A Thesis in
Architecture
by
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ABSTRACT

Textile artifacts act as barometers to trace the ever-evolving, and often-conflicting, identities and rituals of a society. The intersection of culture and contemporary architecture through textiles is most evident in museum settings. Developing display techniques and architectural venues for historical textiles in museums is to be achieved. Hence, an architecture that transpires in the present while participating in the rendition of the past is reconsidered.

A study of the textiles that prospered throughout the Egyptian timeline belonging to the Pharaonic, Ptolemaic, Roman, Byzantine, and Islamic epochs, is conducted. Analysis and critique of three nineteenth century textile theories - by architects John Ruskin, Gottfried Semper, and Owen Jones - are carried out with the purpose of generating a more communicative, non-traditional approach to textile representation. Each of these theorists has a drastically different approach of relating textiles to architecture, to the very initiation of civilization, and to other forms of arts and ornamentations respectively. From the ideologies of the authors, one could assert that the specificities, techniques, and tales of the textiles are those which communicate their significance and meaning. Revealing textile semantics would enable new ways of refining and developing their displays. The haptic dimension is a factor if considered, many textile characteristics would be revealed. These tactile qualities are unfeasible to discern just through visuality. Consequently, the current role and the architecture of the museum are challenged.

Once textiles’ subject-related matters are answered. The larger architectural milieu is then considered, which brings space syntax into discussion. The spatial discourse and adjacencies of textile exhibitions shape the experience of visitors. Through the different spatial typologies and genotypes, museums are categorized into two broader models:
“congregational” and/or “organizational.” The spaces that constitute the whole classify a museum archetype. Textiles preservation and conservation techniques as well as museological practices are also introduced.

Through the focus on the Egyptian inventory in the two case studies - The Egyptian Textiles Museum in Cairo and The Metropolitan Museum of Art in New York (MET) – the spatial layouts, architecture, display techniques, as well as lighting strategies of the exhibitions are studied based on the theories developed throughout the research. As curation processes and museum management strategies may differ from one institution to the other, especially if from different cultural backgrounds: Western vs. Eastern, they are further explored through personal interviews with curators from each institution. The differences and similarities in the two case studies are then assessed through a comparative analysis. Moreover, a proposed series of textile exhibitions as an addition to the MET is used as a test design to further explore some of the discussed theories.

Beyond the technical preservation and conservation measures, the concept of whether textile exhibitions should function as blank vessels of history or as living artifacts that reflect the contemporariness of existence through the translation of the subjected culture is debated. The thesis concludes with summarizing the concepts and findings developed throughout the study. The resulting outcome - guidelines to be employed when designing textile museums - focuses on elucidating design characteristics and museum practices that translate and manifest textiles through an architectural creation.
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Finally, I would like to give a special thank you to my friends and my family, especially my grandmother Ebtisam El Attar, for being my every day ceaseless supporter and comforter.
Chapter one defines the thesis premise followed by a timeline through the history of Egyptian textiles as well as defining the language and terms employed throughout in order to appropriately communicate the thesis intent. In this chapter, a breakdown of the thesis by chapters is provided through a record of the questions investigated, proceeded by significance of research, and lastly the research methodology.
1.1.0 THESIS STATEMENT

Architecture—through its inherent interrelationship with textiles—is the constitutive element competent of translating the cultural and historical textile peculiarities and semantics, while simultaneously homogenizing them through a contemporary creation.

Textiles are an integral part of the Egyptian material culture. Their representation reflects the subjected history and rituals. The intersection of textiles, architecture, culture, history, as well as contemporariness is retrieved in a museum environment. On account of the many conflicting identities found in this setting, architecture is the only entity proficient of unifying the whole in a contemporary locale while simultaneously manifesting the contrasting qualities of the parts. Hence, the position and architecture of the textile museum are challenged.

The ability of contemporary architecture design to decipher a culture and reinforce defining historical features trough representation and form is reappraised. This thesis aims to establish aspects of display spaces and their compositions in order to transcend their current role as vessels for historical artifacts and to function as embodiments of the evolving cultural identities. This is achieved by reevaluating how architecture contributes to the pattern of reinforcing certain defining features of a culture.
1.2.0 BACKGROUND: EGYPTIAN TEXTILES TIMELINE

The following walkthrough of the Egyptian textiles timeline serves as an introduction to fabric materials of substance in each era and the reason behind their significance. The emergence of the particular types of textiles is a resultant of different political, economic, and socio-cultural conditions in each corresponding epoch. Egypt possesses an elaborate inventory of unique indispensable textile masterpieces, which best represent its different dynasties. In this context, textiles are considered a trace of the cultural development through history. “The artistic scrutiny of these treasures, apart from the creativity of manufacture and the remote times they belong to, concludes that they represent a logical sequence of the developments of arts and societies during its rich historical eras” (Selem 4).

The textile industry in Egypt has been established since the Neolithic era, hence since the emergence of its civilization. It continued to prosper during the Greek, Roman and Christian eras. It also had a great leap during the Islamic period especially in the carpet industry. The development of Egyptian textile timeline is easily traced chronologically through its production along the Pharaonic, Greek, Roman, Coptic, Iranian, Turkish, Umayyad, Tulunid, Ayyubbid, Mamluki and Ottoman periods. Textiles are still manifested in the contemporariness of the Egyptians’ every day lives (Selem 6).

The following timeline (FIG.1) represents the periods where valuable inventories of textiles have prevailed through history. It is not an inclusive timeline, but rather an exclusive one. Some of the periods are omitted such as the French and British occupations, for example, as few and insignificant textile collections were found.
Pre 3000 B.C - 304 B.C
Pre-historic & Pre-dynastic (Before 3000 B.C)
Old & Middle Kingdom (3000-1600 B.C)
New & Late Kingdom (1600-304 B.C)

304 B.C - A.D 395
Ptolemaic Period (304 - 30 B.C)
Roman Period (30 B.C - A.D 395)

A.D 395 - A.D 647
Council of Chalcedon (A.D 451)
Death of Muhammad (A.D 632)

A.D 640 - 1517
Caliphs of Medina (A.D 632-661)
Umayyad Caliphs of Damascus (A.D 661-750)
Abbasid Caliphs of Baghdad (A.D 750-1258)
Tulunid Governors (A.D 868-908)
Fatimid Dynasty (A.D 969-1171)
Ayyubid Dynasty (A.D 1171-1254)
Mamluk Dynasty (A.D 1254-1517)

A.D 1882 - Present
Modern Egypt
Khayameya (oriental print)
Cotton

Pharaonic/Ancient Egypt
Linen
Papyrus
Wool
Basket Weaving
Pharaonic Depictions

Ptolemaic & Roman
Wool
Silk Tunics

Byzantine
Died Wool
Fragmentary Tapestry
Christian Tunics

Islamic
Silk
Caligraphic Inscriptions
Embroidery
Full size Tapestry
Carpentnery

FIG.1 TEXTILE TIMELINE
**CHRONOLOGY** (Thompson, xxiii)

Pharaonic and Ancient Period

<table>
<thead>
<tr>
<th>Period</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-historic and Pre-dynastic Periods</td>
<td>Before 3000 B.C</td>
</tr>
<tr>
<td>Old Kingdom and Middle Kingdom</td>
<td>3000-1600 B.C</td>
</tr>
<tr>
<td>New Kingdom and Late Period</td>
<td>1600-304 B.C</td>
</tr>
</tbody>
</table>

Ptolemaic Period

<table>
<thead>
<tr>
<th>Period</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>304-30 B.C</td>
</tr>
</tbody>
</table>

Roman Period

<table>
<thead>
<tr>
<th>Period</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>30 B.C – A.D 395</td>
</tr>
</tbody>
</table>

Byzantine Period

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Council of Chalcedon</td>
<td>A.D 451</td>
</tr>
<tr>
<td>Death of Muhammad</td>
<td>A.D 632</td>
</tr>
</tbody>
</table>

Islamic Period

<table>
<thead>
<tr>
<th>Dynasty</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caliphs of Medina</td>
<td>A.D 632-661</td>
</tr>
<tr>
<td>Umayyad Caliphs of Damascus</td>
<td>A.D 661-750</td>
</tr>
<tr>
<td>Abbasid Caliphs of Baghdad</td>
<td>A.D 750-1258</td>
</tr>
<tr>
<td>Tulunid Governors</td>
<td>A.D 868-908</td>
</tr>
<tr>
<td>Fatimid Dynasty</td>
<td>A.D 969-1171</td>
</tr>
<tr>
<td>Ayyubid Dynasty</td>
<td>A.D 1171-1254</td>
</tr>
<tr>
<td>Mamluk Dynasty</td>
<td>A.D 1254-1517</td>
</tr>
</tbody>
</table>
1.2.1 PHARAONIC AND ANCIENT PERIOD

During the Pharaonic epoch, linen textiles gained extensive renown in the ancient Near East due to their smooth and soft texture as well as their superior quality. “The weaving of linen tabby was the traditional native textile industry in the Pre-dynastic and Dynastic Egypt” (Thompson1). During the New Kingdom, linen tabby textiles were decorated by “interwoven tapestry-woven patterns in colored wool” (Thompson 2).

Garments and textiles were among the most precious gifts between Egyptian Pharaohs and Royals of the ancient world. Linen used to be inherited in families due to its significance and high quality. “In the tomb of Thutmose IV (KV 43) of the 18th Dynasty of the New Kingdom (c.1400-1390 BC), a piece of textile was found bearing a cartouche with the name of his father Amenhotep II, and part of his grandfather’s name Thutmose III” (Selem 6).

Textiles weren’t only used as a luxurious material for the royals and wealthy. They were also used to pay taxes that were due to the state, while the government also used textiles along with other goods such as crops, oil, bread, and meat to pay the wages of employees and workers.

The ancients mastered the process of spinning, weaving, and dyeing especially of flax fibers during the early periods. They were pioneers in various textile-making techniques such as plain weaving, tapestry, and looping. Embroidery had also been excelled, especially of the royal textiles using beads, colored glass paste, and golden ornaments.

People’s dressing style differs relative to the culture of certain regions. Gottfried Semper, who wrote extensively about Egyptian textiles, had postulated the relation between architecture and clothing style or costumes. For instance, traditional costumes and accessories led to the
design of “structural symbols”, molding of column capitals. The lotus-capital columns were derived from the lotus blossoms that the Egyptian ladies used to place in their hair or behind their ears as part of their ensemble (FIG.2-5) (Style 238).

1.2.2 PTOLEMAIC AND ROMAN PERIOD

Alexandria, the capital of Egypt at that time, realized a boom in the textile industry. Roman Emperors founded factories during the period (30 B.C - A.D 325). These factories were located in special districts of Alexandria where women wove and embroidered royal garments. Such apparels were simple in their construction, but sophisticated in their designs. They were plain wool, silk, or cotton cloths, which Greeks and Romans used to warp around their bodies forming complex drapery designs.

Typical apparel in the Roman Republican times was a plain tunic. For affluent Romans, they wore the same type of garment except larger and with “tapestry-woven” adornments. Such tunics remained the standard among the Romans in the late periods of their reign in Egypt. In later periods such as the Christian/Byzantine period, costumes developed further in the extent and alternation of their decoration (Selem 6)

1.2.3 BYZANTINE PERIOD

The Byzantine period was characterized by the development of tapestry techniques which resembled embroidery rather than weaving. Coptic textiles amply advanced during the Byzantine period. What is frequently referred to as the “Coptic” period in Egypt is a cultural phase rather than a historical one (Thompson xxiii). The stylistic approach of Coptic art and textiles first appeared in the late Roman period in Egypt and continued into the Byzantine period where it reached its peak. Coptic textiles were celebrated for their colorful embellishments and three-dimensional
aspects (FIG.6&7). The completion of their designs was accomplished through the distribution of different color tones using dyed wool threads. An analogy is then drawn between the art of pattern representation and textile colored interwoven fabrics. Wool required a simple dyeing process. The material retained its intended brightness for a prolonged period of time. This textile technique was produced in special workshops known as Ergasteria spread throughout the northern and southern cities of Egypt of this era including Alexandria, Karanis in Fayyum, Akhmin in Sohag, and El-Sheikh Ibada in Minya. Other more spacious workshops were specialized in wall hangings such as curtains and hung cloth for decoration. Hung textiles occupied a significant position in palaces of the wealthy, churches, as well as government buildings. Among the most prominent types of Coptic textiles found in museums nowadays are Christian tunics, fragmentary and whole hangings, as well as cushion cloths and other textiles used for decoration purposes. An abundant quantity of Coptic garments were found in tombs due to the custom of burying the dead fully clothed along with other forms of textiles added to the wrappings of the body in the Christian era. Such tradition had increased the numbers of preserved historic textiles.

1.2.4 ISLAMIC PERIOD

Following the Arab conquest starting A.D 640, the textile industry became even more prominent since soft cloth was one of the most significant characteristics of the Islamic era. More importantly was Egypt’s production of the Kiswa of Kaaba. The Kiswa is the cloth covering the Kaaba, a cube-shaped building in the heart of Islam’s most sacred mosque, Al-Masjid al-Haram, in Mecca, Saudi Arabia. It was and still is viewed as the prime holistic symbol of Islam. Factories were built and designated only for the manufacturing of the apparel of the Kaaba. Whole sets of fabrics were sent from Egypt to the holy lands. Cultural and festive-processions attended by the officials of the state, even the Caliph,
were held in Cairo as the Kiswa departed to Saudi Arabia (FIG.8-10). These practices remained active in Egypt till 1960’s.

As the Islamic State acquired more importance, Muslim Caliphs and Emirs started to pursue luxury in their quotidian lives. It was most obvious in their style of clothing and high-end silk fabric garments. This was not the case in earlier periods as during previous Islamic eras of strictly guided Caliphs, religious laws forbade the use of silk as a garment material for men. Muslims were required to live moderately away from lavishness. In later periods, Emirs in the Islamic State paid special attention to the textile industry where the government managed weaving factories known as “tiraz houses” at the time. The term “tiraz” was first used in Egypt to describe decorative inscriptions on fabric. However, it is originally a non-Arabic word that refers to embroidery. Later, it was used to describe government owned factories, which produced embroidered textiles.
FIG. 8 KAABA KISWA TEXTILE

FIG. 9 TEXTILE PROCESSION

FIG. 10 CAIRO FESTIVES
1.3.0 THESIS LANGUAGE: DEFINITIONS

1.3.1 DEFINITION OF CULTURE

Theorists have struggled through history to define the term “culture”. The word was first developed to describe the “tending of natural growth” (Gerard 87). Culture, in this sense, was the process of adapting nature to fit human needs. It later was broadened to include human evolution. Ultimately the understanding of culture emerged as “an abstract process or the product of a process with definite class associations” (Mitchell 104). Thus, culture became a concept used to distinguish and classify. By the 19th century, culture was used to define three areas: the process of rational, transcendental, and artistic development; the lifestyle of a people, a time period, a certain class or humanity in general; and the creation of artifacts and intellectual practices. As much as the stated three domains look segregated, they are often conflated. There is a strong yet complex relation between human development, and between the works of art and intelligence. Thus, culture is not meant to account for only these three issues, but also the relationship between them and the reasons behind their being. Culture accounts for economic, social and political practices, language, education, norms, traditions, architecture and yet much more. A possible elucidation of culture in the 20th century is “a necessary abstraction for understanding the incredible suite of differences that mark the world” (Mitchell 106). There is no set of criteria that could possibly encompass culture.

1.3.2 DEFINITION OF MUSEUM

The term “museum” was first introduced in the Renaissance to refer to private collections. It involved a different experience from today. Artifacts were arbitrarily displayed on walls, ceilings, cabinets, and drawers of one
or two chambers. The objective behind these so-called “Cabinets of Curiosities” was to surprise and delight. In this case, the crowd interested in these objects had to find the special ones that caught their attention to make their own connection and interact with them (Newhouse 9). Forms of these chaotic and eclectic characteristics still exist in museums of the 21st century.

In the 19th century, particular museums acted as “temples of cultures” meaning that they imitated the original settings in which an artifact was placed in order to provide an equivalent framework and ambience for the piece of art in its new milieu. However, there is still a belief between critics, nowadays, that removing artifacts from their native environment is equivalent to burying them. Another contradictory belief is that “Museums increasingly divorced art from a lived experience and elevated it to the status of a secular religion in what I refer to as the Museum as a Sacred Space” (Newhouse 9).

By the early 20th century, museums were articulating arts through open spaced rooms where artifacts were displayed and illuminated through artificial lighting. According to Newhouse in her book Towards a New Museum, “This neutral approach was successful for Modern art, which was by definition self contained and self referential: it was much less so for other genres” (Newhouse 10).

“The museum is a medium of communication. It is primarily, but not necessarily exclusively, concerned with the visual communication of objects of cultural and scientific interest, both cultural and scientific used in their widest sense. Unless therefore, the museum is able to fulfill this task it is failing in its purpose” (Brawne 7). It was suggested by Brawne that the spatial aspect of the museum as well as the displays must succeed in making such communication and actively contribute to it. “Not only are there more museums than ever before, but also more functions
for them to accommodate, more range in the kind of art they contain and more rationales to their design” (Newhouse 9).

