

Cultural Imprints on Physical Forms: An Exploration of Architectural Heritage and Identity

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Abstract

This study investigates the cultural roots of architectural forms, situated within the broader research context of traditional architecture and urban morphology, and this study seeks to understand the confluence of social norms, environmental factors, and deep-seated cultural values that have historically influenced spatial and architectural designs. The study posits that these cultural elements are integral to the creation of physical forms and spaces that are not only functional but also embody the identity and heritage of a community. Utilizing a mixed-method approach architectural connotation, and cultural theory, the study reveals how architecture represents a culturally impacted response to climatic, cultural, and social conditions. This triangulation of methods ensures a well-rounded investigation into the tangible and intangible aspects of architectural heritage, providing a bridge between empirical data collection and theoretical exploration. The findings emphasize the importance of cultural legacy in architectural identity and urban design, by underlining the significance of these findings for the preservation of cultural identity in the face of globalization and modernization, emphasizing the need for culturally informed urban planning and design strategies. The significance of this study rests in the comprehensive analysis of the symbiotic relationship between culture and architecture, offering a nuanced understanding of the ways in which cultural heritage can and should influence contemporary architectural practices by providing useful insights for future research into the adaptability of traditional design to current challenges.

Keywords

Culture, Physical Form, Najd, Social, Traditional, Architecture, Saudi Arabia

1. Introduction

The interaction between culture and architecture influences the formation of cities, and traditional Najdi architecture will allow us to present an intriguing viewpoint on this connection. Thus, this study investigates how values, social norms, and environmental factors shaped the physical forms and spatial layout of Najd, a region with a rich historical and architectural legacy. This study examines Najdi communities and illustrates the complex relationship between cultural significance and architectural design, emphasizing the importance of cultural context in producing constructed environments.

Understanding culture as a force that not only influences architecture's aesthetics but also determines how urban forms are functionally and spatially arranged is an important component of this investigation. Traditional Najdi architecture, with features such as courtyard dwellings, resilient mud brick walls, and narrow pathways, evolved in response to the region's harsh desert climate, social traditions, and defensive needs. This study contends that the architectural form has cultural meaning rather than being arbitrary choices; it fulfills operational functions while also conveying symbolic importance.

Furthermore, this study looks beyond architecture to investigate the broader implications of cultural importance in an age of industrialization and globalization. This study critically examines the challenges and possibilities associated in conserving Najdi towns' cultural character while addressing contemporary requirements and using new technologies. The struggle between maintaining architecture and embracing innovation is a prominent issue that prompts reflection on the future of Najdi architecture in a rapidly changing world.

Finally, by evaluating the impacts on spatial and physical forms, we acquire a fuller knowledge of cultural identity and how it is expressed in architecture. This examination reflects on how built environments mirror the values, challenges, and aspirations of their inhabitants. By highlighting the relevance of context in architectural and urban planning, this article proposes for a more nuanced and tolerant approach to understanding and maintaining constructed heritage in Najd, both regionally and internationally.

2. Method

To investigate these topics, this study employs a mixed method that blends field research, architectural analysis, and theoretical frameworks from cultural anthropology and urban planning. This methodology does not provide nor target an in-depth understanding of architectural heritage, but it does contribute to the larger discussion of how culture influences urban and architectural forms. Through this viewpoint, this article seeks to provide insights into how cultural heritage can guide design methods relevant to specific contexts in architecture and urban planning.

This means that a multidimensional approach is used to comprehend the intricate relationship between culture and the formation of place, space, and form

(Miccoli et al., 2014). As a result, a mixed-methods approach combining interdisciplinary field research components is essential and foundational since it entails immersive observations and interactions of architectural heritage.

Architectural connotation is the study of design aspects, elements, and symbolic meanings. This part of the method allows for an assessment of how environmental challenges, material availability, and socio-cultural values are transmitted and influenced the growth of architectural forms from a cultural perspective.

The study uses theoretical frameworks from cultural anthropology to investigate how architecture expresses societal conventions, beliefs, and values. This includes doing a literature review of past studies, and interpreting field data using cultural theories (Oosten, 1995; Zuber-Skerritt et al., 2015). It aids in comprehending the symbolic implications of architectural elements and how social processes manifest in the built world.

