REACTIONS TO ARCHITECTURAL GLOBALIZATION IN THE CONTEXT OF CONTEMPORARY CAIRO

DOI: http://dx.doi.org/10.26687/archnet-ijar.v12i1.1571

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Keywords

globalization; Cairo; architectural identity; culture; environment; context; practice.

Abstract

The impact of global forces on architecture has been discussed thoroughly in the literature. Key issues relevant to cultural, economic, environmental, as well as morphological factors have always been drivers of the discourse. However, the interaction between them has been seen intellectually as an imperative that should govern reactions to globalization.

In light of the key points raised in the literature, this paper traces key reactions to architectural globalization by the professional community in Cairo. Methodologically, this is based on adopting two approaches. The first is an attitude survey that captures views on globalization as conception, its tools, and the understanding of cultural change. The second is a case study that critically analyzes the impacts of globalization in relation to three projects located in Cairo on the basis of a number of factors: technological, morphological, cultural, and environmental. These projects are the American University in Cairo (AUC), Futures University (Futures), and Smart Village. The study relies on a number of sources of data including field visits where field observations and analytical descriptions are formulated, information from the clients regarding their requirements and the original architectural designs, site photography.

Analysis and discussions are centred on establishing links between globalization as a concept with the experience of local architects and practitioners so as to develop a holistic understanding of architecture in contemporary Cairo within the context of globalization, thereby encouraging architects in to continuously assess the current realities of architectural practice.

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BACKGROUND

Contemporary Cairo encompasses portions and patchworks that represent a relative interdependence of urban, natural, cultural, and economic processes. With its current physical, socio-cultural, and socio-economic realities, it has produced and still produces much of what is demonstrated today as politics, knowledge, and culture. History adds another dimension to Cairo's architecture and urbanism. It reflects the correlation between place, society, culture, and technology (Salama, 2007). This has made it a complex and extremely diverse city with over 20 million people and a range of well-established traditions where the symbols of religious, political, institutional, and economic powers are often competing.

The present situation of Cairo cannot be understood without articulating a glance of its history. The city has evolved historically through a series of grand political designs where four physical formations constituted pre-modern Cairo. These have been envisioned and initially carried out by great military political commanders. Al Fustat was established in 641 AD then to the north east of it Al Askar was built. A third settlement named Al Qataei was envisioned in 870 adjacent to Al Askar. The Fatimid Jawhar Al Sekilli to the north east of these three settlements established Al Qahira, or Cairo in 969. In 1187 these settlements were joined and fenced by another military commander, the Ayyubid Salah El Din. Since then, Cairo assumed its physical unity and functional integrity as a single city. Most of the physical and socio-cultural developments occurred within the confines of this single entity of about 5 square km.

The preceding developments took place for three centuries under the Mamluks. The city lost its political eminence with the Ottoman conquest of Egypt in 1517 and entered into a decline affecting all walks of life until 1805 when the Ottoman Empire sent Mohamed Ali to rule Egypt. He attempted to modernize Egypt by creating modern institutions parallel to the traditional ones. With him Cairo had re-emerged as a giant regional power and became a threat to the Ottoman Empire itself. The modernization of Cairo continued under Khedive Ismail (1863-1879). His agenda was to establish the "New Paris of the East". He seized the opportunity of the opening of the Suez Canal to build new districts in the European style with parks and wide streets, an opera house, and palaces accommodating his European guests. He has opened the doors of Egyptian society and economy to many Europeans and with the British occupation hundreds of thousands flocked from Europe into Egypt and settled in Cairo seeking fame and fortune. They established their own quarters and started and operated western type of institutions. This was the case until 1952 when massive public housing projects started to develop in poor districts of Cairo. However, new areas in the 1960s and 1970s were zoned and subdivided for the housing of technocrats who were the backbone of the development's drive, while during the 1980s new satellite cities were envisioned to accommodate the growing number of populations. This can be seen as a prelude for the development of new Cairo in the mid 1990s and the global scene that characterises its architecture.

The issue of the impact of international forces on the architecture of a region or a locality has been discussed in the literature that discusses modernism and post modernism (Frampton, 1992; Ibellings, 1998; Jencks, 2002, Jencks and Kropf, 1997; Sklair, 2006, among many others) As well, the notion of globalisation and its impact on the development of architectural trends in developing contexts has been discussed heavily in the literature (AlSayyad, 2013; Frampton, 1983; Serageldin and Martin-Brown, 1998; Tzonis and Lefaivre, 2003; ). In order to understand reactions to architectural globalization in the context of the contemporary Cairo, this paper builds on the body of literature and arguments developed by a number of
scholars including in the context of Egypt as well as the wider milieu of the Arab World (Asfour, 2007; Eldemery, 2009; Salama, 2007, 2012, 2014; Volait, 2003, 2014). Adopting two approaches, the methodology employs an attitude survey coupled with an examination of three case studies. The results contribute to key insights toward understanding of how certain aspects and influences influence various generations of architects in Egypt.

### ATTITUDE SURVEY

In light of the key points raised in the literature which are outlined below, this survey aims to link existing research with the experience of local architects and practitioners so as to develop a holistic understanding of architecture in Egypt within the context of globalization, thereby encouraging architects in Egypt to continuously assess the current realities of architectural practice and education in Egypt and evaluate current progress and the potential for continuing progress.