1.3.3 DEFINITION OF MUSEOLOGY

According to the Oxford English dictionary, museology is “The science or practice of organizing and managing museums; museum curation.” A further explanation of museological practices is provided by Christina Kreps in her article “Non-Western Models of Museums and Curation in Cross-Cultural Perspectives.” She describes it as the preservation of valued material culture objects. It also includes the arrangement of spaces for the collections, storage, conservation and preservation of objects, display, as well as artifact interpretations. “Cultural heritage preservation is defined as the transmission of culture through time” (Kreps 458).

1.3.4 DEFINITION OF CURATION

Museum curation of the 21st century is no longer perceived as merely the guarding of cultural heritage or objects of value. With the cross-cultural approach to museum curation nowadays, more non-western artifacts are displayed in western cultures and acknowledged for their value and significance. Curatorial work is viewed as “a continuing social process, and the acknowledgement of the social and cultural dimensions of people’s relationship to objects” (Kreps 469). Curation has evolved to rectify the historical transgressions including diversified worldviews and belief systems as they relate to particular societies and their creation of meaning to objects. If curation is to be considered as a social practice and a section of the ongoing social processes, we will be more able to give value and meaning to objects notwithstanding their isolation in museums. We will be viewing artifacts as “things in motion” with “social
lives” (Appadurai, 5). This perspective regarding material objects and their viewing, reveals an approach where they are connected to entire systems of cultural expressions and a method through which they are not only viewed through the lens of outsiders. “Culturally oriented approaches to curation are inherently about sharing curatorial authority and power and making room for the inclusion of multiple forms of knowledge and expertise” (Kreps 469).

1.3.5 DEFINITION OF TEXTILES

In 1860, Gottfried Semper classified textiles as materials that share the following attributes “pliable, tough, highly resistant to tearing, of great absolute strength” (Style 109). He added that the category of the material classified should be considered extensively. Thus one should regard textiles as more than just fabric. The manufacturing of textiles contributes to the alteration of the crude substance and their distinctive qualities to extremely flexible yet strong products. In Chapter three of Style in the Technical and Tectonic Arts; or, Practical Aesthetics, Semper noted the following:

The idea of a system of material units whose attributes are pliability, suppleness and toughness came about for the following reasons:

- To string and to bind (linear form)
- To cover, to protect, and to enclose (planimetric form) (Style 113)

There are two configurations that result from the objectives mentioned above: “linear forms” and “planimetric forms.” The former system is used for “stringing, binding, and fastening” and the latter is used to illustrate the concept of surface covering, dressing, enveloping, and enclosure.
The very first different types of textiles were developed within art or were derived from natural material objects (Style 113). Textiles refer to any type of materiality made out of interconnected strands. Thus, plant fibers that bear the characteristics previously stated are considered textiles. In Egyptian history, such forms of textiles are evident in Lotus and Papyrus products used to symbolize the upper and lower states respectively. Both plants played an important role in architecture and textiles. The Papyrus plant was used as the main element in manufacturing ancient Egyptian paper. The final product was light, strong, thin and durable. It wasn’t only used to produce a medium for writing purposes, but also to fabricate ropes, ships, foot wear, and furniture. Papyrus was used intensively as it grew along the River Nile. The plant after being harvested, its fibers were then peeled away to be used for manufacturing purposes. Weaving was the main technique used to put these strips of fiber together in order to produce various commodities. Since textiles refer to any type of materiality that is made out of interlacing fibers, the Papyrus intertwined strands are a type of textile because of the weaving technique used to produce it.
1.4.0 THESIS BREAKDOWN: QUESTIONS INVESTIGATED

The breakdown of the following investigation is as follows:

CHAPTER TWO
TEXTILE SEMANTICS

What is the cultural role of textiles? How could textiles participate in translating culture? What is the relationship between architecture, textiles, and culture?

Comparing textile theories: Ruskin vs. Semper vs. Jones
Should textiles be displayed as “art” or should they be an essential “space contributor”?

What is the significance behind a masterpiece of textile? What are the connotations and denotations of the textiles semantics? What are Primary and secondary meaning textiles convey to the audience?
How does the theory of “Signifier vs. Signified” apply to textiles?

How do the methods and techniques employed in textiles production such as plaiting and weaving give significance to the textile piece?

How could minute elements such as type of knot used to produce a piece of fabric vindicate significance to the whole or even unveil details about a period in history?

What is the correlation between textiles and time? Through a range of textile collections how can one trace the development of a culture?

What are the senses required to fully experience the multidimensional qualities of textiles? Is the fabric’s visual appearance sufficient to
manifest textiles? Could the tactile and acoustical dimensions of fabric be considered as a means of display?

CHAPTER THREE
SETTING THE ARCHITECTURAL FRAMEWORK

How could the historical and cultural context of the piece of textile be narrated through the spatial setting of its repository?

How do adjacencies of spaces in a textile museum affect the audience? How does the audience’s experience differ when following a storyline of spaces vs. retrieving their own path with no architectural guidance?

What are the universal architecture guidelines that frame the design of historical textile exhibitions?

What is the role of curators of the 21st century?

CHAPTER FOUR & FIVE
CASE STUDY 1: THE EGYPTIAN TEXTILES MUSEUM, CAIRO
CASE STUDY 2: THE METROPOLITAN MUSEUM OF ART, NEW YORK

Overall objective is to test the theories discussed in previous chapters of the thesis and investigate the architecture, display techniques, lighting strategies, as well as spatial layouts of the exhibitions.

Do museums’ curatorship and management play a role in the politics of textile showcase? What is the strategy behind the curators’ decisions regarding the collection process?

Are there restrictions/standards/rules that conform the display of historical textiles (preservation and conservation of textiles)? Are they universal? Or do they differ in the West and the East?
How do display techniques and informational means reveal signification and history of the textile?

CHAPTER SIX
CASE STUDIES DISCUSSION - COMPARATIVE ANALYSIS

This chapter aims at analyzing and concluding the differences and similarities in both institutions employing the same criteria of chapters four and five.

CHAPTER SEVEN
TEST DESIGN – MET TEXTILE EXHIBITIONS ADDITION

A proposed design that includes a series of textile exhibitions as an addition to the MET is used as a method to further explore some of the discussed theories.

CHAPTER EIGHT
CONCLUSIONS AND FINAL DELIBERATIONS

Should the architecture of the museum be a “living artifact” that converses to its content or should the space act as a “blank slate” for the artifact to speak for itself?

In this final section of the thesis, I recapitulate my findings of the theoretical research as well as the case studies in the form of guidelines for designing textile exhibitions.
1.5.0 SIGNIFICANCE OF RESEARCH

The tension between cultural identity and contemporariness will always remain a battle in architecture. The past and the present will continue to coincide in societies’ everyday lives. Two conflicting attitudes are then created. On the one end is to immerse oneself in the memory of past and ignore aspects of advancements which is usually an act done out of fear of change. One could refer to the stated action as “fundamentalism” considered as an unhealthy adherence to the familiar past. In most contemporary museums, this phenomenon is apparent through their display techniques where artifacts enclosed in glass boxes have been the prevailing tactic of showcase for decades. Even when development is sought for, it is done by slightly altering the existing “glass box” concept to have a more pristine copy of the same configuration. On the opposite end of the spectrum is the fascination to explore the unknown (Alsayyad 262). This inclination emerges from the eagerness to have a closer affiliation with the “other” and to participate in a broader milieu (Alsayyad 261). New, innovative, and communicative design strategies for textile museums are to be achieved through this thesis.

How can architecture and exhibition methods translate textile semantics, their historic and cultural significance as well as reflect the contemporariness of our existence simultaneously? Through the years, museums have been perceived as showcases and keepers of historical artifacts. In this study, the position of the textile museum is challenged to surpass its current stagnant role to being a responsive mechanism of the culture through the reconsideration of its design.
1.6.0 RESEARCH METHODOLOGY

The research methodology requires three stages: literature studies, case studies, and a test design. The outcome of my analysis and critique is manifested through a set of design strategies. Gathering data is the first approach to expand my knowledge and gain a more comprehensive understanding of textiles and their relationship to architecture, culture and history. Such data consists of:

- Literature studies on Egyptian textiles and their development over time.
- Literature studies on different textile theories discussed by architects and historians such as John Ruskin, Gottfried Semper, and Owen Jones.
- Literature studies on textiles significance, semantics, and cultural implications.
- Literature studies on the haptic nature of textiles.
- Literature studies on space syntax and museum archetypes.
- Literature studies on technical universal restrictions for textile exhibitions.
- Literature studies on museum curation and managerial responsibilities as well as their involvement in the process of textiles representation in exhibitions.

Selected textile objects from The Metropolitan Museum of Art in New York (MET) and The Egyptian Textiles museum in Cairo are illustrated throughout my research in order to exemplify the theories and their possible applications.

The case studies in The Egyptian Textiles Museum in Cairo and in The Metropolitan Museum of Art in New York are conducted as follows:
- Interviews with curators and staff members
- Photographic documentations of the textile inventories
- Photographic documentations and architectural drawings of the display techniques.
- Photographic documentations and architectural drawings analyzing spatial configurations.

After conducting my literature and case studies, my fifth year B.Arch design project is analyzed as a test design to illustrate a number of concepts presented throughout the first two stages. Strategies are then developed in the form of guidelines for creating a textile exhibition space where the intersection of architecture and textiles interweave to decipher their multidimensional qualities.

Please reference the end material of this document for the full bibliography and references.
CHAPTER TWO

2.0.0 TEXTILE SEMANTICS
Textile artifacts in a context of a museum setting are the connecting point between history and contemporariness, hence is situated the signifier vs. signified theory. This principle is substantiated in textiles where the material object is the signifier, and its hidden narratives are the signifieds. As important as the textile piece are the tales it carries, as well as the contemporary physical setting - the architecture - through which communication with the audience materializes. And, the tale is revealed through the detail, as Frascari declared.
2.1.0 SIGNIFIER VS SIGNIFIED

Vitruvius was one of the first to introduce the dichotomy between signifier vs. signified in his book *Ten Books on Architecture*. He claimed, “In all matters, but particularly in architecture, there are these two points – the thing signified, and that which gives it its significance” (6). In this context, “the thing signified” is the signifier and “that which gives it its significance” is the signified. According to the Oxford English Dictionary, a signifier is “a sign's physical form as distinct from its meaning.” A signified is “The concept or idea expressed by a sign, as distinct from the physical form in which it is expressed and the actual entity to which the sign refers.” Signifiers are eternal, while signifieds are ephemeral (Barthes 169). To textiles, the artifact is the signifier, in contrast with, the history it had undergone, the culture it partook part in, and the matters it influenced, which are the signifieds. The latter is often lost or trivialized when the former is introduced in a new setting – the museum – and what remains is the material object enclosed in an alienated receptacle.

Barthes asserted that significance and meaning of the constituent are conveyed through adjacency rather than content. By adjacency, I do not solely refer to other physical objects displayed along with the textile piece, but also the intangible cultural and historical context it comprehended and still carries. The signification of an entity is achieved through both the physical manifestation of the object as well as its immaterial cultural milieu. Thus, there are many multidimensional aspects of textiles other than their physical being to be revealed in order to communicate their full essence. One of many examples is the red silk prayer carpet, with silver filaments, that Mohamed Ali, head of the Royal family during the Ottoman era, dedicated to his eldest daughter lady Zeinab during her wedding day (FIG.11). The gift was accompanied by a celebratory festive. Such socio-cultural and political contexts if not revealed, part of the experience would remain missing.
FIG. 11 RED PRAYING CARPET
2.1.1 VIRTUAL LAYERS

The conception behind textiles’ display techniques in museums of the 21st century remains rather “gestalt” than “structural”. The textile artifact is regarded as a one unit whole rather than an aggregation of its constituents. Thus, the fabric is considered in its entirety, rather than its many interlocking intricate individual parts, suggesting that the whole is other than the sum of its parts. Barthes used “gestaltism vs. structuralism” as two contrasting terminologies during his investigation of maps and their role in representing cities (Leach 167). Maps, though represented through a thin material surface, carry abundant obscure layers of complexity difficult to reveal via the material object exclusively (FIG.12). Similarities are discerned between cartography and textiles. They both constitute of numerous intertwining strata of details, knowledge, history and culture. The textile virtual layers, if dismantled and dissected diligently would reveal many of the hidden cultural and technical specificities, which would vindicate the significance of the whole piece.

The disciplining of whole populations through a desire-driven interaction with objects were object-lessons in at least two principal ways: (a) As documentary indices of a (narrative) history of the world and its people, constructed as teleological dramaturgy (“evolution”), a “story” having a direction and a point and leading up to the spectator in the present, at the apex of his development. (b) As simulacra of a rich cornucopia of subject-positions (multiple ways of “being” in the world) which might be admired, desired, abhorred, mirrored, emulated, or rejected. (Preziosi 52)

Donald Preziosi in his article “Art History and Museology: Rendering the Visible Legible”, revealed that our communications with historical objects and their narratives imply the complexity of a previous composition in the past. Likewise, they indicate their influence on our contemporariness and
FIG. 12 VIRTUAL LAYERS

POLITICS
CULTURE
HISTORY
TEXTILE
SEMANTICS
TECHNIQUES
CHARACTERISTICS
evolution, due to the fact that they cause us to respond to them. In this context, textiles become a representation of controversial symbols that lead spectators to react.

2.2.0 THE DETAIL

“God lies in the detail”, credited to Mies van der Rohe. “The detail tells the tale” according to Jean Labatut. And, as Alberti noted “beauty is the concinnity of the details in the unity to which they belong.” The commonality among these statements reveals that the detail converses signification and produces meaning through its minute units, which are then translated to the whole (Frascari 1). Textile semantics are denoted through the details.

Semper relates this general relationship to Egyptian textiles through his statement that: “It is noteworthy that cross-stitching was the method of embroidery preferred by the (ancient) Egyptians (numerous remnants in this manner have survived), whereas the Assyrians embroidered with a flat-stitch” (Semper, Style 230). The ancient Egyptian cross-stitch embroidery technique was not only revealed through the material fabrics, but also through illustrations and paintings on walls. Therefore, details have the ability to connect various aspects of the arts that paint a comprehensive understanding of the culture as a result.

One of the textiles minute details is the “knot”. According to Semper, the knot is the earliest technical illustration of the cosmogonic notions of civilizations. As mentioned by Frascari, “detail” in architecture is a “joint” at all times. Same for textiles, a knot is always a joint at the ends of two or more filaments where its strength is contingent on friction. If pulled in opposite directions, the lateral stress increases friction between the threads, which yields to a stronger knot. The very original and early application of the knot prompted the creation of the net. It was then used
by ancient tribes in their quotidian activities for survival such as hunting and fishing, which signifies the importance of textiles in the cultural and economic realm. Netting industry flourished in ancient Egypt. It evolved from the daily life usages to luxurious practices such as ornamental nets made of strings of beads. The supremacy of the net mesh technique lies in the fact that if one knot failed, the remainder of the system does not get affected.

The textile method of netting is manifested in architecture through many ways such as surface decoration, façade articulations, as well as spatial dividers and enclosures. It is also applied in structural systems through the use of stronger materials in mesh-like constructions. “In the details are the possibilities of innovation and invention, and it is through these that architects can give harmony to the most uncommon and difficult environment generated by a culture” (Frascari 2). When employing textile techniques in architectural venues, which display the same type of artifact, a strong connection between the fabric and its spatial enclosure is achieved. Such implementations in textile museums help visitors comprehend the nature of the material and its extents.
Few theorists throughout history have considered textile semantics and their alliance with architecture as well as other forms of art. The most prominent ones are John Ruskin (1819 - 1900) and Gottfried Semper (1803 - 1879). Their concepts regarding textiles are divergent as the former viewed textiles as “wall veils” and the latter regarded them as “space contributors”. Their beliefs are contrasted with Owen Jones (1809 - 1874) and his grammar of ornaments, which is affiliated with the textile geometries, patterns, and their graphic depictions. The different textile theories and their association with architecture are presented, in the next sections of the thesis, not only to prove that there is a strong relationship between both, but also to set the foundation for developing textile display techniques that would reflect their signification, meaning and specificity.
2.3.0 JOHN RUSKIN (1819 - 1900)

2.3.1 THE WALL VEIL

As Thomas Carlyle before him, Ruskin also suggested that architecture surface ornamentations, mainly facades, are paralleled with clothing. He stated in his book *The Seven Lamps of Architecture*, first published in 1849, that architecture is the supplement of the “venerable or beautiful” but “unnecessary” characteristics of a building. The decorative features are meant to be the most pleasurable quality of a building, and the symbolic significance of these elements is unassociated with an architectural purpose (Chatterjee 70). Ruskin was influenced by the visual representation of textiles. In his writings, he endorsed interesting analogies between external skin of edifices and clothing configurations as well as textile patterns. He set a dividing line between ornamentation, which he believed are the most revered, but inessential, and the building necessities such as structure. His theory contradicts itself regarding this issue. How can one regard something as eminent but unimportant simultaneously? On the other hand, the relationship between clothing, textile patterns and building facades, could well be implemented in textile exhibitions. Exhibiting architectural fragments along with textiles portraying the same geometries or interlocking techniques would demonstrate the connection between textiles and architecture to the audience. This resemblance is apparent in parts of Islamic buildings and textiles where corresponding geometric patterns dominate such as the star pattern and the Mihrab shape (FIG.13&14).