Furthermore, urban planning theories are used to situate architectural heritage within the larger contexts of city development and regional planning. The methodology examines how cities have adapted to socio-economic changes, urbanization pressures, and modernization tendencies. Combining several methods provides a holistic understanding of architectural heritage. This method not only provides light on the unique qualities of heritage, but it also contributes to the greater discussion of how cultural values influence urban and architectural forms. The study's findings are designed to inform culturally sensitive and appropriate design strategies for architecture and urban planning in similar areas. This methodology emphasizes the necessity of considering the cultural dimension in architectural and urban design to guarantee that new projects are consistent with the region's historical, social, and environmental context.

Strength Score Approach

The strength score approach used is a qualitative assessment that evaluates the impact, certainty, and relevance of each finding and implication produced from the study. This strategy takes a holistic approach, taking into account the depth of evidence, the possibility for practical application, and the expected impact on the fields of architecture and urban planning (Constant et al., 2008). Therefore, strength score is derived by certain evaluation criteria, as follow:

- **Evidence and Empirical Support:** The degree to which a finding or inference is supported by credible research, case studies, and empirical data. Higher ratings were given to aspects that were well-supported by evidence, indicating significant validity in their conclusions.
- **Practical Application:** The practicality and possibility for implementing the concepts in real-world circumstances. Higher marks were given to findings and implications that have clear application paths and provide concrete benefits to architectural and urban design practices.
- **Innovation and Forward Thinking:** The degree to which the ideas challenge

current thinking and practice in the field. Concepts that bring novel methods or solutions to existing problems received better scores, indicating their ability to generate development and transformation.

- **Cultural and Environmental influence:** The projected influence on cultural heritage preservation and sustainability. Sub-categories that address crucial topics such as sustainability in traditional processes or incorporating cultural values into modern designs received higher rankings.

By applying these criteria, the strength scores offer a nuanced understanding of each idea's significance, guiding researchers, practitioners, and policymakers in prioritizing areas of focus and action in the preservation and evolution of architectural and urban spaces. These strength scores provide a quantitative measure that can be used to compare and evaluate different ideas, allowing for informed decision-making and resource allocation. This approach helps ensure that limited resources are directed towards the most impactful and promising initiatives, ultimately leading to more effective and sustainable architectural and urban development.

Overall, the strength score system is an effective tool for improving the quality and relevance of efforts in architecture, urban planning, and academic research. By carefully assessing the significance of diverse results and consequences, it assists stakeholders across these sectors in navigating the challenges of combining cultural heritage with modernity in the built environment (Table 1).

Table 1. Structured framework for evaluating research outcomes.

Goal/Objective	Framework
Prioritizing Research and Development Efforts	<ul style="list-style-type: none"> - Architects and Designers: Informed design decisions balancing aesthetic, cultural, and environmental considerations. - Urbanists: Design cities respecting historical context while meeting contemporary needs.
Enhancing Decision-Making Processes	<ul style="list-style-type: none"> - Architects, Designers, and Urbanists: Gain insights into effective practices for informed project development and implementation.
Facilitating Interdisciplinary Collaboration	<ul style="list-style-type: none"> - Stakeholders: Encourages collaboration among diverse professionals to address complex design and planning challenges.
Benchmarking for Academic and Practical Applications	<ul style="list-style-type: none"> - Academics: Guides scholarly investigations towards impactful research areas. - Practitioners: Insights into applying cutting-edge research in practical scenarios.
Guiding Policy and Regulatory Frameworks	<ul style="list-style-type: none"> - Policy Makers: Support in developing policies that balance preservation of cultural identity with modernization and growth.

3. Cultural Imprints

The concept of “culture” encompasses multidisciplinary fields and has different

interpretations. To understand its meaning researchers have identified definitions of culture, which are always influenced by external factors (Williams, 1976). It is critical to understand the scope and impact of culture in this research. Thus, three aspects the study addresses that are interrelated to culture. Firstly, it explores the nature of cultural definitions and how this term is described. Secondly it examines how culture serves as a force that shapes individuals' creation and perception of their built environment. Lastly, it investigates how such ideas contribute to achieving the study aims.

