Investigating trends in the Contemporary Architecture of Amman: An after thought

Abstract

Jordan, in the last forty years, went through dramatic changes in its socio-economic creating a new cultural environment. In response, the architecture of Amman changed and largely diversified; a mixture of buildings ranging from small scale houses to high rise buildings and large scale projects. These follow different schools of thought and vary in style; between modern styles and traditional one, from aesthetically pleasing to visually displeasing and from culturally acceptable to totally alien can be found. Through visual observation, this paper closely examines the architectural scene of Amman and attempts to give a preliminary classification of such stylistic trends. This paper identified seven architectural styles ranging from the modern to the regional to the neo-traditional. The afterthought of the paper concluded that these styles can be further grouped into three general categories reflecting three attitudes towards current developments; a contemporary attitude, a conservative attitude, and an attitude of confusion.

Introduction

Exploring issues of architectural identity and stylistic change is problematic especially in the context of rapidly changing Arabic cities like Amman (fig 1). Furthermore, the realities of present day of historical continuity, scarce resources and demands of large urban population, socio-economic and cultural complexity, and technological advancements, as well as the proliferation of architectural trends, pose challenges for the development of a contemporary architectural identity. Against this multi-layered and complex scene, the examination and classification of contemporary architectural trends in Amman becomes a most. This paper examines the architectural scene of Amman and attempts to identify current architectural trends and classify them visually.
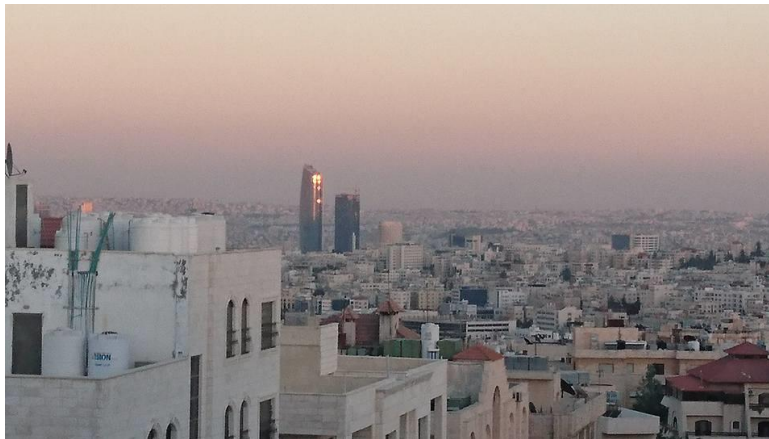

Figure 1 an over view of the city of Amman

Research in this paper addresses the visual appearance of the built environment of Amman in order to find distinguishable properties that enable their grouping into categories or trends. In architecture, researching similarities is within the domain of architectural style. Architectural style is a way of classifying architecture according to characteristic features of design (Knight, 1994); buildings can be classified with reference to form, elements used, techniques and materials, time period, region, etc... Human observers are able to recognize, interpret and search for salient features in buildings or their representations in order to detect visual similarities (Jupp & Gero, 2006). As such, visual observations and qualitative descriptions rather than morphological and typological analysis suffice the purposes of this paper. Despite its significance, this paper will not discuss the internal lay out of the

buildings and its reflection on the external facades.[1] As important as it is, this paper will not address the socio-economic conditions nor the cultural bases for the diversity of the architectural scene in Amman.

This paper focuses on the architecture of what is popularly known as" Western Amman", an area that has no exact geographic boundaries or legal qualification but agreed upon socially. The selection is not without merit; Western Amman is where "middle class" and "upper middle class" dwell, as such, it is an area where architecture can be freed from the constraints of pragmatic necessities and economic pressures giving architects the opportunity to experiment with designs that address new ideas, technologies, and social and political orders. Furthermore, the freedom from pragmatism and economic necessity allows architecture to address social, cultural, and aesthetic aspects, and accordingly, to act as a visual metaphor of the value systems of people and the validity of social institutions they underlie.

