AN APPROACH TO TEACHING AESTHETICS:
LINKING MENTAL AND MANUAL SKILLS

Nabeel Elhady and Raghad Mofeed

Abstract
Aesthetics in Cairo used to focus on the discussion of the psychological aspect and its related theories such as the Gestalt. This approach seemed that it does not address the full potential of studying aesthetics whether theoretically or contextually. Therefore, the authors of this paper proposed an alternative approach to study the subject when they had the opportunity to do so a few years ago. Naturally, they were faced by a number of challenges regarding the content as well as the context of the subject.

The authors suggested an approach that attempted to relate ‘theorizing’ with ‘observations’ as means to approach the aesthetical experience. In addition, they encouraged the students to create, make, and ‘reconstruct’ their observations in order to cultivate their sensitivity to beauty. The aim was to investigate a number of issues, namely:
- The exploration of the deep qualities of traditional architecture.
- The relevance of these traditional qualities to the making of architecture today.

This approach was first introduced in fall 2006 at Cairo University. In each following cycle, a different traditional architectural element was used to contemplate the issues of aesthetics; a courtyard, a doorway, a ceiling, etc. This paper attempts to reflect on the experiment with special concern to its first two cycles.

The paper runs three lines of inquiry in addition to the introduction that outlines the approach. The first line is a discussion of the local understanding of aesthetics and the theoretical grounds of the approach. The second is an overview of the experiment with its two phases; exploration and manifestation. The third inquiry assesses the experiment and outlines students’ viewpoint. Finally, the paper attempts to reflect critically on the experiment where a continuous process of contemplating, theorizing, making and designing is suggested to link manual and mental skills and to challenge students’ customary clichés.

Keywords
Education, aesthetics, ethics, traditional architecture.

Introduction: An approach to Teaching Aesthetics
Teaching as well as studying aesthetics in Cairo used to focus on the discussion of the psychological aspect and its related theories such as the Gestalt. A few years ago, the authors had the opportunity to introduce an alternative approach. In doing so, they were faced by a number of challenges regarding the content as well as the context of the subject.
Concerning the content, we opted for an approach that tries to combine the two approaches that Lang (2003) pointed to: the physiological and the philosophical. While the physiological approach is more tangible and comprehensible, the philosophical one is more elusive as it focuses mainly on the meaning of aesthetics and its relevance to the essence of architecture and design in general.

The other challenge arose from being interested in exploring the aesthetic qualities of local traditional architecture and their relevance to the making of architecture today. As Egyptians and Cairo residents, we were lacking solid grounds upon which to address and discuss aesthetics. This is mainly because these issues are not addressed or discussed adequately from a local point of view and especially in the field of architecture. Rather it is usually discussed through the studying of Gestalt theories, Aristotle, Plato, and other western intellectuals (Matter, 2002).

On the other hand, Arab attitudes regarding art were thought to be more practical. This view allowed aesthetics to be considered as a ‘norm of life’. Hence, meaning of art or beauty, as Abouseif (1999: 3) asserts, has to be deduced from “scattered literary and cultural statements in addition to the works of art themselves”. Thus, our approach to teaching amalgamated theorizing with observations as means to approach the depth of the aesthetical experience. In addition, we believed that, by encouraging students to create, make, and reconstruct the explored qualities, they will be able to cultivate their sense of beauty. This way of addressing aesthetics is thought of as relevant to conceptualization of object of the study in the following phases of the experiment; especially the design phases.

**Theoretical Grounds**

Abouseif (1999: 7-8) claims that “The separation between the ‘good’ and the ‘beautiful’ in the Arab culture, and the appreciation of beauty for its own sake, without commitment to religious or moral criteria” were among the main characteristics of medieval Arab understanding of beauty. Yet the linguistic and practical usage of the word ‘beautiful’ might have a different indication. The term jameel meaning beautiful is frequently used in the Koran in a moral context, referring to fortitude (sabr), forgiveness (safh), abandonment (hajr), etc (Kotb, 1995). In addition jameel is used in the Arabic language to describe both beautiful sights and acts (Mokhtar Al-Sehah). Jamal or beauty also is related to jamal or camel who was worshiped in the era before Islam and used to be a symbol of abundance, fertility and beauty (Zayoor, 1992). Husn is another Arabic term used to mean beautiful, it is derivative from ihsan that is related to good acts and is considered the highest level of belief in Islam (Bastawisi, 2004). This would indicate that the good and the beautiful are not separated at least from the linguistic viewpoint.

