International Journal of Applied Arts Studies

Acknowledgement

In the Name of God

Dear Readers,

I, on behalf of the editorial board, am proud to present this issue of the *International Journal of Applied Arts Studies (IJAPAS)* under the sponsorship of the Islamic Azad University, Yazd Branch. We were driven to found the *IJAPAS* by a noticeable lack of journals, in the Islamic Republic of Iran in particular, devoted to architecture, urban design, urban planning, architectural conservation and restoration, painting, art history, graphic, digital arts, fashion design, performing art, industrial design, aesthetics and semantics. Although the academic world is increasingly driven by cross-disciplinary visions and models, we seek multi-disciplinary views, an attempt to inform researchers, graduate students, and professionals about the trends, ideas and innovations being put forward in applied arts. To this end, in addition to standard articles, in every volume of the *IJAPAS* we hope to provide a special issue related to a respective field with innovation.

We are also sending out a call for papers related to *Applied Arts* to appear in the next issue of *IJAPAS* in Nov – Dec 2023.

Finally, I should mention that we are committed to a speedy refereeing process for every article submitted to us. We effort to reply to all papers submitted within five weeks' time with a response about acceptance or rejection. We also do not require formatting for submissions in our style until *after* the paper has been accepted by us for publication.

I would like to thank our Editorial Board for their work so far in helping to establish the *IJAPAS*. And, finally, I would like to extend my deepest gratitude to Dr. Ali Boloor, the assistant editor of the *IJAPAS*, for all of his hard work to ensure the timely completion of the issue.

I am delighted to invite you to visit us at www.ijapas.org.

Sincerely,

Dr. Abolfazl Davodi Roknabadi
Editor-in-Chief
International Journal of Applied Arts Studies (IJAPAS)
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INDEX

Bicycle Helmet Design Using Gyro Technology

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Research Article

Abstract

Medical evidence shows that skull injuries and brain injuries are the most important cause of death in cycling accidents. Due to the growing acceptance of bicycles as transportation within and outside the city, it is necessary to use a hat. A helmet prevents severe head injuries in the event of a fall or accident. In this article, an attempt has been made to design a new helmet that has a different structure compared to other helmets. The final helmet is designed with the inspiration of the car airbag system, and its performance is such that when a person crashes and falls, it opens like a car airbag and prevents the cyclist from head injuries. The helmet's electronic system uses a multi-axis gyro sensor and the helmet is filled with a compressed gas capsule. The working method in this article is descriptive-experimental. By observing and examining the hats available in the market and registered patents, laboratory observations and reviewed articles, article analysis was done. The results of the research showed that the designed helmet has more protection than the old helmets, and the new design and its use bring more comfort and visibility to the cyclist.

Keywords: Helmet; Cyclist; Gyro Technology; Design

1. Introduction

A bicycle is a device that can be easily accessed and because the user uses his physical strength, it has a great effect on the physical and mental health of people. On the other hand, because the bicycle does not consume any fuel, it can reduce energy consumption and reduce air pollution and ultimately reduce traffic. While cycling has many advantages, due to the lack of protection for the

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cyclist's body and head, it is a relatively dangerous means, so injuries, injuries and deaths of cyclists have been reported in different countries of the world (Wegman, Zhang and Dijkstra, 2012). Although about a third of the accidents around the world are related to pedestrians and cyclists, only 68 countries have adopted policies for the safety of pedestrians and cyclists (Siman-Tov, Jaffe and Peleg, 2012). Most of the accidents related to cyclists were between the ages of 9 and 15 years old, and usually male cyclists have twice as many accidents as female cyclists (Kiss et al., 2010). The amount of bicycle use is different in different regions. In America, while only one percent of intra-urban and suburban transportation is done by bicycle, about 51,500 accidents and 800 deaths occur due to bicycle riding. Head injuries account for 75% of these injuries. All cyclists, whether beginners or professionals, must use the most essential safety equipment. One of the most essential equipment for cycling is having a helmet. Using a helmet can reduce the possibility of brain damage by 90% (Hamann and Peek-Asa, 2013). It is estimated that bicycle accidents cost the US economy about $5 billion from 2005 to 2010 (Naumann et al., 2010). In our country, due to the presence of cyclists in the passages, streets and roads that are used for the passage of motor vehicles, the number of accidents and deaths caused by cycling, especially among children and young boys, is high (Karkhaneh et al., 2008).