**Questionnaire Design**

Three groups of architects with different experience levels were surveyed. First is a group of architects who have 0 (fresh graduates) to 7 years of experience in practice. The second is a group of architects with experience ranging from 7 to 20 years. The third and final group constitutes a set of architects that over 20 years of experience in architecture (Figure 1).

![Figure 1: The three groups of participants in the attitude survey (Source: Author).](image)

The factors considered in the selection of individuals to be surveyed are twofold. While the selected sample represents a variety of age and experience groups of architecture practitioners and academics highlighting the different priority issues for each age group, the fact that fresh graduates and young architects make up the first age group may provide insight their interest in local and regional issue essentially revealing insight into the future of architecture in Egypt. Each question on the questionnaire is designed with multiple choices of answers in order to render particular measurable outcomes, while at the same time allowing participants to provide an alternative response not among the choices.

Through personal interviews and emails, 150 copies of the questionnaire were distributed to participants, among which only 90 questionnaires were completed in a 9-month period. The themes covered are globalization, globalization tools, and cultural change. A number of
difficulties and reservations were faced throughout this process. For instance, some questions were not fully responded to, some had answers not apparently relevant to the questions, while others were answered with a seemingly lacking interest in the themes of the questionnaire. Consequently, this study does not take into consideration inappropriate or irrelevant answers. Furthermore, some participants expressed their reservations towards the length of some of the questions. A number of participants also preferred not to be named.

Theme No. 1: Globalization

The first 12 questions of the questionnaire cover the theme of globalization as an important phenomenon that evidently impacts politics, society, economy, and culture. Most questions are general in nature with only the last linking globalization to architecture and architects. The questions seek the participants’ understanding and perceptions towards globalization and the countries that promote it, its meaning and definition, its intentions and its reality, its impact on Egyptian society, culture and identity, and whether it is perceived in a positive or negative light. The final question asked participants for their opinion on whether architecture in Egypt is stagnant or progressing. See Appendix A for the first portion of the questionnaire.

Theme No. 2: Globalization Tools

The second 12 questions (numbers 13 to 24) of the questionnaire expand further by addressing the theme of globalization tools. These questions essentially investigate the tools utilized both by multinational companies with their role in the free market economy as well as by practicing architects who are influenced by global architecture movements. The purpose of this set of questions is to explore the participants’ perceptions towards the following: the impact of information technology as a component of globalization on local architecture; the relationship between trends in Western architecture (i.e. in Europe and the United States) and Egyptian architecture trends; the question of tradition versus modernity and the notion of a universal architecture; creativity; architectural theory; and, architecture curricula in Egypt. See Appendix B for the survey questions that cover the theme of globalization tools.

Theme No. 3: Cultural Change

The final 12 questions (numbers 25 to 36) of the questionnaire carry the theme of cultural change as an outcome globalization. Due to its relationship with architecture, cultural change as a phenomenon essentially necessitates an ongoing and evolving understanding of culture. These questions investigated the participants’ specific perceptions towards the following issues and concepts: the importance of culture and associated concepts to the architectural profession; the relationship between modernity and globalization in the context of architecture; definitions of local and traditional architecture; the most recent impact of globalization on Egyptian culture; criticism and architectural education in Egypt; the dominance of foreign architects in local projects; the impact of technology on architectural practice in Egypt; the architect’s role in society; the status of sustainability in Egyptian architecture. See Appendix C for the complete listing of questionnaire questions addressing cultural change.

DISCUSSION OF FINDINGS

Theme No. 1: Globalization

There is a notable difference in how young architects view globalization in comparison to the more experienced generation, whereby 70 percent of the latter perceive globalization simply as another form of colonization compared to 20 percent of young architects. Interestingly, 65 percent of this same age group finds the question of whether globalization’s intentions contradict the realities at hand. On the other hand, 75 percent of those with over 7 years of
experience see a conflict between how globalization is represented in the media and its realities. This indicates that young architects are more liberal in their views towards and their accommodation of globalization, and are perhaps not critical enough of its advantages and disadvantages.

With regards to the impact of globalization on society, while 20 percent believe the impact is limited, 70 percent of all survey participants agree that globalization brought about comprehensive changes at all levels of Egyptian society. In fact, 80 percent of questionnaire participants agree that globalization has resulted in significant cultural changes in Egypt, where alternative notions of consumption and materialism are imported into the country ultimately resulting in a false image of society. Also indicative of the prevailing negative perception of globalization, nearly 65 percent of the older two age groups assert that globalization has destroyed borders between countries, replacing local and national traditions and identity with a universal culture. In the meantime, the questionnaire results reveal that the younger generation of architects view globalization in a more open-minded and tolerant manner without the desire or the need to resist it.

Interestingly, all age groups agree that living side by side with globalization is possible. While 55 percent of young architects believe that resisting globalization is a romantic idea and an endeavor that may result in negative or even harmful outcomes, 60 percent of architects with over 20 years of experience emphasize that a nation may opt for an alternative that does not compromise local norms, values, and culture. Japan and China are cited as models for their participation in the global market while maintaining their identity. Not surprisingly, 75 percent of young architects are enthusiastic about the ongoing expansion of globalization and its role in shaping people’s everyday lives. However, 65 percent of architects with over 7 years of experience are optimistic that globalization’s disadvantages will drive it to ultimately dwindle.

