

INFLUENCE OF ARCHITECTURE IN CLOTHING DESIGN

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Abstract: *This paper describes and state the relationship between architecture and fashion, as both disciplines respond to the culture and environment of individuals and societies. Very often fashion designers were inspired by architecture, but also architects were inspired from the fashion creations. Very often, designers in their fashion pieces reflect the architectural constructions. The aim of this work is architecture, an art that, like fashion, is the fruit of creativity. More precise, the architecture is used as inspiration for creating two fashion models. The basic construction of a dress is used and then with use of modeling, the pattern pieces are created. With these models women's fashion is bring closer to and shows the connection with architecture. At the end we get the conclusion that both, the fashion and architecture, in the past and in the future, remain two arts that are connected through creativity, inspiration, technology and human imagination.*

Keywords: architecture, design, construction, modeling, dress.

UTICAJ ARHITEKTURE U DIZAJNU ODEĆE

Apstrakt: *Ovaj rad opisuje i navodi odnos između arhitekture i mode, jer obe discipline reagiraju na kulturu i okolini pojedinaca i društava. Vrlo često su modni dizajneri bili inspirirani arhitekturom, ali također su arhitekti bili inspirirani iz modnih kreacija. Dizajneri u svojim modnim komadima vrlo često odražavaju arhitektonske konstrukcije. Cilj ovog rada je arhitektura, umetnost koja je, poput mode, plod kreativnosti. Preciznije, arhitektura se koristi kao inspiracija za stvaranje dva modna modela. Koristi se osnovna konstrukcija haljine, a zatim pomoću modeliranja, stvaraju se delovi uzorka. S ovim se modelima ženska moda približava i pokazuje vezu s arhitekturom. Na kraju dobijte zaključak da i moda i arhitektura, u prošlosti i u budućnosti, ostaju dvije umetnosti koje su povezane kreativnošću, inspiracijom, tehnologijom i ljudskom maštom.*

Ključne reči: arhitektura, dizajn, konstrukcija, modelovanje, haljina.

1. INTRODUCTION

For decades, fashion and architecture have been independent of each other [1]. Despite the identical idea of covering the human body, fashion produces thin flowy clothing while, architecture produces big heavy masses [2]. Fashion and architecture at one time were developed as an object for body covering and protection [3,4]. So, while clothing is named as the

"second skin" because it covers and shields the human body from the external elements and also serve as an aesthetic function, architecture is named as the "third skin" because it serves the same protective and aesthetic functions but on a bigger scale which regard the human body and its private environment [5]. In fact, both industries are completely different in terms of size and used materials, but its processes of design contains recognisable similarities [6].

Throughout history, movements and periods in art have influenced the both disciplines and they also strengthen the parallels placed between them by development them further [7]. These two fields have many similarities, so the "Design" and "Creativity" are leading common elements between fashion and architecture, where both fields touch on; creativity, art, visualisation, imagination and skills [8]. So, the fashion and architecture disciplines, as an impressive nonverbal expressive language, are main actors of designing activity, feeded from creativity. They are defined of the values of political, socio-cultural and technological influences from past and today, and are influenced by economic, cultural, generic and historical factors [9]. Both architecture and fashion get ideas from outside sources (art, science, and technology), and they both have an impact on one another [10]. In addition, things like culture, society, time, and the environment influence them [11].

Architecture and fashion design both reflect the society's rapidly transforming social mores and cultural identities. It they stated that throughout history, the form and look of both clothing and constructions have been impacted by one another. This relationship demonstrates parallels because it is based on human size as well as function [5]. But in addition to the similarities mentioned above, fashion and architecture differ in scale, proportion, materials, patterns and size depending on the targeted final product [4,12]. So, this disciplines are diametric in the final product. This is also confirmed abd by Restin who stated that architecture has a more imposing and long-lasting existence while fashion design is more short-lasting in nature. By developing structures in a one-to-one range with the proto-architecture of products like furniture, teapots, and clothing, it is possible to explore design techniques in smaller-scale products [13]. In terms of this conclusions, Coco Chanel state that "Fashion is architecture. It is a matter of proportion." [14], while Zaha specified, "Architecture is how the person places herself in the space. Given that both, architecture and fashion have their roots in the visual arts, there is frequently a clear and continuous connection between the two worlds [15], especially when an iconic work of art like Mondrian's "Compositions" is used in both, architecture and fashion projects [16]. The simplest example of comparison can be seen in Gothic art, strictly devoted to Christianity, through architecture characterized by tall and airy cathedrals, against which stands the representative clothing of women-