From the practical viewpoint that is still connected to the linguistic one, art or fann points to good work or craftsmanship, hence fannan or artist is the creative maker. Understanding art as good act can be related to Sufis who were considered the main contributors in acts of buildings and related craftsmanship in Cairo at the time when Zainab Khaton and other selected pieces were built (Raymond, 1984). Sufis believed in three basic principles of undertaking of any good act; imagination, taste and patience (Shemail, 2006). It is also important to note that Ihsan is the Islamic ethical principle that denotes attaining beyond...
normal obligations; it includes “itkan” or precision, and perfection (Elhady, 1997).

Aesthetics, then, was introduced through the course from a perspective where architecture can be seen as the vessel that embodies the underlying qualities in some pieces of architecture in Cairo. In this view, beauty is not separated from the Good or from life, so contemplating is an essential activity to deduce the hidden qualities (AbdelHameed, 2001), (Scruton, 1979), (Eco, 2004). Contemplation, in this regard, is a way to perceive and to reflect; to examine and to theorize. (Blomstedt, cited in Pallasmaaa, 2005: 233).

Architecture is a process of exploring where the creation of good or beautiful piece of work becomes a constant matter of making choices between polarities. In this view architecture can be seen as an ethical process. But as this process aspires to the beauty, aesthetics becomes the dominant or the superior. We here agree with Wilson in his view that the task of architecture is to mediate the artistic domain and the real life domain and to “draw them together and to make of that very occasion an act of discovery, a revelation about a way of framing the daily activities and celebrations and rituals of society in ways that offer them both place and identity.” (Wilson & Stonehouse, 2000: 45).

**Exploration and Manifestation**

In light of the previous understanding of beauty, we sought an object that holds for us, the students and Cairo citizens what can be collectively representing an intensive level of beauty. Through our visits and wandering in Cairo, we came across a number of what we thought of to be beautiful buildings, for instance Zaynab Khaton house, Khan Alzaraksha, Ibn Tulun mosque, etc.

When this approach was first introduced, in fall 2006 at Cairo University, the traditional courtyard of Znab Khaton house was used as a window to contemplate the issues of aesthetics. In the second cycle, the doorways were investigated along Mohamed Abdu street where number of buildings were selected as seen in (Figure 1). Each following cycle was an opportunity to investigate a new element in the rich context of Cairo and to dive into its latent qualities. Amongst these elements were the courtyard, the doorway, the ceiling, and the skin.

The course was organized to comprise two main phases; exploration and manifestation. While the first was concerned with contemplation and observation to deduce the underlying qualities of the investigated element, the second focused on embodying and manifesting these qualities through modeling (Figure 2). For us as well as our students, the manifestation phase was more experimental where number of approaches was introduced; the reconstruction, the deconstruction and the direct embodiment. These approaches were inclined to be a design activity especially in the first two cycles of the course that we will focus on through this paper.

**Exploring the Qualities**

The weekly classes of the course were moved, as much as possible, to the site itself to increase the sensitivity of our students to the place. In the first weeks of the course, students were asked to run deep investigations and to contemplate the investigated element. Through contemplation, “the richness and multiplicity emanate from the things themselves” as Zumthor (2006, 31) asserts.
Our tools in this phase were a sketch book and a camera, yet the sketch book was more stressed as while sketching the unification between hand and thoughts has a great chance to occur. Pallasmaa (2009) clarifies that through sketching and drawing three different sets of images are produced; the drawing image on paper, the visual image in mind and the muscular memory of hand. In that sense, sketching is not only a kind of expression but rather a process of thinking and reflecting (Figure 3).