On the status of architecture, 75 percent of all questionnaire participants agree that Egyptian architecture is currently in crisis, although 70 percent of young architects do not believe that globalization has had a negative impact on local architecture. While this may initially appear as a contradiction, one could interpret this as young architects simply not blaming the current state of crisis on globalization. Some participants, however, add their views on the factors that cause this crisis, which include: limited criticism in following global trends, limited attention to the rules that govern urbanism, decline in the architect’s role in society whereby the architect has become a mere tool to achieve the demands of consumption and the market at large.

**Theme No. 2: Globalization Tools**

On the question of the impact of globalization on architecture in Egypt, a clear divide in the views of young and older generations of architects is evident. Approximately 30 percent of architects with more than 7 years of experience agree that the true effect of globalization on Egyptian architecture is not fully clear and is thus inconclusive, while 35 percent of them believe that there is no point in discussing this impact. On the other hand, most (60 percent) young architects perceive globalization as having a positive effect on Egyptian architecture. Interestingly, 70 percent of all participants assert that architecture is global and universal, with 75 percent of those with over 20 years of experience believe that this universality is realized when the global is combined with the local.

The effect and importance of technology as a globalization tool is a dominant sub-theme throughout the questionnaire. While 60 percent of architects with more than 7 years of experience believe that the information technology revolution that resulted from globalization has had a detrimental effect on Egyptian architecture, as the latter became a direct
subordinate to global architectural trends, 65 percent of young architects share the opposing view that innovations in information technology has had a positive impact on the practice and thought of architecture in Egypt. Similarly, 65 percent of the older generations of architects believe that modern technology and computers have had a negative impact on architecture and the performance of architects as they have become increasingly reliant on internet images and internet data to formulate the bases of their philosophies, essentially resulting in the mere reproduction of the work of Western architects. Conversely, 80 percent of young architects see modern technology in the form of presentation and marketing tools as being useful to the field.

In the same vein, questionnaire participants were asked about their perceptions towards Dubai and whether its development should be framed as a model example. More than 80 percent of young architects agree that Dubai represents an ideal development model, which reveals insight into the potential progression of architecture in Egypt. In the same context, 55 percent of the older generations of architects see Dubai mainly as an exaggeration of globalization trends in the Arab region. Likewise, 50 percent of the older generation place emphasis on the power of multinational corporations in shaping the image of the city and that essentially it has weakened the local identity, while 80 percent of young architects believe that questioning the importance and the impact of these corporations on local architecture is irrelevant as they have in fact become our reality and thus indicative of a new vision of the world.

With particular regards to the use of ‘modern’ materials like aluminum cladding, glass curtains, composite aluminum sheets, etc, 70 percent of architects with over 7 years of experience believe these materials have been overused by Egyptian architects and that they are largely incompatible with sustainability. Not surprisingly, while most young architects believe that creativity is the most important aspect of architecture, 70 percent of them believe that the use of such materials reflects a modern approach to architecture. Put simply, this outcome is clear evidence of young architects’ limited understanding of environmental issues and sustainability.

On the status of architectural education in Egypt, 75 percent of all questionnaire participants agree that architectural education is general ineffective, is not compatible with new local and global challenges, and is characterized by a lack of emphasis on the local culture. This has a potentially significant impact on the development and progress of local architectural trends and the study of architecture in Egypt.

Theme No. 3: Cultural Change

Finally, the questionnaire addresses the final theme of cultural change. Globalization has without a doubt affected vast cultural change resulting in a growing need to better understand culture as it is reflected upon architecture. In this regard, approximately 60 percent of architects with over 20 years of experience agree that values, heritage, history, norms, and culture are important for the profession of architecture, while over 80 percent of young architects find these concepts irrelevant and that they are difficult to define and measure.

Such assertions raise the question of whether “globalization architecture” is similar to or synonymous with “modern architecture”. Here, nearly 75 percent of participants with over 7 years of experience confirm that “globalization architecture” is in principle a manifestation of modern architecture, whereby its future is moving towards failure. Yet, 80 percent of young architects see a distinction between globalization and modern architecture. Interestingly, when questioned about their understanding of local architecture, 75 percent of young
architects understand it to simply mean the use of basic and simple materials and traditional methods of construction, while more than 70 percent of the middle and older generations of architects perceive local architecture as relying on accommodating the local environment.

In a similar vein, participants were presented with an alternative to global and local architecture. At their crossroads is regional architecture, which has been proposed as the balance of the two. However, more than 80 percent of young architecture practitioners and academics believe that local or regional philosophies obstruct the architect's creative freedom vis-a-vis his or her architectural design.

Ultimately, globalization has resulted in distances shrinking where communication has been the medium through which intellectual currents are spread. On the question of the role of foreign architects on major projects in Egypt and across the Arab world, nearly 80 percent of all questionnaire participants agree that foreign architects and firms dominate major national projects for their competitive advantage in their professionalism, their technical expertise and their use of advanced software, and their progressive project management. This outcome thereby highlights the need for a strong technical system to develop in Egyptian architecture.