Literature regarding the architecture of Jordan in general and Amman in particular is diverse, nevertheless, this paper is not an exhaustive review of all lierature; rather a sample of that literature is presented; Al-Rifae (1987) published a book recording houses of Amman built in the 1920s and 1930s in the last century, Al Faqih (1993) addressed the formation of an architectural identity in the houses of Amman, Mahadin (1994) talked about regional architectural identity in Amman and the attempts of many Jordanian architects to formulate that identity, Fethi and Mahadin (1994) addressed the spectrum of villa architecture in Amman, Al-Asad et. Al. (1999) published a book talking about the old houses of Amman between 1920-1950, Rababe'h (2010) draws attention to the crucial problem of how to approach to design issues based on cultural identity within a global world, by referring to Petra and Nabataean architecture, Daher between 2007 and 2008 published a series of articles addressing the effect of capital and neoliberalism on tourism, identity, and architecture and heritage of Amman. In her PhD thesis, Jarrar (2013) investigated the work of four prominent architects in Amman to identify the cultural influences on its architecture post 1990s', Rjoub (2016) studied the emergence and development of Jordanian architecture and its relation with the cultural architectural heritage of the civilizations that passed on Jordan.

The aim of this paper is twofold: in what seems a chaotic architectural scene, this paper investigates the architectural trends in the architecture in Amman and attempts to classify them into categories. Some of these categories represent the current state of confusion and others representing reactions against what is happening and trying to give a better identity for the architecture of Jordan. Secondly, this paper presents a critical after thought about the contemporary state or architecture. Classification presented within this paper, exploratory in nature, is essential for structuring architectural knowledge about Amman, for providing a sense of order within what appears to be a messy mixture, and forming a necessary pre-condition for future in-depth analytic and morphological studies. Consequently, such a classification provides a platform for a more structured discourse about the architecture of Amman.

General Context: tracing Amman

It is not within the scope of this paper to give an exhaustive review of the architectural development of Amman; rather, a quick of review of its development is presented to provide framework against which trends presented can be understood. In her PhD thesis, Jarrar (2013) drew a general idea about the architectural scene in Amman between 1920s' and the 1990s'. Following is a summary of that review; up until the 1940's, Amman had three dominant housing typologies; the Rewaq (arcade) house, Al-Fina'a (courtyard) house, and the Central Hall house which was a European influence adopted in Lebanon and spread afterwards further in Syria and Jordan (fig 2). With the introduction of new building functions such as governmental buildings, schools, and buildings for entertainment, a modernistic style started to encroach the territories of Amman (Daher, 2008 a). The return of many professionally educated architects from Europe, Lebanon, and Egypt, coupled with the complexity of an emerging city and radical change in life style due to changing socio economic conditions, a new era of modernist influence began in Amman. By the 1960s', the international style was introduced to Amman especially in the architecture of hotels, public facilities, and university buildings (fig 3).

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[1] In his PhD thesis, Dahabreh (2006) supported the distinction between form and function where any functional program can be manifested in a number of connectivity graphs, which in return are expressed in a variety of geometric configurations that are ultimately expressed in a number of architectural styles.

Figure 2 old houses of Amman

Figure 3 University of Jordan Hospital (left) and the Intercontinental Amman (right)

The period of the 1960s up until the middle 1970s' witnessed a domestic modern architecture that had both character and style; the modernist influence merged with local building tradition of masonry and stone to produce what can be labelled "domesticated modernity" (Daher, 2008 a) (fig 4). The period of the 1970s' up till mid 1980s' witnessed an economic boom due to rising oil prices, which influenced most sectors of society including the construction industry. Countries of the Middle East including Jordan initiated a new phase of development and construction led by both international and local architects. In Amman, two architectural trends dominated; an eclectic extravaganza of designs that exhibits wealth and financial power (fig 5), and a kind of picturesque Islamic revivalism that expressed nostalgia to the past (fig 6). These trends reflected a state of confusion in a culture that is both dogmatic and undefinable i.e. neither traditional in the authentic sense, nor contemporary in the modern sense, a mutated hybrid. By the mid of 1980s' a new generation of practitioners came into the scene; architects who were interested in rediscovering and reinterpreting local Jordanian cultural values and expressing them architecturally. A sort of regional architecture was born and was gaining momentum among practitioners and university educators. Interest in the vernacular emerged and several public and touristic projects followed that trend.

