elsewhere [29]. The city has grown and expanded after the 1962 revolution, as a result of political stability and more growth than before in all standards, whether with filling in spaces or horizontal expansion in all directions, in addition to its horizontal expansion on agricultural land. After the establishment of Yemeni unity in 1990 A.D., the urban growth of the city increased and expanded more than before, as a result of many factors, perhaps the most important of which is the high rates of immigration from within or outside the governorate. In recent times, a number of urban problems have emerged that have negatively affected the architectural identity of the city, as represented by the encroachment of urban growth and the spread of informal neighborhoods and

housing that were not subject to planning and that were built without a permit and outside the scope of urban planning. In addition, these residences and neighborhoods do not follow an architectural style linked to the history and heritage of the region and achieve its architectural identity ^[31].



Figure 3: Multi-Story House in the Old City (Authors)



Figure 4: The Market - Sawq Alrboa (Authors)



Figure 5: The Great Mosque in al-Houta Neighborhood (Authors)

Discussion and Data Analysis

The criteria and factors through which the range of achieving architectural identity can be determined were identified as a framework for achieving identity. This framework consists of a set of basic standards consisting of social factors, religious factors, environmental factors, and cultural factors.

Social Factors

One of the most important social factors is privacy, as it is strongly linked to the issue of identity because one of its main functions is to serve the individual's self-identity by establishing boundaries to regulate interaction with others and by establishing, regulating, and controlling personal boundaries. Another factor is security and safety, which are closely linked to the basic use of housing as protection against the impersonal, external dangers of social life. The factors affecting this aspect are related to the presence of safety in the urban fabric as well as achieving defensive and security goals in urban planning, through roads and squares, and in the designs of architectural facades and their elements. Among the social factors affecting identity are issues of belonging, familiarity, and social relations between members of society. Belonging strengthens human interaction with the place and the sense of ownership and affiliation to the region between the individual and the surrounding social and urban environment. Criteria include the interaction between space and society and the relationship between place and society. Among the factors are social customs, which are defined as all the

patterns that a person gets used to that are repeated, and these patterns are transmitted from one generation to another. The influence of social customs is greater in the cultural context of the group because it is a phenomenon with a general collective approach that is practiced through the collective interaction of society. Criteria include the extent of the space's response to social traditions, the characteristics of squares and their role as a place for meeting, gathering, and celebration, and the relationship between urban planning, customs, and social events.

Religious Factors

Sources of Islamic legislation, such as the Qur'an, have a tangible impact on urban and architectural aspects. The teachings have authority and dominance in evaluating ways of living and social customs. This factor clearly affects the spatial distribution and relationships between spaces, as well as the formation of facades and the composition of aesthetic values and architectural details. The adoption of Islamic principles in construction and rooting them in the values of societies until they became the rule of general custom and their application became a general behavior led to the end of the spread of the Islamic character in the urban formations of the city. These formations were an embodiment of the principles and standards that constitute the spirit of the place, including the meanings and contents. Among the religious factors affecting architectural identity are topics related to the idea of the constant and the variable. These are the factors related to the rulings and laws, as well as the physical configurations of urbanization. They include planning standards that combine human rights with God's rights and a balance between matter and spirit, the urban composition of mosques in neighborhoods, and the relationship between place and space. There are factors related to the issue of religious dominance and authority, which are factors related to urban planning and urban structure and the dominance of the provisions of Islamic law on the design of spaces and planning elements. It is achieved through the design of the mosque and its impact on the urban fabric, as well as the impact of minarets and domes on the urban facade. There are other factors related to the idea of considering the principles of the Islamic religion as a reference and source when designing the functional spaces of the building, shaping the facade and its elements in accordance with those principles and provisions, and feeling the spirit of the faith in all urban aspects.

Environmental Factors

There is no doubt that environmental factors play an important role in shaping identity and have a major impact on shaping the place, its function, and its meanings. Environmental aspects include location, local climate, structural materials, orientation, decoration principles, and openings. The location and the site are treated with respect; the design should be compatible with the topography and other resources; and a positive interaction takes place between the place, the natural environment, and the built elements. The environmental response to climate change is a key factor in shaping architectural identity. The design of the building spaces should be appropriate to the climate; appropriate shade should be provided on the roads and squares; the urban form should be compatible with the local climatic conditions; and the architectural form of the building should be compatible with the local climatic conditions. On the other hand, building materials play an important role in responding to climatic conditions. This is achieved by using environmentally friendly building materials and local building techniques, and the various parts of the building facade are interconnected in a unified pattern that suits the local environment. In addition, the orientation of the building facades should be compatible with the local climate, and the buildings should be aligned with the streets in accordance with the orientation and climate. Likewise, the placement and dimensions of the mass should be compatible with the climate, and the urban landscape should have orientation solutions suiting the local climate. Moreover, openings should be made from local building materials, and all types of openings belong to ancient Yemeni architectural origins. The use of small openings in private spaces, the use of Mashrabiya for privacy, and the locations of openings are achieved for function and beauty.