Such a development in architecture as an industry in Egypt cannot occur without the assessing local architectural practice as well as education and criticism. More than 70 percent of questionnaire participants with over 7 years of experience believe that architectural curricula in Egypt lack the emphasis on local cultural schools and instead place the most emphasis on global trends. For this reason, it appears, 75 percent of the older generations of architects see a growing need for criticism for the purpose of improving architecture as a profession. Meanwhile, 65 percent of young architects believe that the disregard for Egyptian culture in academic curricula as a positive and that it essentially has little or no importance. Yet, the vast majority (80 percent) of young architects perceive architectural criticism as unnecessary.

As for the evaluation of architectural practice in Egypt, 80 percent of young architects find the use of technology to be important for the profession and that it is essentially inevitable. Furthermore, 80 percent of all experience groups agree that sustainable practices in architecture are effectively absent; specifically, 60 percent of the architects with over 7 years of experience attribute this absence to the lack of government legislation.

GLOBALIZATION IN PRACTICE: A CASE STUDY

The primary goal of this case study is to critically analyze the impacts of globalization in relation to three projects located in Egypt on the basis of a number of factors: technological, morphological, cultural, and environmental. These projects are the American University in Cairo (AUC), Futures University (Futures), and Smart Village. The study relies on a number of sources of data including field visits where field observations and analytical descriptions are formulated, information from the clients regarding their requirements and the original architectural designs, site photography, updated Google Maps (dated October 2014).

The three projects were selected for a number of reasons, most prominent of which is their notable distance from the city centers as they are situated on the peripheries of Cairo and Giza. This factor is particularly important for the study as it allowed for a more controlled investigation where the problems associated with being located in the hearts of bustling metropolitan cities is essentially eliminated. All three projects also utilize cultural motifs in their facades, thereby allowing the study to investigate whether or not such adaptation adheres to contemporary trends. This ultimately helps provide insight into the effects of
globalization on the implementation of these projects. Also worthy of note, the three projects are evidently located in a year-round warm climate whereby the architects’ adaptability to such climate is investigated.

**Project Descriptions**

**The American University in Cairo (AUC)**

Ahead of the fall semester of 2008, AUC left its widely renowned downtown campus and officially inaugurated a new 260-acre suburban campus in New Cairo, a satellite city about 20 miles (or 45 minutes drive) away from the downtown campus. New Cairo is a relatively new development on the periphery of Cairo comprising 46,000 acres of land with a project population of 2.5 million residents. In an effort to raise its standards, AUC’s New Cairo campus houses advanced facilities for research and learning as well as the modern resources needed to support campus life in the ever-evolving Cairo (AUC, 2017).

In the new campus’s master plan, the university mandated that the campus respect the “values of liberal arts education, the traditions of the university and its Egyptian character, and the environment of the site”, as recalled by Abdel Halim Ibrahim Abdel Halim, one of the architects of the project. This plan was designed by a Boston-based design collaborative feature Sasaki and Associates of Watertown, Massachusetts as the main architect alongside the Cairo-based Abdel Halim community design collaborative (Figure 2). The organization of the site’s land use was established in adherence to the mission and vision of the university, the community and environmental context, the physical condition of the site, and the master plan concept. The land use pattern, the distribution of buildings and shared open spaces, and the layout of the buildings relied mainly on notions of tradition compact design, the use...
of courtyards with varying sizes and proportions, and environmental studies relevant to the project with the goal of preventing or reducing negative or unwanted impacts on the environment (Figure 3).

**Figure 3: AUC Campus design – drawing from cultural heritage and climate-responsive design (Source: as indicated in individual figures).**

**Futures University**

Founded in New Cairo in 2006, Futures University’s main objective according to its website is to be one of the region’s leading university by contributing to its social, political, technological, and cultural development (Figure 4). The project features two sets of buildings including engineering schools, the administration building, the library, and offices of senior management situated off the main road, and a teaching hospital, the school of dentistry and the business administration department situated at the back of the campus.

**Figure 4: Future University, a model of dismissing environmental constraints while focusing on the formal language (Source: as indicated in individual figures).**
The primary design reference alluded to by the designer is the Coliseum of Ancient Rome, a public square regarded by Christians as a site of the martyrdom of large numbers of believers during an era when Christians were widely persecuted. Such a reference attempts to link the university’s buildings with heritage symbols while incorporating Roman building vocabulary with specific finishing materials to result in a modern aftereffect. As a response to the power of marketing without regard to architectural goals as ultimately a disadvantage of globalization, the architect was adamant to show that the university’s buildings serve as symbols of human disfigurement (Figure 5) (FUC, 2017).

![Image of Future University buildings](source: author, 2013)

**Figure 5:** Future University, a model of eclectic architectural styles (Source: as indicated in individual figures).

**Smart Village**

In 2000, the Smart Village was established by government decree number 355, with activities beginning in 2001. It is located on the Cairo-Alexandria Desert Road in the Abu Rawash area at the western periphery of Cairo. Smart Village occupies an area of 450 feddans (a unit of measurement equivalent to 1.038 acres), comprising green spaces, waterfalls, a lake, and 317 feddans for administrative buildings (Shalpy, 2012).