The continues process of visiting the sites, making sketches, writing comments and feelings, discussion and brainstorming as well as lectures resulted in some general observations or characteristics of what can be seen as aspects of beauty in the various subjects we investigated. While in each year we got a different set of observations and impressions, yet some common characteristics can be observed such as: layering, subtleness, ambiguity, calmness, grace, and humility. These results of previous contemplation can be seen in the following:

Figure 1: The selected cases for investigation in the first two cycles: In 2006 the courtyard of (1) Zainab Khaton house. In 2007, the doorways of: (2) Rab’a Kayetbay, (3) Sabeel Kayetbay, (4) side gate of Abouldahab mosque, (5) Sabeel Abouldahab, (6) Wkalet Al-Ghouri, (7) main gate of Abouldahab mosque, (8) Khan Alzaraksha. After (Wamer, 2005). (Source: Authors).
a) Layering

When looking at the architectural elements that exist in the courtyard or in the doorway there is a sense of detailing that takes you from certain level to another in a continuous way (Figure 4). This sense of connected layers of things unfolds at the same time to the observer other things and qualities or other connected worlds. Hence, suggesting multiple readings and interpretations. Such richness of detailing calls for nearness, tactility, and slowness where “tactile sensibility replaces distancing visual imagery through enhanced materiality...and intimacy.” (Pallasmaa, 2005: 323).
b) Subtleness
Look at how openings meet their wall, and note how are very fine detailing is used to declare this relation. Also note how stone are cut in different sizes and forms, how wood is treated in doors and in windows. There is a sense of subtleness that means in a way that builders were very sensitive to different situations, locations, and materials (Figure 5). This reminds us with Bryggman’s (1991: 279) understanding of beauty as the “logical result of having everything in the right place.”

Yet this doesn’t mean a case of perfection, instead there is also odd relations that might be a result of dealing with the accidents that took place during the building in a clever way and turning them into meaningful acts. This sense of spontaneity and imperfection is not only sign of life but source of beauty (Ruskin, 1865; Pallasmaa, 2005).

Figure 4: Examples of layered details, from left to right: Inner view of the main Mashrabia overlooking the courtyard of Zaynab Khatoon, Photographed by Ne’ma Hisham 2006. Doorway detailing of the Sabeel and Tekyat Abouldahab, photographed by Rami Osama 2007. (Source: Authors).

Figure 5: Examples of the clever dealing with material. From left to right: Stone detailing at Zaynab Khatoon courtyard. Photographed by Raghad Mofeed 2006, Mukamas at Abouldahab mosque, photographed by Rehab Zahran 2007. (Source: Authors).
c) Ambiguity, mystery, secrecy.
The sense that there is something hidden or concealed can be noticed whenever you look in the courtyard or through the doorway. The lattice structure of the Mashrabiya, the way you enter the courtyard, and the scale of the gate, even if it is large, all reinforce this sense of ambiguity (Figure 6).

The investigated elements simultaneously veil and unveil, simulate and dissimulate and this is part of the pleasure they create. They work, in Tschumi’s (1996) term, as a ‘mask’ that provokes number of meanings and interpretations yet never discloses reality. The doorway, as a mask, works in a similar way to the veil or hejab of Muslim women. It also remind us with Sofis’ veils or hojob that separate man from the ultimate truth.

d) Grace and glory
In the court yard there is a sense of glorifying the sky in the way by which the court surrounds and ascendsto it (Figure 7). This glorification that some considers as a condition of architecture (Wilson & Stonehouse, 1992) might have a connection to the genesis of the courtyard as it came to being in Sumer. The universe to the Sumerians was mainly heaven and earth. The mythology says that they were united until ‘Lil” which is wind, breathe, and spirit came and separated them. The courtyard became the place where they come together again (Ujam, 2006).

e) Calmness
When entering the court we and the students observed this overall calmness. You feel offended when somebody raises his voice, as if the court yard telling you to be quite. Calmness here is not the mere absence of sound, but an “independent sensory and mental state.” (Pallasmaa, 2005: 305). One might think that calmness is derived not only form profound sense of stability of elements and how they relate to each other, but it is also a result of a sort of slow rhythm that relates the objects. It may be also noted in the slow rhythm of Arabic music and
azan (Figure 8). This calmness is what Day (2004) calls the healing silence. To him this was one of the greatest qualities of environments around us. It is not death; rather it is the sound of resting where you are hearing the sounds of your body.

d) Humility

Objects in the courtyard/doorway are not striking in the first instance. Instead they look as they are good neighbors to each other (Figure 9). This creates a sense of harmony where cordiality is the law (Mekdashi, 1992). Cordiality is considered a governing principle not only in the Islamic art but also between Muslims, where difference is a source of harmony rather than clash. Such kind of harmony could be described as a fragile structure or image. The strength of this fragility is of adopting “a posture that is not aggressive and dominating but tangential and weak.” (Pallasmaa, 2005: 328).
Manifesting the Qualities

