

QUALITATIVE COMPARISON OF SIMILARITIES BETWEEN MUGHAL ARCHITECTURE AND PREVAILING COSTUMES FOR DESIGNING CONTEMPORARY WEAR

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ABSTRACT

Architecture and fashion plays an important role in satisfying basic human need of shelter and clothing. Both fields evolve responding to changes in surroundings brought by different culture. Different art forms in each culture borrow influences from each other to create new aesthetics. Mughal architecture stands out as the Golden age of Islamic architecture which is a fusion of Persian, Islamic and Indian influences known for symmetry, rich decorations and grand structures. Costumes worn during Mughal era were also examples of exquisite craftsmanship.

Present study was undertaken to compare similarities between features of Mughal architecture and costumes worn during this era to prove that costumes worn in any era are influenced by different art forms creating new aesthetics.

Data was collected, collated and validated with opinionnaire through survey method. Results were tabulated in the form of graphs and tables.

This study gave a conclusive result of positive correlation between features of Mughal architecture and costumes worn. This similarity was found in silhouette/shape, textures, colours, surface ornamentation and motives used for decoration.

Based on these similar features six garments were designed and acceptance study was carried out based on six parameters to find the suitability of designs for contemporary wear based on historical influences.

KEYWORDS: *Mughal Architecture, Pietra Dura, Jali Work, Costumes, Marble and Red Sand Stone*

INTRODUCTION

Architecture is a combination of technology, engineering and building skills along with art and design. The buildings or monuments constructed in each era reflects design sensibilities and advances in technology and construction materials.

Costumes are a style of dress or set of clothes worn by population at large. Costumes worn in an era reflects culture, economic and social progress and technological advances reflecting in innovations of techniques and new fabrics. Costumes usually mirror the civilizations.

Architecture and costume design both deal with creating space for human form in 3-dimensional structure. Elements and principles used for both disciplines are similar. Thus, Colour, texture, line and form being important elements of design used along with proportion, balance, rhythm, harmony and scale as important rules or principles used for designing architectural spaces as well as designing costumes.

Mughal architecture stands out as the golden age of Islamic architecture, developed in India under 5 successive emperors like Babur, Humayun, Akbar, Jahangir and Shah Jahan.

This architecture was the fusion of Persian, Turkish and Indian styles, which is known for their symmetry and decorative aspects.

Mughals were known to be connoisseurs of art and were responsible for creating rich legacy of various art forms which includes architecture, textiles, fashion, paintings, literature, music, gardens etc.

There are several similarities between architecture and fashion world.

Both share techniques that provide texture, form and volume in new and intriguing ways, often introducing shapes and silhouettes that confound conventional ideas of proportion and form. The new shapes in each discipline seem to find echoes in one another. Fashion design and Architecture have long been used to express ideas of personal, social and cultural identity (www.somersetshouse.org.uk-parallel practices in Fashion and Architecture)

Architecture serves as evergreen source of inspiration where both fields are visually driven expressions of personal taste and the times we live in, says director at Architectural Digest, Jane Kelter de Velle.

Designers often incorporate architectural elements, like elongated proportions and strong silhouettes in their fashion (www.mymodernmet.com)

On similarities between fashion and architecture, Dragana Zoric, adjunct professor of Architecture at Pratt said, 'At their core, both fashion and architecture, are focused on assembly. The architectural system and techniques of 'fastening' connects forms or materials in a variety of ways, where sequence is of utmost importance. Fashion construction of clothing through patternmaking and sewing follows a similar type of protocol.

The form of art and architecture began in 13th century, reached its zenith under the Mughals. The costumes developed under Mughals were unique and gorgeous in their form and styles. Mughal textiles were exemplification of luxury and royalty.

The dress of the Mughal like their fine art and architecture was not completely confined to one race. Combination of Muslim, Hindu, Persian or Turks contributed to the development of Mughal costume. Mughal emperors were fond of adopting new dress and new fashion which synthesized their own culture, contemporary culture and indigenous culture. (www.shodhganga.inflibnet.ac.in-Dresscodes of Mughal court)

The researcher is trying to explore these similar influences between the two fields with the example of Mughal architecture in India since Mughal era stood out as a Golden era in India when different arts flourished under the empire.

By exploring similarities between these two fields, we are trying to prove interdependence of all art forms for creation of new products or new features in any given art field.

This is also an attempt to implement application of historical art features in the knowledge of design history in the contemporary fashion industry with the creation of garments using contemporary fabrics and styling.