The first phase of the Smart Village was inaugurated in September 2003. This included a communication center, business service center, conference center, as well as technological incubators that house small businesses in the field of technology. Also on the site are a post office, a reception and meetings center, a library, and a center for electronic printing, publishing, and imaging (Figure 6). It appears that there is no thematic distribution of buildings on the site based on their functions. All buildings are modern in style with a prevalent use of glass walls and are surrounded by water and green spaces. There appears to be little to no concern about sustainable solutions (Selim, 2013).
Figure 6: Smart Village, a model of ignoring the environment through glass boxes (Source: as indicated in individual figures).

DISCUSSION OF FINDINGS

Technological Factors
Each of the three projects is evaluated based on their cooperation with global experts, use of modern technology and materials, and the use of sustainable design practices. The American University in Cairo, as previously mentioned, was designed by two teams of architects, one in Boston and one in Cairo, where each team was responsible for a group of buildings and spaces while adhering to the same criteria. Similarly, Smart Village was designed and constructed in cooperation with international companies, while maintaining local techniques. However, Futures University was designed and constructed solely and wholly by local firms.

Notably, only the American University in Cairo was adamant to adapt technology to all levels of the project while respecting the environment. In the meantime, buildings were not treated independently from their environment; in fact, buildings were viewed as collectively part of
the nature surrounding them. On the other hand, Futures University and Smart Village reveal a limited emphasis on technology. For instance, both Futures University and Smart Village used traditional construction methods and air-conditioning technologies and artificial ventilation. Nevertheless, while Futures University focused on emitting a unique image through an interestingly mixed use of materials, the buildings of the Smart Village all appear nearly the same as they all utilized similar colors and materials.

Interestingly, only the American University in Cairo appears to be designed with sustainability as a core priority. For example, on the campus, power is generated mainly through natural sources. On the contrary, the designs of Futures University and the Smart Village have given little to no attention for sustainable design practices. Both projects have simply used glass walls in abundance to expose a high-tech image.

Morphological Factors
All three projects are further evaluated based on a number of morphological factors comprising of the expression of local heritage and the contemporary adaptation of it, the relationship between function and form, and the prevalence of an international architectural style. The three projects show a display of heritage in their design. While Futures University illustrates the non-local Greek architectural styles with glass walls and stone utilized in a deconstructive manner, the American University in Cairo and the Smart Village express local Egyptian heritage with the latter relying on the Ancient Egyptian motif of the pyramid although constructed with modern materials (i.e. glass). Intriguingly, the American University in Cairo relies on the development and evolution of traditional and historical elements without directly imitating them. However, the Smart Village’s use of the pyramid, although modern, did not carry a real function. Similarly, Futures University implemented a direct replica of elements of Ancient Greek architecture also without a particular function.

In the same vein, the projects were also assessed on whether their function matched their form in terms of their facades and the materials used. Although varying degrees of heritage elements were present in the three projects, there is no particular link between the universities being academic institutions and Smart Village being a technological hub and their expression and use of cultural and heritage motifs; AUC used reinforced concrete, Smart Village used glass materials, and Futures used a mix of stone and glass.

Another criterion for evaluating the projects is the extent of their regard to international styles and trends in architecture. In the case of the American University in Cairo, there is no particular international style evident throughout the design. Futures University relied on the postmodernist school, ensuring its distinctiveness from modernist architectural features. Finally, the Smart Village features elements of repetition and typicality prevalent in international architectural styles.

Cultural Factors
The three sites in question were also assessed based on cultural factors including the advancement of the role of the architect, the accommodation of the cognitive abilities of the project recipients, and the expression of the culture. The ever-evolving role of the architect and the role of community participation and decision-making on similar projects has been a major concern since the early spread of globalization. On all three projects, community participation was completely absent and the architects maintained their role as the leading decision, although in the case of the American University in Cairo, there appeared to be an initial intention to consult with community members in an effort to maintain the local identity; however, this did not in fact come to fruition.
On the question of accommodating the cognitive capabilities of the end users of the projects, both universities appeared to do so although in different forms. For example, the American University in Cairo used a variety of finishing materials and heavily incorporated natural and diverse color schemes. Futures University used a variety of materials and metals, which gave the impression of a condensed visual momentum. On the other hand, the Smart Village relied fully on blue and white glass walls, which essentially resulted in a dull image.

More specifically, all three designs used different approaches to cultural expression. For the American University in Cairo, the university deliberately intended to uphold sustainable practice while simultaneously respect the local and traditional architecture and culture. The design revealed caution against creating a false image with the use of materials (i.e. glass walls) that are compatible with neither the environment nor the culture. In the case of Futures University, the client’s priority was to achieve marketing success, which result in a total disregard to the local traditions. However, the architect did intend to influence the psyche of the end users through the sharp mixed use of Ancient Greek and modern imagery, with a complete absence of homogeneity. Similarly, the Smart Village was also designed with a disregard to the local culture and traditions. Instead, the project placed more emphasis on emitting a whimsical image through the use of modern and global models.

Environmental Factors
The final criteria used to evaluate the impact of globalization on the chosen projects are the environmental factors. These environmental criteria include the consideration of environmental determinants and the adaptation to the project's site and location, the use of natural sources of energy, and the intention to improve the overall environmental performance. In their consideration of environmental determinants, neither Futures University nor the Smart Village placed any emphasis on their projects' compatibility with nature and the surrounding environment. Both of these projects placed the overall image of the project as their priority. Yet, the American University in Cairo's entire design philosophy was based on environmental determinants (i.e. the desert climate) from the general plan to the smallest details. Even the topographic nature of the site was carefully considered in the design of the campus’s service tunnels.