A helmet is one of the most important safety and personal protection equipment that has a variety of uses, including industrial activities, construction, workshops, factories, and sports. The main function of a helmet is to protect the head against falling objects, throwing objects, falling debris, electric shocks and accidents. The straps inside the helmet are very user-friendly and distribute its weight evenly. Safety helmets are also used for working at height, rock climbing and sports that are considered high.
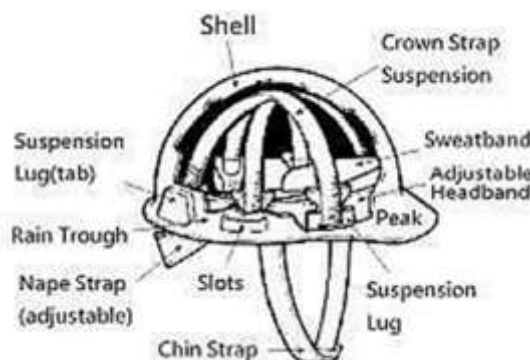
Fig 1 The overall structure of the helmet

There are different types of helmets, which include specialized sub-categories. Among the types of helmets, the following can be mentioned: engineering helmets, industrial helmets, construction helmets, workshop helmets and sports helmets.

The tests that are performed on helmets according to the EN 397 standard are as follows:

Impact absorption test: In this test, a 5 kg spherical object is placed on the hat from a height of one meter and dropped on an artificial head. The maximum force applied to the head should not exceed 500 dyne. This test is repeated at -10oC and +05oC and in humid air.

Penetration resistance test: In this test, a three-kilogram rod with a diameter of 100 mm is hit at an angle of 60 degrees to the hat, so that the tip of the rod should not pierce the hat.

Resistance to ignition test: In this test, the hat is exposed to a burning flame for 10 seconds, the fuel of which is propane and the flame diameter is 10 mm. After removing the cap from the flame, the burning of the outer surface should not continue for more than 5 seconds.

Electrical resistance (insulation) test: In this test, a cap filled with NaCl solution is placed in a tub filled with the aforementioned solution. The amount of electrical discharge is measured at a voltage of 1200 volts and 50 Hz, and the discharge current should not be more than 1.2 milliamps.

Resistance test against metal lava: This test is carried out in iron and steel industries. For this purpose, 300 grams of molten metal with a temperature of 1400oC is poured on the shell of the hat.

Today, the word sensor refers to elements or parts that have the ability to sense and convert a quantity into electrical signals (regardless of whether the signal is digital or analog). A smart sensor is a sensor that has two important parts: 1- Separate processing unit 2- Network communication unit. One of these sensors is a gyroscope. Knowing the position and angle of the object and its angular velocity is essential in all moving devices, because without knowing the position of the object, it is impossible to control it towards the target and it seems impossible. Gyroscopes are sensors that we use to obtain angular velocity and angular position. By processing this information, the overall position of the object can also be obtained based on calculations. Gyroscope is the main member of inertial guidance systems.

In this article, an attempt has been made to design a helmet with an airbag so that it is more efficient and has more freedom of action for the user in its design (Hauptman, 2008).

2. Materials and Methods

In order to choose the right fabric for the airbag, two fabrics, polyester and nylon 66, were examined. According to Table 1 and by examining the characteristics of both fabrics, the advantage of nylon 66 is its low density. On the other hand, fabrics made with threads of the same diameter show that polyester is 20% heavier than fabric made of nylon 66.

Table 1 Comparing the characteristics of nylon 66 and polyester

Specification	Nylon 66	Polyester
Density (kg/m^3)	1140	1390
Specific heat capacity (kJ/kg/K)	1.67	1.3
melting point (°C)	260	258
softening point (°C)	220	220
Melting energy kJ/kg	589	427

According to the aforementioned characteristics and features, nylon 66 fabric was used to prepare the appropriate fabric. The sewing was done using HIGHLEAD industrial sewing machine model GC1188_MZY. Helium gas is due to the small size of its molecules, which causes rapid penetration into empty spaces. The inertness of helium gas prevents the process of surface absorption in objects, and helium can also be considered an ideal gas. Due to the lack of access to very small size helium capsules in the Iranian market to fill the air bag, 16 grams compressed air cartridge containing 16 grams of carbon dioxide gas was used instead of helium gas. The advantage of these capsules compared to helium gas is the cheap price, easy access and easy recharging. At this stage, the amount of gas needed to fill the air bag has been calculated, and by calculating the amount of gas required, how much carbon dioxide gas capsule is needed. Here, taking into account the design of the parts of the hat in the form of a cylinder with an oval cross-section, the volume was calculated.

Calculating the volume of a cylinder with an oval tank:

The volume of a cylinder with an oval cross-section = The height of the cylinder × The area of the ellipse

The formula for calculating gas pressure:

$$V_1P_1 = V_2P_2$$

After obtaining the chamber pressure, we come to the conclusion that not all the gas in the capsule is needed to fill the chamber, and the solenoid valve system should be adjusted so that a sufficient amount of gas is released from the carbon dioxide capsule.

The sensor used in the project is a gyroscope sensor with part number MPU6050. This sensor has the ability to measure angle and acceleration in three axes and exchanges its information with the microcontroller through I2C serial communication.