In the quest for comprehending the meaning of culture, it is crucial to delve into interpretations found in historical and contemporary texts. For instance, Kroeber and Kluckhohns influential collection in 1952 evaluated definitions and views of culture, throughout history (Kroeber & Kluckhohn, 1952). The goal is not to pass judgment or condemn these views, but rather to consider how the concept of culture has progressed throughout time.

This assisted in investigating the progress of the meaning of this expression into shared conceptions that multiple researchers shared and agreed on. In Lentricchia and McLaughlin book titled "Critical terms for literary study" they define culture as an entity encompassing morals, knowledge, art, law, custom, belief and any other skills and lifestyles acquired by individuals as members of society (Lentricchia & McLaughlin, 2010). Thus, culture is neither arbitrary nor a conscious quest of destiny. Rather it is an illustration of a social progression termed "exchange" (Daniel & Peck, 2022). According to Andrew Milner's description, a society's culture is made up of all of its common beliefs, conditioned reactions, and behavioral patterns that have been developed through shared experiences (Milner, 2005).

The term "culture" to Margaret Mead encompasses the collection of traditional habits that have evolved over time within humanity and are gradually learned by each subsequent generation that eventually become a behavioral pattern. Mead acknowledges both the scope of culture and the necessity for specific delineation, in its study (Mead et al., 2000).

Hence culture refers to the collection of learned behaviors that define a particular group of individuals. Additionally, it is important to note that the term "culture" can be somewhat vague encompassing behaviors exhibited by a society or group of societies as well as those associated with a specific race, region or time period (Matsumoto, 2007). Clifford Geertz expressed the idea that culture and men are interdependent; without one the other cannot exist (Geertz, 2008). In this context culture represents the way of life or lifestyle acquired through socialization within a community. It refers to the systematic mental processes, feelings, and behaviors exhibited among members of a specific civilization or community section. These shared human behaviors serve as patterns for daily life in numerous elements of social interaction (Coplien, 2004).

The concept of "culture" appears to encompass the aspects that define our humanity. It is widely accepted that culture serves as the differentiating factor

among individuals as being the same as someone implies being distinct, from others (Altman & Chemers, 1984; Hatch & Schultz, 2002). In this context culture encompasses both intangible elements that signify unity, coherence, stability and the structure of life. Culture also includes the process of learning that is connected to social groups and includes a broad range of phenomena, such as community norms, values, and significant behavioral patterns.

The emphasis on culture frequently leads to the formation of a perspective (Rapoport, 1980, 1987). People possess unique qualities and culture serves as a regulating mechanism that governs the aspects of society ensuring that each individual's individuality is harmoniously monitored within the community (Rapoport, 1980). While individuals may vary within a culture, they also share fundamental characteristics that are advocated by the culture itself. Here, "worldview" refers to a collection of people who share common meanings that have been indirectly passed down through time, along with a defined set of tools that include norms, values, beliefs, and behavioral patterns.

3.1. The Role of Culture in Shaping Spatial and Physical Form

The consensus is that culture plays a role in shaping one's worldview. The primary focus is on understanding how culture impacts the development of spaces. Many experts and scholars argue that there is a link between culture, tangible structures and their environment (including location and its components). While they may have varying perspectives, they all share a belief; acknowledging culture is essential, in comprehending the local architectural landscape (Duncan, 1981; Macdonald, 2011; Oakley, 2014; Oliver, 1997; Tosun, 2019).

The purpose of this discussion is to explore in what way culture plays a role, in shaping physical and spatial structures. Taking Najd region as an example it allows us to reconsider in what way culture impacted the evolution of architectural landscape. Additionally, it reveals how the community integrated their viewpoints to design appropriate built environments that align with their lifestyle.

In this context, Geertz emphasized the importance of comprehending roles and argued against viewing culture as something innate or inherent, from birth. He emphasizes that culture is essentially what defines our humanity and distinguishes us from entities. Geertz argues that culture should be perceived not merely as a collection of behavioral patterns but rather as a system of control mechanisms (Geertz, 2008). David Tomasello supports this viewpoint by asserting that culture serves as humanity's adaptive mechanism and that non-verbal communication is inseparable from the cultural context in which it occurs (Tomasello, 1999). From this perspective we can understand culture as holding influence over the arrangement of buildings which eventually shaping human identity. This implies that comprehending the Najdi architectural landscape in Saudi Arabia requires an understanding of the cultural context within which local communities operate.