Aim

To compare and explore similar features between Mughal architecture and costumes of Mughal era and design contemporary garments based on similar features.

OBJECTIVES

- To study Mughal architecture for prominent features.
- To analyze women's costume worn during Mughal dynasty.
- To compare and correlate prominent features of architecture with costumes.
- To design costumes based on similar features for contemporary wear.
- To evaluate the acceptance of designs.

SCOPE

This study was undertaken to explore the comparison of features of Mughal architecture and the prevailing costumes during the Mughal era. Colour, texture, silhouette and surface embellishments were studied, compared and correlated with prominent features of Mughal architecture.

By analyzing this comparison, the researcher is trying to find if there is any impact of architecture on fashion. This is to prove that interdependence of all art forms creates new products with the application of historical art features.

METHODOLOGY

Phase 1

Collection of Data

- Literature on Mughal architecture was collected through books, internet, journals, essays, photographs of actual sites and interviews with architects.
- Costumes worn during Mughal period were analyzed through paintings and studied from books and internet.
- Survey was undertaken to validate the similar features found between Mughal architecture and fashion, with architects, design faculty and students.

Phase 2

Design Development

- Collected data was analyzed to make a comparative table of similar features found between Mughal architecture and prevailing fashion.
- New designs were created based on similar features for contemporary using new fabrics

Phase 3

Acceptance Phase

Assessment of designed garments were done with interview schedules and questionnaire to find opinion about symbolism, innovation, texture, colour, appearance, aesthetic appeal, market acceptability and commercial viability of garments designed based on features of Mughal architecture.

Examples of Mughal Architecture And Costumes

Pietra Dura or Inlay work

- Fine gemstones were used for inlay work in floral pattern on marble surface.
- Similar influence was found in Royal costumes which were decorated with all over floral designs and the motifs were outlined in gold thread similar to Pietra dura inlay work.



Figure 1

Jali work or Latticed screen

- Also called as perforated stone or latticed screen with ornamental pattern constructed with the use of calligraphy and geometry using finely carved plant based designs.
- Chikankari is a delicately done hand embroidery on muslin, silk, chiffon etc with white or same coloured threads. Jali work is part of this embroidery technique resembling Jali work in architecture, popularised by Mughal queen Noor Jahan.
- Fabrics like Kota doria also resembles jali work: they are made of cotton or silk in Rajasthan or UP and have small square like patterns known as khats with fine weaves and light in weight.



Figure 2

Pointed Arch

- Architectural symbol of hands joined in prayer pointing towards heaven or Mecca. They can be 1,2 or multi centered pointed arch.
- Mughal costumes had a yolk looking like a pointed arch.
- Silotte of some of the costumes resembled pointed arches.

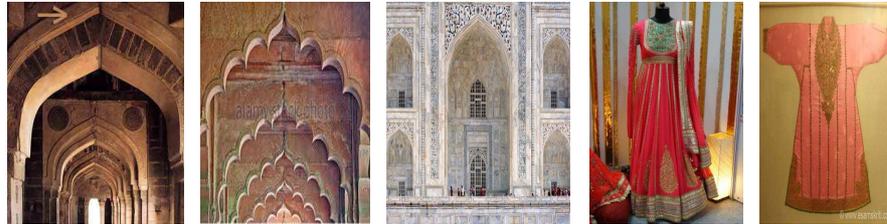


Figure 3

Domes and Minarets

- These are important features of Mughal style, symbolizing the arch of heaven which is used in Tombs and Mosques. They are typically wider in the base and slender on top.
- Costumes too followed the similar pattern of wider flare and slender bodice ,resembling like a dome .



Figure 4

Minerates :

- Tower like structures from which Azan is given by muezzin or maula. In the later phase they were meant solely for their picturesque effect.
- Women's slender costume resembled minerates

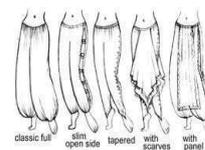
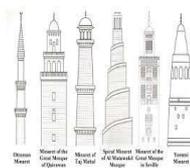


Figure 5

Material for construction :Red sand stone & Marble

- Architecture under Akbar was constructed using red sand stone whereas Emperor Jahangir and Shah Jahan used marble.
- Costumes used red brocades and white on white fabrics resembling The red sand stone and marble.