ladies in elegantly elongated dresses, rather long than wide sleeves with pointed, tall hats [17]. Certainly, both, fashion and architecture are two fields of design that are driven by needs, ideas and values across time and space. Therefore, the products of each of them are exposed to continuous changes depending on the circumstances and requirements [18]. The limits of designing both disciplines were changed by use of computer tools and software. Construction are more fluent and clothing is more architectural. The architectural alphabet in fashion from one side, and on the other the fashion methods and ideas used in architecture along with experiencing similar content in both areas are among the characteristics of these arts [19]. When this two disciplines are seen separately, can be noticed that fashion is taken as a popular and favorite trend, not only related to the form of the dresses and decoration or behavior, but also understood as a part of manner. In a higher considering fashion is also related to: fancy, vogue, mode, and luxurious good and articles [20, 21]. Many studies has confirmed the conection between this two disciplines. So, the connection between fashion and architecture is seen in the work of designer Frank Lloyd Wright, who designed a hat that is a fashion accessory inspired by the Guggenheim Museum [22]. The famous Italian-French fashion desiner "Pietro Cardin" (known as "Pierre Cardin") has introduces his famous "Bubble Dress" design, influenced by his architectural background study and inspired by the geometrical forms od spheres and ellipsoids [23]. In our previous research, modeling of clothing is performed by using different methods and computer software as a 2D and 3D CAD system [24-28].

The aim of this paper is to connect architecture and clothing design at the construction and modeling of a women's dress with the application of parts of architecture.

2. EXPERIMENTAL PART

In addition to all these analyze of the relationship between fashion and architecture, the aim of this study is to create models inspired by architecture. The common thing between the created models and the architecture is the design, so, architectural construction were mirrored in dresses. The inspiration of the models is Gothic and Modern architecture (circles). For the realization of the models, as basic material, fabric and knit, was used. Also, secondary materials were used, such as: laces, non-woven fabric, plastic for a corset, zipper. The Figure 1 and Figure 2

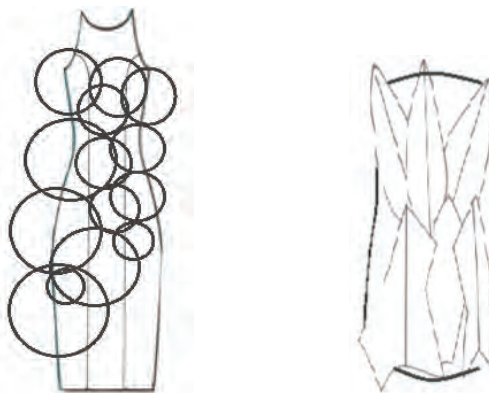


Figure 1: Technical sketch of Model 1 and Model 2



Model 1



Model 2



Figure 2: Model 1 and inspired by Contemporary Prahran Hotel Melbourne Pub and Model 2 inspired by Sydney Opera House

are present the technical sketch of models and their inspiration.

Description of model 1: The front has two darts that start at the sleeve neckline, and joins with a seam that is located above the waist line and ends at the length of the cut. Circles of different sizes are sewn on the front part and form a 3D accessory. Back: There are two darts on the back also, the length is 14.0 cm and the width is 2.0 cm. The used material for making this dress, as a base and for circles, is a knit.

Description of model 2: On the front this dress has two darts, and the piece should be cut once. Also here are sewn 3D accessories. The back has two darts

above and below the waistline. There is a zipper for fastening and the 3D accessories are sewn starting from the location of the zipper and ending at the side seam. The used materials for making this dress are fabric. For the accessories on the front and back, it was used flaselin, a material that serves to fix the parts, to get strong. And for the individual pieces for the front of the dress, plastic corset strap was sewed into the edges of each piece.

3. RESULTS AND DISCUSSION

For creations of the patterns, as first step was made the basic construction of a women's dress [29].