Arduino UNO board has an AVR microcontroller with part number m328p. This chip has a maximum working frequency of 16 MHz and has 26 input/output pins and 6 analog inputs.

3. Results and Discussions

In this section, the production process and pattern of the helmet, the initial plans to produce the best suitable model according to the standards and ergonomics of the helmet are discussed. Also, how the gyro sensor works and the components required for production and how the electronic system in the helmet is described.

3.1. Initial Design

After the reviews and researches, the design of the helmet should be designed considering the ergonomics of the helmet and the features of the airbag.
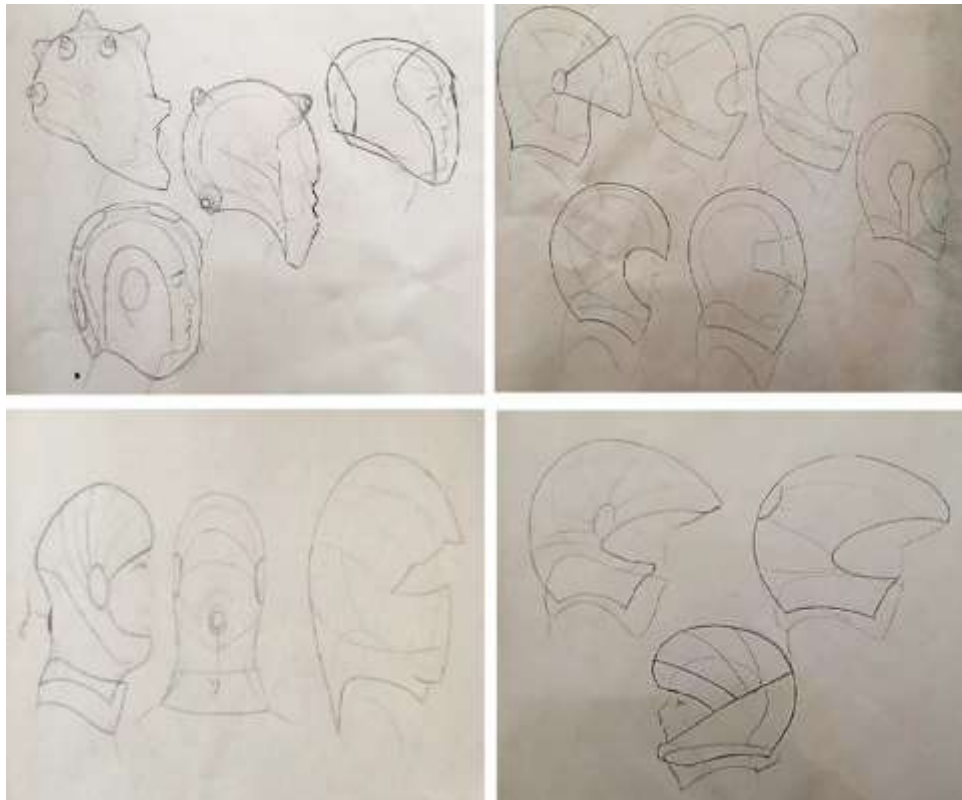
Fig 2 Sample prototypes

Figure 2 (top left): The initial designs were such that the airbag would cover the entire face after inflation and include full head protection. After the investigations, we came to the conclusion that in these designs, more gas is needed to fill the airbag and provide head protection, and it takes more time to fill, which is a problem.

In other designs, by creating a conical design on the cap, it creates a greater distance from the impact point. The problem with this design is that when the hat is opened from the collar, it becomes difficult to inflate these surfaces.

Figure 2 (upper right): In the completed designs, an attempt has been made to create a design with the minimum amount of fabric to produce hats so that the final weight of the work can be minimized.

Figure 2 (bottom left): Preliminary plans have been made for the best points for cutting the fabric and the appropriate location for the gas to enter the hat.

Figure 2 (bottom right): A detailed examination shows the place of cutting the fabric from the back of the head and in the ear area. Cutting the fabric from the ear area requires a larger number of patterns, which creates problems in the field of pressing and sewing. Cutting the pattern is important in this work, because when the airbag is placed in the collar, it should be easy to fold and it should be possible to open it quickly.

3.2. Final Designs

The final design was approved due to having the following features: 1- Protection and more area of the head and neck, 2- The amount of fabric used is low to reduce the overall weight of the hat, 3- The final design can be placed better on the collar, 4- Low amount of helium gas in the chosen design to reduce the overall weight of the hat, 5- Low amount of helium gas to fill the cap faster, 6. The ability to cover with any type of headgear and hairstyle.