Figure 6

White Marble monuments



Figure 7

Symmetry in architecture and charbagh or Mughal garden

- Mughal architecture was symmetrical in nature creating a mirror like image having the same number of minarets, arches and pillars.
- Gardens were also designed based on symmetrical four ways partition
- Costumes used symmetry in its design and construction.



Figure 8

Symmetry in architecture and gardens

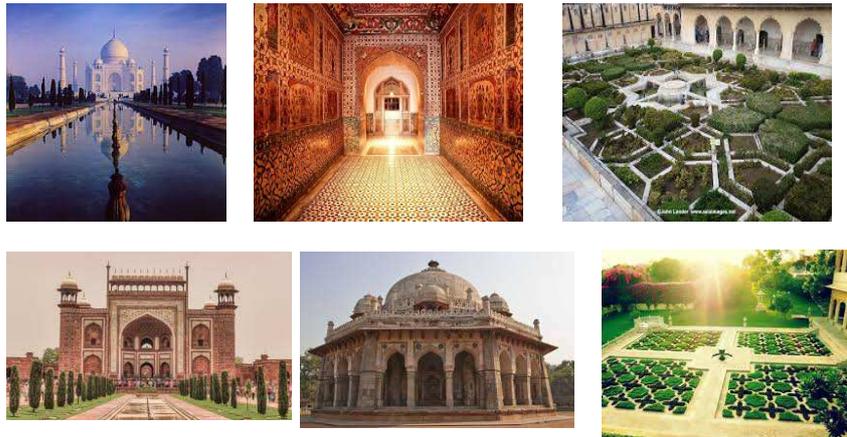


Figure 9

Jewelry motifs and designs:

Similar motifs were found in costume embroidery and on surface decoration of mughal architecture.



Figure 10

RESULTS AND DISCUSSIONS

The comparative study has given the following conclusive results where features of Mughal architecture is compared with fashion which is further validated by a survey of architects, students and faculty:

- 98% of those interviewed agreed that inlay work resembled jardosi work on costumes
- 98% said Jali / lattice work resembled embroidery and fabric construction of similar influence
- 91% of those interviewed agreed that pointed arches of Mughal architecture resembled yolks. And silhouettes of costumes worn during this era.
- 94% agreed with shapes of Domes being the inspiration of wider flare of lower part of a garment and slender top.
- 90% agreed with Minarets also being an inspiration for some of the slender silhouettes of lower as well as upper part of the garment.
- 93% agreed with red sand stone inspired wide use of reds, orange, maroon and brick red colors in brocades and silk and wool during emperor Akbar's era.

- 98% agreed that use of white marble inspired extensive use of white brocades, silks and voiles with white embroidery resembling carvings on marble, during later part of Mughal era. Emperor Shah jahan and Jahangir used white marble for construction.
- 91% agreed that there was order and symmetry in architecture and gardens built during Mughal era which was reflected in costumes design and construction.
- 91% agreed about similarity in embroidery designs with motives of inlay work and jewellery designs worn during Mughal period.
- 100% of the respondents agreed with overall appearance of Mughal architecture was grand and rich similar to costumes worn during Mughal era which were rich and luxurious with use of gold, silver and gemstones used for surface embellishments on the costume.

Table of Comparison of Similarities between Mughal Architecture and Costumes

Table 1: Mughal Architecture Mughal Costumes

1. Inlay work or Pietra Dura: gemstones were used in floral pattern with gold outline on marble surface.	1. Jardosi work: stones were used in floral pattern with gold or silver in the form embroidery on fabrics.
2. Jali or lattice work: was a common feature for screens using ornamental finely carved plant based designs.	2. Chikankari embroidery and fabrics like Kota used similar jali work.
3 Pointed arches: with one, two or multi centered points were common features.	3 Yolks and Silhouettes of some costumes resembled pointed arches
4 Domes: were common with wider base and slender top	4 Headgear and costumes also had wider flare and slender bodice resembling dome
5 Minerates: were tower like structures surrounding the main monument	5 slender costumes of Mughal women resembled minerates
6 Red sand stone: was common construction material during Akbar	6. Red brocades and shades of red were popular materials.
7. White marble: was commonly used by Jahangir and Shah Jahan	7. White on white textures in cotton, silk, voil were common.
8. Symmetry: was commonly used in Mughal architecture and gardens creating mirror like images	8. Most costumes used symmetry in its design and construction.
9. Motifs: used in inlay work or jaliwork were floral, natural and geometrical.	9. Motifs used for surface embellishment on garments resembled motives foe inlay work and carvings
10. Appearance: of Mughal architecture was grand, rich and luxurious.	10. Appearance of costumes were also rich and luxurious with finest fabrics and use of gold, silver and gemstones on the surface decoration.