Cultural Factors

There are a group of cultural factors that affect the place's identity, including cultural continuity, everything associated with the architectural heritage throughout the past and present, and all the values derived from its physical heritage. Among them are the traditions, which are general rules and models shared between members of society. These rules derive their strength from society itself and differ from one society to another and from one period to another. They include the harmony of streets and squares with cultural traditions, as well as the compatibility of building spaces and architectural elements with social traditions and occasions, and the place being compatible with the norms regulating urbanism. Cultural heritage plays a role in enhancing memory about the place,

thus achieving continuity and connection with the city's history. The urban shape should preserve its original heritage characteristics, and the urban content should restore the historical memory of the place, giving a sense of authenticity to its markets and streets. The local culture of the place has a role in shaping the architectural identity through individuals' connections with the place through interactions and activities with the place. It connects the heritage place with people emotionally through symbols and meanings, creating a sense of place and belonging to it. The more distinct the elements and features of the region, the more clear it is, and thus it is automatically reflected in the following generations by developing a sense of belonging to the place. When the community system is part of the fabric of the city, the residents' connection to the place is achieved through a relationship of affection as well as through the formation of neighborhoods based on tribal and ethnic affiliation.

Survey Results

The sample of the current study consisted of 50 architects who live in Dhamar city, including engineers working in the labor market, and architecture students at Tamar University who are studying in their fifth year. The questionnaire consists of two parts: the first is general information about the participants answering the questionnaire, including age, gender, type of housing, etc., and the second is the factors affecting the evaluation of architectural identity. They were developed in the form of 63 questions so that it is easy to evaluate them according to the level of measurement. After analyzing the first section of the questionnaire, which represents general information about the participants, it was found that everyone, without exception, was between 20 and 40 years old. The participants were distributed in terms of gender into 38 male participants and 12 female participants, with a ratio of 76% males and 24% females. Participants are distributed in terms of housing: 32% live in apartments, 4% live in villas, and 64% live in separate houses. The answer to the question asked about the participant's knowledge of urban heritage was that 40% of the participants had medium knowledge, and 60% of the participants had good knowledge. The participants were asked through a question to define identity in general, and the answer for most of the participants was generally close and went into defining it as a set of features or characteristics that distinguish one thing or person from others. Another question asked them to define architectural identity, and most of the answers were based on the definition that it is the set of features and characteristics that distinguish a building or group of buildings from others. On the other hand, participants were asked a question to make choices about which

architectural element forms the architectural identity. The answers were distributed among four participants who think it is in the urban fabric, four participants who think it is in the shape and form of the building, two participants who think it is in the functional spaces, two participants who think it is in the facades, and 38 participants who think it is in all of them. The participants were asked, through a question about the continuation of the architectural identity in the new neighborhoods of Dhamar city, to choose yes or no, and the question was whether the architectural identity in the city remains or not. The results were: 24 participants answered yes, and 26 participants answered no, meaning a percentage of 48% believe that the architectural identity of the city remains, while 52% believe that the city has lost its architectural identity. Therefore, the results confirm the research hypothesis that the modern neighborhoods of Dhamar city no longer achieve the identity of the place by more than 50%.

Analysis of the responses to the questionnaire

The questionnaire contained general and research-specific questions. It was distributed to 50 experts and specialists in the field of architecture. The questions dealt with the concepts of the research. The second section of the questionnaire is the important part of the study and consists of criteria and factors and their evaluation through a scale consisting of five points (1-5), where 1 is strongly disagree, 5 is strongly agree, and 3 is neutral, and the value has been distributed for each period. The questionnaire was prepared from the factors in the form of 63 questions (Table 1).

Table 1: The Factors Affecting on Architectural Identity in Dhamar City

Factors
1) The spatial and movement sequence between the public and private spaces.
2) High privacy between neighbors' dwellings.
3) Isolation between the guests and family in the spaces.
4) High control in the visual and audio relationship between home and neighbors.
5) Height of buildings and balconies in response to privacy.
6) The house has two entrances, one for women and one for men.
7) The urban form creates a sense of security and containment.
8) The roads are curving and not straight to produce a sense of security.
9) Lower floor without windows and openings.
10) The urban plan achieves security and defense purposes.