Figure 4 modern architecture of the sixties and early seventies

Figure 5 eclectic architecture of the seventies

Figure 6 Islamic picturesque

Rapid social and cultural change marked the end of the 1990s' till mid 2000s' due to globalization and rapid geo-political transformations. Globalization was supported by the rise of international neoliberal values and facilitated by the wide spread of digital media. Digital media, the free mobility of capital and goods facilitated the spread of a culture of consumption and advocated an optimum universal character of contemporary living (Ricoeur, 2007). This contemporary image stretched on all scales of human artifacts and commodities from small-scale products up to entire urban developments. The rapid geo-political transformations due to both the Gulf conflict and the September 11 events affected Jordan directly; a new wave of immigrants from the Gulf, mainly Jordanian returnees and Iraqi refugees concentrated in Amman, brought their lifestyle, as well as capital (Jarrar, 2013). This influx of newcomers demanded large scale housing, which caused boost in residential building (fig 7) and the construction of high end residential villas.

Figure 7residential buildings

The effect on the local architecture was immense; on one hand, Amman was forced into new urban developments of a contemporary image to compete in a world market and attract capital (fig 8). Its architecture was one of manufactured "sameness" with a universal mode of expression could be found anywhere and of an everywhere; thus buildings are reduced into a sort of tourist post card attractions or "free floating signs"(AlAsad, 2008). On the other hand, a new "universal" architecture that expressed formal manipulation and an understanding of what contemporary theory of architecture started to emerge with practicing young architects (fig 9).

Figure 8 the Abdali development in Amman as an example of urban globalization

Figure 9 private residence by Morph x Design Studio

As can be seen from the review above, Jordan, in the last forty years, went through dramatic changes in its socio-economic conditions resulting in various shifts in its cultural environment. Accordingly, its architecture changed in response to the new cultural landscape; looking around Amman, a mixture of buildings ranging from small scale houses to high rise buildings of various functions and large housing projects following different architectural styles and schools of thought and varying between modern styles and traditional one, from aesthetically pleasing to visually displeasing and from culturally acceptable to totally alien can be found. More recently, rapid urbanization, technological advances, and wide spread use of digital media, resulted in more diversification of Jordan's architectural built environment, depriving its architecture of its cultural and regional identity, and leading to a break in the continuity between its inherited morphology and the more recent architectural developments (Rababe'h, 2010). Such a condition, warrants close examination and preliminary classification of such stylistic trends.

Style: a classification of the stylistic trends in Amman

Concepts of style and stylistic change are central to the study of art and architecture; members associated within any discipline share a definition and classification of common concepts that constitute that discipline. The definition and classification of these concepts are necessary to structuring knowledge in any aspect of any discipline, communicating that knowledge, and giving insight into that particular discipline (Mitchell, 1990). Knight (1994) defined style as an ordering principle through which "artifacts" can be grouped together according to some distinguishable properties or features. As such, style can be described as consistencies among products of an individual, group, region, or time period that can identify them. For Schapiro (1953) these consistencies generally refer to physical form elements, formal relationships, and qualities (expression). Ackerman, (1962) regarded these consistencies as a kind of a language within which symbolic and formal conventions are organized into a coherent constructs similar to a grammar.

According to Knight, grouping of art products is a prerequisite to the study of stylistic change (knight, 1994). In architecture, the value of studying style is multifaceted: it can be a significant identifier of place and time; it is a system of forms with a quality and a meaningful expression through which values of the society are expressed and communicated; it forms a common ground against which innovations and the individuality of particular works maybe measured; and most importantly, it helps to account for the variations in styles and matching these variations with events and with the varying features of other fields of culture (Schapiro, 1953). Furthermore, theories of style and stylistic change not only provide a description of various styles but investigate the relation between them.