Analysis of above results under the heading of Silhouette, Texture, Surface embellishments or design techniques and Overall appearance of costumes worn during Mughal empire is as follows:

Influence of Mughal Architecture on Silhouette of Costumes

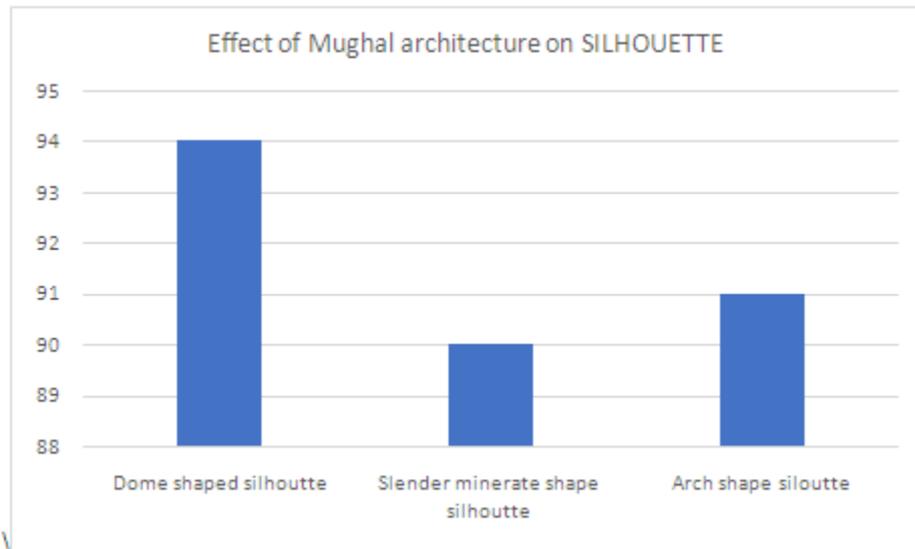


Figure 11

From the Above Charts, it Can be Concluded that:

- 94% of the respondents agreed that Domes used in Mughal architecture could have been an inspiration for a dome shaped flare of a tunic used by both men and women of Mughal era.
- 90% of the respondents agreed that slender silhouettes of some of the costumes was inspired by the slender structure of Minerates.
- 91% of the respondents agreed that single as well as multi pointed arches which were common features in Mughal architecture could have inspired the yolks used in Tunics along with silhouettes of some of the garments.
- 92% of all the respondents agreed that Silhouettes of Mughal era were influenced by the features of architecture like arches, domes and minerates.

Influence of Mughal Architecture on Colour

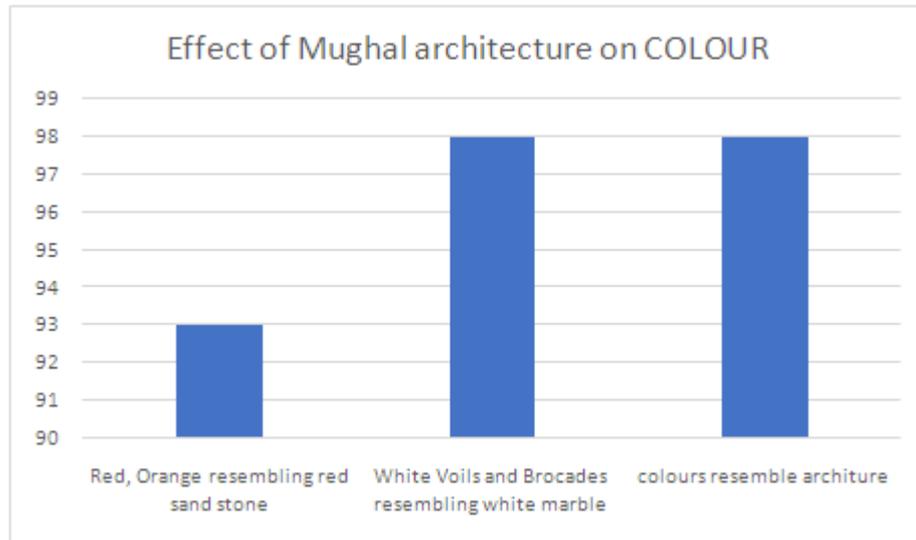


Figure 12

From the Above Chart, it Can be Concluded that:

- 93% of those interviewed agreed that red sand stone which was commonly used as a construction material during Emperor Akbar's era inspired the use of shades of red brocades in the outfits.
- 98% people agreed that white marble used extensively during Emperor Shah Jehans era inspired white fabrics in veil, brocades and mulmuls.
- 98% people agreed that colours of monuments during Mughal empire influenced the colours used in fabrics for making garments.