The design of the pattern was done after choosing the final design. The pattern is designed in such a way that it has two inner and outer layers. The design of the pattern is done with the help of an example of a motorcycle helmet. Then the patterns were designed and according to the necessary sizes, the amount of fabric needed for use was estimated to be 4651 square meters.
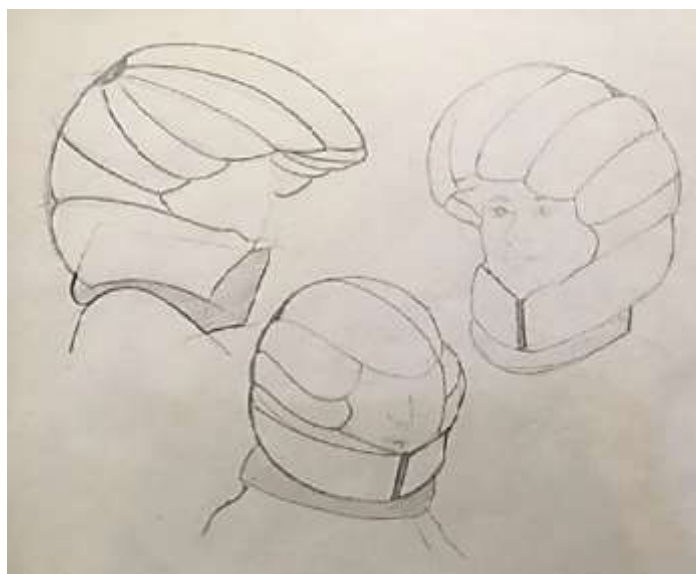
Fig 3 The final design of the helmet
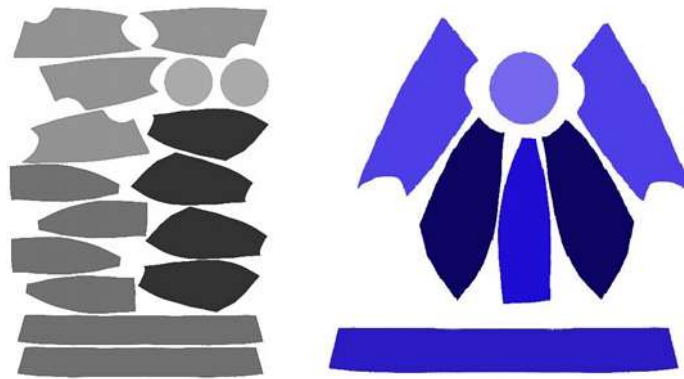
Fig 4 Pattern arrangement of outer layer (right), pattern arrangement of all parts (left)

Only one size has been considered for airbag sizing, and only the collar that wraps around the neck has sizing so that all consumers have enough comfort when wearing it and there is no problem in the neck area.

The collar is sized in three sizes: small (S) (for neck size less than 36 cm), medium (M) (for neck size between 34 and 42 cm) and large (L) (for neck size between 38 and 45 cm).

After obtaining the pattern, a sample of the hat was sewn with ordinary fabric (cotton) and filled with glass wool fibers to remove any defects in the design, and its size was checked on the head. The stitches were made in such a way that there is a chamber in each section so that gas can penetrate into each section by means of an air capsule. The circular part of the back of the hat only connects the patterns and air does not go inside.

Fig 5 Sample of sewn hat fabric

Also, the sample of the prepared fabric was cut into 20*3 centimeters and tested for strength. According to the obtained results, the average force for tearing the fabric is 313N with an increase in length of 34 mm. This amount of force is suitable for a large amount against the rupture of the airbag due to impact with the ground or point impact and has sufficient protection.

Considering the electronic system on the screen, the installation of the dam and the input and output of the device were specified. To place the system in the collar, a small box was considered

behind the collar, which was placed on the end of the neck, and then this box was connected to the collar. This collar is designed to hold both sides of the airbag and the airbag is placed inside it in a compressed manner. The compressed air bag is placed in such a way that there is no obstacle or entanglement in the bag so that it comes out easily. It is installed on the back of the box where the electronic system is located. The electronic system is protected by foam. In the front part, the zipper is sewn to the airbag itself, and then the prepared collar is attached to it.

To connect the airbag to the collar, a kind of glue is used so that no needle holes are created on the airbag. The electronic connections for gas criticism are connected to the air bag through the connecting hose, which is pressed into the air bag at the back of the air bag.

3.3. Test

The helmet test was done in such a way that after putting on the helmet and closing the zipper, the head moves forward as fast as possible. The angle of deviation in the electronic programming of the hat is considered to be 35 degrees from each x, y and z axis. The acceleration measured by the accelerometer in the gyro sensor is considered to be 1.2 m/s in the programming. After deviating from this required angle and speed, the board transfers the steering to the solenoid valve and the cap starts to fill with gas.