Robert Brown and Daniel Maudlin argue that vernacular architecture is intentionally crafted to meet the needs of a community while reflecting the values, economies and lifestyles unique to their origins. They describe this type of architecture as a reflection of society's accumulated knowledge and practices embodying the established standards, for their constructed surroundings (Brown & Maudlin, 2012). Thus, culture encompasses implicit behavior patterns acquired and transmitted through symbols, which form the unique accomplishments of human groups including their manifestation in artifacts. Rapoport supports this idea by stating that a culture's distinctiveness lies in its choices—solutions to specific needs (Rapoport, 2007). Therefore, it is crucial for this research to analyze Najdi built environments thoroughly to uncover their hidden meanings. This analysis will reveal the processes that shaped these physical forms over time.

Cultural sensitivity in architecture and urban design involves acknowledging and valuing the cultural contexts and meanings embedded in architectural styles and urban forms. Cultural sensitivity in architecture and urban design is recognizing and appreciating the cultural contexts and meanings ingrained in architectural styles and urban forms. This involves recognizing the numerous ways in which Najdi architecture reflects the region's social conventions, environmental adaptations, and cultural activities (Figure 1). By incorporating cultural sensitivity into the planning process, urban designers and architects may ensure that new developments respect and replicate Najdi architecture's traditional values and aesthetic principles, retaining a sense of continuity and identity.



Figure 1. The skyline of At-Turaif historical district urban form. Source: Author.

Culture influences and solidifies architectural identity. John Archea emphasizes that behavioral characteristics are vital, in creating an identity. He argues that the concept of identity goes beyond labeling and involves individuals expressing their interpersonal and structural position as well as their circumstances (Archea, 2016). This process and expression play a role in shaping how people perceive identity among various human needs. Rapoport shares this viewpoint highlighting the importance of necessities in shaping the characteris-

tics of any given culture. The researcher believes that individuals typically develop their identity within a comprehensive framework that directs and monitors the built environment.

Therefore, culture can be defined as a collection of knowledge shared by a specific community. It serves as a framework that guides individuals in identifying what suits their tastes and which visual representations and identities they connect with. Alberto Melucci further delves into this concept by discussing how identity is shaped through processes emphasizing the cultural elements and personal meanings that individuals attribute to themselves (Melucci, 2013).

In terms of spatial and architectural design, incorporating Najdi architectural characteristics into modern projects necessitates a careful balance of innovation and tradition. This can include adapting traditional materials and techniques for contemporary use, designing spaces that reflect Najdi society's communal and family-oriented values, and incorporating Najdi architecture features such as courtyards, high walls, and intricate decorative motifs (Figure 2). By doing so, architects and urban planners may build spaces that are not just practical and sustainable, but also profoundly rooted in the region's cultural legacy.



Figure 2. Typical traditional Najdi architecture characteristics. Source: Author.

Thus, culture, in essence embodies the growth of a society over an extended period. It is not something that can be instantly acquired or obtained by a community. Rather accumulates gradually over time. From this perspective culture serves as a way for individuals to express their identity through both characteristics that are evident in their physical manifestations (Giles-Corti et al., 2016; Habraken, 2000; Proshansky et al., 2014). Rapoport for example, discusses the concept of “dimension” and how it influences the design of houses. He identifies five dynamics that contribute to the creation of a house. The first dynamic is needs, followed by family structure as a second dynamic, which plays a significant role in shaping the design of a home. The third dynamic considers the women role and needs of privacy, which impacts the form of houses. Additionally varying levels of privacy required across cultures as noted by Rapoport serve as the fourth dynamic influencing house forms. The fifth dynamic focuses on interactions, including customs, traditions, religious values, and social behaviors present, in all cultures (Rapoport, 1969).