Influence of Mughal architecture on Texture

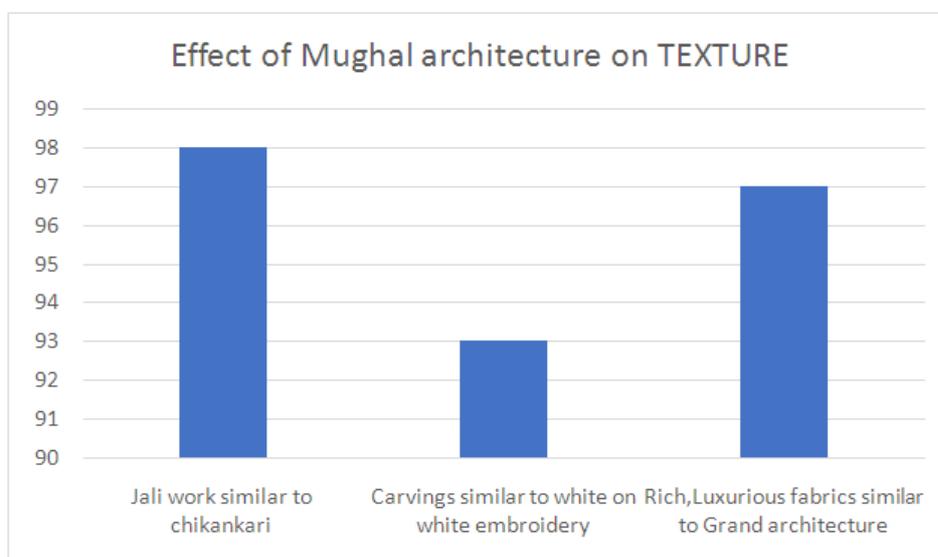


Figure 13

From the above Chart, it was Concluded that:

- 98% of respondents agreed that Jali or Lattice work found in Mughal architecture resembled chikankari embroidery and fabrics like Kota Doria which has jalawork.
- 93% people said carvings used on the surface of monuments created texture to the plain surface which was found to be similar to texture created by tone on tone embroidery or Jari work of Brocade fabrics.
- 97% of the respondents said Grand, opulent appearance of Mughal monuments influenced the overall appearance of rich, luxurious fabrics like silk, voils with gems, gold and silver work.
- 98% agreed that features and techniques used in Mughal architecture influenced textures of garments.