This study is exploratory in nature; it does aim to explain why such styles appear, rather, it aims to identify visual similarities in buildings of Amman, which enables their grouping into architectural styles giving a sense of order

within an otherwise apparently chaotic scene. Visual similarities in this research will address the overall form of the building as well as the design elements that are used. The detection of these visual similarities will be based on visual observations: according to Jupp & Gero (2006), human observers are able to recognize, interpret and search for salient features in diagrams in order to detect visual similarities. This is supported by environment-behavior research where through observations, people recognize formal categories of defined architectural styles, state their stylistic preferences for a given building type, and identify the social meaning associated with housing of particular architectural styles (Groat & Despres, 1991).

One issues that warrants attention here is the classification and labeling the different styles; the approach I shall take in this paper is based on the premise that architecture is analogous to language in terms its syntactic aspects especially with its structural and grammatical rules. As such, an architectural style can be regarded as a formal language characterized by a vocabulary and a grammar. The labelling of styles in this paper is based on the distinctive formal features of the vocabulary that typify that certain style, and at the same time, adheres to the canonical definition as agreed upon by various authors.

Through the initial survey of buildings of Amman, the following styles were identified:

International Architecture

This trend refers to architectural designs that employ the vocabularies of modern architecture; simple rectilinear designs, the use of modern material, structural honesty, horizontal windows, pure forms, etc. This trend started in Jordan after its independence and even in the earlier phases, especially with the process of development in order to become modern. Since the idea that the west knows better, the model of the west has to be followed; modern architecture to express a modern society (refer to figure 3). Due to lack of any local models, the use of modern architecture was a ready-made response to designing large scale projects such as universities, hospitals and large scale housing projects in which the traditional architectural was not able to cope with.

This trend is also very clear in the architecture of banks and office buildings especially with the glass box and extensive use of glass.

Buildings conforming to this group are characterized by: the simplicity and clarity of forms with the elimination of detailing and decoration, orthogonal designs with a visual emphasis on horizontal and vertical lines, materials honesty in expression and structure, the visual expression of structure, the extensive use of industrially-produced materials and the adaptation of machine aesthetic, and the illusion to the International Style of modernism (fig 10).

Figure 10 samples of modern architecture

Eclectic Architecture

Eclectic architecture is an architectural style that has its roots in the nineteenth and twentieth-century architecture. It refers to the use of a mixture of elements from previous historical styles and schools of thought in a single piece of architecture. However, this is often without conventions or rules dictating how or which elements to be combined. Here, everything goes and there are no rules or definite schools of thought to govern the design process. Most of the architectural built environment in Amman belongs to this trend; a pitched roof combined with arches, strange shapes and onion like domes, the use of traditional vocabulary to express a modern plan, etc. The dominant players in this trend are the demands of the clients, the demands of the market, and architects' capabilities and desires. This trend is mostly followed by mass production designers and profit makers who were supporting commercial values as aspects affecting the quality of the produced architecture.

This trend was most dominant on the period of the late seventies and the early eighties due to the increased wealth and the need to express this wealth by being different by the means of using different forms, expensive materials and following different styles. Nevertheless, some architects who work in this trend practice a kind of organized eclecticism, where they are aware of what they are doing and they do it according the codes of aesthetics and implying a certain rationality in their design solutions. It should be noted that this kind of architecture results from the freedom in the architectural expression and from the state of confusion of the society (fig 11).

Figure 11 eclectic architecture of Amman

As a result of the loss of the architectural identity and the visual chaos, some architects began to question the forms used started to search for an architectural identity through built forms; they began to look back at the rich repertoire of past architecture as an active source for their designs. This return was meant to establish the identity that was

seemingly lost. This trial took the form of four trends, each one agrees on the use of tradition to give the identity but what source of reference to be used and the way to deal with that reference is different in each one of them.