Ruskin’s beliefs were rooted in Carlyle’s theory about the body and the soul. The latter demonstrated emphasis on the soul rather the body and expressed his theory through clothing. If we look back at Carlyle’s attitude towards textiles, he argued, “clothes in their literal and metaphoric form expressed a hidden and an inner idea” (Chatterjee 75).
In his book *Sartor Resartus*, first published as a serial in 1833–34, his main claim was that culture is founded upon textiles, that all perceivable matters are symbols, and that all symbols are “thought-woven or hand-woven” (Carlyle 34). One could reveal insights about a person’s inner soul and spirit through observing his clothing (Chatterjee 75). “The body could be signified - given a personality and a character - only through the literal and metaphoric construction of an exterior surface” (Chatterjee 76). Thus, the soul, the garment, and the body are connected. They should represent one another. Ruskin translated Carlyle’s theories into architecture through considering the “body” as the structural and interior spaces of the building, which are of a lower significance than the adornments outer layers, as the “soul” of architecture. “As clothing was the essence of the human figure, surface was the substance of architecture” (Chatterjee 77). Ruskin’s translation of Carlyle’s theories revealed a great disconnect. For Carlyle, a garment reflects the soul, but Ruskin considered the facade as a “wall veil” that is physically and conceptually detached from the other elements of the building.

“The wall was to architecture what cloth was to fashion and tailoring” (Chatterjee 82). Ruskin developed the theory of the adorned “wall veil,” where the wall acts like a “veil” to isolate the outer life from the inner one. This separation is not only physical, but also symbolic as the adornments of the veil are disconnected from the structure (Chatterjee 85). Though if we look closely into the tectonics of a textile piece, the compilation of colors and the graphics produced are a result of its technique. Ruskin translated textiles into architecture through a literal manner, in this case, without examining their composition which is one of the main reason behind their significance. Ruskin regarded the external skin of edifices as “a pictorial surface”, and as an independently “executed art object”. Although Ruskin’s decorative wall veil had a rhythm, it was arbitrary and did not conduct a functional role (Chatterjee 86). This stance towards textiles contradicts with the very nature of their compositions. They are
not random, their graphics and techniques illustrate characteristics and often times narratives in history. Museums of the 21st century have the same take as Ruskin’s, where textiles are regarded as art objects and graphic surfaces pleasing to look at. I am not suggesting that one should regard textiles as non-art. However, there are many aspects of this type of art that are not revealed when considering them as paintings framed in a glass enclosure.

“That which makes drapery be drapery, is not its being made of silk, or worsted, or flax, for things are made of all these which are not drapery, but the idea peculiar to drapery” (Ruskin, *The Works* 151). Ruskin is referred to drapery as a concept to be applied to other material objects, which are not necessarily fabric. His application of textile techniques such as weaving was through naturalistic ornamentation of interlaced and inter-tangled foliage on buildings external facades. Chatterjee further elaborated on Ruskin’s theories by stating that: “Because of this woven quality, nothing could be added or subtracted without disturbance of the whole” (Chatterjee 86). For Ruskin, facade adornments should engage the concept of linking, braiding, and weaving (Chatterjee 87). Although Ruskin did examine the composition of textiles filaments and their structure through ornamentation, his analogy was carried via a two dimensional aspect of connectivity.
2.4.0 GOTTFRIED SEMPER (1803 – 1879)

As Ruskin concentrated solely on the vertical exterior veil of the building where exterior walls are the means through which textile concepts of decorations are applied. On the other end of the spectrum, Gottfried Semper contrasted Ruskin’s theory of the “wall veil” through considering fabric covers not only vertically on walls but also on horizontal surfaces as well as space contributors.

2.4.1 SPATIAL ENCLOSURES

Semper’s first attempt in defining space as a “primary architecture motive” was through his book *The Four Elements of Architecture*, published in 1851, where he stated that the main four constituents of space are: “hearth, (ceramins), roof, enclosure (textiles), and mound (earthwork).” He also claimed in this book that hearth is the first identification of space (*The Four Elements* 28). Afterwards, in his book *Style in the Technical and Tectonic Arts, or, Practical Aesthetics* his declarations shifted. His argument revolved around the discussion that scaffolds, used to support and hold spatial enclosures, are by no means expressing spatial conditions. Nor are they the form-generators of architecture. Scaffoldings are only “aiding” the creation of the interior environment through supporting textiles. The same concept applies to walls where the main reason behind their being is fortification and defense to confirm durability or to serve as vertical supports for drapery. Thus, woven materials are the legitimate representation of the spatial idea, whilst the solid walls remain the hidden unseen support of the knitted artifact. Even ancient spoken language supports this resolution and justifies it. The word “wall” in Germanic language is “wand” that deracinated from the word “gewand” meaning garment (Semper, *Style* 248).
The use of textiles for spatial enclosures is older than the “art of dressing the body’s nakedness.” “The beginning of building coincides with the beginning of textiles” (Semper, *Style* 247). What we conceive today as architecture is crucially influenced by the ancient approaches of using textiles for space boundaries since the pre-architecture era of the human race. Moreover, these earlier techniques of enclosures - tent structures - still occur when similar circumstances or events take place in the society (Semper, *Style* 250). In ancient Egyptian history such events included: festive celebrations, feasts, pilgrims' markets, among others. These are actually still manifested the same way they were since antiquity. Thus, it is the pre-building through textile primeval techniques from which the architecture terminology is mostly borrowed. Semper's understanding of textiles is perpetual. In fact, his textile theories are the basis for membrane architecture as he is the first to consider the three-dimensional spatial qualities of textiles.

Spinning, plaiting, and weaving (FIG.15-17) were developed by the most primitive tribes, which suggests that these textile techniques are the oldest concepts in arts. According to Semper, the genesis of textiles corresponds with the start of structures and buildings. The craft of textiles first began with the plaiting of branches and bast fibers, then the weaving of plant fibers and grass stalks came into being. Afterwards, these textile skill developments led them to use different arrangements of natural colors of stalks to produce what is known now as “patterns.” Later in the process, chemical treatments and synthetic preparations were applied to produce colorful coverings that serve as wall and floor dressings and as ornamentation to reflect a certain culture (Semper, *Style* 248). The chronological order of the preceding events are not the only key matter in this context, but what is relevant is the development of events as a means of improving the inner life and separating it from the outer one, as well as expressing culture and tradition. It also shows the evolution of the first
FIG. 15 SPINNING

FIG. 16 PLAITING

FIG. 17 WEAVING
formal creation of spatial dividers, textiles, from which the idea of the solid wall is derived.

2.4.2 FLOOR AND CEILING DRESSINGS

“Floor dressings and ceilings (which as horizontally extended, freely suspended, upper terminations of a room, are the counterparts to floors) are the most important from our point of view” (Semper, *Style* 130). Although Semper mentioned floors and ceilings as the grouping of two horizontal planes separate from those of the vertical ones (walls), he recognized their dissimilarities. Even viewers perceive them differently. When looking at the floor, one views the nearest sections first, whereas when looking at the ceiling, one perceives the furthest part first (FIG.18). It is essentially the caution or fear that forces the human vision to inspect the most adjacent part of the floor first (Semper, *Style* 147). The stated theory makes us rethink the traditional way of displaying textiles in glass boxes to other means that communicate their different attributes such as plasticity. This concept could be manifested through the display of the ancient royal linen fabric sheets, one of the most valued and renowned in the Pharaonic dynasty which were found in the tomb of Ramose and Hatnefer (FIG.19&20). The material was found in the storehouse of Queen Hatshepsut as a funerary gift for the parents of Senenmut, one of her favorite courtiers. The length of the fabric pieces, which exceed 20ft each, and their elastic nature allow them to be displayed horizontally (on the floor or the ceiling) and to continue vertically.

The ceiling should set up the “climax of the effect”. The terminating horizontal surface of the space concludes the harmony of the whole system (Semper, *Style* 147). Semper noted the importance of the ceiling dressing as the peak (FIG.21). In textile display techniques the ceiling is also a room for manifestation. “The ceiling should overcome the oppressive feeling evoked by any separation between us and the open
FIG. 18 ROOM PERCEPTION
FIG. 21 CEILING AS CLIMAX
sky” (Semper, *Style* 147). There are spiritual connotations that could be signified through his words. Many pieces of religious nature especially those belonging to the Islamic period, could benefit from this theory, such as the Kiswa of the Kaaba; a ribbon embroidered on a piece of black silk textile made by the order of Al Modawkel Al Allah Farouk (the king of Egypt) and dedicated to Kabaa Al-Mosharafa in the reign of Khadem al Shareifeen Abdel Aziz Al Soud (the king of the Saudi Arab Kingdom) (FIG.8). In this context, the ceiling is an ideal medium for communicating the spiritual dimension and cultural significance of the textile.
2.5.0 OWEN JONES (1809 – 1874)

2.5.1 TEXTILES AND ORNAMENTS

“Jones’s is very much an orientalist notion of ornament: stylized, networked and always polychromatic” (Spuybroek 103). As Ruskin approached textiles through architecture facades and his theory of the wall veil, and as Semper tackled textiles through his claim that textiles are the very origin of architecture and a representation of culture, Owen Jones’s interest lies in the geometrical aspects of textiles and their patterns. This is a fascinating way of considering textiles, as patterns are created through the interlocking of the different filaments, which are a result of the inherent characteristic of the material. The graphic representation of textiles is not an additive process to the material, but an integral outcome of its technique. Textiles according to are art, more specifically part of ornamental art.

Textiles possess a language. One of many is the pictorial one, according to Jones’s aesthetic theory, which he expressed through defining its grammar. “Loosely speaking, grammar comprises the rules that control the structure and functions of the component forms” (Jespersen 150). Pictorial language belongs to the signs vocabulary which originates from profound regions of human understanding of the world. Parallel to the written or verbal language is that of the geometric constructs of ornamental configurations. Jones took such concept to an extreme where he suggested in Proposition number 8 that “All ornament should be based upon a geometrical construction” (Jones 5).

Although Jones was mainly concerned with the “ornamental fields” of rugs, fabrics, and surfaces in general, it is evident through his book _The Grammar of Ornament_, first published in 1856, that he was also interested in the “how” of their construction, which is related to the “logic
of ornamental figuration”. As well noted by Lars Spuybroek in his book *The Sympathy of Things*: “These fields are structural; they are constructions, or, as we call them, configurations; and for each category, [Owen Jones] finds new sets of rules, new types of figures that have various properties enabling them to make bands, corners, or most commonly, complete fields” (103). However, there is a great disconnect between the implied principles throughout Jones’s entire book and some of his prepositions. In preposition number 6 he stated: “Construction should be decorated. Decoration should never be purposely constructed” (Jones, 6). It is suggested through his words that one should adorn constructions and not construct ornamentations. This contradicts with the fact that each chapter of *The Grammar of Ornament* contains full-pages of colored plates accompanied with their construction principles as well as the history of the ornament. Thus, how did Jones claim that ornaments should not be constructed, though he dedicated an essential section in each of his chapters to explain the principles of their constructions?

Textile techniques influence the art of ornaments, and the criteria of the former are still evident in the rendition of the latter. For instance, the system behind weaving is intrinsically structural, and the ornaments represented through chiseling or painting, are also connective in their nature. Whether derived from knotting, interlacing, or plaiting, such techniques give textile-stemmed ornamentations a rationale behind their compositions. This rationality serves as a set of “configurational rules” that determines the connecting and intersecting principles behind these ornaments. “As long as there are figures, and a certain variation of these figures, accompanied by rules of interconnection, they will always result in configurations” (Spuybroek 106). Hence, the abstracted forms of materialism gave rise to textile techniques in other fields such as art and architecture.
We have to follow the things themselves, for their meanings are inscribed in their forms, their uses, their trajectories. It is only through the analysis of these trajectories that we can interpret the human transactions and calculations that enliven things. Thus, even though from a theoretical point of view human actors encode things with significance, from a methodological point of view it is the things-in-motion that illuminate their human and social context (Appadurai 5).

The above quote by Arjun Appadurai from his book *The Social Life of Things: Commodities in Cultural Perspective* if applied to textiles; they would be “the things.” It is then insinuated that the meanings of textiles are found in their material matters, their application, and the practices they influence. One could reveal parts of the socio-cultural context through the analysis of the three aspects of the object: its “form, use, and trajectory” (Appadurai 5). The latter refers to the set of events throughout history which surrounded the textile and shaped its meaning.
2.6.0 THE HAPTIC

All the prominent textiles theories developed throughout history have exclusively considered their visual dimension, which is certainly momentous. However is it the only communicative means of representation? We live in an intellectual ambience, which still honors visuality over other sensory faculties. Touch remains greatly abandoned. The preeminence of vision over touch has been culturally accepted throughout history. Even in Aristotle’s renowned pyramid of the senses in De Anima of c.350 B, sight was regarded as the superior sense, while touch was downgraded to the bottommost position. As Mark Paterson stated in his book: The senses of the Touch, Haptics, Affects and Technologies “If touch is the most basic of the senses in the hierarchy, it is also the most necessary” (17). The low ranking of touch in the order, denies its complex nature as being the one sense communicative through no solitary organ (Paterson 1). Unlike sight that corresponds to the eye, or the hearing which corresponds to the ear, touch is a unique sense as the flesh becomes the means rather than the organ. “With tactility we are not affected or altered by the sense-object itself, nor simple through the medium flesh, but actually in synchrony with the medium” (Paterson 17).

“And I found that of all the senses, the eye was the most superficial, the ear the most haughty, smell the most voluptuous, taste the most superstitious and inconstant, touch the most profound and philosophical”

Diderot, “Letter on the Blind,” 1749 (Paterson 17)

The tactile nature of textiles remains a reprehensibly neglected and an unexamined representational method, though it is one of the most expressive of their characteristics. There are more hidden qualities to touch than to see. Touch is “perceptive, expressive, can communicate
empathy" (Paterson 1). It is this one sense that brings material objects and people into proximity. It articulates a rich complex domain - of investigation and movement - which enhances communication through a non-verbal medium.

This suggests a different and profound realm to be delved into, a “tactile-spatial experience” (Paterson 2). Distinction between “immediate” vs. “deep” haptic experience of touch is first to be established. The cutaneous sensation of touch when the skin comes into contact with the textile, evokes an immediate/instant awareness of the fabric material and hence its characteristics of roughness or smoothness. It simultaneously develops a sense of consciousness to the sensations of our lived body and the spatial limits that surrounds us. On the other hand, touching and feeling materials could open up a new medium of communication and interaction. After an immediate experimentation with the object, a deeper exploratory knowledge is developed through the textile specificity as well as the spatial expanse inhabited.

We grasp space through our bodily situation. A “corporeal or postural schema” gives us at every moment a global, practical, and implicit notion of the relation between our body and things, of our hold on them. A system of possible movements, or “motor projects” radiates from us to our environment. Our body is not in space like things; it inhabits or haunts space. It applies itself to space like a hand to an instrument, and when we wish to move about we do not move the body as we move an object. (Merleau-Ponty 5)

The haptic experience of textiles can serve as a type of modality resulting in a more profound transfer of information through numerous receptors, which would be difficult to discern via just visual experience. One can learn about the different textile technical methods by simply touching the
fabric itself. I am cognizant of the fact that historical textiles cannot possibly be approached in this manner, as there are many conservation and preservation restrictions to be followed in order to maintain their state. Such restrictions prohibit visitors from touching textiles. However, there are other possible ways to make this experiment viable.

2.6.1 SIMULATION AND MAGNIFICATION

Simulation of textiles is one of the suggested solutions to carry out their tactility to the audience. They would be displayed in a dimmed light space where people can condense their attention on experiencing the physical attributes rather than the visual ones, especially that they would be a replica and not the authentic textile artifact. Further expanding of this concept would evoke the magnification of textile filaments for visitors to examine the different fabrication techniques. The experimental mode of display will allow spectators to distinguish between the different types of weaving. For example, in Ancient Egyptian times, there were numerous types of weaving techniques. The most basic and renowned was tabby or plain weaving, which used linen as its main material. Different types of tabby weaves had developed such as basket weave, wrap-faced, and weft-faced weaves (FIG.22-25). The different types of interlaces therefore created various patterns and textures which are unfeasible to discern just through looking at them with the naked eye. In this case, the simulated-magnification of the textile would unravel their minute details and beauties.
FIG. 22 TABBY WEAVE

FIG. 23 BASKET WEAVE

FIG. 24 WRAP FACED WEAVE

FIG. 25 WEFT FACED WEAVE
2.7.0 FINDINGS

After analyzing the different theories of John Ruskin, Gottfried Semper, and Owen Jones as well as Mark Paterson and others who critiqued and paralleled their works, design exhibition propositions are concluded. They are as follows:

- Weaving and plaisting are widely expressed in architecture. The architecture of the textile museum is the most appropriate setting where such configurational rules should come to surface. When employing these techniques in architectural venues, a strong connection between the displayed textile artifacts and their spatial enclosure is achieved.