Influence of Mughal Architecture on Design Techniques and Embroidery

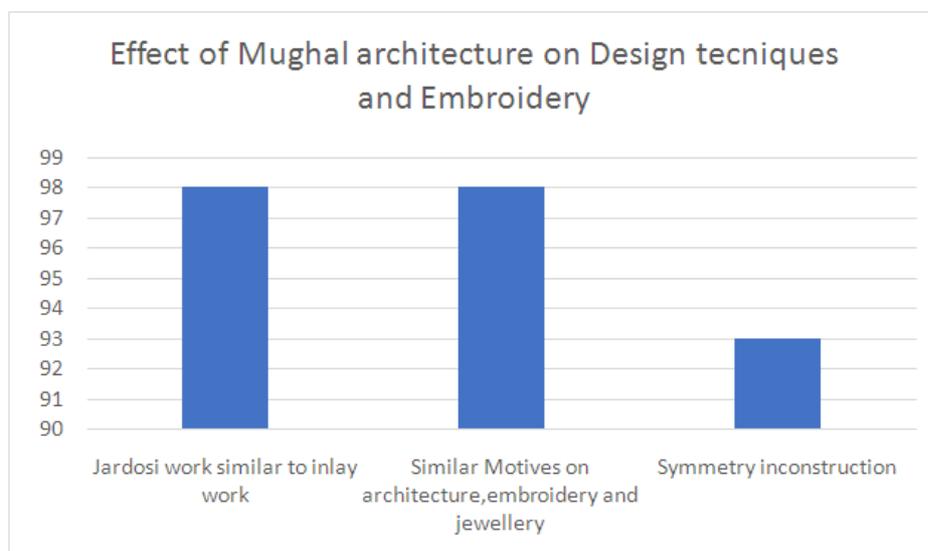


Figure 14

From the Above Chart, it was Concluded that

- 98% said that Jardosi work used extensively on Mughal costumes was inspired by Inlay work used on the surface of monuments which used gemstones.
- 98% agreed that motives used for carvings, jaliwork, inlay work were similar to motives used for jewellery and embroidery: used for surface decoration of the garment.
- 93% agreed that the symmetry used in a garment was similar to symmetry used in the construction and design of monuments and gardens of Mughal era.
- 96% agreed that Mughal architecture influenced design and techniques used for achieving symmetry in a garment and embroidery motives used for surface ornamentation of costumes

Thus, from the above analysis it can be said that average of 96% of the respondent agreed that Mughal architecture positively influenced the costumes worn during the same period. Influence was prominently seen in colour,

silhouette, texture, design, techniques and motives used in both architecture and fashion. This was further proved by test of proportion where the resultant value $4.6^{**} > 1.64 > 2.33$ is

Highly significant which lies in the critical region so we reject the null hypothesis and accept the alternate hypothesis at 1% level of significance that proportion of agree is more than proportion of disagree, thus proving that architecture during Mughal era influenced fashion incorporating features of architecture into styles and designs of garments worn by women during this period.

Based on the above observations and results, garments were designed for contemporary wear. These garments have features observed in Mughal architecture. Styling and silhouettes of all the garments are meant to be contemporary, thus bringing in traditional elements into modern costumes with similar fabrics.

Acceptance study was done for these garments with architects, students and faculty. They were assessed on the parameters of Symbolism related to Mughal architecture, Innovation adapted for contemporary wear, Texture, Colour and Appearance suitable for Mughal era, Aesthetic appeal, Market acceptability and Commercial viability. The survey showed the best design for each parameter and best overall design. They are as follows:

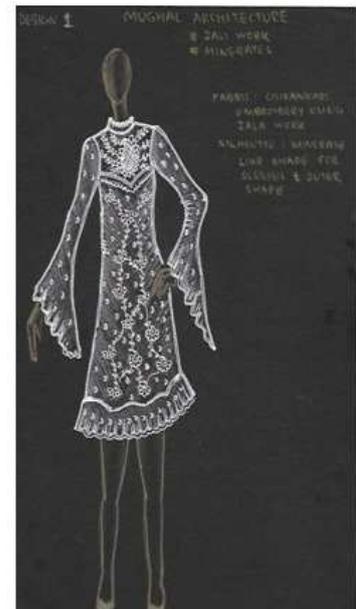
Design 1: Inspiration: Jali/
Lattice work & Minarets



Design 2: Inspiration: Minarate Dome,
Rich grand appearance, Transparency



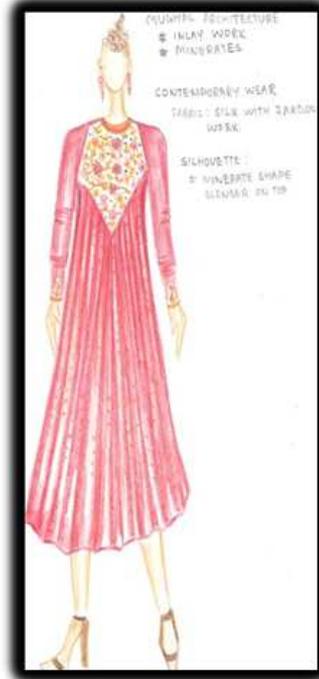
Design 3: Inspiration: Domes,
Rich white brocade