- 11) The urban structure of a neighborhood strengthens the neighboring relationship.
- 12) The space achieves social interaction and social communication.
- 13) There is a strong relationship between place and community.
- 14) The human scale is used in spaces.
- 15) The public space (Al-Dewan) responds to social habits.
- 16) The open spaces are a place for meeting, gathering, and celebrating.
- 17) The urban is compatible with social customs and social occasions.
- 18) Fixed principles for planning balance between matter and spirit.
- 19) There is a mosque in the center of every neighborhood.
- 20) Urban places hold constant religious symbols and meanings.
- 21) Architectural shapes have contents expressing religious principles and concepts.
- 22) The mosque dominates the urban fabric.
- 23) The minarets and domes dominate the urban façade.
- 24) Roads and streets orient directly to mosques.
- 25) The provisions of Islam dominate the planning of urban spaces and components.
- 26) Islamic principles are considered a reference in designing functional spaces.
- 27) The elements of the architectural facade are formed according to Islamic principles.
- 28) The sense of Islamic belief spirit in all urban aspects.
- 29) Respect the natural and cultural resources of the site.
- 30) The urban structure is compatible with the topography and other resources.
- 31) Positive interaction between the natural environment and built-up elements.
- 32) Building spaces are suitable for climate conditions.
- 33) Appropriate shadows are available on roads and square spaces.
- 34) The urban form is compatible with local climatic conditions.
- 35) The architectural form of buildings is compatible with local climatic conditions.
- 36) Used building materials are local and environmentally friendly.
- 37) The use of local building techniques has skill and experience.
- 38) All building materials used in the architectural facades are local.
- 39) The orientation of building facades corresponds with the local climate.
- 40) Buildings and streets are oriented to suit the local climate.
- 41) The long axis of the building blocks extends from east to west.
- 42) Urban fabric has solutions for orientation and fitting with the local climate.

- 43) All openings are made from local materials.
- 44) All types of openings and windows belong to ancient Yemeni architecture.
- 45) Small openings (Shwaqis) are used in private spaces.
- 46) The Mashrabiyyats are used for privacy.
- 47) The sizes and locations of the openings are designed to meet function and aesthetics.
- 48) The buildings correspond with the local cultural environment.
- 49) The place is associated with cultural symbols and meanings.
- 50) Urban form maintains cultural continuity.
- 51) Permanence and continuity between ancient and modern architecture.
- 52) The open spaces and streets are consistent with cultural traditions and habits.
- 53) The building spaces are suitable for social traditions and occasions.
- 54) The place is suitable for norms organized for urbanism.
- 55) The architectural elements are suitable for cultural heritage.
- 56) The city reflects the history of the Islamic region.
- 57) Urban form maintains its original heritage features.
- 58) Sense of originality in markets and streets.
- 59) Urban content returned historical memory of the place.
- 60) Continuing the formation principles between old and modern architecture.
- 61) The community system is set up within the fabric of the city.
- 62) Elements of modern building facades are inspired by elements of ancient buildings.
- 63) The neighborhoods were formed based on tribal and ethnic sectarian affiliations.

After analyzing the data contained in the questionnaires, the following was noted:

The most influential factors on the architectural identity of the city were the presence of a mosque in the center of every neighborhood, the responsiveness of Diwan space to social events, and the use of the human scale in designing architectural and urban spaces. In addition, the urban form gives a sense of security, containment, and good insulation between the spaces of guests and visitors and the spaces of the family. This gives an indication that the participants in the answers to the questionnaire strongly agreed that the above-mentioned factors are important in their impact on architectural identity, as well as that the architecture and construction of modern neighborhoods in the city of Dhamar still maintain their local identity. It was found that the majority of participants believe

that the most influential and most investigated factors in contemporary architecture are social criteria, with an average of 3.80, then religious criteria, with an average of 3.73, then environmental criteria, with an average of 3.52, and finally cultural criteria, with an average of 3.40 (Table 2). It turned out that the sub-criteria related to social interaction and social customs, which are classified as social criteria, received the largest approval value from the majority of participants at the level of their group and at the level of all groups. It was also found that the sub-criteria related to place culture and cultural continuity, which are classified as cultural criteria, as well as the security and safety sub-criteria, which are classified as social criteria, received the smallest approval value from the majority of participants at the level of all groups. In fact, the results are consistent with the question asked about the loss of identity in modern neighborhoods, and more than half of the participants answered that it has been lost. These factors are related to the idea of visual identity and the relationship between ancient architectural heritage and its impact on the visual identity of modern architecture. In other words, they are the factors that are related to the continuity of the traditional vocabulary in the facades and which are related to the visual image of the architecture.