- Fabric and membrane architecture are another opportunity through which the nature and extents of the material is celebrated.

- Walls are not the only means of displaying textiles. Other architectural elements such as floors and ceilings represent rooms for manifestations.

- Textiles if exhibited along with other forms of art such as fragments of a structure – cornices, floor tiles, or ceiling patterns – would express the textile principles but through different means.

- Textile tools such as looms, brushes, and stamps (FIG.26-29) if displayed along with the fabrics they produced would strengthen the contextualization of the material object.
- Visuality is not the only mode of showcasing textiles and their attributes, the tactile dimension is an important, though unexamined, medium that is yet to be further explored.
CHAPTER THREE

3.0.0 SETTING THE ARCHITECTURAL FRAMEWORK
There has always been a debate of whether the architecture of the museum should act as a “living artifact” that converses to its content and fortifies the significance of its constituents or whether it should act as a “blank slate” for the artifact to speak for itself. In order to decide which is more viable for textile museums, one needs to take into consideration not only the attributes of the artifact - as studied in the previous chapters - but also the various possible museum archetypes, the restrictions that textiles deposit, as well as the museological practices that shapes the decision making process. These topics will be unfolded through this chapter of the thesis and tested through the succeeding case studies.
3.1.0 SPACE SYNTAX

It has been demonstrated through the previous chapters that textiles carry value and meaning. This signification is revealed through the display techniques of the material objects as well as their settings. By looking at the scale of the individual substances, the micro level of the issue has been considered. However, it is also as important to examine the macro scale. How can a story be narrated through the relationship between the spatial settings where these living cultural organisms are displayed? How do adjacencies of spaces in a textile museum affect the experience of the spectators? Does the experience of the audience differ when following a storyline of spaces vs. retrieving their own path with no architectural guidance? In this context, space syntax theory and spatial layout configurations are investigated. “Syntactic studies, then, are increasingly looking at the interaction between the two aspects of space layout: the layout of objects within spaces and the layout of the relations between spaces, and showing them to be both highly interdependent and powerful in their ability to shape the experience of the visitor.” (Hiller and Tzortzi 296)

3.1.1 SPATIAL TYPOLOGIES

Bill Hiller and Kali Tzortzi suggested that exhibition spaces constitute a well-defined architectural typology with different possibilities to operate as a “pedagogic device” for transmitting information and narratives, and/or as an “embodied spatial and social experience” for communicating a non-narrative connotation (282). In order to define these approaches in museum typologies they introduced a basis for measuring the degree of integration vs. segregation of spaces in a complex. The study was done by the means of a set of case studies through which they concluded that there are four types of spaces in a museum. The first is a type a space with one connection to another space. Such class space is
considered a dead end, as it has no further “through movement potential.” The type b space has more than one interconnection to another space, but is situated on the way to the type a space or a number of them. Thus, all travels through space b must ultimately go back the same path. “In a tree, that is a complex without circulation rings, and so without choice of routes between spaces, all spaces must be either a or b spaces.” Thirdly, is type c space, which has at least two connections, resides on at least one “circulation ring”, and has one alternative way back. This means that movement is not forced through this type space and that motion of visitors can take place through another space. Finally, the fourth type of space d, is that which possesses further than two connections, lies on at least two rings, and has more than one alternative way back. Such type of space tends to be the movement’s focal point, which lies on all the rings of circulations (FIG.30) (Hiller and Tzortzi 297).

The reason behind discussing these different types of spaces, which continue to reoccur in a museum type structure, is that they define whether the museum acts as a pedagogic device following a sequential presentation, or as a non-narrative and towards an exploratory visiting style. The order and number of the various types of spaces in a layout will affect the extent to which different exhibitions within a museum are considered social vs. sequential. Spaces that fall into the category of type b and c are proven to increase segregation as they intensify a spatial systematic progression. They define the necessity to pass through certain zones to get to others. Whilst, types a and d tend to upsurge the integration and connectivity of circulation spaces. They are connected to other types of spaces which are in direct contact to circulation rings, thus, do not add to the necessity of movement through them. To conclude, the more c type spaces in a museum, the more restricted is the crowd to follow a certain path pre-designed for their journey. While, the
FIG. 30 SPATIAL TYPOLOGIES
more $d$ type spaces, then the further choice and prospective for freedom the visitor will possess for exploration (Hiller and Tzortzi 298).

To make these four spatial typologies more clear, the various layouts are taken to their maximal to illustrate their outcomes when experienced in a setting. At one extreme, a museum is formed of only type $c$ spaces (FIG.31). In such context, the spatial arrangement exclusively take the form of a “single sequence of spaces” (Hiller and Tzortzi 299). This configuration results in a chain of spaces where all visitors need to go through the same concatenation of spaces in the same order. At the other end of the spectrum, a museum is composed of just $d$ type spaces (FIG.32). Here, each individual space is connected to all its adjacent ones. An interconnected network of spaces is then created. Hiller and Tzortzi claim that $d$ type spaces if grouped together are “virtually impossible to understand and visit in an orderly sequence.” They offer an abundant number of choices with no constrains where “every visit is a new but unmemorable experience” (299).
3.2.0 MUSEUM ARCHETYPES

Through our understanding of the categorization of spatial typologies in a museum, a more theoretical and comprehensive approach is formed. Taking into account the spatial syntactic studies and positioning them through a wider literature of museology will lead to a grouping of museums into an “organized walking” category and a “congregation of visitors” class. The former is characterized by the layout of spaces into a classification, which maps out a series of informational knowledge. The latter is established through the formation of assembly type spaces. Hsu Huang concluded the two stated archetypes of modern museums via his analysis of the syntactic structure of museums through different periods of history and in different regions. He then organized them according to their nature of progression and the intensity of their “integration core”.

3.2.1 ORGANIZED WALKING

The marking out of time into a series of stages comprising a linear path of evolution; the organization of these stages into an itinerary that visitor’s route retraces; the projection of the future as a course of limitless development: in all these ways the museum echoes and resonate with those new institutions of discipline and training through which, via the construction of a series of stages that were to be passed through by means of the successful acquisition of the appropriate skills, individuals were encouraged to relate to themselves as beings in incessant need of progressive development (Huang 43.3).

According Betty T. Bennett, organized walking is defined as the linear path of organized sequential spaces. It is employed when the shaping of spatial layouts of exhibitions is meant to represent an order of things being defined as “historicity.” And to manifest “historicity,” one is
inevitably stipulated to employ a certain type of spatial form that conveys ranking (Huang 43.3). Thus, a deterministic model is active.

### 3.2.2 CONGREGATION OF VISITORS

On the other hand, the congregation of visitors has its main focus on bringing visitors together and enhancing the sense of social incorporation. The formation of power and bonds is done through an “integration core” where physical and virtual social relationships are experienced to their maximum between the crowds. In this case, a probabilistic model is active, where motion is randomized, but “modulated by configurable variables” (Hiller and Tzortzi 290).
3.3.0 THEMATIC FRAMEWORK & STRUCTURE

A set of exhibition spaces could employ one of the two stated archetypes solely or both simultaneously. Whichever the chosen museum genotype is, a classification of inventory should always be present. The grouping of textiles and related artifacts into different spaces creates a thematic framework and a structure through which the objects are displayed. Such arrangement could take place through one or more of many different ways; it depends on the message curators and designers want to convey as well as the availability of materials they possess. The following list suggests possible classifications through which Egyptian textiles could be displayed in a series of exhibitions:

- Chronology
- Geography
- Techniques/Tools
- Textile Types
- Social Order
- Gender and Class
- Significant Figures in History
- Stylistic Representations
3.4.0 UNIVERSAL RESTRICTIONS

Textile preservation and conservation are inevitable when dealing with historical and precious collections. There are firm restrictions to be followed by conservators and curators in the process of keeping textile preserved. These procedures go into very technical details, such as controlling relative humidity, temperature, dirt, sulfur dioxide, which are outside of the scope of this thesis, however are essential when treating textiles. In such context, it is worth mentioning the factors that do have an effect when designing textile museums, such as lighting and textiles rotational restrictions.

3.4.1 LIGHTING

Artifacts in museums are subject to damage. Textiles are considered one of the most fragile of all material culture objects. Thus, a great emphasis is casted on creating suitable environmental conditions in order to prevent the bio-deterioration of the fabric. The danger of light is in the energy it carries which causes color change and/or fading of textile filament’s pigments. Generally, lighting whether natural or artificial is divided into three bands:

- Invisible ultraviolet radiation with a wavelength of (3000-4000 A)
- Visible light with a wavelength of (4000-7600 A)
- Invisible infrared radiation with a wavelength beyond (7600 A)

These above categories are in the order of decreasing effectiveness. Invisible ultraviolet radiations, which their main source is natural daylight, are considered the most harmful for textiles. Therefore, they should be completely avoided. Ultra-violet absorbing filters as well as shutter devices are to be used when glazing is introduced. Sunlight exposure
and daylight could also be prevented during the design process through avoiding windows. Not only is daylight restricted in textile exhibition spaces, but there are also limitations regarding artificial/visible lighting. The illumination value should not exceed 50 lux. No textile material should be exposed to direct artificial lighting that emits heat. Thus, in designing display cases as well as spatial layouts, one should take into consideration this type of dimmed lighting environment and work around it, as there is no way to escape it. Lastly, the effect of invisible infrared radiation could be regarded as negligible unless caused by heating, and such aspect could be controlled through the use of devices with less heating emissions, such as LED lighting, as well as air conditioning (Leene 101).

3.4.2 ROTATIONS

Textiles usually go through three months rotational periods of display depending on their conditions. They are then kept in storage in order to prevent deterioration due to their constant exposure to the harsh environmental conditions during their show periods. The main reason behind storing them is to protect them from light as other conditions such as temperature, humidity, and pollution could be controlled even during their display times. Designers need to discuss these issues with curators, as certain textile collections might require rotations, thus the exhibitions housing them need to be flexible enough to allow for different textiles to cycle.
3.5.0 MUSEOLOGICAL PRACTICES

Curators in the 21st century are no longer just guardians of objects of values. Curation came to encompass a whole range of activities specifically those related to value making. Rossen Ventzislavov claimed in her article *Idle Arts: Reconsidering the Curator*, that the curator’s job should be thought of as art in itself since they are now very much involved in the process of artifact representation as well as exhibition space configurations. “When and where an artwork is performed or exhibited has transformative effects on the artwork” (Ventzislavov 83). This claim ascribes the act of adding value to material culture object to curators and their decision-making process.

3.5.1 MATERIAL CULTURE RESEARCH

Material culture is a subject that has developed a chief intellectual concern. Museums’ inventories epitomize the deposited “material culture” of history. And, exhibitions are the primary means through which this history is represented. Susan Pearce has noted in her article “Museum studies in Material Culture” that there are three ideologies about material culture, which are in need for further development in museums. They are as follows:

- The methodical interpretation of material culture as well as the establishment and invention of these methods if developed would support the process of assigning signification and meaning to objects. This proposition also includes the aspiration of pulling together different disciplines for the creation of a broader verge for objects interpretation, which would intensify the curators’ understanding of them.
The comprehension of the collections’ essence; “what they are, why they are so, and what they may become” (2).

The assemblage of the first two concepts together through the lenses of the curators and visitors and considering the prospective of this cooperation.

“The goal of material culture research is to interpret and reconstruct material culture in its cultural context and to integrate the conclusions in the overall state of research.” (Furst 99). It was also been noted that there are four “material culture” research stages (FIG.33):

- Cultural context/object in context
- Curation process/object decontextualized
- Comparative analysis
- Interpretation/object recontextualized

These four areas of research possess a more flexible frame rather than a linear one. Meaning that there is not a fixed departure point where a researcher needs to start the process at. However, it is advisable to start from the “curation process” as the object index information is the critical point in museology.

### 3.5.2 CURATION

A successful exhibition starts with a meaningful and powerful concept. However, the efficacy of its materialization depends on the excellence of the curatorial research (Nicks 346). The curational process of a collection or an individual artifact is as follows (Furst 99):
FIG. 33 RESEARCH STAGES

- Cultural Context/Object in Context
- Interpretation/Object Recontextualized
- Curation Process/Object Decontextualized
- Comparative Analysis

The diagram illustrates the research stages involving cultural context, object in context, cultural context, object in context, and so forth.
- **Acquisition**
- **Documentation**
- **Preservation measures**
- **Storage**
- **Exhibition styles**

The most important role of the curator to this thesis is exhibition design or “Exhibition Styles”. In fact, there are two types of curatorial research that are focused on the materialization of the exhibition idea:

- **Thematic Research**
  This research is based on a broader context where information is gathered to develop a framework through the material objects to create a storyline.

- **Object Research**
  This research is more focused on choosing the works of art, informational means, graphics and illustrations that constitute the parts of the exhibitions (Nicks 346).
CHAPTER FOUR

4.0.0 CASE STUDY 1:
THE EGYPTIAN TEXTILES MUSEUM, CAIRO
4.1.0 SIGNIFICANCE OF CASE STUDY

The purpose of conducting the following two case studies is to test the textiles theories investigated throughout the first half of the research as well as investigate exhibiting structures showcasing textiles. The Egyptian Textiles Museum in Cairo and the Metropolitan Museum of Art in New York represent the two institutions that contain the largest Egyptian textile collections worldwide. The fact that both museums contain Egyptian textiles from the same eras, thus very similar collections, makes great opportunity to contrast and analyze them as well as conclude their differences and similarities. The Egyptian Textiles Museum is different from the Metropolitan Museum of Art as the former is a specialized one in Egyptian textiles. However, the MET is a substantially large institution that contains all types of artifacts from all over the world, some of which are Egyptian textiles that belong to its multifaceted timeline.

This chapter will unfold through first an introduction of the overall museum, followed by the museum management strategies as well as curation techniques. The subsequent sections focus on the architectural analysis, which includes a study of the thematic framework and structure of the exhibitions, spatial syntax, display techniques, color combinations, informational means, lighting strategies, as well as architectural highlights.
4.2.0 MUSEUM GENERAL INFORMATION

- Built: 1828
- Building was originally a Sabil, which is a charity educational establishment, which aimed at serving the community, then got repurposed into a textiles museum.
- The museum is exclusively purposed for exhibiting textiles.
- Located in: Cairo Egypt on Al-Muizz LideenAllah Al-Fatimi street (Historical Old Cairo)
- Total square footage: 15,600 sq ft
- Total number of artifacts on display: 450
- Total number of artifacts on display and in storage: 676 (which allows for 226 pieces to be subjected to rotational/temporary exhibitions)

The museum is a historical Islamic building that has been repurposed in the last decade to be the first specialized textile museum in Egypt. The building was originally a “Sabil”. It was first founded in 1828, by Mohamed Ali Pasha, the ruler of Egypt during the Ottoman’s dynasty. The old program constituted of drinking spaces for the public, classrooms, and shops. The whole building has been readapted to fit its new purpose as a museum except for the shops on the ground level and the exterior balcony space on the first floor (FIG.35&36). The museum is located in Al-Muizz LideenAllah Al-Fatimi Street, which is considered the oldest in the city of Cairo. The street is viewed as an open museum of historical religious, military, social and educational institutions.
4.3.0 MUSEOLOGY PRACTICES

4.3.1 INSTITUTIONAL STRATEGIES

As mentioned by Mohamed Saleh, president of The Egyptian Textiles Museum, the museum’s general strategy could be explained through the following seven departments (stated in order of importance to this research):

- Exhibition Management
- Museum Education
- Scientific Research
- Collection Documentation
- Restoration and Preservation
- Cultural and External Relationship Management
- Traineeship

Curators are the main parties responsible for Exhibition management tasks, which consist of:

- Display techniques of the textile inventory
- Lighting strategies
- Textile selection for exhibition display
- Internal and external exhibition coordination

Nermine Nagi, the Islamic Curator, stated that exhibition management is mainly conducted through curators. They seek the architect’s or the interior designer’s viewpoint in design or construction based decisions. (FIG.37-39 for detailed drawings). However, textile based decisions and classification of artifacts are made through curators. (Refer to the interview for more information regarding managerial vs. designers tasks).
FIG. 37 EGYPTIAN MUSEUM DETAILED DRAWINGS (1/3)
4.3.2 INTERVIEW WITH CURATOR

The following interview was conducted in person with the curator of the Islamic textile collection, Nermine Nagi, in the Egyptian Textiles Museum in Cairo, Egypt. (Interview originally conducted in Arabic and translated by me)

- How much are curators involved in exhibitions designing and spatial configurations? Do they work with architects and interior designers in this process?

Curators in the Egyptian Textiles museum are the main decision makers when it comes to exhibition design and coordination of artifacts within the spatial layout preset by the architect or the designer. In our case, because the museum is an existing historical building, the spaces are already predefined. However, during restoration, we were able to communicate our ideas and concepts regarding display techniques of each collection with the architects and interior designer, hence, they divided the spaces accordingly.

- Regarding the selection of pieces that would be displayed in accordance to each other whether the grouping of textiles themselves or textiles and other objects such as ornamentation or tools or other related artifacts, is it solely the curator’s decision or are there other parties involved such as architects? How are such decisions made? On what basis?