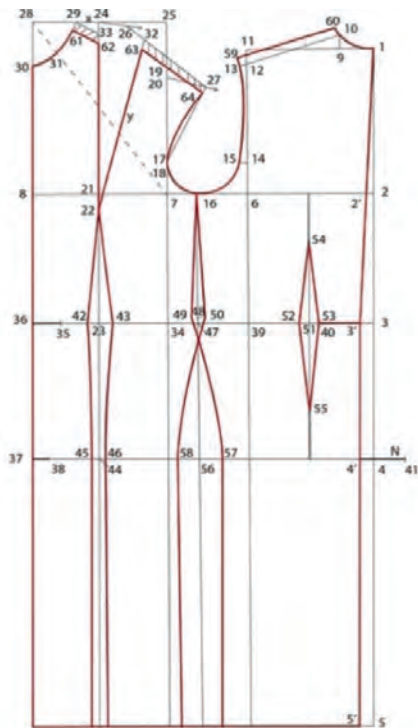


Figure 3: Basic construction of women's dress

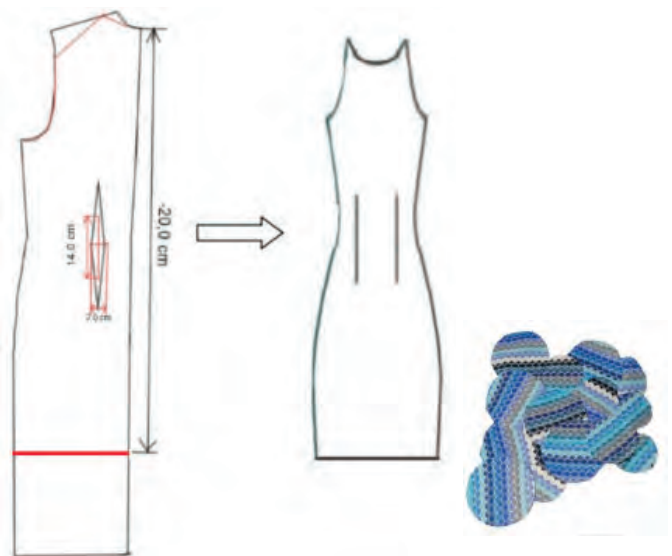


Figure 5: Modeling of back of Model 1 and Circles for 3D accessory

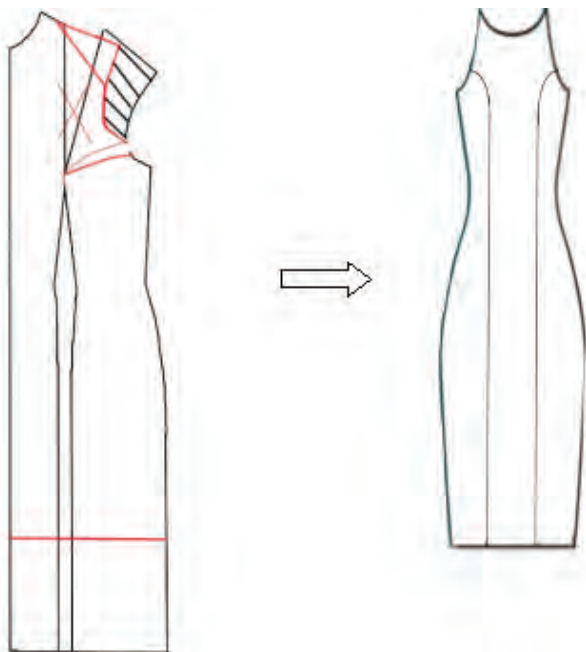


Figure 4: Modeling of front of Model 1

Later, with modeling of the basic construction, the pattern designs were finalized. The basic construction of the dress is made for size 38, Figure 3.

The modeling for Model 1 is presented and the 3D circles in different dimensions for accessories, are

presented on the Figure 4 and Figure 5. Circles with 3 different sizes are made, the largest circle has a diameter of 20,5cm, the middle circle is with $d = 15,4$ cm, and the smallest circle has with of 13,0 cm. Each circle is fixed with two layers of flannel to give them the necessary stiffness to stand upright, and is cut from the braid.

The pattern designs are finalized with adding seam allowance. The side seam allowances are with widths of 1,0 cm and at the end is 2,0 cm. These two pieces are cut from the basic knit, and then are sewn. At the end the 3D accessories are sewn by hand on the front.

Modeling of front of the Model 2 start with removing of the upper part of the basic construction (also and on the back piece), Figure 6. Then the length of the dress is shortened. Also the upper dart is removed.