Furthermore, Amos Rapoport proposed a system to explain the activities involved in dismantling and their interconnectedness by categorizing the creation of the environment into four operational elements. Space has an impact as it dictates how distances are perceived and is essential for understanding, evaluating and contrasting various places. Symbols like materials, signs, colors, shapes, etc. frequently communicate messages. Communication, mirrors and shapes how spaces are arranged and how messages are conveyed. Cultural settings can influence the organization of communication between genders. Lastly time is considered as the element whereby the frequency of events within a given time-frame and their distribution throughout time play a significant role. Different activities taking place during day and night reference this element (Rapoport, 1980).

In this manner Rapoport not utilizes cultural impact to comprehend architectural forms but also considers other factors, at play. He also noticed how social structure, space, location, physical appearance, traditions and religious values influenced the creation of house designs. While culture played a role in defining the form of houses individuals often express their unique perspectives by incorporating “fixed elements” and “semi fixed elements” that are commonly accepted within a culture. These elements typically shape the appearance of houses and reflect the socio-cultural influences through distinct spatial and physical characteristics.

Similar to this, the urban morphology of Najdi towns, which stands out for its compactness, interconnectivity, and hierarchical spatial organization, offers crucial lessons for contemporary urban design (Alnaim, 2020). These characteristics of Najdi towns have proven to be effective in promoting social interaction and creating a sense of community among residents. Additionally, the compact layout and efficient use of space in Najdi towns can serve as a model for sustainable urban development, minimizing the need for excessive land consumption and

promoting walkability (Figure 3). Emphasizing pedestrian-friendly surroundings, mixed-use buildings, and communal spaces can help to foster a sense of community and belonging that is consistent with the traditional Najdi way of life.



Figure 3. The urban fabric of At-Turaif historical district. Source: DGDA.

Different styles of architecture can be used to identify ethnic groups. However, these styles serve not as identifiers but also as a means of communication expressing notions of wealth, construction ability, security and privacy. This expression of identity corresponds to Freud's concept of identification which implies the process by which individuals associate objects with their life stages according to their way of viewing the world. Freud suggests that identification can create a link with an object and serve as a replacement for an individual personality, by using the object as an expression of one character. In this scenario individuals often assign significance to items and objects to showcase their self-image, preferences and identity.

Understanding needs is crucial in defining cultural characteristics that influence how built environment is designed to meet individual's needs. This research recognizes the significance of needs in shaping culture and its impact, on the creation of appropriate spatial environments. Therefore, the significance associated with architectural design highlighting how it reflects people's lifestyles and identities, which leads to architecture being like clothing for society, where it should be comforting and meaningful just as we dress ourselves up to express ourselves (Kistova & Tamarovskaya, 2015). Going further John Habraken suggests that people commonly utilize objects as tools to create shared meanings. He explains how the presence of a form binds individuals together and defines their social circles; what is said about it merely reveals the relationship between people and that form along with their connections through it (Habraken, 2008). From this perspective, physical forms can be seen as a means of embodying a way of living. Therefore, forms are vital for communicating cultural messages. This knowledge has helped us investigate how communities, in Najd have considered their surroundings to reflect their shared and personal requirements.

Hans Mol delves into the influence of culture on the built form, at various

stages of intensity. He suggested three stages to comprehend culture classifying them as beliefs, cultural norms and social norms. Mol stated that each set of values holds a degree of influence that affects how they shape the surrounding physical environment (Mol, 1978). This suggests that various mechanisms driven by values collectively contribute to the creation of built structures. For example, religious beliefs often hold influence in societies and evolve gradually whereas social norms can adjust more quickly in response to political and economic changes. On the other hand, cultural values typically remain steadfast but have the ability to adjust to new situations. As environments change and technologies advance the collective knowledge shared among individuals within a culture enables them to create and redefine new concepts and interpretations, within their built environment.

The varying strengths of forces and mechanisms significantly influence the formation of the built setting. This indicates that shared rules and norms in Najdi architecture possesses distinct strengths and fulfill different roles in shaping architectural structures. Thus, the built environments were shaped by a combination of cultural and social customs (known as *Urf*). To understand this process, it is important to recognize and define the shared rules and norms that influenced each other. By determining which have resisted to change, it is possible to appreciate how they control and impact other forms in order to support their functionality. This hierarchical approach helps us analyze the built environment of Najd by recognizing the strength of each core form and how it affects specific architectural structures.