Table 2: Descriptive Analysis of the Criteria and Sub-Criteria and Their Ranking

Factors affecting the Architectural Identity in Dhamar City	Criteria		Sub-Criteria	Mean	Ratio	Preference Order
	Social Criteria (3.80)	1)	Privacy Principles	3.81	76%	5
		2)	Safety and Security	3.28	66%	13
		3)	Social Interaction	4.05	81%	2
		4)	Customs and Habits	4.07	81%	1
	Religious Criteria (3.73)	5)	Fixed and Changed	3.89	78%	3
		6)	Authority and Dominance	3.76	75%	6
		7)	Design Reference	3.55	71%	10
	Environmental Criteria (3.53)	8)	Location and Site	3.40	68%	12
		9)	Local Climate	3.57	71%	9
		10)	Materials and Techniques	3.83	77%	4
		11)	Orientation	3.46	69%	11

	12) Openings and Windows	3.40	68%	12
Cultural Criteria (3.40)	13) Cultural Continuity	3.26	65%	14
	14) Traditions and Norms	3.59	72%	8
	15) History and Originality	3.70	74%	7
	16) Place Culture	3.07	61%	15

Conclusions and Recommendations

The current research attempts to address the issue of urban identity in Dhamar city. It concludes the following things:

- The creation of spatial spaces and urban and architectural formations in general is a reflection of lifestyles, beliefs, customs, and traditions that finally become the identity of the place. The sense of place is related to the intangible aspects of a place, in which feelings, thoughts, beliefs, and sensations are key aspects. Place is sensed through emotional feelings, values, and meanings, which are formed and stored within individual minds as a result of their awareness of social features, historical events, and context-based spatial characteristics.
- The ancient Dhamar city has an urban and architectural identity stemming from social and cultural traditions and is based on the use of local resources, building materials, and local techniques, as well as its compatibility with climatic conditions and the local environment, in addition to fulfilling functional, social, and artistic requirements. Therefore, the study reached a number of important criteria containing a number of factors that together constitute the concept of architectural identity. Through it, any Yemeni architectural environment can be evaluated, since the cultural identity of Yemen is almost identical throughout the country.
- Most architects participating believe that the architectural identity has begun to lose its continuity through the external image of architecture in the architectural facades and its architectural elements. Therefore, the culture of the place, in terms of the connection between the old and new linked to the continuity of the traditional elements, which are related to the visual image of the architecture, began to lose its physical and intellectual presence in modern architecture.
- The study concluded that social and religious criteria are the most evaluated because they are linked to daily social life, while cultural criteria were the least evaluated by the participants because they are related to the collective

level. Moreover, the modern dwellings have achieved identity in most aspects, especially those that have a relationship with the Islamic religion in the spatial divisions of the building and at the level of urban planning, deriving their values from the Islamic religion.

- The results of the study showed that modern neighborhood housing in the city achieved social factors such as degrees of privacy, spatial isolation, sequential movement in spaces, and functional spaces. This is an indication that the architecture of modern neighborhoods still maintains its local identity. On the other hand, the aspect that is beginning to be lost is the visual aspect of architecture associated with the continued use of heritage elements in a modern way in order to create urban and cultural connectivity and preserve the physical heritage.

References

1. Yasser, W.K. "The Architectural Identity of Arab and Islamic Cities", International Journal of Architecture (IJA), 4(2), pp. 1–10 (2018).
2. Naser, Z.D., and Mohammadi, M. "Comparison between Traditional and Modern Architectural Identity", American Journal of Engineering Research (AJER), 10(6), pp. 42-49 (2021).
3. Çınar, S. The Relationship between the Creative Community and Urban Identity: the Case of Urla, the Degree of Master of Science, Middle East Technical University (2023).
4. Asfour, K. Identity in the Arab Region. Architecture and Identity Sponsored by Volkswagen Stiftung and Berlin University of Technology (2004). Retrieved 04- September 2009, from <http://www.architecture-identity.de>.
5. Mahgoub, Y. Architecture and the Expression of Cultural Identity in Kuwait, the Journal of Architecture, 12(2), pp. 165-182 (2007).
6. Salama, A.M. Mediterranean Visual Messages: The Conundrum of Identity, ISMs, and Meaning in Contemporary Egyptian Architecture, Archnet-IJAR, International Journal of Architectural Research, 1(1), pp. 86-104 (2007).
7. Al-Naim, M. Identity in Transitional Context: Open-ended Local Architecture in Saudi Arabia, Archnet-IJAR, International Journal of Architectural Research, 2(2), pp. 125-146 (2008).
8. Baper, S., and Hassan, A. Factors Affecting the Continuity of Architectural Identity, American Transactions on Engineering and Applied Science, 1(3), pp. 227- 236 (2012).