Modeling of the back: the darts remain the same. A zipper is added and the added pieces on top of the dress. All pattern pieces have side seam allowance of 1,0 cm, and at the end of the dress is 2,0 cm. The technical drawing for the 3D accessories is presented on the Figure 7.

At the end the final models are presented, Figure 8.

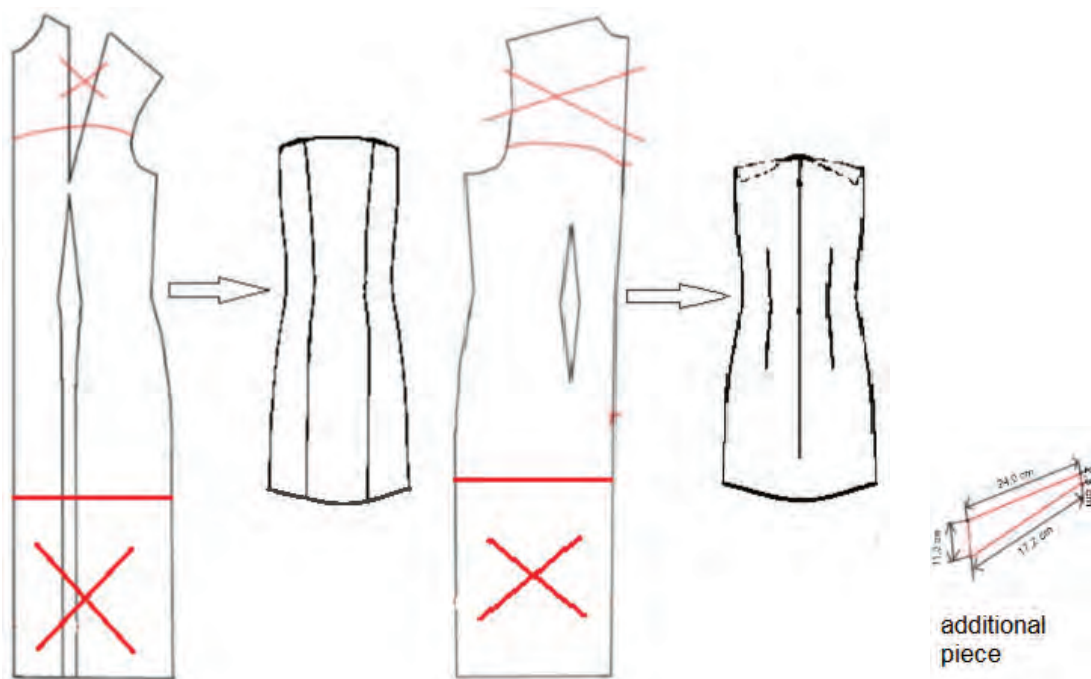


Figure 6: Modeling of front and back of Model 2 and additional piece



Figure 7: Technical drawing of 3D accessories for Model 2



Figure 8: Final model 1 and model 2

4. CONCLUSION

Regardless of whether the worlds of architecture and fashion are concurrent, interdependent, or based on a reciprocal relationship, they were both initially created to enhance the comfort and attractiveness of the human body; therefore, they must also reflect his personality and identity.

The relationship between fashion and architecture has a long history, but it only became increasingly apparent and complex throughout the 20th century as a result of innovations in fashion industry technology and materials.

Therefore, the fashion designers are secret architects and many architects are hidden and undiscovered fashion designer.

This paper is another confirmation for the architecture that is source for creating fashion models.