Neo-Vernacular Architecture

In contrast to what is known as polite architecture, vernacular architecture relies on the design skills of local builders, not professionally trained, to respond to local needs and conditions, using locally cultivated building material, and reflecting local traditions. It is a trial to revive the image of the village architecture found in the rural areas of Jordan with the use of the vernacular elements and treatments such as the use of local building like rough stones and mud, spontaneous massing and the manipulation of the opened and closed spaces. Most attempts in neo-vernacular architecture falls under what Ozkan (2007) Labelled interpretive vernacularism an approach to bringing a new life to vernacular heritage for new and contemporary functions. The widest area of the application of this approach is obviously the architecture for tourism and culture (fig 12). In that sense, this trial did not exceed the renovating of some of the existing buildings for private use or the renovating some villages with the use of modern technology and hiding it behind a layer of vernacular treatments to give the required image for commercial purposes. It could be said that this trend did not exceed the theme of fashion for the recreational purposes for the use of the rich due to the large expenses it needs and to the loss of the traditional craftsmen who were able to produce this type of architecture.

Figure 12 Kan Zaman Restaurant (left), and the SOS Village (right)

Regionalized Modernism

The theoretical base of this style is based on the concept of "appropriate modernity" developed by Cristián Fernandez Cox in 1984 (Schmitz, 2009). This concept assumes the presence of several parallel modernisms, not a singular one, each with its character and history. Here international modernity is used to uncover the real modern identity that with unique responses to particular climates, places, and cultures. Thus, the corner stone of this approach is accepting the modern architectural theories, aesthetical values and technology and adopting it to the local context in which it is used. Through the choice of the modern theories- based on the social values and the norms of the community- that are suitable for the local context and the modification of the regional architectural vocabulary in order to suit the modern times, architects try to give form to their buildings (fig 13). This concept of regionalized modernism is very close to but not exactly equal to what Ozkan (2007) called Abstract Modern Regionalism where modern architecture incorporates the abstract qualities of regional architecture such as massing, solids and void, proportions, sense of space, and use of light seeking to bring back to existence the cultural issues.

Figure 13 the merging of the modern and the regional

It should be noted that the vocabulary of this style of architecture is derived from a regional repertoire rather than the limited local vernacular vocabulary or the wide traditional one, which people usually refer to as the Islamic architecture. This trend which is based on the modern principles and holds the local tradition through the images it uses, managed to produce an architecture that is aesthetically pleasing and theoretically acceptable but still have to be developed more so as to become a methodology with principles rather than a trend carried by some architects.

Experimental Regionalism

This style finds its theoretical roots at the intersection of three concepts; Ozkan's (2007) concrete modern regionalism, Curtis' (1986) authentic regionalism, and Frampton's (1983) critical regionalism. Concrete modern regionalism refers to the use of design of regional architectural elements and features in contemporary designs. Authentic regionalism refers to an architecture that is to finding unique responses to conditions of climate, place, and culture not necessarily by using design features but by reinterpreting and transforming values and principles of the past, thus referring to a way of thinking. Critical regionalism calls for the adaptation of tradition to meet the requirements of the modern times. Thus, experimental regionalism refers to the grounded theoretical manipulation of regional design and architectural elements to meet the demands of modern times. The basic point of reference for this trend is the local regional architecture with its aesthetics, treatments and architectural vocabulary. But since we live in the modern times, this architecture has to suit the modern times and to reflect the present time.

So, architects experiment with the forms of the regional architecture such as the vaults, color, typology of openings - double windows with segmental arches and punches-and other climatic and social treatments such as the courtyard in order to reach a form that is suitable for the contemporary life and still holds the strong image of the past, as if they are trying to give a new image of the past through the manipulation and transformation of its forms (fig 14). It is called experimental because it is done by a group of architects who are trying to find a proper image without the existence of a definite theory behind their work.

Figure 14 projects exemplifying the architecture of Amman

Neo-Traditional 0pArchitecture

Traditional[2] architecture is an architecture that takes into account past styles that were prevalent to a region or area. When one talks about Islamic architecture[3], one refers to an architecture style that finds its highest expression in religious buildings such as mosques and Madrasah. This style is characterized by stylistic features and elements of design and features of design such as domes, arches, vaults, colored stone intentionally incorporated to reflect religious believes (fig 15).