In the second phase students were asked to manifest the qualities they previously observed. Two main approaches were employed during the presented two cycles; the first is the reconstruction approach which was concerned with regenerating the observed qualities in the original building in a new situation. The second approach can be thought of as a deconstruction approach, which was concerned with the rethinking of the existing elements while maintaining the same qualities. In that sense, the two approaches were inclined to be a design activity where reaching a new object was main focus. Sometimes, students were asked to directly embody the original qualities and elements in a reduced scale. This approach was incorporated parallel to one of the previous approaches to raise students’ sensitivity to both qualities and elements.

The reconstruction approach

In the first cycle, fall 2006, we adopted the reconstruction approach. Each student was asked to create his/ her own courtyard, named after his/ her family, based on the qualities learned from Zaynab Khaton courtyard. The students were free to choose any medium they can think of. It can be certain material, color, covering or otherwise. This exercise aimed at investigating the possibility of creating contemporary houses of deep aesthetical quality, and hence further investigates on the nature of beauty in architecture.

The exercise ended up with various proposals that in one way more concentrating on the formal aspect of the old courtyard. Few yet were in there way to touch on the qualities of beauty and were able to propose a tart of creative ideas. There were three points emphasized in the students’ proposals; the first was the ground of the courtyard (Figure 10). The second was the openings of the courtyard (Figure 11), and the third was the Roof of the courtyard (Figure 12). Samples of these experiments are outlined as follows.

The House of Creativity

In this experiment the Ground floor of the house was suggested to be a creative workplace for an architect. In doing so, students proposed a dynamic floor that was inspired by the reflection of the inner facade on the ground in a rainy day.
Students thought of re-introducing this quality while using modern techniques such as the hologram. Four layers were suggested to create a dynamic and changeable floor pattern based on the Islamic geometric patterns. They were, from bottom to top, a solid Islamic geometrical pattern, a hologram display of arts, a hologram blocking patterns, and a transparent walkable surface, (Figure 10).

The House of Mystery

In this experiment students thought of re-introducing the veiling effect of the Mashrabiya with modern techniques and materials. They suggested a mask of smart vertical glass panels to cover different parts of the inner façade.

The House of Light

Inspired by the Islamic geometric patterns and the mystery of the original house, students created a dynamic shed of two layers. The spacing between the two layers varies all the day creating a mysterious atmosphere where a
dynamic mesh of shade is laid on the floor and walls of the courtyard (Figure 12).

**The embodiment and deconstruction approach**

Fall 2007, was our second cycle, which focused on exploring the doorways of a number of historical buildings, see (Figure 1). In this cycle, Students were asked to build a 1:10 or a 1:20 white foam model to embody the observed qualities of the doorway. Through this phase, students were given the chance to think, imagine, experience and appreciate the challenges and ideas that exist in these specific conditions of buildings of quality. How to build a model of the mukamas, the mashrabia, or to express the texture, the striped stone “ablak”, was central question to each group. The students made a number of attempts and discussed it with the professors regarding how they convey or capture the sense in the original building. Not all the attempts were successful yet the importance here was in the attempt and the thoughtful efforts regarding the qualities in the building elements. Some of final models as shown in (Figure 13) clearly reflect this process.

These qualities were further looked at and rethought an exercise where the students were asked to rework the original doorway into a contemporary doorway. As in the courtyard experiment, the new doorway was to be given a name, yet the approach this time was intended to be more related to contemporary architectural theories. Theoretical grounds related to deconstruction as a philosophy and practice were introduced in addition to some techniques such as; dispersal, unfolding, sliding, scaling, etc.

Through this phase, students presented number of alternatives, yet as the exercise show the majority kept some traces of the original doorway, which did not necessarily lead the way to exploring and reinterpreting the original qualities of their case study. The following samples are some of the students’ ideas.