9. Torabi, Z., and Brahman, S. "Effective Factors in Shaping the Identity of Architecture", Middle-East Journal of Scientific Research, 15 (1), pp. 106-113 (2013).
10. Belanche, D., Casaló, L., and Flavián, C. Understanding the cognitive, affective and evaluative components of social urban identity: Determinants, measurement, and practical consequences, Journal of Environmental Psychology, 50, pp. 138-153 (2017).
11. Othman, H. Architectural Identity Shaped by the Political System, Kurdistan Region since 1991 as a Case Study, J Archit Eng Tech, an open access journal, Vol. 7, Issue 1 (2018).
12. Boussaa, D. Urban Regeneration and the Search for Identity in Historic Cities, Sustainability, 10 (48), pp. 1-16 (2018).
13. Garg, K. Redefining Cultural Identity through Architecture, Journal of Emerging Technologies and Innovative Research (JETIR), Volume 7, Issue 7 (2020).
14. Abu Ghazala, A. The Concept of Visual Scope for Heritage Values and Vocabulary as an Introduction to Restoring Urban Identity in the Twenty-First Century. A Case Study of the Kingdom of Saudi Arabia, Architecture Research, 11(1): pp. 1-10 (2021).
15. Kumaraku, L., and Pula, D. Identity of Architecture: The Case of the National Library of Kosovo. Athens Journal of Architecture, 9(3), pp. 281-298 (2023).
16. El-Essawy, S., and Abulnour, A. Quantifying the City's Identity a Morphological Analysis of the Historic Rue Rosette, International Journal of Engineering Research and Technology (IJERT), 7(03), pp. 136-147 (2018).
17. Almakkas, A. The role of activity in shaping identity of place: The Case of the Lace Market, Nottingham, PhD, Nottingham Trent University (2020).
18. Al-Dahwi, S., Raouf, Z., and Tahir, B. The Traditional Vocabulary Changes and Realization of Identity Levels in Contemporary Architectural Products, Engineering Technology Journal, 30(2), pp. 24-45 (2012).
19. Al-Shwani, S. Influence of Modernity Versus Continuity of Architectural Identity on House Facade in Erbil City, Iraq, PhD, Universiti Sains Malaysia (2011).
20. Al-Aqbi, S., Al-Yousif, I., and Al-Nuaimi, S. Mechanisms of Forming Architectural Identity: Expert Perceptions of a Case Study in Iraq, ISVS e-journal, 10(12), pp. 565-582 (2023).

21. Surchi, Z., and Nafa, H. "Appraisal of Place Identity through Tangible Elements of Cultural Features in Erbil City", Civil Engineering and Architecture, 9 (7), pp. 2528-2541 (2021).
22. Ernawati, J. Dimensions Underlying Place Identity for Sustainable Urban Development. MATTER, International Journal of Science and Technology, 3(3), pp. 271-285 (2018).
23. Tasopoulou, A. Measuring urban identity. Comparative analysis of previous studies, Web of Conferences, 436, pp. 1-8 (2023).
24. Alansari, A. Architectural Heritage Preservation as a Tool for Sustaining the Architectural Identity, PhD, Ritsumeikan University (2018).
25. Al-Husban, Al-Husban, A., and Al-Betawi, Y. The Impact of the Cultural Beliefs on Forming and Designing Spatial Organizations, Spaces Hierarchy, and Privacy of Detached Houses and Apartments in Jordan, Space and Culture, 24(1), pp. 66 –82 (2018).
26. Rapoport, A. "House form and culture", Prentice- Hall, Englewood Cliffs: New Jersey, 10th (1969).
27. Toman, I., and Al-Ajmi, F. Privacy in Arabian Architecture: Past and Present Differential Understanding, Art and Design Review, 5, 258-276 (2017).
28. Al-Dholay, F. Environmental Effects of Urban Growth in Dhamar City, Study at Environmental Geography, Master's Thesis (Unpublished), University of Dhamar, Yemen, (2008).
29. Al-Shamiri, F. "Islamic Antiquities in Dhamar City", from the book of Dhamar via ages: Archeological, Historical, Cultural, and Geographical Readings, Daar of Tamar University for printing and publishing, First Edition, (2009).
30. Al-Dhamary, M. Items and architectural machinery executed on traditional house facades in Old Dhaman, Journal of the Jail of Human and Social Sciences, (43), pp. 77-92 (2018).
31. Al-Garafy, A. The city of Dhamar: Study in the geography of the cities, Master's Thesis (unpublished), Faculty of Arts, Tamar University, (2004).