Basim Hakim further delves into this idea by exploring how “*Urf*” influences the design of architecture. He explains that *Urf* encompasses traditions rooted in principles encompassing accepted behaviors and practices within a specific governing framework based on local knowledge. Hakim suggests that many Islamic urban areas share features due to their adherence to *Urf* customs prevalent among Islamic societies. He concludes that *Urf* serves as a “guiding principle” that shape behavior practices which leads to both enhancing the shared and unique attributes, in each built setting (Hakim, 1994).

Hakim’s grasp of *Urf* and its influence on architectural designs is evident by how he managed to describe and justify certain urban form formations in the traditional built environment. The application process of *Urf* in conjunction with factors such as the environment, indigenous knowledge and construction methods has resulted in a variety of architectural styles across various regions within the Islamic region (see **Figure 4**).

Rapoport supports this argument by suggesting that continuity at some level is crucial, for the survival of any group. He asserts that every culture possesses a level of continuity that shapes individual identity and serves as a means through which members express their collective identity. Thus, longevity is one of the factors in maintaining group identity to remain distinct and identifiable to both self and others (Rapoport, 2016b). This idea aligns with Mols’ argument about the varying strengths of values in shaping the built form. Mols’ “values levels”

theory seeks to explain how culture changes over time and influences society's way of life, even in minor ways (Mol, 1978). Rapoport suggests that by understanding influence we can gain insights into specific changes that occur within a certain timeframe (Rapoport, 2016a). Both perspectives are crucial for comprehending the process of developing tangible expressions. As physical and spatial structures become entwined with people's daily lives within traditional built environments, culture ultimately plays a part in creating meaningful structures.



Figure 4. Examples of Najdi traditional elements developed to overcome *Urf* concept. Source: Author.

Viewing Najdi architecture through the lenses of urban morphology, cultural sensitivity, and spatial and architectural designs not only enriches the appreciation of its cultural significance but also provides a comprehensive framework for integrating these traditional forms into the contemporary urban landscape. This multidisciplinary approach ensures that as Saudi Arabia navigates the challenges of modernization and globalization, it does so in a way that honors its heritage, promotes cultural continuity, and fosters a built environment that is sustainable, meaningful, and reflective of the collective identity of its people.

This balanced fusion of heritage and innovation is critical for producing urban places that are not only functional but also rich in cultural value, ensuring that Najd's architectural legacy thrives and informs Saudi Arabia's expanding urban narrative. As a result, the concept of architecture arose from the links and interactions between spatial and physical structures shaped by cultural values. It is critical to understand how individuals and groups constructed environment have interacted with forms and found ways to communicate their collective beliefs and meaning through them.

3.2. Physical Form as a Cultural Manifestation

The physical form serves as a profound medium through which cultural identity, heritage, and collective ethos are not only expressed but also perpetuated. This is most apparent in architectural traditions that have been shaped by both environmental constraints and the social fabric of a place. Saudi Arabia's distinctive Najdi architecture is one example of such a cultural manifestation. Najdi architecture, with its mud-brick constructions, towering walls, and enclosed cour-

tyards, is more than just a response to the harsh desert climate; it represents a way of life (Figure 5).



Figure 5. Aerial view of At-Turaif historical district in Diriyah, Saudi Arabia. Source: DGDA.

From this perspective, architecture is more than just relics of a former past; it is an active accumulation of cultural memory, reflecting the community's adaptation to the physical environment (Gharib, 2017). As a result, attempting to preserve architectural legacy involves more than just keeping the appearance of the past; it additionally involves honoring the narrative and the values embedded within it. As cities grow and urban planning advances, there is fundamental value in incorporating heritage threads into the fabric of modern life, ensuring that a place's cultural identity is not lost in the process (Eladli, 1999).

Architecture can be examined via a phenomenological lens, which indicates that our basic existence is inseparably linked to the places we live in. Najd's architectural forms, for example, are more than just structures; they are tangible expressions of the region's cultural and socioeconomic values, focusing on privacy, family, and community life. The intricately woven urban fabric of Najdi towns forms a rich cultural tapestry, with individual homes, marketplaces, and mosques defining the region's communal ethos. This sense of common identity is what distinguishes Najd, providing a cultural footprint that is consistent with the people's shared history and beliefs.