REFERENCES

- [1] Farahat B. (2014). The Interrelationship Between Fashion And Architecture Al-Azhar University Eng. *Journal, JAUES 9*.
- [2] Deapati A.K., Wikantari R. (2020). Fashion and commercialism in architecture. IOP Conf. Series: Earth and Environmental Science, 575.
- [3] Fermanto L., Rudy T., Denny H. (2019). A Portable Architecture with an Interior Fashion Concept. *International Journal of Engineering Research and Technology*, 12(12), 2126-2132.
- [4] Trisno R., Lianto F., Choandi M. (2019). Re-Defining Fashion Architecture: An Etymological Investigation Towards the Hybrid of Fashion Architecture. *International Journal of Civil Engineering and Technology* 10(10), 259-268.
- [5] Aydın S., Aysel Z. (2021). Being the Next Proto: An Investigation of Proto-Scale with 3D Voxels at the Intersection of Architecture and Fashion Design. *Journal of Computational Design*, 2(1), 217-242.
- [6] Yildirim H. (2011). Cumhuriyet Newspaper, 24th of April.
- [7] Aktepe S. (2014). Art / Artist Relations in the Process of Fashion and Textile Design, *Akdeniz University e-journal*, 55-58.
- [8] El-Gammal Y. O. (2018). Architecture and Fashion-Something in Common. *Trends in Textile & Fashion Design* 3(1), 272-279. <http://dx.doi.org/10.32474/LTTFD.2018.03.000152>
- [9] Harmankaya H., Yilmaz A., Cetin A., Ercan D. (2014). Fashion and Architecture, *Journal World of Turks*, 191-199.
- [10] Özsağ A. A., Alotman H. (2018). Fashion Inspired by Architecture: The Interrelationship between Mashrabiya and Fashion World. *Journal of History Culture and Art Research*, 7(2), 328-351.
- [11] Savić M., Frfulanović-Šomodji D., Đorđević P. (2020). Fashion and textiles inspired by architecture; use of new materials. *Tekstilna industrija*, 68(4), 49-57.
- [12] Nawras O. A., Ziad O. R. (2021). The interrelationship between architecture and fashion. *International Journal of Humanities and Educational Research*. Vol. 3, Issue 6, pp. 525-539
- [13] Retsin, G. (2016). Discrete Assembly and Digital Materials in Architecture. *Proceedings of the 34th eCAADe Conference*, 1, 143-151.
- [14] Afzal F. (2013). Architectural inspirations in fashion design. From <https://www.slideshare.net/franqi/architecture-fashion>
- [15] Woods L. (2009). Art to Architecture. From <http://lebbeuswoods.wordpress.com/2009/03/05/art-to-architecture>
- [16] Lafer S. (2017). How Mondrian Has Been Influencing Pop Culture for 100 years. From <http://www.sleek-mag.com/2017/05/31/mondrian-100-years/>
- [17] Menon V., Bai K. (2018). Exploring the similarities of gothic architecture and costume to develop designs for the contemporary wear by using gothic features. *International Journal of Textile and Fashion Technology*, 8(5), 29-42.
- [18] Abdulahhad E., Ra'ouf Z. (2020). Analogy between costume and architecture as fashion. *Association of Arab Universities Journal of Engineering Sciences*, 27(3), 97-111.
- [19] Karimi P.M., Bavar C. (2018). The Identity of Iranian Architecture and the Formation of Fashion Design Ideas. *Civil Engineering Journal*, 4 (1).
- [20] Devetak T. (2016). Space in Fashion Design - F2 (Fabiani Fashion) Case Study. *South East European Journal of Architecture and Design*, 2-6.
- [21] Trisno R., Lianto F., Choandi M. (2020). An Interior-Architecture Concept for Fashion-Accessory-Interior: Transforming Space from Body to Transformable Fashion Interior. *International Journal of Engineering Research and Technology*, 13(11), 3262-3265.

- [22] Chinwendu A. (2014). Architecture + Fashion: A study of the connection between both worlds. Master Thesis, Nottingham Trent University, United Kingdom.
- [23] Pierre C. (2018). Pierre Cardin, Source: <https://pierrecardin.com/designer> (Date of access: May, 2018)
- [24] Jankoska M., Petreska E. (2019). Computer construction, modeling and fabrication of corset, *Tekstilna industrija*, 67(4), 11-19.
- [25] Jankoska M., Petreska E. (2020). Application of CAD System for Ladies' Dress Design with Draperies, *Textile Science and Economy XI*, 11 International Scientific-Professional Conference, Zrenjanin, Serbia, November 23-25th, 2020, 89-94.
- [26] Jankoska M. (2020). Design and Modeling of Lady's Dress, *Contemporary Trends and Innovations in the Textile Industry, 3th International Scientific Conference*, CT&ITI Beograd, Serbia, September 17-18th, 2020, 331-339.
- [27] Jankoska M. (2021). 3D virtual fitting system on woman's garment, *Tekstilna industrija*, 69(4), 71-79.
- [28] Jankoska M. (2020). Application CAD methods in 3D clothing design, *Tekstilna industrija*, 68(4), 31-37.
- [29] Cortosheva S., Jankoska M. (2021). *Construction of women's cloth*. Ars Lamina.

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