The selection of artifacts is mainly done according to the different curators of the textile departments such as the Ancient Egyptian, the Coptic and the Islamic. These decisions depend on the main idea we - curators - decide should be narrated through the inventory we possess. On the other hand, we welcome innovative proposals on
behalf of the architects or interior designers if they propose ideas that would further enhance the overall message we are trying to convey to our visitors.

- Is there some sort of coordination between the different curation departments? Do you think this would enhance the quality of the exhibitions’ outcomes especially if the inventories of the different curation departments belong to the same cultural background or the same country? (For example the Egyptian culture which includes many dynasties such as Pharaonic/Ancient, Coptic, and Islamic)

  Coordination is very encouraged here in the museum as each curator has a different background and area of expertise. Thus, when preparing a temporary exhibition, the final result is a cooperation of all curators and directors.

- Do you think curation would differ in case of an existing museum where spaces are already predefined, than in the case of a building still in the design process?

  The curation process itself by fair means is standardized, as most institutions would expect the same general tasks to be conducted by their curators. However, the means through which they are executed differ from one organization to the other.

  Regarding the architecture of the museum itself, I would think that it would be less restricting if the building were to be designed for its intended purposes, as there would be more room for innovation. However, I would say that the architects and interior designers we worked with were able to transform the original building and add elements, which enhanced the spatial qualities of the museum. For example, the graphic partition walls are designed for informational means as well as path guiding agents for visitors.
Do you think display techniques, for textiles specifically, have changed to include more innovative and communicative ways to showcase artifacts? (If yes would you be able to give me an example)? Has the haptic quality of textiles been considered as a means of textile manifestation in the history of The Egyptian Textiles Museum?

I believe that we always seek new ways of communicating our ideas to the public. However, I would agree with you that the display techniques of textiles are still restricted in glass box vitrines. We started to seek ways of illustrating textiles and their complexity through different strategies such as full-scale models of textile apparatuses and scales figures illustrating their operational techniques. Our education department also hosts workshops, which help introduce textile making - an important aspect of the Egyptian culture - to the public.
4.4.0 ARCHITECTURAL ANALYSIS

4.4.1 THEMATIC FRAMEWORK & STRUCTURE

The exhibition layouts in The Egyptian Textiles Museum follow a structure or a classification of inventory that narrates a development of events. These occurrences are presented through a chronological layout of textiles, which starts from the ancient Egyptian or Pharaonic eras, followed by the Greek and Roman, then the Coptic, and finally the Islamic. A sub-categorization is also existent in this model. Within the arrangement of textiles according to their consecutive occurrence over history, curators also managed to classify the inventory of each era into subcategories grouped into different spaces. In the Pharaonic/Ancient Egyptian era a sub-grouping of textiles was through: costumes, daily life, and funerary or after life fabrics. On the other hand, the Coptic era is subcategorized into the various figurative patterns found on textiles and fragments such as human and animal figures, floral, and geometric patterns. Each type of patterning technique classifies a certain social order or class in history. The Islamic section is divided up through the different eras of the Islamic conquest as well as the different regions inside and outside of Egypt where Islamic textiles were found. Another significant classification is through the tools used in the production of textiles such as stamps, needles, and brushes. To conclude, within one main model - chronology in this case - several other classifications of material culture are embedded such as life phases, social order, techniques, and tools (FIG.40&41).
FIG. 40 EGYPTIAN MUSEUM THEMATIC FRAMEWORK & STRUCTURE (1/2)
4.4.2 SPACE SYNTAX

Regarding museum’s spatial typologies of a, b, c, & d, The Egyptian Textiles Museum contains both types b and c spaces. The type b space has more than one interconnection to another space, but is situated on the way to the type a space or a number of them. Thus, all travels through b space must ultimately go back the same path. The type c space, which has at least two connections, resides on at least one “circulation ring”, and has one alternative way back, meaning that movement is not forced through this type space and that motion of visitors can take place through another space. (Hiller and Tzortzi 297). The classification of spaces in a layout affects the extent to which different exhibitions within a museum are considered sequential vs. self-exploratory. Spaces that cease to be those of types b and c are proven to strengthen a systematic spatial progression. These spatial types express the compulsion to visit certain zones in order to get to others, which makes the visitors’ progression more dictated rather than optional. The way the different spaces are laid out in The Egyptian Textiles Museum in Cairo shows a sequential system of spaces, which suggests a pedagogic narrative for transmitting information (FIG.42).

Any museum could act as an “organized walking” model and/or a “congregation of visitors.” The former is characterized by the layout of spaces in a way, which maps out a series of informational knowledge, and the latter is through the assembly type spaces. In this case study, the museum falls into the category of “organized walking.” The types of exhibitions and their arrangement represent both “historicity” and “hierarchy/order.”
FIG. 42 EGYPTIAN MUSEUM SPATIAL PROCESSION
4.4.3 DISPLAY TECHNIQUES

Throughout the museum, there are several ways textiles and related artifacts are displayed. Most of the museum’s inventory is displayed in glass boxes with various sizes depending on the dimensions of the objects. The various types of display cases (FIG.43-46) are as follow:

- **Full Height**
  The full height display cases house textiles and artifacts of large dimensions such as costumes and large fabric pieces. This is the situation on the lower floor. On the upper floor, full height cases are the prevailing type of display cases. They exhibit a wide assortment of textiles ranging from large carpets to fragment pieces put next to each other.

- **Wall Built-in**
  This type of display case acts like a window through which smaller types of artifacts or more exclusive ones are displayed, it creates a cleaner final look, as cases do not intrude in hallways or exhibition rooms.

- **Medium Height**
  The medium height display cases are used to display types of artifacts other than fabric. Throughout the museum they house textile production tools or sculptures manifesting a style of clothing.

- **Floor Offset**
  Floor offset display cases display the same types of objects as the wall built in ones. Thus, they contain smaller or exclusive objects.
Free Standing

The free standing display cases mostly house masterpieces within collections. They are not attached to walls and are usually placed in the center of the gallery space.

Through analyzing the various display cases, it is concluded that wall built-ins and the floor-offset vitrines contain pieces of the same nature. The full height ones house most of the collection including large pieces as well as fragments. Medium height cases are used for a specific type of inventory, which makes them more noticeable for visitors. And lastly the free standing ones, they comprise collections highlights. A couple of artifacts are displayed uncased, however, they are mostly sculptures that show how clothing pieces exclusively from the Greek and Roman era used to be worn. Although there is a concept behind displaying textiles in different display cases according to their size and nature, they are all still constrained in the traditional display cabinet.
DISPLAY CASES (2/2)
FIG. 45 EGYPTIAN MUSEUM DISPLAY CASES (3/4)
FREE STANDING E

FIG. 46 EGYPTIAN MUSEUM DISPLAY CASES (4/4)
4.4.4 COLOR COMBINATIONS

Another important aspect of the display techniques is the colors of the textile pieces themselves vs. the background canvases on which they are fastened vs. the vitrines’ backcloth to which the frameworks are attached. In the existing cases, the one constant factor is the color of the vitrines as well as their backcloth, which are dark navy. The other two variables are the colors of the textiles pieces as well as the color of the background canvases on which the artifacts are places. It does not seem that there is a persistent logic behind the design solution. For example, in some cases the textile piece is of a light color, and is contrasted with a dark background canvas, which helps showcase the artifact better. However, in other cases, the textile piece is of a light color and the canvas on which it lays is of a light color as well, which makes it hard for the viewer to visually focus their attention on the artifact (FIG.47). Thus, contrast in color between the textile artifact and its background setting is always recommended to intensify visual attentiveness and comparison.
COLOR CONTRAST

COLOR SAMENESS

COLOR SAMENESS

DISPLAY INCONSISTENCY

FIG.47 EGYPTIAN MUSEUM COLOR COMBINATIONS
4.4.5 INFORMATIONAL MEANS

Informational means are methods through which hidden or inexplicit peculiarities of the textile artifact such as its history, cultural background, and production technique are revealed. These specificities are as important as the physical creation itself. In The Egyptian Textiles Museum, these types of informational means are revealed through four different methods (FIG.48-50). They are as follows:

- **Graphic Partitions**
  Graphic partitions are non-structural partition walls that display visual illustrations or section labels which give the visitors information about the textiles of a specific era in history corresponding to its location in the museum. They also serve as path guidance instruments for visitors. For example, in some spaces they are used to block a potential path and highlight another.

- **Visual Screens**
  Through these monitors, videos or audios are displayed to give visitors more details or a history overview of the exhibit.

- **Models**
  Full-scale models of weavers using various tools of textile production are displayed in different spots of the museum to familiarize visitors with textile techniques.

- **Item Labels**
  Item labels are the most generic and traditional way of displaying information in museums. They are text tags designated to each artifact which list its name, the period it was produced in, as well as an overview (if applicable).
FIG. 48 EGYPTIAN MUSEUM INFORMATIONAL MEANS (1/3)
INFORMATIONAL MEANS (1/2)
4.4.6 LIGHTING STRATEGIES

Lighting in textile museums is a crucial factor, which affects both the overall quality of the atmosphere as well as the way individual objects are viewed. In The Egyptian Textiles Museum, they mainly depend on artificial lighting. Natural lighting is excluded even in spaces that do not host textiles. During restoration and renovation processes, architects and interior designers made such design decision, which is shown through the blockage of the windows from the interior to prevent daylight from entering the exhibition spaces. However, the window openings and frames were kept from the outside to conserve the historical adornments.

There are two types of lighting techniques used in the display cases (FIG.51-54). They are as follows:

- **Fluorescent Lighting**  
  This type of luminaire emits a warm light that changes the color of the artifacts on which it is projected to a yellowish tone. It is also consistent, thus, illuminates the whole interior of the display case uniformly, which prevents the focusing on a specific object.

- **LED Lighting**  
  Compared to fluorescent lighting, fiber optics or LEDs emit a cooler light. It is a rather focused technique of illumination. Thus, it projects the visitors’ attention to specific objects within one vitrine.

General or ambient lighting was provided through LED spotlights which also acted as an illumination technique for the graphic partitions and models as well as the uncased artifacts.
FIG. 51 EGYPTIAN MUSEUM LIGHTING TECHNIQUES (1/4)
LIGHTING TECHNIQUES (1/2)
LIGHTING TECHNIQUES (2/2)
FREE STANDING CASE WITH FLUORESSENT LIGHT

FIG. 54 EGYPTIAN MUSEUM LIGHTING TECHNIQUES (4/4)
4.4.7 ARCHITECTURAL HIGHLIGHTS

There are several architectural highlights in The Egyptian Textiles Museum (FIG.55). They were not effectively implemented, however.

- **Wrought Ironed Windows**
  The intricate and interlaced geometry on the wrought ironed windows exemplify stylistic and technical attributes of textiles. But instead of integrating them as part of the museum’s inventory, curators and conservators chose to block them off with a blackout interior curtain. The rationale behind their decision is to prevent natural lighting, specifically ultraviolet radiation, as it is harmful for textiles. On the other hand, there are other solutions such as filtering screens to be placed between the wrought iron and the glazing, which would have served to protect the textiles from the sunrays.

- **Historical Floral Interlaced Ceiling**
  The exemplary historical crafted ceiling of the second exhibition room on the ground floor is a piece of art in itself. However, very little emphasis is assigned to the architecture of the ceiling, and instead, the masterpiece chamber artifact of the museum is displayed in the same room. It is not inherently a bad decision to place two captivating artworks in the same spatial parameters. Yet, when one of these material cultures is strictly not within the visitor’s eye level, and the other object is physically substantial and attractive to the eye, then visitors will most likely be absorbed by the latter and overlook the former. One design solution, which would draw equal attention to both masterpieces, is to add catwalks that would allow a closer contemplation to the climax of the exhibition space.
Curved Carpet Display
On the first floor in the Islamic Ottoman collection is displayed the red silk prayer carpet, that Mohamed Ali, head of the Royal family during the Ottoman era, dedicated to his eldest daughter lady Zeinab during her wedding day. The display on which the carpet lays is curved which helps reveal the plasticity and pliability attributes of the textile fabric. Still, it is displayed in a glass box, which creates a physical as well as a psychological barrier between the artifact and the viewer. Since this particular textile is in a good condition and could be displayed uncased, as stated by the Islamic curator Nermine Nagy, there are other non-obstructive ways to convey that the artifact should remain untouched by visitors as this is the institution’s main concern behind placing it in a glass box.
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CURVED CARPET DISPLAY

FLORAL INTERLACED CEILING

WROUGHT IRONED WINDOWS

FIG. 55 EGYPTIAN MUSEUM ARCHITECTURAL HIGHLIGHTS
FIG. 56 THE METROPOLITAN MUSEUM OF ART
CHAPTER FIVE

5.0.0 CASE STUDY 2:
THE METROPOLITAN MUSEUM OF ART, NEW YORK
5.1.0 SIGNIFICANCE OF CASE STUDY

Studying the textile exhibitions belonging to the Egyptian Timeline in The Metropolitan Museum of Art opens up the horizon on how Eastern material cultures are investigated in a Western institution. The MET hosts an entire wing of Ancient Egyptian arts and artifacts as well as a Coptic exhibition space, and a whole Islamic department (FIG.57).

The first sections of The Metropolitan Museum of Art case study introduce the museum’s management and curation strategies as well as their conservation and preservation techniques. The subsequent sections focus on the architectural analysis of each department: the Ancient Egyptian, then the Coptic, and finally the Islamic respectively. In each section an architectural analysis is conducted through the thematic framework and structure of the exhibitions, spatial syntax, display techniques, color combinations, informational means, lighting strategies, as well as architectural highlights.
MEDIEVAL
COPTIC
ANCIENT
EGYPTIAN
LEGEND

FIG. 57 MET IN-SCOPE SPACES
5.2.0 MUSEUM GENERAL INFORMATION

- Built: 1880
- Building has expanded via additions throughout the years.
- The museum houses artifacts from all over the world
- Located in: New York, USA on Fifth Avenue and 82nd street.
- Total square footage: approximately 2 million sq ft.

Ancient Egyptian Exhibitions
- Total number of textiles on display: 1,099
- Total number of textiles on display and in storage: 1,382 (which allows for 283 pieces to be subjected to rotational/temporary exhibitions)

Coptic Exhibition
- Total number of artifacts on display: 29

Islamic Exhibitions
- Total number of textiles on display: 489
- Total number of textiles on display and in storage: 2,020 (note than not all 1,531 pieces left could be put on display)

The Metropolitan Museum of Art in New York, located on Fifth Avenue and 82nd street, was inaugurated on March 30, 1880. However, the conceptual idea of the institution started as early as 1866 in Paris, where a group of Americans decided to form a "national institution and gallery of art" to enlighten the American culture through art and art education.

Architecturally, the building has developed through many phases and expansions (FIG.58). Its initial construction started in 1880 and continued till the last addition in 1990. The MET contains a very extensive collection of arts and artifacts. Since the twentieth century, the museum has been
Vaux and Mould: Wing A (1880)

Weston: Wing B (1888)
Weston and Tuckeman: Wing C (1894)

R.M Hunt and R.H Hunt: Wing D (1902)

McKim, Mead and White: Wings E (1909)
F (1910), H(1913), J and K (1917)

Atterbury: Wings L and M (1924)

Voorhees,Walker,Foley and Smith:
Grace Rainey Rogers Auditorium (1954);
Brown, Lawford and Forbes: Thomas J. Watson Library,
Blumenthal Patio, and Service building (1964)

Roche Dinkeloo Associates: Frontsteps and plaza(1970);
Robert Lehman Wing (1975);
Temple of Dendur in The Sackler Wing (1978);
American Wing and Charles EngelhardCourt (1980);
Michael C. Rockefeller Wing (1982);
Lila Acheso Wallace Wing (1987);
Henry R. Kravis Wing and Carroll and Milton Pietrie
European Sculpture court (1990)

FIG. 58 MET ADDITIONS
considered one of the largest hubs for arts internationally. The MET is approximately a 2 million square foot building where tens of thousands of artifacts are now on view. The different departments in the MET could be classified through the seventeen curatorial departments study, exhibit, and care for the objects in the Museum’s collection. They are as follows: The American Wing, Ancient Near Eastern Art, Arms and Armor, Arts of Africa, Oceania, and the Americas, Asian Art, The Costume Institute, Drawings and Prints, Egyptian Art, European Paintings, European Sculpture and Decorative Arts, Greek and Roman Art, Islamic Art, The Robert Lehman Collection, Medieval Art and The Cloisters, Modern and Contemporary Art, Musical Instruments, Photographs (Curatorial Departments).