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[2] The term Traditional Architecture is generally used to refer to the architectural heritage in general including the regional architecture and the Islamic one but in the course of this research it would be used to refer to the Islamic architectural heritage without the regional one.

[3] The term Islamic architecture is greatly debated these days as it is a legacy of orientalism and in the current time the term Architecture in the Islamic Context is used, since spread over a vast geographical area over a period of more than 1400 year in which many local styles developed. For further discussion see Mohammad Alasad '**Views in the Concept of Islamic Architecture: Return to the Aspiration of Islamic Architecture is not mere copying but Development',** in Alhayat, 14-5-1992, p19. (in Arabic)
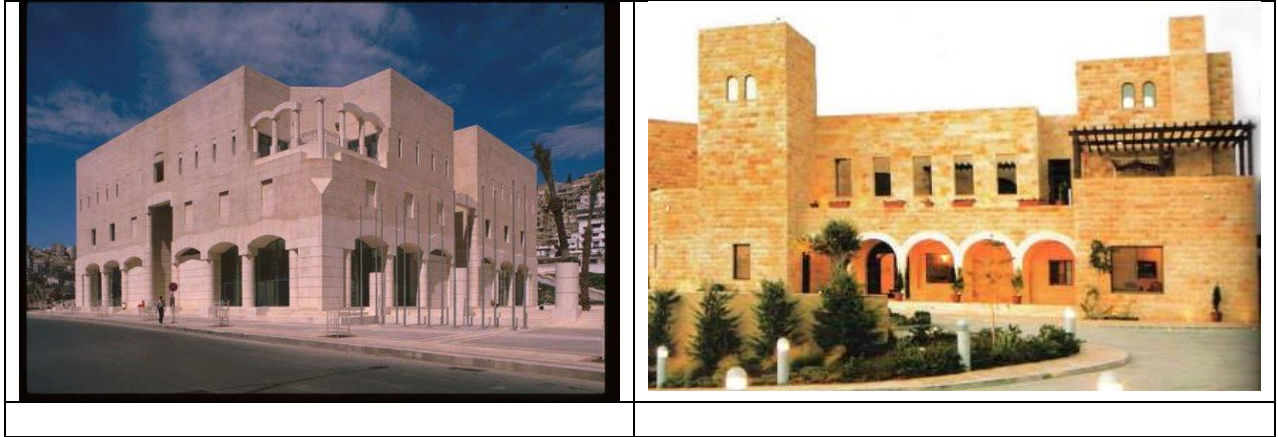
Figure 15 the municipality of Amman

Neo-traditional Islamic architecture is analogic to Ozkan's Concrete regionalism, which copies regional expressions, elements, fragments, or entire buildings, in a certain region, except for the fact it only builds on heavily religious buildings that are considered symbolic of Islam. When new buildings are loaded with design features that have spiritual values or symbolic relevance, they become much more acceptable, owing to the values attached to the original source (Ozkan, 2007).

Relying on traditional architecture takes two forms: the picturesque employment, through borrowing and copying, of forms and features that became symbols of Islam due to their association with Islamic monuments such as the dome and the vault, the different types of arches, and the courtyards, among other features that could be related to what is Islamic. The use of the general rules and principles that lie behind the established types, which implies the rediscovery of the processes that lead behind the forms in order to be able to produce new typologies and this is rarely the case.[4]

Contemporary Formal Architecture

Generally speaking, contemporary architecture is defined as the architecture of the present day. It is based on the intention to design and build things that are innovative and different from what was done in the past or what is usually done mundanely today; it offers a multitude of architectural choices, provided that they stand out from what is normally done. It breaks away from the processes and ways of thinking that have become standard. As it is not an architectural movement of a distinctive historical style, it has a high level of variety; however, this doesn't stop some common traits from being observable within contemporary architecture. The architecture of this trend aims to create mental exercises or compositions/ sculptures with a theoretical base.