In terms of the use of natural sources of energy, as discussed previously, the American University in Cairo was keen to design a sustainable campus with natural ventilation and energy sources. On the other hand, Futures University and the Smart Village featured predominantly artificial lighting and lighting besides the minor use of natural lighting in some buildings.

Finally, only the American University in Cairo was determined to improve its overall environmental performance such that the buildings were designed to surround internal courtyards in addition to appropriately treating external facades. Conversely, Futures University and the Smart Village abandoned any design solutions contributing to improving building performance and ensuring their compatibility with the environment.

**CONCLUSION**

Contemporary Cairo does not appear to have produced a solid architectural trend or planning direction, but rather a collection of planning and architectural positions. While few correspond to the history and economy of Egypt many defy its contextual particularities. Egyptian architects appear to have immersed themselves in exploring a number of trends in search of
visual images that distinguish their work and that simulate the culture and history of the country in search for a contemporary identity. However, many fell into the trap of dealing with architecture in visual, formal, and pure functional terms and only in those terms. The search for visual vocabulary is a valid quest that should not be visualized by over simplifying the meanings that this vocabulary conveys to the public. The lack of serious studies on meaning in architecture and the overall development process together with the absence of professional discourse, evaluation, criticism and assessment studies created sufficient opportunities for experimentation and concomitantly led to the continuous emergence of erratic trends and reactions to globalization while ignoring cultural and environmental factors.

It should be asserted that current reactions to globalization are predicated on the premises of positivistic perspectives where architecture is created to establish dialogue with the self and with fellow professionals and to react to global forces and market logic, and not with the public. A balance of the architects’ preferences and those of the public is needed. Consequently, future debate on architectural globalization needs to concern itself with the memory of architects and memory of others, the perception of the professional community and that of others, the consciousness of architects and that of others, and the reasoning of architects and that of others.

REFERENCES


APPENDIX A

Globalization has long been a phenomenon of concern for researchers due to its impact on political, economy, society, and culture.

1. Generally, researchers have either been proponents or opponents of globalization as a phenomenon. From your point of view, how do you see globalization?
   a) Globalization is a conspiracy and another manifestation of colonization.
   b) Globalization is the logical evolution of information technology.
   c) Globalization does not exist
   d) Other

2. In your opinion, what is the basis or motive of globalization?
   a) Globalization is based on the movement of capital and the creation and expansion of markets
   b) Globalization is based on technical/scientific evolution
   c) Globalization is motivated by the sovereignty of one nation/society/economy over the other
   d) Globalization is based on the information revolution
   e) Other

3. Do you see a contradiction between the intentions of globalization and its reality?
   a) The intentions of globalization match its reality
   b) The intentions of globalization contradict its reality
   c) The intentions of globalization are only realized in developed countries
   d) The problem with globalization lies in the limited participation of developing countries
   e) Other

4. As a result of globalization and its impact on societies, we have seen unprecedented social mobility. How do you see the impact of globalization on Egyptian society?
   a) Globalization has caused comprehensive change on all levels of Egyptian society.
   b) Globalization has affected Egyptian society on some levels.
   c) Globalization has had a strong impact, but it has not changed society completely.
   d) Globalization has not affected Egyptian society at all.
   e) Other

5. By monitoring global trends, do you find that countries who promote globalization are concerned about the interests of other countries?
6. How do you find Egyptian society has been impacted by globalization?
   a) Egyptian society has become precariously consumed by globalization.
   b) Egyptian society as taken advantage of the possibilities offered by globalization.
   c) Egyptian society has consciously and with good knowledge adopted globalization.
   d) Egyptian has not been affected by globalization.
   e) Other

7. Culture plays a great role in the development of societies. How do you see the relationship between culture and globalization?
   a) Local cultures have been replaced by globalization.
   b) Globalization does not affect local culture.
   c) There are no longer local culture in the New World Order
   d) Other

8. Many intellectuals argue that globalization is the spread of one particular culture, specifically American culture, to the rest of the world. Do you agree with this argument?
   a) Globalization is not related to culture and identity.
   b) The aforementioned hypothesis is an exaggeration.
   c) Globalization has simply resulted in the evolution of societies where they adopt progressive models.
   d) The hypothesis is absolutely correct.
   e) Other

9. In the words of Richard Hogget, globalization is a part of the historic movement and evolution and will continue for a long time. In this context, how do you see the future of globalization?
   a) Globalization will continue to grow and spread.
   b) The future of globalization is unpredictable.
   c) Based on historical trends, globalization, like other similar global phenomena, will eventually end.
   d) The future of globalization unclear.
   e) Other

10. There is no benefit in resisting globalization or in resorting to traditions. In fact, we must engage with globalization for it is like a “train and we must ride it”. Do you agree with this argument?
    a) Completely agree
    b) Agree with reservations
    c) This argument is completely exaggerated.
    d) Progress can be achieved without globalization.
    e) Other

11. Globalization has called for one global identity transcending languages, religions, nations, and history. In your view, do you see any chances for identities to be preserved under globalization?
    a) Modernization and progress requires the merging of identities.
    b) There is no contradiction between globalization and identity.
    c) There is point in discussing identity preservation, as identity is a romanticized issue.
    d) Identity can be preserved in parallel with the spread of globalization.
    e) Other

12. In the assessment of architectural practice and its outcomes in Egypt, do you agree that architecture in Egypt is evolving?
    a) Egyptian architecture is currently progressing.
    b) Egyptian architecture is in crisis.
    c) Egyptian architecture is regressing.
    d) The status of Egyptian architecture is unclear.
    e) Other

APPENDIX B

Globalization tools have been utilized by multinational companies as well as local architecture firms who are influenced by global architectural movements vis a vis the evolving communication media.