The physical forms of Najdi architecture consequently function as a storytelling medium, reflecting the region's people's history and relationship with the land. These forms have left a cultural imprint, an architectural language that expresses the region's heritage and identity. Understanding Najdi architecture through this cultural perspective requires a rethinking of heritage protection and urban development techniques. It highlights the necessity for a strategy that is culturally educated and sensitive, one that respects the fundamental significance of traditional architectural forms in portraying the essence of a place. It is not adequate to copy forms; the difficulty is to reinterpret and integrate them in a way that reflects their original cultural intent.

The evolution of architectural heritage must thus be a thoughtful process that recognizes the cultural relevance of the region's architectural legacy. As modernization introduces new materials and technologies, there is a potential to merge tradition with innovation, creating a contemporary architectural language that respects and revitalizes the cultural essence of Najdi forms.

In essence, the physical form is a living cultural document that must be carefully interpreted and integrated into today's constructed environment. It is a legacy that necessitates not only preservation but also active involvement with the present and future, ensuring that cultural manifestations continue to influence and enhance the ongoing story of the region and its people.

4. Discussion: The Role of Culture in the Evolution of Spatial and Physical Form

Although each region of Arabian countries maintains its own unique social and physical characteristics, this uniqueness persists even while sharing an equal foundation of Islamic cultural values (Nurullah, 2008). Despite Saudi Arabia's urban development, Islamic cultural values—which are regarded as essential components of daily existence—have remained constant as tradition and values are inextricably linked (Clarke & George, 2005; Mortada, 2003; Prima, 2021). Given this establishment of religious values and their natural resistance to change while being adaptable to new circumstances it raises the question of how groups in Saudi Arabia as a whole and specifically in Najd respond to social changes.

When considering the future of Najdi architecture and, by extension, Saudi Arabia's broader urban landscape, it is clear that the physical form should act as a link between the past and the present, between the heritage that has shaped the region and the innovations that propel it forward (Figure 6). By enabling Najdi architectural ideas, for example, to influence urban planning and design, Saudi Arabia may keep its cultural identity lively and intact. As a result, architecture will no longer simply serve as a backdrop to daily life but will also be an active player in the cultural narrative, echoing history's rich tapestry while supporting current society's dynamic rhythm.

From this perspective exploring how designers are familiar of a culture relocate and embrace forms can shed light on the techniques of producing urban spaces and how these spaces create meaningful physical structures. The decision to relocate is influenced by the extent to which they find meaning in their surroundings under circumstances. Additionally, it can help identify objects that prompt related socio-cultural values although they may manifest in different ways. Ismail Serageldin illustrates this concept by stating that individuals have the capacity to establish meaningful connections while also seeking to protect and enhance existing ones (Serageldin, 1995). The notion of identification is essentially what humans create for their worldview as these established connections ensure continuity in their worldview when faced with changes; there is of-

ten resistance, from the group of people involved.



Figure 6. Examples of modern application inspired by Najdi architecture. Source: Author.

The process of interpreting holds significance than the final outcome when considering a group of people. This conversation suggests that culture plays a role in shaping our perspective of the world. While culture generally influences our meanings and behaviors values serve as the guiding principles and regulators of this influence. Individuals typically share values and consent to view the world through them. In some circumstances, culture can influence human behavior in specific areas, resulting in architectural interpretations that reflect their worldview through tangible objects. Here, culture is significant as it acts as a filter determining what is accepted or rejected by communities in their built surroundings. The built environment is influenced by this mechanism and serves as explicit manifestations of society's worldview. It's critical to keep in mind that a "worldview" is the collective set of values, customs, beliefs, and behavioral patterns that individuals in a group possess and have been indirectly passed down through time.

However, Saudi Arabia's rapid modernization presents an issue of incorporating new architectural forms while preserving old structures. The essence of architectural identity and rich cultural value, must inform current architectural discourse, ensuring that modernity and tradition coexist in a respectful and

meaningful synthesis.