Formally speaking, this trend is dominated by the straight line. Overall form is either a pure platonic form in its generic state or an ensemble of basic design elements and volumes creating distinctive spaces in-between. These elements are combined according to architectural design principles (fig 16). Another distinctive feature is the use of new materials or new use of materials like glass, wood, brick, and metals for both the interior and the exterior. Windows and openings are larger and more plentiful; besides the horizontal strips, multiple openings and their uncommon positioning, panoramic windows, window walls, and skylights have all entered the playing field.

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[4]The work of Henning Larsen in the Ministry of Foreign Affairs in Saudi Arabia is an example of extracting rules behind the traditional architecture.

Figure 16 samples of the contemporary architecture of Jordan

After thought

The aim of this paper was to explore the architectural scene of Amman. In this seemingly chaotic architectural scene, visual observations identified seven architectural styles: international, contemporary formal, eclectic, neo-vernacular, regionalized modernism, experimental regionalism, and neo-traditional. Appearance of these style is due rapid and complex socio-economic and cultural transformations, realities of the present day of globalization and power of digital media, issues of change and historical continuity, and most importantly, the need for an architectural identity especially after the failure of the modern model to reflect the cultural context and the state of chaos that is ruling the architectural built environment in the present time.

These seven styles can be grouped into three main trends: first, a contemporary trend that is based on a notion of timeless and contextualess architecture, which rests on a universal architectural culture and transcends time and space. In that sense, architecture is regarded as an abstraction as a way of figuration in which architectural form is displaced from its pragmatic surrounding conditions, giving priority to internal rules and mechanisms specific to architecture, without necessarily denying the presence of these conditions and responding to them. This type of architectural trend has the duality of a twin phenomenon of the abstract and real, the local and the global. Second, a contextual trend that responds to the specific physical and socio-economic characteristics of its site, which help distinguish the architectural work and emphasize its local identity. Thus, in contrary to the former, it emphasizes locality and specifity rather than abstraction and globalism. In the architecture of Amman, Contextualism includes experimental regionalism, neo-vernacular, regionalized modernism, and neo-traditional. All of them, except for regionalized modernism, attempt to establish an architectural identity based on the past, an identity that reflects the culture of the region and defines an image for itself against another. This trend includes a commitment to maintaining a link to formal past styles of building through the re-use of elements and vocabularies and the reuse of traditional materials to create a sense of continuity and connection to the past.

It should be noted that the difference between regionalized modernism and experimental regionalism is not a thin line; rather it is a margin with overlaps within which so many works of architecture are found. The main difference can be summarized in the attempt to create a regional modern identity or a modern regional identity. The process of creating such an identity requires a process of Reconciliation. Reconciliation takes two forms; firstly, adaptation of the modern trends to the existing cultural norms through a process of filtering of the modern through the traditional. This would mean the selection of what is appropriate of the modern according to the traditional norms and values and the rejection of what is not. Secondly, the adaptation of the past to the modern times, which implies the selection

of the best of the traditional heritage in accordance with its suitability to the modern times.

The third trend, is eclectic trend of being neither here nor there; an eclectic approach, which literally reflects the current state of social and cultural confusion. It is this trend that is expressive of the current conditions and mostly characterizes the pop intellectual scene. It represents the bare truth and its value lies in it being a warning sign that triggers study and action.

By no means has this paper claimed these styles are exhaustive or clearly defined; rather, they are meant to be further investigated with more essential and relative characteristics in the Aristotelian sense. These styles are meant to provoke questions of cultural identity in an age of globalization and an architectural identity in an age of theory and vast advancements in material, technology, and construction and manufacturing; questions of architectural documentation and analysis of this vast and rich repertoire; questions of how the issues of appropriate modernism, authentic regionalism, and critical regionalism be applied to the local context of Jordan. But most importantly it seek answers to the seminal question of Paul Ricour (2007): "How to be modern and to continue the tradition, how to revive an old dormant civilization as part of universal civilization."