Figure 12: The House of Light (Nour) is an example of re-introducing the roof of the courtyard. A model by: Sara Abdoulaah, Ammar Yasser, Mennatollah Mohamed. 2006. (Source: Authors).
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The Gate of Paradise
In this experiment, students were committed to the idea of sublimity that they observed in the doorway of Sabeel Abouldahab. They thought of reintroducing this quality through manipulating the form of the mukamas. By means of magnification, the mukamas became the gate. It is a kind of binary opposition, where the detail became in the position of the whole. In other alternatives, students used slicing, dislocation, and explosion techniques to lighten the mass of the doorway (Figure 14).

The Ablak Gate
This group of students was influenced by the ablak order that they found in the doorway of Sabeel Kayedbay. They thought of reintroducing it in a form of recessed and projected horizontal layers. These layers were cohesive at the base of the building yet dispersed at the top. In another alternative, that is more conservative, students filled the recessed layers with identical mokarnas units (Figure 15).
The Shadow of Time
In this experiment the dynamism and layering qualities that students observed in Khan Al-Zaraksha were reintroduced through repetition. First, the surface layer of the doorway of the Khan was extracted then its shade was traced along the day. These traces of shade set the order for self similar shapes of the original doorway to be repeated. Through the exercise, students tried different materials to express the deliberate qualities. While white foam was thick and rigid, using copper wires of different thickness gave a fair sense of dynamism and movement to the new gate (Figure 16).

The Echo Gate
For a group of students, the doorway of Sabeel Kayetbay represented an incessant narrative that tells the interplay between in and out, dark and light, ups and downs. For them, this eternal dynamism was attributed to the broken silhouette of the gate and the double fold of doorway zone. In this view, the broken silhouette was taken as a starting point. Then it was amplified, repeated, and vanished to form a three folded doorway. The new gate became an echo of the old one in a very abstracted way (Figure 17).

Assessing the Experiment
By the end of each cycle we used to meet our students in a more relaxing environment to reflect on our experiment. Reflections took the form of a written questioner in addition to an open discussion. This feedback helped us to develop our approach through the years. In the first two cycles, the results of the questionnaire indicated that the majority of the students, around 80% enjoyed the experiment as a whole. A fair number of them, around 55%, found the assignments an opportunity to promote their imaginative and creative abilities. In 2006, when we applied the reconstruction method, 60% of the students found the approach they applied
Figure 16: The multiple trials that students did to express the qualities of dynamism and layering of the doorway of Khan Al-Zaraksha. Models by Reham karam & Shaymaa Mostafa, 2007. (Source: Authors).

Figure 17: The broken silhouette of Sabeel Kayedbay was unfolded and amplified to create an effect of infinite. Done by: Ahmed El-Hussieny, Shady Mohamed, Ramy Ahmed & Mostafa Salem, 2007. (Source: Authors).
is relevant to design and could help them to generate contemporary designs laden with deep qualities. Yet, in 2007, when the deconstructive approach was applied, only 30% of the students appreciated the approach. This may have to do with the nature of deconstruction itself or the multiple phases they went through that year.

The open discussion with the students pointed to some issues. We will focus here on three issues that we would like to discuss in relation to the broader environment of design learning, which are distortion, confusion and contradictions. The first issue arose from claim of number of students who considered their design attempts to reproduce the investigated quality were in themselves a kind of distortion of the original qualities. They wished if we worked on a modest space rather than a beautiful one, so their designs would solve the problems of the original space hence generating beauty. This way of thinking reflects the reformist attitude that students are used to adopt through design studios. Being in a place of value seemed for some problematic in two ways; first it implied the absence, or at least scarcity, of weak points to build their designs on, second the existing situation they deeply contemplated was so powerful that they couldn’t imagine other solutions. This may has to do with the emotional factor and the kind of relation they had with the building.

The second arose when some students expressed their confusion about the nature of the course and whether it is about design and not learning aesthetics. For us this has to be understood in the wider context of the design education in Cairo University. While in most design studios students are asked to make site visits and analysis, such investigations doesn’t exceed the physical components of the site. The latent qualities of the place, the impressions, and the non physical values are not deeply investigated. Students are trained to deal with physical aspects; they are not trained to sense, to contemplate, or to live the place before introducing their designs. In that sense, students were confused, for them contemplation is not related to design activity, rather it is more related to aesthetics as working with values is not deeply introduced in their design studios.