The institution is encyclopedic and scholarly. It operated through a complex set of departments and managerial interconnections. This relates back to the size of the museum and its exhaustive collection. It has been clearly stated in their mission statement that their ultimate goal has been to:

Collect, preserve, study, exhibit, and stimulate appreciation for and advance knowledge of works of art that collectively represent the broadest spectrum of human achievement at the highest level of quality, all in the service of the public and in accordance with the highest professional standards.
5.3.0 MUSEOLOGY PRACTICES

5.3.1 INSTITUTIONAL STRATEGIES

As mentioned by Deniz Beyazit, the curator of the Islamic department at the MET, the museum’s general strategy could be explained through the following five tasks (stated in the order of importance to this research):

- Exhibition Design
- Documentation and Research
- Acquisition
- Conservation and Preservation
- Storage

Exhibition design is done through the collaboration of exhibition, graphic, and lighting designers along with curators. Curators originate the main theme of the exhibition as well as the content to be presented. Exhibition and graphic designers team up with the curators in order to translate their ideas into design strategies. Deniz Beyazit stated that the curator’s idea for an exhibition needs to be approved by the exhibition office as well as the director’s office before proceeding into the specificities of the design. Researchers help curators throughout the process by studying how artifacts or similar ones were presented previously. Conservators are also consulted to ensure textiles are well preserved. They decide whether the textile is to be cased or uncased. (Refer to interview for more information regarding managerial vs. designers tasks).
5.3.2 INTERVIEW WITH CURATOR

The following interview was conducted in person with the curator Deniz Beyazit in The Metropolitan Museum of Art.

- Is material culture research part of the curator’s responsibilities? Or is it part of the researchers’ tasks? If the latter is the case, do curators and researches cooperate?
  Curators along with their research assistants work together on conducting material culture research.

- How much are curators involved in exhibitions designing and spatial configurations? Do they work with architects and interior designers during this process?
  At the MET, curators originate the main theme and select the inventory to be displayed. We don’t collaborate as much with interior designers as we have in-house exhibition designers who translate the curators’ ideas into designs through back and forth discussions between both parties.

- Is there some sort of coordination between the different curation departments? Do you think that would enhance the quality of the exhibitions’ outcomes especially if the inventories of different curation departments belong to the same cultural background or the same country? (For example the Egyptian culture which includes many dynasties such as Pharaonic/Ancient, Coptic, and Islamic)
  Sometimes there could be interdepartmental exhibitions. For example, Interwoven Globe, a special textile exhibition held recently, was done through the collaboration of several curational departments. Also, while setting up the exhibitions for the Islamic department, curators
wanted to tie the works of art chronologically to the Coptic collection, since it is the era preceding the Islamic one. As seen in the Islamic introductory exhibition, there are several Coptic textile pieces displayed as a way to reference arts of the previous era and represent their influences on the succeeding ones. In those instances, interdepartmental loans take place in order to allow another department to display works of art belonging to its original one.

- Do you think curation would differ in case of an existing museum where spaces are already predefined, than in the case of a building still in the design process?
  The general tasks of curators are standardized to a certain degree regardless of the circumstances. In the case of the MET, especially the Islamic department, our exhibitions are permanent except for the special exhibitions. Some of the permanent collections of textiles go through rotational display every 3 months depending on the condition of the piece. Our conservators determine such decisions.

- Do you think display techniques, for textiles specifically, have changed to include more innovative and communicative ways to showcase artifacts? (If yes would you be able to give me an example)? Has the haptic quality of textiles been considered as a means of textile manifestation in the history of the MET?
  In textiles, conservators need to approve the display technique of the each piece depending on their fragility state and the rarity of the piece. For example, some pieces could be uncased, and others must be held in between plexi-glass panels such as fragments. But in general, the change and innovative means of display techniques have been rather slow throughout the years.
5.4.0 CONSERVATION AND PRESERVATION

According to Janina Poskrobko Conservator in the Department of Textile Conservation at the MET, textile display techniques are determined through three aspects of the textile piece:

- The condition
- The material
- The fabrication technique

A well-preserved fabric can be exhibited through a horizontal or low-angled slanted support without the need for mounting provided that the environmental conditions such as temperature, humidity and lighting levels are suitably controlled.

On the other hand, textiles of fragile conditions are usually pressure mounted. Such technique of display involves positioning the textile piece on a firm cushioned support without any stitches. The object is held in place through the light pressure of a Plexiglass sheet or box (FIG.59&60). This kind of secured mounting permits for complete reversibility and conservation.

For large pieces of textiles and those in different states of preservation, are often partially exhibited while the remainder of the fabric is rolled on a suspended tube.

Fragile costumes and garments necessitate inserting “archival materials” to maintain their weights and preserve their innate forms. Thus, “couching stitches secured areas of loss to an underlying support fabric of compatible color” (Textile Conservation).
FIG. 59 FRAME CROSS SECTION

FIG. 60 TEXTILE FRAME

- Plexiglass box
- Historic Textile
- Pima Cotton Fabric
- Thin Pellon
- Felted Pellon
- Felted Pellon
- Barrier Paper
- Plexiglass Sheet
5.5.0 ANCIENT EGYPTIAN EXHIBITIONS ARCHITECTURAL ANALYSIS

Refer to (FIG.61&62) for in-scope vs. out of scope exhibitions. This decision is made based upon the fact that certain spaces contain textiles and others do not. The ones that do not are considered out of the scope of this thesis.
ANCIENT EGYPTIAN EXHIBITIONS BASE FLOOR PLAN (1/2)
ANCIENT EGYPTIAN EXHIBITIONS BASE FLOOR PLAN (2/2)

PARTIAL FIRST FLOOR PLAN 1’=1/16”

FIG.62 ANCIENT EGYPTIAN BASE FLOOR PLAN (2/2)
5.5.1 THEMATIC FRAMEWORK & STRUCTURE

The exhibition layouts follow a classification of inventory. They represent a development of events through a chronological layout of textiles, which starts from the pre-dynastic and early dynastic periods and progress through the Roman period. The periods considered in this research are: Middle, New, Late New, Ptolemaic, Roman periods (FIG.63-66) as they are the ones which contain a significant and influential inventory of textiles compared to the other periods. Each kingdom or era is represented through a set of connected rooms. It is difficult to discern where a new chronological era has started except by reading the rather small signs. Architecturally and spatially, there aren’t any differentiations between the various categorizations of inventory that would indicate the emergence of a new era.
FIG. 63 ANCIENT EGYPTIAN THEMATIC FRAMEWORK & STRUCTURE (1/4)
FIG. 64 ANCIENT EGYPTIAN THEMATIC FRAMEWORK & STRUCTURE (2/4)
ANCIENT EGYPTIAN EXHIBITIONS THEMATIC FRAMEWORK & STRUCTURE (2/2)

PARTIAL FIRST FLOOR PLAN 1’=1/32”

FIG.65 ANCIENT EGYPTIAN THEMATIC FRAMEWORK & STRUCTURE (3/4)
5.5.2 SPACE SYNTAX

The Ancient Egyptian exhibition spaces contain mostly types c and d spaces. The type c space has at least two connections, resides on at least one “circulation ring”, and has one alternative way back, meaning that movement is not forced through this type space and that motion of visitors can take place through another space (Hiller, and Tzortzi 297). The type d space possesses more than two connections to another space, lies on at least two circulation rings, and has more than one alternative way back. Museums that consist of mostly d spaces are proven to be non-narrated and exploratory. They express the freedom of spatial progression. Thus, the sequence of the experience is optional rather than dictated. The way the different spaces are laid out in The Ancient Egyptian exhibitions of the MET shows an interconnected network of spaces, which suggests a self-experimental and undefined method of exploration (FIG.67&68).

The Ancient Egyptian exhibitions fall under the archetype of the “congregation of visitors” characterized by the assembly type spaces. The types of spaces and their arrangement represent an unconstrained and libertarian walk.
ANCIENT EGYPTIAN EXHIBITIONS RECOMMENDED SPATIAL PROCESSION (1/2)
ANCIENT EGYPTIAN EXHIBITIONS RECOMMENDED SPATIAL PROCESSION (2/2)
5.5.3 DISPLAY TECHNIQUES

Throughout the Ancient Egyptian exhibitions, there are different ways textiles and related artifacts are displayed. The majority of the inventory is displayed in glassed cases with various designs depending on the nature of the pieces. The various types of display cases (FIG.69-72) are as follows (note: the following categorization is a personal assessment and not an institutional based one):

- **Cabinets of Curiosity:**
  The term is used to reference the first means of artifact display techniques where items of “curiosity” were displayed in a randomized fashion. This is the way I perceived the first category of display cases in the Ancient Egyptian exhibitions. These cases house a large amount of objects. Visitors have to put an effort in choosing which artifacts they want to investigate in between the hundreds of artifacts shown within a large glass cabinet.

- **Glass Framed**
  This type of display case is used to show artifacts such as long rolls of papyrus paper and other textile fragments. It is a very similar technique that would be used in displaying paintings. It is a generic way of exhibiting artifacts of thin mediums such as paper or fabric.

- **Glass Cased**
  Glass cased displays have similar features to the “Cabinets of Curiosity”. Glass cased ones, however, house inventory in a more organized fashion. They include less and larger artifacts that are exhibited in a systematic manner.
Through analyzing the various display cases, it is concluded that the Ancient Egyptian inventory is displayed in a rather generic manner where artifacts are kept in glass vitrines. This method suggests a sameness essence to the collection as no thematic or hierarchical categorization is conveyed.

5.5.4 COLOR COMBINATIONS

Throughout the various installation techniques, there is barely any contrast between the artifact and the padded fabric on which it is mounted. This creates monotony to the collection as well as an unclear definition of the object, especially to the textiles on view. Most of the Egyptian textiles that belong to the Ancient or Pharaonic era are linen sheets or fragments of an off-white/yellowish color. Thus, when the padded material on which the fabric is displayed is of the same tint, visual confusion appears.
ANCIENT EGYPTIAN EXHIBITIONS DISPLAY CASES FLOOR PLAN (1/2)

PARTIAL FIRST FLOOR PLAN 1’=1/32”
ANCIENT EGYPTIAN EXHIBITIONS DISPLAY CASES FLOOR PLAN (2/2)

FIG. 70 ANCIENT EGYPTIAN DISPLAY CASES (2/4)
CABINETS OF CURIOSITY

GLASS FRAMED

GLASS CASED

GLASS CASED
CABINETS OF CURIOSITY E
GLASS CASED F
GLASS FRAMED & CASED H

FIG. 72 ANCIENT EGYPTIAN DISPLAY CASES (4/4)
5.5.5 INFORMATIONAL MEANS

The significance of a textile artifact is deciphered through its physical essence, its cultural and historical background, and its technical aspect. The way the MET is conveying textile semantics is mainly through text and visual illustrations. These informational means (FIG.73) are as follows:

- **Item Labels**
  Item labels are captions of various text lengths, which describe the objects on display and state their background history (if applicable).

- **Textile Technique Labels**
  Textile technique labels are part of the item labels. In some instances, the textile technique, through which the textile was produced, is illustrated and explained. It is imprinted on the glass of the showcase.

- **Section Labels**
  Section labels are displayed on walls. They are used to demonstrate general information of a grouping of rooms that represent an era in the Ancient Egyptian epoch. They contain text information, and/or graphical illustrations.
Objects from the Burial Chamber of Ramses and Hetephor.
Dynasty 18, c. 1,998 B.C.

Ramses and Hetephor were buried on the hillside of Sheikh Abd el Qurna in a small rock-cut chamber provided for them
by their son Setemnet, directly below his own tomb chapel.

Ramses was originally intended to hold Hetephor's
burial equipment, but when excavated was found to contain
Ramses' coffin and mummified mummy as well as sex
unknown women and children. The objects in this
case largely come from the excavations of the tomb, the
Metropolitan Museum undertook in 1996.

Temporary Label
Care Under Restoration
5.5.6 LIGHTING STRATEGIES

Artificial lighting is the main and only source of illumination technique. Natural light is excluded specially in the spaces that host textiles. In some display cases, light bulbs are turned off in the sections where textiles are displayed to better preserve the fabric and not expose it to constant lighting.

The majority of lighting techniques (FIG.74-76) used in the display cases are as follows:

- **Fluorescent Lighting**
  
  There are two types of fluorescent lighting used in the display cases: warm and cool. The former type of luminaire emits a warm light that gives the artifacts a yellowish tone, and the latter provides a whiter representation of the object. Both types illuminate the whole interior of the display case uniformly. This prevents the focus on specific objects. Within the display cases, the lighting fixtures are covered with either a mesh system or a frosted sheet of plexi-glass to help diffuse the light.

In addition to the lighting inside the vitrines, there is general LED lighting system outside of the display cases that provides an ambient lighting atmosphere to the visitors as they explore the different galleries.
FIG. 74 ANCIENT EGYPTIAN LIGHTING TECHNIQUES (1/3)
ANCIENT EGYPTIAN EXHIBITIONS LIGHTING FLOOR PLAN (1/2)

PARTIAL FIRST FLOOR PLAN 1’=1/32”

LEGEND
- WARM FLUORESCENT
- COOL FLUORESCENT
- UNLIT CASES
5.5.7 ARCHITECTURAL HIGHLIGHTS

- Woven Linen Sheets
  In Gallery 116 is located “Senenmut's Burial Objects and Hatshepsut's Foundation Deposits”. All the objects that were found from the excavations of the tomb are displayed together in a large glass box. The display case includes artifacts from the burials of Senenmut, the most important official of the female pharaoh Hatshepsut (ca. 1479–1458 B.C.). Especially noteworthy are the abundant woven linen sheets as well as the furniture pieces (FIG.77). The woven linen sheets are shown through folding them and placing them on top of each other as a stack. This display technique shows the plasticity of the material as well as its ability to be fold. However, displaying part of the linen inventory unfolded would have manifested its architectural functions as spatial enclosures. This display technique would have enriched the visitor’s experience in relating textiles to the spatial qualities of architecture. This connection could be achieved through the hanging of the linen vertically and/or horizontally, or through creating a three-dimensional sculpted volume on which the fabric would rest.
FIG. 77 ANCIENT EGYPTIAN ARCHITECTURAL HIGHLIGHTS

WOVEN LINEN SHEETS
5.6.0 COPTIC EXHIBITION ARCHITECTURAL ANALYSIS

Refer to (FIG.78) for in-scope vs. out of scope exhibitions. This decision is made based upon the fact that Egyptian textiles are displayed in one exhibition room out of the whole Medieval Wing.
COPTIC EXHIBITION BASE FLOOR PLAN

PARTIAL FIRST FLOOR PLAN 1’=1/16”

FIG. 78 COPTIC BASE FLOOR PLAN
5.6.1 THEMATIC FRAMEWORK & STRUCTURE

The Coptic exhibition space consists of one room divided up into three sections. It is rather a small gallery space. The thematic framework and structure are expressed through a typological grouping of artifacts into three categories: stones, jewelry, and textiles (FIG.79&80). The different categorizations are dictated through the brick arches, which help divide up the space into perceivable sections.
COPTIC EXHIBITION THEMATIC FRAMEWORK & STRUCTURE

PARTIAL FIRST FLOOR PLAN 1’=1/32”

LEGEND
- STONES
- JEWELRY
- TEXTILES

FIG. 79 COPTIC THEMATIC FRAMEWORK & STRUCTURE (1/2)
5.6.2 SPACE SYNTAX

Defining the spatial typology is not applicable in the Coptic exhibition setting as it is a one-space gallery. However, it is possible to specify its spatial archetype. Since there are no architectural elements that would command a specific progression through space, the exhibition suggests a self-exploratory observation. Thus, it falls under the archetype of the “congregation of visitors”. The journey is carried through an unconstrained and libertarian walk (FIG.81).
COPTIC EXHIBITION RECOMMENDED SPATIAL PROCESSION

PARTIAL FIRST FLOOR PLAN 1’=1/32”

FIG. 81 COPTIC SPATIAL PROCESSION
5.6.3 DISPLAY TECHNIQUES

There are two types of display techniques (FIG.82&83) in the Coptic exhibition space. They are as follows:

- **Glass Cased**
  Most of the inventory in this exhibition is displayed in traditional glass repositories. All textiles are housed in glass cases. Some of which are placed horizontally angled in larger cases under the staircase area, and others are framed and mounted vertically on walls.

- **Uncased**
  The uncased artifacts are fragments of buildings such as cornices and column capitals from the Coptic era found in southern Egypt. These moldings carry a visual representation of textile techniques through their vegetal interlaced geometries. Revealing architectural fragments manifesting textile-interlocking illustrations reinforces the connection between architecture and textiles to visitors.

5.6.4 COLOR COMBINATIONS

The Coptic exhibition space is quite unique as the walls are left unpainted. The original materials of the walls - brick - and the bottom of the stairs - stone - are left untouched. In fact, the darker tones of the walls are contrasted with the backcloths of the glass cases on which the colorful textile fragments are placed. The color combinations strategies are successful not only because they accentuate the textiles' pictorial qualities, but also because they are in harmony with them as the Coptic era is known for its use of brick pigments.
COPTIC EXHIBITION DISPLAY CASES FLOOR PLAN

PARTIAL FIRST FLOOR PLAN 1’=1/32”

FIG.82 COPTIC DISPLAY CASES (1/2)
FIG. 83 COPTIC DISPLAY CASES (2/2)
5.6.5 INFORMATIONAL MEANS

The informational means present in the Coptic exhibition are generic. They represent the traditional labeling system found in mostly all museums. These informational means are as follows:

- **Item Labels**
  Item labels are placed next to each artifact stating its name, medium, date, location, and other background information (if applicable).