References

Akerman, J. S. (1962). A Theory of Style. The Journal of Aesthetics and Art Criticism. Vol. 20, No. 3. pp. 227-237. Wiley: on behalf of The American Society for Aesthetics. DOI: 10.2307/427321

Al-Asad, M. (1999). Houses of Jordan. Routledge

Al-Asad, M. (2008) The Contemporary Built Environment in the Arab Middle East. In Architecture and Urbanism in the Middle East: View Points Special Edition. Washington DC: Middle East Institute. pp. 26-28

Al-Faqih, S. (1993) House Formation and Architectural Identity in Urban Amman. *Open House International*. Vol. 18, no. 2, pp. 21-27

Al-Rifae, T. (1987). The First Houses of Amman. Jordan: Jordan University Publications. (In Arabic).

Abdelmajeed Rjoub, A. (2016). The Relationship between Heritage Resources and Contemporary Architecture of Jordan. Architecture Research 6(1): 1-12. DOI: 10.5923/j.arch.20160601.01

Curtis, William J. R. (1986). Towards an Authentic Regionalism. Mimar 19: Architecture in Development, edited by Hasan-Uddin Khan. pp 24-31. Singapore: Concept Media Ltd.

Daher, R. (2008 a) Amman's Vanishing Legacy of Modernity. *Jordan Property*, Issue 23, complimentary copy, pp. 10-21

Daher, R. (2008 b) Celebrating and Qualifying Amman: The City of Many Hats. *Jordan Property*, Issue 14, pp. 32-39

Daher, R. (2008 d) Amman: Disguised Genealogy and Recent Urban Restructuring and Neoliberal Threats. In El-Sheshtawi, W. (ed.) The Evolving Arab City: Tradition, Modernity, and Urban Development. Great Britain: Routledge. pp. 37-68

Fethi, E., Mahadin, K. (1994). Villa Architecture in Amman: The Current Spectrum of Styles. In the City and its Society, French Centre for the Study of Contemporary Middle East (CERMOC) 6-8.6.

Groat, L., Depres, C. (1991) The significance of Architectural Theory for Environmental Design research. In Zube, E., Moore, G. et.al. Advances in Environment, Behavior, and Design. pp 3-52. New York and London: Plenum Press.

Kenneth Frampton. (1983). Towards a Critical Regionalism: Six Points for an Architecture of Resistance. In Foster, Hal ed. The Anti-Aesthetic: Essays on Postmodern Culture. Seattle: Bay Press.

Jarrar, Ola. (2013).Cultural Influences in Jordanian Architectural Practices: Post 1990. University Of Calgary

Jupp, J. Gero. J. (2006).Visual style: Qualitative and context-dependent categorization. *Artificial intelligence for engineering design analysis and manufacturing*. 20(3):247-266.

Knight, Terry (1994). Transformations in Design: A Formal Approach to Stylistic Change and Innovation in the Visual Arts. Cambridge: Cambridge University Press

Mahadin, K. (1994) Regionalist Architecture in Jordan: a Critical View. In Open House Internationa, Vol. 3, no. 3, pp. 12-22

Mitchell, W. J. (1990). The Logic of Architecture: Design, Computation, and Cognition. Cambridge: MIT Press

Meyer Schapiro, "Style," in Anthropology Today: An Encyclopedic Inventory, ed. A. L. Kroeber (Chicago, 1953), 287–312.

Ozkan, S. (2007) Regionalism within Modernism. In Canizaro, V. (ed.). Architectural Regionalism: Collected Writings on Place, Identity, Modernity, and Tradition. pp. 102-109. New York: Princeton Architectural Press. (originally published in 1985).

Ricoeur, P (2007). Universal Civilization and National Cultures. Architectural Regionalism: Collected Writings on Place, Identity, Modernity, and Tradition. Canizaro, V. (ed.). pp. 43-53. New York: Princeton Architectural Press.

Schapiro, M. (1953). An Excerpt from Style. White Paper, http://homepages.neiu.edu/~wbsieger/Art202/202Read/202Schapiro.pdf, Access date, 10/7/2016

Schmitz, S. (2009). Identity in Architectue? A Construction? In Herrle, P., Schmitz, S. Constructing Identity in Contemporary Architecture: Case Studies from the South (HABITAT - INTERNATIONAL: Schriften der Habitat Unit, Fakultat VI Planen Bauen Umwelt der TU Berlin)