Design 4: Inspiration: Domes, Jali work & Arches



Design 5: Inspiration: Inlay work, Pillars, Arches



Design 6: Inspiration: Inlay work, Minerettes

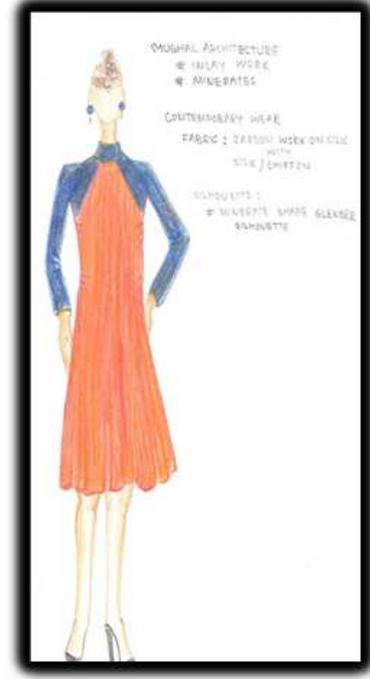


Figure 15

Results of Acceptance Study for the Above Designs are as Follows

Table 2

	Design 1	Design 2	Design 3	Design 4	Design 5	Design 6
Symbolism	64%	48%	64%	64%	44%	68%
Innovation	68%	60%	60%	64%	36%	80%
Texture	60%	52%	56%	48%	32%	48%
Colour	52%	48%	66%	64%	64%	68%
Appearance	60%	68%	56%	76%	32%	56%
Aesthetic appeal	61%	56%	52%	60%	36%	60%
Market acceptability	66%	48%	36%	56%	16%	52%
Commercial viability	68%	48%	36%	64%	44%	56%
Total	499	428	426	496	304	488

The garments were assessed on a 3-point rating scale. The above figures are for percentage of people who rated the garments as Excellent.

Symbolism: This is related to costumes symbolizing Mughal architecture. Symbolism was related to features of architecture like Domes, minerettes, lattice work, inlay work, Textures symbolizing material of construction and symmetry in construction. Design 6 was found to be most symbolic followed by design 1,3,4.

Innovation: is related to style, texture and colour to adapt or innovate to suit the new design for contemporary wear. Design 6 was liked by 80% of the respondents for innovation followed by design 1 and 4

Texture: of Design 1 was well accepted by majority followed by 3,2,4 &6, 5. Lace fabric or fabrics with white on white embroidery or jacquard weave were liked by most people.

Colour: The most acceptable colours were brick red-tangerine, Red-Maroon, Pink and Whites and Off whites. These colours were popular colours in Mughal era.

Appearance: Design 4 was most appealing followed by design 2,1,3,6 and 5

Aesthetic Appeal: Design 1 was liked by majority for aesthetic appeal, followed by design 4, 6,2,3,and 5

Market acceptability and Commercial Viability: Design 1 was found to be most commercially viable and acceptable in the market followed by design 4, 6,2,3 and 5

Overall score was highest for design 1, followed by design 4,6,2,3, and 5.

SUMMARY AND CONCLUSIONS

Architecture and fashion plays an important role in satisfying basic human need of shelter and clothing. Both fields share similar ideas of form, space, volume, colour, proportion, harmony, balance, texture etc. Architects and fashion designers use innovation and experimentation in technology. Cultural influences play a big role in developing new aesthetics.

Design evolves responding with changes in the surroundings brought by different cultures, merging different elements to create something aesthetically pleasing.

Architecture is a technology driven science and aesthetically pleasing art. Costume/Fashion design is also a combination of art and technology for construction of human contoured fitted garments.

Mughal architecture was a combination of Persian, Islamic and Indian cultural influences. Mughal monuments like Tajmahal, Humayuns tomb, Red fort were known for their symmetry, rich decoration and grand structures. Costumes worn in each era are reflection of civilization. They change according to changes in culture. Costumes evolve by borrowing ideas from different cultural influences. Mughal costumes were crafted with exquisite textiles, refined embroidery and beautiful craftsmanship borrowing influences from Persian, Islamic and Indian culture.

This study was undertaken to compare similarities between Mughal architecture and costumes worn during Mughal era. Similarities were explored for form/shape, texture, colour, techniques or designs used for construction and ornamentation used for costumes and monuments.

Data was collected through various medias and compared to find similar features. These features were analyzed and validated with the help of a survey of architects, students and faculty of fashion design. The results were further tabulated in the form of graphs and tables and conclusions were drawn based on the findings.

The researcher found a positive correlation between features of Mughal architecture and costumes worn during Mughal era. These similar features were used as an inspiration to design garments for contemporary wear. These garments were further assessed on eight parameters to find the most popular design and acceptability of all the designs. These

parameters were Symbolism, Innovation, Texture, Colour, Appearance, Aesthetic appeal, Market acceptance and Commercial viability.

Thus, it can be concluded that there is interdependence of all art forms which can be proved by analyzing similarities between prominent features of Mughal architecture and Mughal costumes. New products are created using combined aesthetics. Historical features can be applied for contemporary fabrics and styling in the fashion industry.

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