- **Section Labels**
  Section labels in this gallery are text, graphical illustrations, and geographical maps displayed on walls presenting contextual information about the collection and the excavation process in southern Egypt.
5.6.6 LIGHTING STRATEGIES

Lighting strategies in the Coptic exhibition space are simple. All the cases are un-lit as they are part of the old installations. Most of the new installed cases, in other spaces, have built-in light fixtures which facilitate visual concentration on specific objects. The only type of lighting fixture used in the Coptic exhibition gallery is LED (FIG.84).

- LED Lighting
  They serve to both cast light on artifacts as well as provide ambient lighting. On top of the under-stair cases is located an LED bar which projects light on the textile fragments. While, LED spotlights are located parallel to the arches in each bay. Some of which are subjected on the uncased artifacts as well as the framed textile fragments and others are used for the general lighting purposes.
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5.6.7 ARCHITECTURAL HIGHLIGHTS

- Material Matters
  The use of bare materiality such as brick and stone reveals wall textures, which are attributes related to textiles. The roughness created through the grains of the material carries similar textile characteristics. Thus embraces the same language as the displayed artifacts. The incorporation of the spaces below the stairs, the dimmed lighting, and the materiality, all give the space a transcendental atmosphere, which is pertinent to the excavated collection and the spiritual connotations the Coptic material culture carries.
5.7.0 ISLAMIC EXHIBITIONS ARCHITECTURAL ANALYSIS

Refer to (FIG.85) for in-scope vs. out of scope exhibitions. This decision is made based upon the fact that certain spaces contain textiles belonging to the Egyptian timeline, while others do not. The ones that do not are considered out of the scope of this thesis.
5.7.1 THEMATIC FRAMEWORK & STRUCTURE

The layout of the Islamic exhibitions shows a rather complex but comprehensible system. Within the set of rooms, there are two thematic frameworks through which the classification of inventory is structured. They are sectioned chronologically and/or geographically simultaneously. For example, the second exhibition space, after the introductory gallery, houses the Umayyad’s and Abbasid’s inventory of artifacts from 7th century to the 13th, proceeding through the spaces counterclockwise is the Egypt and Syria gallery of the 10th and 16th centuries (FIG.86&87). Within the chronological and geographical classifications another subcategory of artifacts is embedded according to their typology. This second category materializes through the Ottomans carpets and textiles galleries as well as the Damascus room of the 18th century. Architecturally and spatially, the exhibition spaces are rendered differently throughout the Islamic wing, which makes it noticeable to viewers when a turning point occurs, chronologically, geographically, or typologically.
5.7.2 SPACE SYNTAX

The Islamic exhibition spaces consist of all types of spaces \( a, b, c, \& d \). There are two paths, a primary and a secondary one. The former consists of the rooms in close proximity to the central void, while the latter includes the rooms on the periphery. The galleries located on the primary path belong to the chronological and Arab-world geography, while the exhibition spaces of secondary path belong to the typological thematic framework or the non-Arab world geography.

Because of the existence of all spatial genotypes, the Islamic exhibitions are considered an assimilation of the “organized walking” as well as “congregation of visitors” museum archetypes. Thus, a deterministic model as well as a social engaging environment is experienced subsequently. In some spaces the procession is dictated with limited options such as exhibitions 451, 453, & 456 and in other spaces the path is exploratory and unrestricted with numerous route choices such as exhibitions 455 & 460 (FIG.88).
ISLAMIC EXHIBITIONS RECOMMENDED SPATIAL PROCESSION

PARTIAL SECOND FLOOR PLAN 1’=1/32”

FIG. 88 ISLAMIC SPATIAL PROCESSION
5.7.3 DISPLAY TECHNIQUES

The Islamic department contains the most recent installations on view housing Egyptian textiles. Textiles are not all constrained to glass cases as in The Ancient Egyptian, Coptic, or The Egyptian Textiles Museum exhibitions. There are several expressive ways where textile artifacts are manifested and explored. The various display techniques (FIG.89&90) in the Islamic exhibitions are as follows:

- **In-Case Hung**
  In case hung textiles often include fragmented textiles or others which their condition does not allow them to be displayed uncased. Thus, fabric is held in between two surfaces: a padded one at the back and a transparent plexi-glass to protect the front of the textile.

- **Uncased Hung**
  Textiles in good conditions are hung uncased. The majority of textile types shown through this method are carpets or textiles of thick surfaces. Having fabric being displayed in this manner is more expressive of its qualities as there are no surfaces that isolate the artifact from the viewer such as glass which often creates a reflection through which many textile peculiarities get lost.

- **Glass Cased**
  Glass cased displays include less of the textile inventory. They house textile related objects such as textile tools, architectural fragments, vases, works on paper, ceramics, and other pieces of art possessing similar stylistic qualities.
- Uncased
  Uncased artifacts include textiles such as carpets. They are not hung, but displayed horizontally on an elevated surface from the floor. This display category also contains other artifacts such as sculptures, architectural fragments, and ceramics.

5.7.4 COLOR COMBINATIONS

The color combinations of the interior vertical and horizontal surfaces show a successful attempt to exhibit textiles and related artifacts in a way that would create visual contrast. Throughout the various installation techniques, there is noticeable contrast between the artifact and the color of the surrounding environment, which often makes it easier for visitors to visually compare and contrast. By employing this technique in color coordination, monotony is avoided and a more clear definition of the object on view is experienced. Most of the Islamic textile collection is colorful, which makes it even harder to design a space that would create a contrasted harmony for the heterogeneous collection. In addition, the exhibition spaces that belong to the second path were highlighted from the primary path through the different rendition of the former. For example, in the two Ottoman exhibition rooms, each one has a different wall color that differentiates them from each other as well as from the rest of the Islamic wing.
ISLAMIC EXHIBITIONS DISPLAY CASES FLOOR PLAN

LEGEND

IN-CASE
HUNG
UNCASED
HUNG
GLASS
CASED
UNCASED

PARTIAL SECOND FLOOR PLAN 1’=1/32”

FIG.89 ISLAMIC DISPLAY CASES (1/2)
FIG. 90 ISLAMIC DISPLAY CASES (2/2)
5.7.5 INFORMATIONAL MEANS

The informational means (FIG.91) in the Islamic exhibitions are as follows:

- **Section Labels**
  Section labels are used to demonstrate general information about each Islamic era. In other instances, they are used to describe a certain textile technique or artistic style and its significance. They contain text information, graphical, and/or map illustrations.

- **Item Labels**
  Item labels are text captions used to describe the item on display. They can go beyond tombstone labeling through giving more detailed information about the item’s historical, cultural, or geographical background.

- **Visual Screens**
  Visual screens in the Islamic exhibitions are more interactive as they are touch screens where visitors would tab on different icons and information would pop up. A touch screen was provided at the Damascus room. It included a detailed 3D model with the various architectural elements and artifacts that constitute the space.
SECTION LABELS

ITEM LABELS

VISUAL SCREENS

FIG. 91 ISLAMIC INFORMATIONAL MEANS
5.7.6 LIGHTING STRATEGIES

In the Islamic exhibitions, artificial lighting is the main source of lighting, however, it is not the only one. Natural lighting is incorporated into the spaces, but filtered through the historical Mashrabiya screens and frosted glass behind them. They are used all around the central courtyard to diffuse the light coming from the skylights above. Thus, all the sunlight that enters the space is indirect and diffused so that artifacts, especially textiles, would not be harmed (FIG.92&93).

Artificial lighting is sectioned into the following three categories:

- **LED In-Case**
  LED or fiber optics lighting is used in all display cases, as it is a rather focused technique of illumination. It is also the newest and most efficient lighting method.

- **LED Spotlights**
  LED spotlights are used to illuminate the glass-cased artifacts, which do not have built-in lights into them, as well as the cased and uncased hung textiles and artifacts.

- **Ambient Ornamental Lighting**
  Arabian style chandeliers are used as both artifacts on display as well as ornamental lighting luminaires that provide ambient light. They are not subjected to specific artifacts but rather act as a general lighting strategy.
ISLAMIC EXHIBITIONS LIGHTING FLOOR PLAN

PARTIAL SECOND FLOOR PLAN 1’=1/32”

FIG.92 ISLAMIC LIGHTING TECHNIQUES (1/2)
FIG. 93 ISLAMIC LIGHTING TECHNIQUES (2/2)
5.7.7 ARCHITECTURAL HIGHLIGHTS

The Islamic exhibitions have several architectural highlights worth studying (FIG.94). They are as follows:

- **Islamic Star Pattern Ceiling**
  The ceiling covering of the 16th century on display in the Ottoman gallery is a testament to the persistence and flourishing of the Mudéjar Islamic art in non-Arab countries, such as Andalusia, even after Christian Reconquista. This ceiling was found in Spain; however, it is stylistically very similar to any type of Islamic art that would have been found in Egypt. It is comprised of carved, painted, interlaced pinewood panels that carry equivalent textile production techniques. Its main element is the Islamic-start geometric design that is repeated in a structured fashion to produce an intricate interwoven pattern.

- **Mashrabiya Screens**
  Mashrabiya screens artifacts are inserted in windows around the central courtyard to serve as artwork as well as apparatuses to filter natural light through the space. These screens were displayed in proximity with textile collections that carry the same stylistic patterning.

- **Carpet Horizontal Display**
  A number of carpets throughout the Islamic galleries are displayed horizontally. The most successful of them is the one in the Ottoman Carpets & Textiles room where the large carpet lays horizontally on a foot high wooden surface surrounded by a railing on which spectators can lean to look closely.
• Carpet Vertical-Horizontal Continuation
  Another exclusive display technique of carpets is evident in the octagonal room where a rectangular long carpet is hung vertically but continues horizontally on an elevated wooden surface. This technique better manifests the plastic and pliable quality of textiles than having them enclosed in a glass box or frame.
FIG. 94 ISLAMIC ARCHITECTURAL HIGHLIGHTS
CHAPTER SIX

6.0.0 CASE STUDIES DISCUSSION
COMPARATIVE ANALYSIS
6.1.0 TABLE OF COMPARISON

This chapter summarizes the different architectural venues discussed through the case studies. The following table represents the elements analyzed in The Egyptian Textiles Museum as well as the Ancient Egyptian, the Coptic, and the Islamic exhibitions of The Metropolitan Museum of Art. The comparison will serve to encapsulate the analysis conducted in the previous two chapters of the thesis and set the foundation for discussing their disparities and commonalities as well as concluding the suggested practices and design decisions acquired from researching the case studies.
<table>
<thead>
<tr>
<th>ANALYSIS</th>
<th>CASE STUDY 1: THE EGYPTIAN TEXTILES MUSEUM</th>
<th>CASE STUDY 2: THE METROPOLITAN MUSEUM OF ART</th>
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<tbody>
<tr>
<td></td>
<td><strong>ANCIENT EGYPTIAN</strong></td>
<td><strong>COPTIC</strong></td>
</tr>
<tr>
<td><strong>MUSEOLOGY PRACTICES</strong></td>
<td>Curators are responsible for exhibition management. Architects are consulted for design or construction based decisions</td>
<td>Exhibition design is done through the collaboration of exhibition, graphic, and lighting designers along with curators, but not architects</td>
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<tr>
<td></td>
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</tr>
<tr>
<td><strong>THEMATIC FRAMEWORK &amp; STRUCTURE</strong></td>
<td>Main: Chronology</td>
<td>Material typologies</td>
</tr>
<tr>
<td></td>
<td>Sub:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Funerary vs. quotidian, Figurative patterns, &amp; Religious vs. secular</td>
<td></td>
</tr>
<tr>
<td><strong>SPACE SYNTAX</strong></td>
<td>Spatial typology: b &amp; c, Museum archetype: organized walking</td>
<td>Spatial typology: d, Museum archetype: congregation of visitors</td>
</tr>
<tr>
<td><strong>DISPLAY TECHNIQUES</strong></td>
<td>Full height glass cases, Wall built-in glass cases, Medium height glass cases, Floor offset glass cases, Free standing</td>
<td>Cabinets of curiosity, Glass framed, Glass cased, Glass cased</td>
</tr>
<tr>
<td><strong>COLOR COMBINATIONS</strong></td>
<td>Color contrast &amp; color sameness, Inconsistency</td>
<td>Color sameness</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>INFORMATIONAL MEANS</strong></td>
<td>Graphic partitions, Visual screens, Models, Item labels</td>
<td>Item labels, Textile technique labels, Section labels</td>
</tr>
<tr>
<td><strong>LIGHTING STRATEGIES</strong></td>
<td>Fluorescent in-case, LED in-case &amp; spot-lights</td>
<td>Fluorescent in-case, LED spot-lights</td>
</tr>
<tr>
<td><strong>ARCHITECTURAL HIGHLIGHTS</strong></td>
<td>Wrought ironed windows, Historic floral interlaced ceiling, Curved display</td>
<td>Woven linen sheets in “Senenmut’s Burial Objects and Hatshepsut’s Foundation Deposits” chamber</td>
</tr>
</tbody>
</table>
6.2.0 DISPARITIES & COMMONALITIES

When the same elements reoccur in numerous exhibition spaces, they are categorized as generalities within the field. Thus, conclusions are drawn from them. Starting with the first comparative element, it is evident that a thematic framework and structure are necessary in textile exhibitions. Categorization is essential. It has been demonstrated through existing theories as well as case studies that the signification of textiles are conveyed not only through their physical being but also through their adjacencies and relationship to other materials. In order to assign meaning to textiles, exhibition layouts need to follow a structure.

Chronology has been the most reoccurring thematic framework throughout the different case studies. It is indeed one of the simplest ways visitors are able to comprehend a collection of artifacts. Setting a timeline through history is a straightforward solution, easy to follow. Categorization, however, could be executed in many different ways. Within one theme, others could be embedded in order to kill the monotony that might result in adopting one linear stream. The Islamic exhibitions in the MET have shown success in employing a main chronological and geographical theme while implementing a nested theme within the first, which groups inventory according to their typology such as the Ottoman Room, dedicated to carpets. The Egyptian Textiles Museum is another good example where its main classification of inventory was through a chronological order while its secondary grouping is achieved through the different life stages and various figurative textile patterns.

Classification of textiles does not necessarily intend for a visual segregation of galleries or a handicapping of cross-comparisons between various groupings. It only helps generate a more systematic itinerary whether dictated or exploratory. However, a total randomization...
of movement through spaces of textile exhibitions is not sought for in layout design. Through visiting the Ancient Egyptian exhibitions in the MET it was relatively hard to make sense of the collection when all the rooms are interconnected through a complex web system where one has a completely undefined path. Thus, the type d spaces has proven its failure in textile gallery spaces. On the other hand, special aspects of the “congregation of visitors” archetype such as the integration core could be employed in nodes of the “organized walking” framework to enhance the aspects of co-existence and co-awareness of audience. This model is best manifested in the MET’s Islamic department and partially in The Egyptian Textiles Museum.

The most traditional way of exhibiting artifacts, which has shown a constant pattern throughout all the case studies, is glass-cased displays. However, they have also shown an unsuccessful attempt in conveying the language of textiles. The Islamic exhibitions display techniques have proven this theory. Since they represent the newest installation out of all the case studies, they are the only ones experimenting new and more communicative ways of manifesting textiles. Their attempt at dedicating a whole room to carpets is a successful one. They are placed uncased, either hung, rolled, or horizontally demonstrated. Displaying architectural elements such as the Islamic star geometric ceiling proves that textile techniques are not only pertinent to fabric but also expressed through different means, wood in this case, in building ornamentations.

The ways museums approach conveying textile information have included item and section labels which are mainstream means used throughout all the cases investigated. Other more communicative methods are employed to better communicate with visitors such as touch screens. However, these background narratives should go beyond texts labels and trifling visual devices. They should engage in the spatial layout and be a significant part of the architectural atmosphere. They could be
exemplified through many advanced digital means, such as motion sensitive display walls which are interactive methods of display that engage the visitors through their significant physical presence and their captivating visual aspect.

Lighting requirements are restrictive in textile exhibitions. They should not exceed 50 lux. Thus, the atmosphere will inevitably consist of a dimmed lighting system. Many lighting strategies are used by different departments in museums, however, the most efficient and successful at rendering the artifacts the closest to their original colors is LED lighting. The benefit of fiber optics lighting is their ability to highlight specific areas which helps concentrate the attention of the viewers on certain objects. This technique is used in parts of The Egyptian Textiles Museum as well as the Islamic exhibitions in the MET. Another effective lighting strategy existing in the latter space is the ornamental Arabic style chandeliers, which are visually pleasing as well as contextually germane to the rest of the displayed Islamic collection.