Fig 6 Procedures for testing an airbag helmet

4. Conclusion

In the designs made, due to the flexible surface of the airbag, the point of impact and the contact pressure are distributed on the surface of the helmet and a larger area so that the force is not concentrated on a specific area of the skull, which reduces the damage to the head and neck. Therefore, in these designs, better shock absorption is provided than other helmets. The performance of the airbag helmet is such that it reduces the speed of the movement of the skull and therefore the movement of the brain is controlled during an accident. The air in the helmet absorbs some impacts and as a result the head hits the helmet slowly, which means that the brain does not hit the skull with much force. The unique design of this helmet is such that it expands in case of an accident and is stronger and softer than traditional helmets, reducing the risk of stroke up to eight times and almost eliminating the risk of skull fracture. Another advantage of the design of this hat

is its completely natural view because there is no interference or restriction on the head. Meanwhile, the biggest disadvantage of existing helmets is that the visibility of the cyclist and motorcyclist is reduced, and this reduced visibility is a great danger. Another advantage of the designed hat is that it can be easily used with most hairstyles. It can be used even for people who use scarves, shawls, hooded sweatshirts, all kinds of hats such as knitted hats, with or without a mask. Only for this purpose, the collar that is tied around the neck should be used on a shawl or scarf. The use of glasses is also allowed.

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Fashion Mood Board Design of Sportswear Using Photomontage Technique

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Research Article

Abstract

In the art of clothing design, finding ideas and producing creativity is an integral part of this science. The design of clothing, which is the product of the designer's mind, is examined and noticed or criticized in the course of the contemporary society. The main purpose of this article is to use mood board design with the help of photomontage technique, which is a new method of mood board design to create a collection of girls' sportswear. In this regard, the designs made use of the digital mood board method, which has led to the design of many creative collections using the photomontage technique and along with visual creativity in the field of girls' sportswear in an artistic and modern way, which is a kind of upward course of diversification and tendency to innovation and a kind of norm-breaking to the tendencies of today's society in the life of today's modern teenage girls satisfy. Reul Haussmann has introduced the beginning of this science with the Berlin Dadaists who used this art in the 40s. The photomontage and combined photos of this work are the result of the creator's vision and creative thought to present a work that uses two or more components to achieve this coherent whole. What is certain is that photomontage is not a photo, because it is not taken, but made, and it is in the collection of applied arts, and thus the designer has been able to use the photomontage capabilities in the mood board using images and inspirations. It is to present a different design compared to the common traditional designs. The use of energetic and warm colors in the above collections, the sense of movement and the broken and diagonal lines on the clothes, all show a sense of excitement. All the elements placed on the mood board page express the designer's goal in designing that mood board.

Keywords: Mood Board; Fashion; Photomontage; Sportswear

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1. Introduction

A mood board is a type of visual display or "collage" that consists of images, text, and examples of objects in one composition. A mood board can be based on a set theme or it can be any randomly chosen material. A mood board can be used to convey a general idea or feeling about a particular topic. They may be physical or digital and can be effective presentation tools. Mood boards are a great tool for creative projects because they help set the visual direction of the project. A mood board (or inspiration board) is a physical or digital collage of ideas, commonly used in fields such as interior design, fashion, and graphic design.

While many assume that mood boards are only necessary for projects like interior decorating and wedding planning, the truth is that many professionals in various fields rely on mood boards as their first port of call for any large project. In fact, more than just a set of attractive images, mood boards act as a fundamental transition between an initial thought and an early draft. In a study conducted by the Journal of Business Research, it was found that mood boards are effective in setting the scene, directing activities and aligning by-products by creating a point of reference (Dewet, 2006).

Systematic integration of ideas in order to understand them and share them with others is the next step in the design process, which is called research evaluation process. The main task of a fashion board is to focus the designer's mind on the beauty, style, color effects and direction of the collection. Visual information about the board should also be displayed in this format. Tables should be produced as a summary of the designers' findings and before any serious design begins. The success of a mood board is due to the selection of the image, its editing and arrangement, which should be consistent with the mood that the mood board is trying to convey. Fashion boards are a suitable tool for communication and vision for others or designers. Fashion boards can also be used in more cases than the product design collection that a brand designer uses to create and introduce his business plans. Modeling and visualization are the basis of visual literacy, which are a qualitative research tool in the created mood boards that are used in the art of design. The term mod board is often used to cover a wide range of mod boards in general. Types of boards are considered in special uses (out-cutters), which is a vital part of the design process that creatively and innovatively expands the design (Edward, 2003).

In simple words, when a clothing designer decides to design a clothing collection, he has a series of ideas and topics in his mind that need to be organized; For this reason, he chooses a board, a large cardboard or a notebook to write whatever comes to his mind or stick his photo on it. So, it can be said that the fashion board includes images of the designer's source of inspiration, selected elements, personal interests and ideas of the designer, fabric material and color, type of clothing cut, etc., which may also have small notes written in it.