5. Findings and Implication

The discussion regarding the relationship between cultural heritage, modernity, and possible future directions in architecture and urban planning acquires in a convoluted narrative, with each aspect interweaving to produce a unified understanding of how we could maintain cultural identity while embracing progress. At the heart of this discussion is the understanding of cultural heritage as a critical factor of architectural identity and urban forms. This tenet emphasizes the need of incorporating vernacular features into contemporary designs, advocating for the use of locally sourced materials, processes, and designs that promote environmental and cultural sustainability. The concept expands to emphasize the need of community participation in planning processes, ensuring that developments are not only culturally relevant but also generate a sense of ownership and continuity within the community.

Balancing tradition and modernity appear as a key difficulty, representing the need to adapt and repurpose historical buildings for new uses, protecting architectural legacy while satisfying modern needs. This balance is further refined by the desire for technological breakthroughs that are compatible with cultural values, implying a future in which technology complements rather than replaces traditional architectural styles.

Future research directions indicate to an examination of the impact of globalization on architectural identity, with the goal of finding ways to balance global influences with local traditions in order to produce unique, culturally rich urban landscapes (Table 2). Furthermore, there is a focus on researching the long-term viability of traditional architectural techniques, emphasizing the potential of age-old methods and materials to contribute to modern environmental sustainability goals.

Table 2. Qualitative assessment of the finding and implication produced from the study.

Topic	Sub-category topics	Strength Score
Cultural Heritage as a Determinant of Architectural Identity and Urban Forms	Integration of Vernacular Elements	8
	Community Participation in Planning Processes	6
Balancing Tradition with Modernity	Adaptive Reuse of Historic Structures	9
	Technological Innovations Aligned with Cultural Values	7
Future Research Directions	Impact of Globalization on Architectural Identity	8
	Sustainability in Traditional Architectural Practices	7

The purpose of the strength scores is to direct future research, policymaking, and design efforts toward the most pressing and consequential challenges. Stakeholders can better allocate resources to tackle the most critical challenges and opportunities by measuring the relevance and possible effect of different results. As a result, strength scores may inform architects and urban planners which ideas and methods are most well supported by research and could make the biggest benefit. All the way from the planning stages to the actual execution of a project, this can help direct the decisions that are made.

The scoring method promotes cross-disciplinary teamwork by drawing attention to the merit of individual results along multiple aspects, including cultural effect, sustainability, and technical innovation, among others. When faced with challenging issues in urban and architectural design, an interdisciplinary approach is essential. Together, these principles form a narrative that promotes a multidisciplinary approach to architectural and urban planning, one that respects and preserves cultural identity while responding creatively to contemporary challenges. The ongoing investigation of how to effectively blend traditional values with contemporary techniques demonstrates a dedication to creating spaces that are not only practical and sustainable, but also deeply infused with cultural prominence.

6. Conclusion

This study proposed two interwoven viewpoints into how investigates the notion of culture. The first viewpoint investigates how individuals build their worldviews by incorporating ideas, cultural values, and social conventions. These factors collectively influence individuals and groups in expressing their shared views through manifestations. The second viewpoint investigates the culture as concept that functions as a dynamical tool for explicitly conveying latent meanings and values through tangible forms in the built world. The greater the link between mechanisms and spatial/physical forms, the more important these forms are in establishing the characteristics of a certain built environment. This claim holds importance when studying architectural identity as it aims to uncover embedded concepts within cultural context.

The study provided an overview of how cultural values, social norms and environmental factors significantly influence spatial and physical forms. It has been demonstrated that architectural form is a product of its environment reflecting practical needs and symbolic values through distinctive features such as courtyard dwellings and narrow pathways. The implications of findings are extensive suggesting that cultural heritage plays a critical role, in shaping architectural identity and urban forms. The discussion revolves around finding a balance between preserving cultural characteristics and embracing modern necessities and technologies. It highlights the conflict that arises when conservation efforts clash with contemporary development. Looking ahead the study emphasizes the importance of incorporating context into architectural and urban planning to ensure sustainable development. It advocates for a design approach that respects

the social and environmental aspects of the region while also addressing modern needs.

According to the study there are future research avenues worth exploring. These include investigation into repurposing traditional structures understanding how tourism affects architectural conservation and exploring new materials and technologies that align with cultural values. Focusing on these areas can enhance our understanding of identity preservation ensuring its relevance and resilience, in the future.

Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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