13. El Sayed Yassin has argued that globalization is economic, political, and cultural in nature and has an impact on architectural through and architecture practice in Egypt. Do you believe that architecture in Egypt has been affected by globalization?
    a) Architecture in Egypt has not been affected by globalization.
    b) There is no globalization of architecture.
    c) Architecture in Egypt has evolved through globalization.
d) Other

14. The evolution of information technology has advanced communication between architects from across the world and has also allowed for the spread of globalization. How do you evaluate this convergence?
   a) Information technology has enhanced the knowledge of architects.
   b) This convergence has enriched architecture in Egypt.
   c) This convergence has led to the decline of Egyptian architecture.
   d) This convergence led to the spread of “nowhere architecture”
   e) Other

15. Many architecture theorists argue that Western architecture theory has been exported to the developing world but has failed, while others see that Western architecture represents the best model. In the same vein, do you see contemporary Egyptian architecture as a reflection of Western architecture?
   a) Architecture in Egypt is an exact replica of Western architecture, without any adaptation to the local environment or culture.
   b) Architecture in Egypt attempts to reconcile between the local and the global.
   c) Architecture in Egypt is evolving without the influence of Western architecture.
   d) Architecture in Egypt does not follow a specific trend.
   e) Other

16. Do you believe that Egyptian architects have overused modern materials, like glass curtains, cladding, composite aluminum sheets, without attention given to sustainability issues?
   a) There are attempts to merge between local and imported raw materials.
   b) Non-sustainable materials have been excessively used.
   c) Architects are interested in the building’s overall appearance without regard to the materials used.
   d) Modern materials are not overused.
   e) Other

17. In the Arab world, the future of architecture and its relationship with traditions has been a concern, Dubai being an example of a modern Arab city. Do you agree that Dubai is in fact a model of what modern architecture should be?
   a) Dubai serves as an ideal model for modern architecture.
   b) I am not interested in the Dubai experiment.
   c) The Dubai example has not taken into consideration the local context.
   d) Modernity and locality are contradictory concepts and cannot exist in tandem.
   e) Other

18. John Ruskin confirms that we are able to live without architecture just as we can worship without it; yet, we cannot formulate memories with it. In your opinion, how important is the historical dimension for contemporary architecture?
   a) The historical dimension is not important for architectural practice.
   b) Linking architectural practice to history may lead to stagnation.
   c) Architecture must reflect the historical dimension relevant to the place.
   d) These concepts are not important to discuss.
   e) Other

19. Do you support the architect’s freedom in using his or her creativity without limits?
   a) The architect must be free and place no bounds on his or her creativity.
   b) The architect’s creativity should only be based on the projects costs and constraints.
   c) Architectural creativity should be based on its relevance and appropriation to the local context.
   d) The most important outcome is the final image of the building.
   e) Other

20. Architecture researchers argue that, while architecture is categorized under engineering or construction science, it often falls under the Arts. In your opinion, what categorization is the most accurate?
   a) Architecture is an art and must follow the Arts streams.
   b) Architecture falls under Applied Sciences for its dominating technical and structural components.
   c) Architecture is a commercial activity subject to the laws of supply and demand.
   d) Architects falls under all the previous categorizations.
   e) Other

21. Many theorists believe that the problem with Arab architects is that they are cut off from heritage and cultural theory, which has resulted in a non-smooth transition towards modernity and globalization architecture. Do you believe that architectural theory is universal and can be applied to any building in any place?
   a) Architecture is universal and global and has no relationship with a particular location.
   b) Because of modernization, these issues are irrelevant.
   c) Architecture should reflect local realities, culture, and history.
   d) Global architecture must be developed in the local context.
   e) Other
22. The spread of multinational companies has given rise to a unique architectural style that has the potential to obliterate the architectural identity of cities. Alternatively, some argue that this global style is natural and cannot be resisted. Which view do you support?
   a) The spread of multinational firms has weakened architectural identity.
   b) Multinational firms are important for the economy.
   c) Multinational companies must maintain the architectural style of the city.
   d) Other

23. Computer technology has a major impact on architecture in the form of relying on the internet and technological tools in research and practice. Do you agree with this statement?
   a) The reliance of computer technology has led to a regression in architecture.
   b) Architects excessively use computer technologies.
   c) The use of computers has contributed or led to architectural development.
   d) Other

24. It has been noted that architectural education in Egypt has advanced in the sense that it has recently doubled the numbers of its students, teachers, and faculties. However, this growth has not been accompanied by a development of education quality where curricula continue to provide old answers to new challenges. Do you agree?
   a) Architectural education in Egypt is compatible with global trends.
   b) Architectural pedagogy has not accommodated new challenges in architecture.
   c) Architectural pedagogy has not effectively evolved.
   d) The status of architectural education is parallel to the status of other educational programs and fields in Egypt.
   e) Other