In short, a mood board is a collection of images or materials that evoke certain concepts or feelings. Mood board, which is the Persian equivalent of mood or inspiration board, shows a collage of images and objects with a special visual style. Mood boards are used in different fields such as building design, panel painting and even website design, but their use in clothing design is much wider. There are two types of mod boards, and it is better to choose the most suitable type according to your application. In the following, you will get to know the types of mod boards (Cassidy, 2011).

The mood board should be used as a tool to refresh the mind, which enables the designer to return to it during the design process and discover something new. It is possible to create a collection that has several layers of depth and visual interest, keeping in mind that communicating with the audience is simply a matter of marketing, focusing on studying and creating trend boards

that are accompanied by creativity and creative process, used for boards. It is a board that provides creative opportunities for deep engagement with them and is designed to develop creative and innovative solutions. In order to improve the approaches in fashion board, it is necessary and necessary to have visual literacy, which creates a context by discovering and modeling this process. Visual literacy conceptualizes working methods and problem solving in theory and models in the visual system. Therefore, trying to provide a better understanding of mood boards and their process in creating the depth of interaction with certain stages determines a visual process of qualitative research. Visual literacy is a tool to further prove the above concept. The difference is in the quality of the boards presented and the research on a topic or topics done to produce a visual literacy board (Garner, 2001).

One of the biggest choices to be made when creating a clothing design mood board is choosing its type. There are two types of templates for mood boards:

1- Physical mood board: the traditional and older option that was used in the past is called physical board. To make this mood board, you have to carefully cut lovely pictures from different newspapers or magazines and stick them to a board with glue or glue. Usually, poster board or foam is used for this, but cardboard and cardboard sheets can also be used. The background of the board should be painted using a color that is in harmony with the mood board color palette. Images can be placed on top of each other or create a gap between them. It is also possible to use fabric, decorations or different materials for mood board and install it on the wall. If the materials are important to the work and the customer needs to touch them, physical mood board is the best choice (Elahi, 2013).

2- Digital mood board: In the digital mood board, it is easy to add images that catch the eye of the audience on the internet. You can also use different images, objects and materials in the digital mood board. In other words, this fashion board has left the audience free to use anything. This mood board can also be produced using photo editing software. Of course, websites like "Canva" have also provided the possibility of creating digital mood boards for artists.

The art of combining images is called photomontage. In some of these works, the images are so carefully combined that the impression of the realness of this photo is imposed on the human being. The first step to making a photomontage is to have a suitable idea. Some people have a different definition of photomontage. They combine a series of unrelated or semi-related photos. It should be said that in art, definitions are variable and it is not easy to introduce a method to only one definition. A photomontage work is very different from creating a single photo, like painting, writing or sculpting. The creative process takes a lot of time and energy, but the result is a work that fascinates every viewer (Bafghi, 2012).

In the art of mood board design, using the photomontage technique, it mainly consists of photos or parts of photos to guide the viewer's mind towards specific visual connections. The pieces used in these images are often made to convey a message. This message can be a commentary on political, social and artistic issues, clothing design or other issues. When these images are done right, they can have a dramatic impact on the landing page (Shafaieh, 1975).

In carrying out the clothing design process, the photomontage technique in mood board design should be done by studying artistic styles. Regular integration of the designer's ideas in order to understand them and share them with others is the next step in the fashion design process. This is a research evaluation process, the main function of a mood board is to focus the designer's mind on the beauty, style and direction of the collection, while also creating the effects of color and design area. Visual information related to research implications should be displayed in this mood board design format. A panel should be produced as a summary of the findings before any mood board

design begins. The success of a mood board is due to the selection of the image, its editing and arrangement, which should be in line with the mood that the mood board is trying to convey. Mood boards should be used as a tool to refresh the mind. A mood board creates the ability for a designer to return to throughout the design process to explore new ideas to create a collection that has multiple layers of depth and visual interest (Maqbili, 2012).

Design is actually a type of visual representation or role-playing that is mainly formed by emphasizing the element of line. Drawing a line on the surface is the simplest form of visual expression that is objectified by design and becomes tangible for the audience. Therefore, line is the simplest element in visual expression, especially in mood board. Mood board is a means of conveying ideas, and creating communication through images and combining lines. But the arrangement of the same images on the board screen is done with the coordination of several physical and mental factors, which include: seeing, finding, analyzing, and transferring or executing. Mod board design is also a product of coordination between the eye, the hand, the tool and the artist's thought. To create a strong fashion board, you need continuous practice, study in nature and appropriate tools that help the designer to achieve the best results. Thinking here means having deep visual literacy, observing, selecting, and reflecting one or more images on the mood board page by the designer. Of course, it should be kept in mind that culture, thinking and the final goal also play a role in the shape and conclusion of mood board. In the process of reaching the final result, in addition to paying attention to aesthetic issues, other principles such as modeling and design should be considered. Conceptual design is a type of step-by-step design based on visual needs and proportions, checking and calculating visual criteria in the final design. The scope of conceptual design is very wide and it is obtained from the combination of elements such as line, shape, color, texture, layout, space, etc., based on balance, proportion, rhythm and harmony in visual literacy and from that mood board is based on visual literacy and composition, these elements should be known and understood deeply (Moghimnejad, 2005).