The third issue is concerned with the contradictions that some students thought of between reconstructing the courtyard/ the doorway while maintaining the original qualities. For them it was difficult to imagine reproducing qualities apart from their original characteristics; color, material, texture, and even age. For us it was about how to learn to identify qualities and then how to incorporate these qualities in a contemporary situation. This was the most difficult for the students to handle as they associated the qualities with the forms materials, age, and other aspects of the original building.

Reflections: Aesthetics to Design

The exercise was first introduced to encourage students to be more sensitive to beauty. Yet, this proved to be more difficult and required more time than what was allocated. In the following years we decided to focus more on the understanding and embodying of the observed qualities. We thought that the second part of the exercise which concerns itself with reintroducing the qualities in a new situation can be more effectively addressed through a design course. What we suggest is a kind of splitting the experiment into a theoretical course for a studio
course. We think that the approach we adopted in teaching aesthetics where observations, making, theorizing, and designing became continuous with no clear cut could be relevant to the design realm in two ways; it maintains a contentious dialogue between intellectual and manual skills in one hand and keeps the tension between risk and certainty in the other.

For the design activity such dialogue between mental and manual skills is crucial; the unconscious collaboration of the eye, hand and mind fuse into a unified and singular response. From this point the action of the hand and thought lose their independence and turn into a singular and subliminally coordinated system of reaction and response.” (Pallasmaa, 2009: 82).

Yet, observations as most students are accustomed to in design course are bound to the eye. Instead we opted to a multisensory approach, where various tactile, olfactory and acoustic qualities were deeply investigated and linked with its physical characteristics in one hand and the emotions and feelings it evokes in the other. During observations students were given a chance to extend their understanding of architecture beyond theory. Through layers of contemplation and discussion, students were not only able to reach a deep level of philosophical thoughts but also to link them with tangible elements and treatments.

The multiple hours of concentration to reach the essence of objects, while not losing connection with reality, enabled students to pass through an actual experience rather than the abstract understanding of theory. Through contemplation theory and practice are linked and a balance between thoughts and reality is approached; a balance that most design studios seek to maintain.

For a considerable number of students, the relation between theory and practice is turned into certain clichés. We used to observe such clichés in students’ proposals when, for instance, tradition is reduced to arches, stone, rough texture, etc. in light of that, the exercise we introduced intended to challenge this safe way. It challenged the association between the quality and a precise shape through reintroducing it in a new situation with new materials and techniques. Instead of the safe way students were pushed towards risk.

As design is always about searching for something that is unknown in advance, it lies mainly in the category of ‘risk’ (Pye, 1995). Yet working on the edge of risk would encourage students to tolerate uncertainty, vagueness, and open-endedness, it would also encourage them to experiment novel structures, forms, and materials instead of the safe way of concretizing a preconceived idea.

What we suggesting here is an approach that links tactile and mental skills through a continuous process of contemplating, theorizing, making and designing. This approach is engaged with reality or specific qualities. Moreover, it can be seen as a continuous investigation and exploration into one of the essential aspects of architecture, and in doing that it encourages future architects to cultivate a sense that can help eventually in making intensely humane objects.

References
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Nabeel Elhady

Nabeel Elhady is a professor of architecture and practicing architect. He holds a Bachelor of Architecture with honors from Cairo University where he was also awarded the Masters of Architecture and then the Doctorate of Architecture in 1997. He was a fellow of Architectural Association in London 1992/93 and a visiting scholar at the University of California at Berkeley in the years 1994-95. Currently he is an Associate professor at Cairo University. In addition, he initiated and organized (through the architectural dept. at Cairo university) the annual architectural students’ competition. Besides the academic responsibilities he has a private practice.
named “noon” since 1998. Through the projects undertaken by the office, continuous attempts are made to blend theories with realities in order to bring about architecture that respects humanity and nature.

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Raghad Mofeed
Raghad Mofeed is an Associate Professor at Cairo University and a visiting lecturer in other Egyptian universities. She graduated with a Ph.D. from Cairo University in 2000, and has been awarded the Excellence prize of Post Graduate Studies and Researches from (CAPSCU) Cairo University. Between 2002 and 2004, she was a corresponding editor of Nexus Network Journal: Architecture and Mathematics. She undertakes research in contemporary Egyptian practice, architectural education, architectural criticism and Aesthetics.