APPENDIX C

25. Yahia El Zayne argues that we science and technology are in fact properties of culture. Do you believe that concepts like values, heritage, history, norms, and culture are important to the architecture profession?
   a) These concepts are not important for contemporary architectural practice.
   b) These concepts oppose concepts of modernity.
   c) These concepts must be observed in the context of architectural practice.
   d) These are important concepts but they are not measurable.
   e) Other

26. In the words of Mies van der Rohe, “less is more”. Do you find globalization architecture to be similar or equivalent to modern architecture?
   a) Globalization and modernity are not similar.
   b) Globalization architecture is essentially the revival or modernity.
   c) Globalization is a continuation of modern architecture.
   d) Other

27. Many architects have tried to promote local architecture. How do you define this trend?
   a) Local architecture is defined by the use of simple materials and traditional methods of construction.
   b) Local architecture is defined by the use of architectural forms related to the local heritage.
   c) Local architecture is that which considers the local environment.
   d) Local architecture is defined as the construction activities that are made by specific people in a specific place.
   e) Other

28. Amos Rapoport confirms that culture is the secret for continuity through the stability of its components. With the changes that have occurred in Egyptian society as a result of globalization, how do you evaluate this change?
   a) The changes that occurred in Egyptian society are compatible with its culture.
   b) Comprehensive change has occurred throughout Egyptian society as a result of globalization.
   c) The changes are not compatible with the local culture.
   d) Other

29. What is your assessment of education in Egyptian architectural schools?
   a) Architectural education in Egypt reflects the needs of the local community.
   b) Architectural education in Egypt has placed little or no emphasis on culture.
   c) Architectural education should only be concerned with technical elements.
   d) There is a different between architectural pedagogy and culture.
   e) Other
30. Architectural criticism is a tool that is used to test the efficiency of design solutions and propose improvements. How do you evaluate the reality of architectural criticism and its role in architectural practice in Egypt?
   a) Architectural criticism is utilized in architectural practice in Egypt.
   b) Architects in Egypt pay no attention to criticism.
   c) Architectural criticism methods are ambiguous.
   d) Architectural criticism is not necessary for enhancing architectural practice.
   e) Other

31. Ismail Serageldin confirms the importance of the concepts that make up a civilization like culture, religion, identity, myths, and creativity, among other. From his point of view, this is essential for establishing a scientific basis for applying architecture in Egypt. In your opinion, why do most architects neglect the process of criticism?
   a) Criticism does not add new knowledge to architects.
   b) Criticism is a subjective process, not useful for objective decision-making.
   c) Architectural culture needs to be spread and deepened.
   d) The language used in criticism may be more ambiguous than the architectural work itself.
   e) Other

32. Global distances are quickly shrinking as a result of globalization. However, local architects have not adequately participated in this global architecture although the means of communication have been evolving. In the meantime, such global currents have impacted architectural creativity everywhere. What is your opinion about the role of foreign architects in major projects in Egypt and the Arab region?
   a) Foreign architects are involved because of their professionalism and intellectualism.
   b) Foreign architects are interested in objectively addressing projects, which is lacking from local architects.
   c) Foreign architects are resorted to as they are more technologically advanced, as reflected by their architectural works.
   d) Local architects simply do not sufficiently participate in global architectural practice.
   e) Other

33. Technology is understood to have progressed pragmatically; yet, progress relies on the community's ability to own and develop rather than import technologies. In your opinion, what is the relationship between technological development and architectural practice in Egypt?
   a) Architecture in Egypt is only associated with technology on the surface.
   b) Architecture in Egypt is limited in his construction technology capacity.
   c) What is important in architecture is the image and not the technology used.
   d) Architecture must only use local technologies, even if limited.
   e) Other

34. In attempt to merge local architecture with global architecture, architects have given rise to the concept of regional architecture. Do you believe that regional architecture offers a balanced solution?
   a) Architecture does need require such a philosophy.
   b) Architects must take into consideration the architectural characteristics of the region.
   c) Architects can achieve the appropriate balance through regional architecture.
   d) Architecture is a global activity and neither local nor regional.
   e) Other

35. Contemporary Egyptian architecture has relied heavily on the individual performance of the architects, their personal feelings, and the theoretical school they follow. Based on this argument, how do you see the architect's role in society?
   a) Egyptian architects address architecture in-depth, and not just in terms of the end image.
   b) Architects are not committed to the local society or its traditions.
   c) Architects must be committed towards their society and its traditions.
   d) These ideas are not relevant to the field of architecture.
   e) Other

36. While the globalization model has resulted in unsustainable practices and often even environmental crises, the world is now motiving towards addressing environmental and sustainability concerns. By investigating contemporary architecture and urban contexts, do you see a reflection of sustainability issues?
   a) Architecture in Egypt reflects an awareness of sustainability issues.
   b) Architecture in Egypt reflects the neglect of sustainability issues.
   c) Architects in Egypt need to develop their knowledge and culture of sustainability.
   d) The government is responsible for placing policies promoting sustainable practices.