2. Results and Discussion

This article is the result of the writer's effort to present a new design and for this, one should be completely familiar with the main elements or the correct alphabet of visual literacy, and then to achieve the main goal of designing a mood board with photomontage technique, arrange it in an intelligent way and by changing the arrangement of these elements, he achieved diversity in the design. This diversity with different applications in the design of mood boards always leads to innovation in order to attract the audience and meet their needs. In the rest of the paper, examples of mood board design using the photomontage technique will be presented along with discussion and analysis. It should be mentioned that all the stages of implementation of these mood boards have been done by the author.

The first mood board, seen in figure1, is a photomontage attached to a collage, which consists of gluing ordinary images together to create an illustrated reality. This mood board was created by digital photomontage method, which is the purpose of this work to design a fashion board with photomontage technique. Due to the fact that there is no limit in the creation of photomontage works, but in this work all the elements and details are arranged very accurately and coherently. The use of denim and tricot fabrics is clearly visible in this work. In the design of the mentioned fashion board, the attention of the teenage girl is on the type of clothing and her appearance from all angles and her desire to experience different clothing with warm and cold colors. The use of colors in changing light conditions gives a different appearance. The rotation of color spaces in the whole work has greatly contributed to the balance and proportion of the work. The arrangement of warm

colors next to the tones of cold colors has multiplied the charm and brilliance of the work. Warm and cold colors together inspire a sense of boldness, vitality and joy of energy to a teenage girl. Red is a flexible color and it shines strongly, it does not get dark and extinguished easily, and when red turns to orange, it acquires fiery and inflamed power. The red and orange color is a symbol of the yard of life in the noisy world of fashion and means victory, success, influence and overcoming problems, which is a sign of the creative and wonderful mind of the designer. The composition of the work is asymmetrical and the arrangement of the main elements is based on the vertical axis, which is well maintained by the colors. The use of the shape of the hands has given a kind of strength and balance to the work, which evokes a sense of relaxation in its vertical and horizontal form, which somehow includes all the components of the work. The choice of the model's face in the frame is very compatible with the look of the character, and all the elements and details in this work evoke rotation and movement, which is completely consistent with the main theme.

Fig 1 Mood board with photomontage technique in postmodern style

A picture is often more expressive than a thousand words. In Figure 2, the digital photomontage method has been used in the design and mood board, and this product is known as the ideal of the contemporary society. A society that, through modernism, has gained its critical and comparative

thought in the multiplicity of scattered experiences, limitless different angles of view, and in order to relieve this multiplicity and confusion and reach He constantly searches for a new definition of a boundless and integrated world.

In Figure 2, one can see the contrast of Roman sculptures with modern forms and various textures along with warm and cold colors. The use of soft curved forms along with the texture of jeans brings a kind of contrast that attracts the attention of the audience in this asymmetric combination. The role of thinking of Dadaist artistic trends is visible in this work (the slogan of art for art). The white spaces and white cuts in the middle of the image along with the light colors seen in ancient Greek sculptures have created a kind of beautiful contrast, from the point of view of being traditional or modern.

In general, it can be said that the three-faceted facial expression and calm look of the model along with the soft and curved lines show the fluidity and movement of the work well. The form of the bird in the hand and the shadow on the opposite side and in the background the contrast of elements and visual quality are expressed. The photomontage of this work instills a beautiful contrast between colors, forms and surfaces in the mind of the audience. A beautiful choice that the artist chose a model based on Greek sculptures (the ancient Greeks were very important to sports and sports bodies) that the main purpose of this collection is to present works for the design of sportswear fashion mood board.