To conclude, the most successful attempts in the textile exhibitions investigated through the case studies are highlighted in the following table.
<table>
<thead>
<tr>
<th>CASE STUDY 1: THE EGYPTIAN TEXTILES MUSEUM</th>
<th>CASE STUDY 2: THE METROPOLITAN MUSEUM OF ART</th>
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<td><strong>THEMATIC FRAMEWORK &amp; STRUCTURE</strong></td>
<td><strong>DISPLAY TECHNIQUES</strong></td>
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<td><strong>SPACE SYNTAX</strong></td>
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<td><strong>ARCHITECTURAL HIGHLIGHTS</strong></td>
<td><strong>ARCHITECTURAL HIGHLIGHTS</strong></td>
</tr>
</tbody>
</table>

### CASE STUDY 1: THE EGYPTIAN TEXTILES MUSEUM

**Main:** Chronology & geography
**Sub:** Material typologies

**Chronology**
- Funerary vs. quotidian,
- Figurative patterns,
- Religious vs. secular

**Material typologies**
- Museum archetype: organized walking
- Full height glass cases
- Wall built-in glass cases
- Free standing

**Spatial typology:**
- b & c

**Museum archetype:**
- Congregation of visitors

**Display Techniques**
- In-case hung
- Uncased hung
- Glass cased

**Color**
- Overall harmony
- Inconsistency

**Lighting**
- LED in-case & spot-lights

### CASE STUDY 2: THE METROPOLITAN MUSEUM OF ART

**Main:** Chronology & geography
**Sub:** Material typologies

**Chronology**
- Main: Material typologies

**Material typologies**
- Museum archetype: congregation of visitors
- Cabinets of curiosity
- Glass cased
- Uncased

**Spatial typology:**
- d

**Museum archetype:**
- Congregation of visitors

**Display Techniques**
- Graphic partitions
- Models
- Item labels
- Section labels

**Color**
- In-case & color in-case
- Overall harmony

**Lighting**
- LED in-case & spot-lights

### MUSEOLOGY PRACTICES

Curators are responsible for exhibition management, while architects are consulted for design or construction decisions. Exhibition design is done through the collaboration of exhibition, graphic, and lighting designers along with curators, but not architects.

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### MUSEOLOGY PRACTICES

---

**ANALYSIS**

MUSEOLOGY PRACTICES

THEMATIC FRAMEWORK & STRUCTURE

SPACE SYNTAX

DISPLAY TECHNIQUES

COLOR COMBINATIONS

INFORMATIONAL MEANS

LIGHTING STRATEGIES

ARCHITECTURAL HIGHLIGHTS

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6.3.0 FINDINGS

After studying the technical restrictions and analyzing the different architectural and museological aspects in the case studies, design exhibition propositions are concluded. They are as follows:

- Architects should be involved in the process of object interpretation specially the stage of translating textiles and their semantics into architectural and spatial configurations. Because curators are currently the main decision makers for exhibition designs, setting a connection between the container – architecture – and the contained – textiles – fails.

- A classification of inventory should always exist in a textile museum. Employing a main thematic framework along with a secondary embedded structure has shown success in the case studies. Chronology is the most employed system of grouping textiles.

- Having a predefined path for visitors to follow, comprised of mainly type c spaces, is necessary when designing a series of textile exhibitions. An unidentified itinerary would cause confusion. However, inserting a few self-exploratory type spaces – d spaces – would enhance social zones within the spatial structure.

- Glass receptacles, of varied shapes and sizes, are the main textile display technique throughout the case studies, while they are the most unsuitable means for exhibiting textiles. The Islamic exhibitions in the MET have shown other more communicative means such as stepped horizontal display and uncased hung ones.
- Contrast, between textile objects and the background surfaces in proximity, is necessary to visually accentuate the subject matter. A homogenized whole that converses the textile vocabulary is also sought for. Surface texture and materiality are a way of translating the textile language into architecture.

- Background narratives - textile trajectories - should go beyond texts on item and section labels. They could be exemplified through advanced digital means, such as motion sensitive display walls. They are interactive methods that engage the visitors through life scale graphical illustrations and audio-sound.

- No textiles should be subjected to any type of illumination that exceeds 50 lux. Introducing natural lighting is possible in textile museums, however it should be indirect as well as filtered from invisible ultraviolet radiations. The most appropriate type of artificial lighting is LED/Fiber optics as their heat emittance is the lowest compared to other types of luminaires.
CHAPTER SEVEN

7.0.0 TEST DESIGN
MET TEXTILE EXHIBITIONS ADDITION
7.1.0 SIGNIFICANCE OF DESIGN

This chapter introduces parts of my fifth year B.Arch design project exemplifying a number of the concepts presented throughout the thesis. The project was designed prior to the extensive analysis and studies illustrated throughout this written thesis. A rather general/limited research - including exposure to some of Gottfried Semper’s theories as well as cultural, historical, site, and institutional studies - was conducted as a preceding phase to design. Thus, this section of my thesis is regarded, in the context of this book, as revisited reflective analysis of a previously designed project to demonstrate ways through which manifestation of textiles transpire into architecture.

The project is an addition to The Metropolitan Museum of Art, specifically The Ancient Egyptian Wing, thus, pertinent to this study. The design features a series of Egyptian textile exhibition spaces as well as workshops and event spaces. Both programs aspire not only to the generation of contemporary ways of displaying textiles, but also to the establishment of the relationship between architecture and textiles. Contrasting the proposed design with the built exhibitions of the case studies is carried to differentiate between what has been done and what is yet to be developed.
7.2.0 DESIGN CONCEPT

The colors, geometries, patterns, and textures of textiles as an art and as an experimental medium, enable them to be important historical artifacts as well as contributors to unique and cultural experiences. The aim of this project is to showcase textiles as vital historical artifacts and as embodiments of evolving cultural identities. The intersection of built space and the woven forms intertwine to create a multifaceted spatial experience. In this project, the architecture is treated as a museum artifact. The museum does not function as a blank slate. On the other hand, the architecture converses the language of the textile artifacts and strengthen their vocabulary. Thus, my proposal is to extract the cultural, translate it to the contemporary through appropriate means and design approaches of the global.

The building acts as a spatial procession and a journey through time. All the textile exhibition spaces are located underground to account for the fragility of textiles and their prohibition to be exposed to sunlight. The forms manifest the concept of unearthing through history and act like the Ancient Egyptian tombs, which served through history as vessels that contain the most precious treasures of the kingdoms. This theoretical idea fades away as one move through the chronologically designed spaces. It is shown through the volumes gradually ascending above ground until one reaches the contemporary chamber located on the second floor above the Temple of Dendur in the MET.
7.3.0 SPATIAL ANALYSIS

The thematic framework and structure used in this project is through chronology. The organization of textiles is arranged via the order of their occurrences. One could go through the spaces whether from most ancient to the most recent or the other way around. The journey starts with Pharaonic era, then moves to the Greek and Romans, the Coptic, followed by the Islamic period, and lastly the Contemporary (FIG.95). The programmatic volumes are woven within the structure of the MET to engage and wrap around the existing spaces. They are all connected through “the pathway” which acts as the “integration core” where social manifestation transpires. Moreover, within each era-inspired volume, different spatial typologies are exemplified. The types of spaces that reoccur throughout the design are $b$, $c$, & $d$ types spaces. The spatial procession is dictated but also self-governed simultaneously. The different volumes are arranged in a way that would allow for self-exploration, while also being systematic and orderly connected. Thus, this design falls under both museum archetypes the “organized walking” and the “congregation of visitors” (FIG.96).
7.4.0 ARCHITECTURAL ANALYSIS

This section is discussed through the different spatial volumes of the project. They are as follows: The Pathway, The Pharaonic, The Coptic, The Islamic, and lastly the Contemporary. In each section is highlighted the architectural design epitomizing the various findings of the thesis.

7.4.1 THE PATHWAY

The pathway connects all timeline underground chronologically ordered exhibition spaces together. It is exemplifying a translation of the textile weaving technique through structure, thus, weaving at the architectural scale. In this case another medium – steel – is used to express textile configurational rules. A steel woven bridge is suspended from the floor above to serve as a visual and physical connector to the underground chambers (FIG.97).

7.4.2 THE PHARAONIC

In the Pharaonic/Ancient Egyptian volume, walls are treated as textiles. Linen sheets are suspended vertically on the tapered walls starting from the first level, continuing down to the others below (FIG.98). On the opposite wall is a 3D molded papyrus volume (FIG.99). Both display methods exemplify the three-dimensional qualities of textiles and their plastic characteristics as well as their association with architecture. They also serve to visually connect the various floors of the same volume. The texture and haptic significance of textiles is demonstrated through the papyrus wall since the material used is not of historical significance, but rather a contemporary model of it.
FIG. 97 THE PATHWAY: WOVEN STEEL BRIDGE

FIG. 98 THE PHARAONIC: LINEN WALL
FIG. 99 THE PHARAONIC: PAPYRUS MOLDED WALL

FIG. 100 THE COPTIC: THE VOID
7.4.3 THE COPTIC

Coptic textiles are celebrated for their colorful embellishments and three-dimensional qualities. Thus, textile segregation is essential. This is reflected in the project through the central void where textiles are hung (FIG.100). Visitors are to circle around the central atrium space through the different levels surrounding it. Most of textiles found in this period are fragments. Thus, having them displayed through a pressured plexiglass case is required to keep them from deteriorating (FIG.101).

7.4.4 THE ISLAMIC

The ceiling should set up the “climax of the effect”. The terminating horizontal surface of the space concludes the harmony of the whole system (Semper, *Style* 147). Semper has noted the importance of the ceiling dressing as the peak. Inspired by his theories, the space is designed to accentuate the spiritual connotation of the Islamic epoch through the use of the ceiling as a display medium. The architectural setting, which consists of elongated chairs furnishing system, allows the viewer to look upwards at the relatively low ceiling through which the Kiswa of Kabba is suspended (FIG.102). This technique allows the viewer to investigate the textile, and have a deeper connection with it.

7.4.5 THE CONTEMPORARY

The use of textiles for spatial enclosures is older than the “art of dressing the body’s nakedness. “The beginning of building coincides with the beginning of textiles” (Semper, *Style* 247). Semper’s theory of textiles as spatial elements transpires in this room, which serves as a workshop and exhibition space for contemporary textiles (FIG.103&104). The geometry of the textile modular grid is inspired by the Khayameya patterning, which has been and still is used when hosting cultural events. The resultant grid
FIG. 101 THE COPTIC: HUNG TEXTILES

FIG. 102 THE ISLAMIC: CEILING AS CLIMAX
is a compilation of layering and abstraction of the historical textile patterns, resulting in a lightweight membrane structure creating a spatial enclosure (FIG.105&106). It exemplifies the attributes of the material fabric and its potential applications in contemporary architecture.
CHAPTER EIGHT

8.0.0 CONCLUSIONS
8.1.0 FINAL DELIBERATIONS

Should the architecture of the textile museum operate as a living artifact that reflects the language of its repository or should it converse through its own vocabulary and be a blank slate for the artifact to speak for itself?

“Museums increasingly divorced art from a lived experience” (Newhouse 9). In this setting, we often experience textiles exhibited as objects in new alienated settings apart from their original ones, and as an attempt to denote context, it is often executed through object labeling. Adjacent to the material fabric are paragraphs stating the name of the textile, its location, and occasionally background historical information. However, by employing such approach, years worth of civilization are diminished in a couple of sentences. On the other hand, resorting to a recreation of the innate setting, where the textile was retrieved, is not the remedy. Ruskin expressed his concern with architecture restoration and replication in the following piece:

Do not let us deceive ourselves in this important matter; it is impossible, as impossible as to raise the dead, to restore anything that has ever been great or beautiful in architecture. That which I have above insisted upon as the life of the whole, that spirit which is given only by the hand and eye of the workman, can never be recalled. Another spirit may be given by another time and it is then a new building; but the spirit of the dead workman cannot be summoned up, and commanded to direct other hands, and other thoughts. And as for direct and simple copying, it is palpably impossible. What copying can there be of surfaces that have been worn half an inch down? The whole finish of the work was in the half inch that has gone; if you attempt to restore that finish, you do it conjecturally; if you copy what is left, granting fidelity to be
possible, (and what care, or watchfulness, or cost can secure it,) how is the new work better than the old? There was yet in the old some life, some mysterious suggestion of what it had been, and of what it had lost; some sweetness in the gentle lines which rain and sun had wrought. There can be none in the brute hardness of the new carving (Ruskin, The Works 242-43).

Copying what has already been created would take away from the authenticity, value, and beauty of the material object, which defeats the very purpose of a museum at first. This concept applies to both the textile as well as its innate architectural setting. As museums refuse to display non-genuine objects, architecture should not participate in the crime of cloning a historical one. Another atmosphere should be given through the current time frame, which would result in a new and meaningful experience. We live in a contemporary world, thus, even in a museum setting that mostly represents history, one should recognize the “now.” The solitary possible way to translate the past to the present is through architecture. In this instance, “The object - textile - is not simply transported but transformed” (Preziosi 50).

Textiles are intricate. They constitute of numerous complex intertwined layers of information that reflect the evolution of the values, styles, and attitudes of a given society, as proved throughout the thesis. These socio-cultural and political contexts if not revealed part of the experience would remain missing. Material fabrics cannot be considered solely in their entirety. Their minute technical details are rather important, if dismantled and dissected diligently would disclose many of the hidden specificities, which would vindicate the significance of the whole piece. Not only does the detail represent significance, it often converses meaning, which would be impossible to unearth through treating textiles just as pictorial objects pleasing to look at. Consequently, the proposal of textile exhibition as a blank slate is rejected.
Through investigating the case studies, it is concluded that there has been a conformist approach in most of the defining elements of textile museums, ranging from its architecture, display techniques, informational means, to its museological practices. The architecture through which textiles are manifested is seldom interactive or communicative to its repository. This phenomenon creates a disconnect between the textiles and their architectural settings. Visitors find themselves torn between contradictory and unrelated statements, that of the historical textiles, and the alienated designed venue. The Islamic department at the MET shows the most potential. However, there is still a profusion of trivialized aspects that are yet to be employed for achieving an architectural setting for textiles that translates their interrelation and meaning.

The morphological disparity between architecture and textiles artifacts in museums is a result of the current museological systems. Curators are the main decision makers when approaching display designs and their spatial requirements. In some institutions such as the MET, there are in house exhibition designers responsible for the interior creations; however, their backgrounds are not architecture based. They are often graphic designers. As curators are experts in artifacts related matters, they are not able to interpret and translate the multidimensional layers of textiles into architectural and spatial creations. Collaboration between both parties - the architects and the museum personnel in charge – is imperative in order for the built environment of the museum to manifest the intricacy of textiles.
8.2.0 DESIGN GUIDELINES

This final section of the thesis serves as a concluding manifesto through which design guidelines for textile exhibitions ought to be considered by architects, interior designers, and museums’ personnel. The following matters have been proven and concluded through theoretical research, case studies analyses, and exemplified through the test design.

8.2.1 THE ARCHITECTURAL

- Textile museums cannot function as “blank slates”. The architecture should converse the textile semantics and embrace them.

- Since woven materials are the legitimate representation of space, membrane architecture is a way of manifesting fabrics as spatial enclosures. Thus, textiles are the architecture.

- Applying textile techniques, such as spinning, plaiting, and weaving, in design is a means of translating textile systems into the architectural scale through different mediums.

- Visuality is not the only mode of celebrating textiles and their attributes. The acoustical and tactile dimensions are significant, though, unexamined domains that are yet to be further explored.

- The materiality of architecture along with lighting techniques, have the ability to transform the transcendental atmosphere of the space which is pertinent to textiles, especially those possessing spiritual connotations.
8.2.2 THE SPATIAL

- A thematic framework and structure are necessary in textile exhibitions. At least one main narrative should be conveyed through the categorization of the repository. Sub-organizations could take place to enrich and systemize the overall understanding.

- The most successful museum archetypes are the ones which merged the “organized walking” with “congregation of visitors” genotypes.

- A deterministic procession through type c spaces creates a more systematic visitor experience. Yet, including a few type d spaces would encourage the self-exploratory adventure. An abundant number of type d spaces is not recommended as it would result in a complicated web system of spaces that would cause confusion to the visitors.

8.2.3 THE EXHIBITAL

- Traditional glass case enclosures are unsuitable instruments to present textiles. In fact, they handicap the possibility for communication between the artifact and the visitors.

- Walls are not the only means of displaying textiles. Other architectural elements such as floors and ceilings represent rooms for manifestation.

- When textiles are displayed with other stylistically or technically related forms of art such as cornices, floor tiles, ceiling patterns, or textile production apparatuses, a contextual understanding of the material objects is acquired.
- Contrast, between textile objects and the surrounding surfaces, is necessary to visually accentuate the subject matter.

- Background narratives should go beyond text on item and section labels. They could be exemplified through advanced digital means, such as motion sensitive walls.

- Introducing natural lighting is possible, however it should be indirect as well as filtered from harmful radiations.

- The most appropriate type of artificial lighting is LED for in-case displays. Ambient artificial lighting is not restricted to a specific type of luminaire as long as illumination does not exceed 50 lux.

8.2.4 THE MUSEOLOGICAL

- Architects should be involved in the process of textile exhibition designing along with curators. Curators have extensive knowledge in the textiles and their related matters. While, Architects contribute the spatial relevance and translate the intricacy of textiles into architecture.

- Workshops and artist studios are social programs through which textile techniques and tactility are conveyed.
8.3.0 FUTURE STUDIES

This thesis evokes a reevaluation of how architecture contributes to a pattern of reinforcing defining features of what it represents. It sets the importance of the relationship between the container and the contained in a harmonized whole, while emphasizing the individual parts. Such connection does not only lie between architecture and textiles. There is a whole range of disciplines and venues where this concept is yet to be explored and applied to enhance the human understanding and the everyday experiences through the built environment. Future explorations are not only restricted to the museum architectural typology but could encompass an entire new spectrum of building archetypes.
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