Fig 2 Mood board with photomontage technique in postmodern style

In Figure 3, fashion designers try to make the clothes they design a function of beauty and attractiveness. They must consider the audience of each type of clothing and also in what situation it is worn. In Figure 3, which is designed for the design of sports fashion, the digital photomontage method is used to implement the effect. A kind of breaking the norms of the tendencies of today's society can be seen. The use of gold-colored and multi-purpose accessories and the association with the 19th century European clothes or the luxurious and aristocratic clothes of the Rococo and Baroque eras, which is a great contrast to the sports style, can be seen in this work. With a careful look, the designer presents a new design and idea to her audience. The use of train elements, suitcases and packed boxes has given this effect a special attitude and thinking. All the elements evoke a kind of farewell to the type of clothing of the old days, which in today's world has no traces left. The selection of warm colors along with the volume of the royal blue color seen in the form of the bird has given a very beautiful composition to the work. The green color and the musical note form, which is embroidered with jewels, plays a kind of music. In all types of looks, the form of facial makeup reviews all the works of the Baroque period in the mind of the audience. The uses of diagonal lines all induce a sense of dynamism and movement, and this type of arrangement is considered a very strong point. The composition is asymmetrical, but at the same time, the placement of all elements in a rotating and circular form shows the sense of movement and dynamism in the work. The placement of the train at the bottom of the frame and the placement of the stop hand form next to it somehow shows this hidden message to the audience (art for art).

Fig 3 Mood board with photomontage technique in postmodern style

In Figure 4, what is certain is that photomontage is not a photo, because it is not taken, but made, and it is in the collection of applied arts. In Figure 4, this is executed by photomontage method. In order to find its visual signs, it is important for a better understanding and the reasons for the formation of this way of making images in conveying concepts as a necessity in examining this work which is the design of sports fashion. In the work you can see in figure4, the digital photomontage method is used for its design. At the beginning of examining this work, the thing that attracts the attention of the audience is the form of the headscarf in this image. The headscarf is one of the important parts of women's clothing that has been discussed in fashion design, which is considered a fresh and new look for the design of sportswear. The use of a pink sports cap at the end of the frame, along with the eye-catching colors of orange and tropical green, conveys a sense of vitality and activity to the audience. The main goal of the designer is to design a sports mood board that shows its message well in the middle of the diagonal lines. The composition of this work is asymmetrical, and it is arranged based on the triangular form of elements and visual qualities. The use of butterfly wing and fig tree leaf cuts has hidden a special choice with a deep thought behind this work. The kind of look of the artist in this work and the relaxed state in the eyes of the models in figure4 has given a special feeling to the work and has designed the possibility of a good rest in the frame for the audience. The arrangement of warm and cold colors together has created a good balance. The designer has used photomontage to express his postmodern concepts and has designed his sports car with a different expression.

Fig 4 Mood board with photomontage technique in postmodern style

The next mood board, which can be seen in Figure 5, was created by digital photomontage method. The audience is faced with a coherent work that is accompanied by creative thinking. Photomontage is an adaptation of collage in which cut pieces of photos are combined with each other. These heterogeneous components of the collection, which are combined against the custom, have created a coherent effect. In this work, the idea of separating and reassembling photo elements and harmonizing them with the help of design in experimental forms is well evident, which shows the progress of this art in the field of fashion. The use of diagonal lines and surfaces, which is a sign of movement and dynamism, can be clearly seen in this work. The rotation of green color spaces in the whole work has greatly contributed to the balance and proportion of the work. The arrangement of warm colors next to black and white tones has multiplied the charm and brilliance of the work. The diagonal and rotating form and cut in the center of the work has created more emphasis on the sports mod board, which is a sign of the designer's creative and in-depth mind. The composition of the work is asymmetrical, which is well maintained by the colors. The use of the full-face face shows the stop motion of this arrangement and has designed a kind of resting space for the audience. Using the shape of the hands has given a kind of strength to the work and includes all the components of the work. The arrangement of this work, which combines images in order to create new concepts that were created at certain times, has a tremendous impact on society and its time. The composite photos of this work are the result of the creator's creative vision and thought to present the image, which is made of two or more components to reach a single whole. The purpose of this work rejects the existence of mere representation in billboard design and shows that the use of this technique with new digital tools and facilities can be an effective help in reaching the audience of the work.

Fig 5 Mood board with photomontage technique in postmodern style

The next mood board, which can be seen in Figure 6, was created using futuristic style and digital photomontage method. Being bold in this work is its first obvious feature because the person has used clothes that are not specific to his present time and are at least a few years away from the present time and are more pioneering than his time. Therefore, whoever chooses this style has added a high risk and a new look to the mod board design, which has not been seen before. The use of neon colors can be seen in this style. The use of transparent and energetic neon green color, which sometimes shows a colored light at night, can be seen in the above work. The use of warm and cold colors along with neutral tonalities has given a special effect.

This controversial move to design a fashion board using special, broken, triangular and new lines and cuts and using instead of a sports hat to emphasize the designer's main goal, which is the design of a fashion board with the photomontage technique. The use of asymmetric models can be seen in this style to a large extent, and the type of look of the model and the movement of the vinegar is in a rotational manner, clearly showing the sports movements in the eyes of the audience. The use of geometric volumes, geometric lines, and passionate colors with different degrees can be seen very harmoniously in the design of Mod board. The designer of this work has imperceptibly shown the movements of the body in the form of forms, lines and surfaces, which have been carefully selected.

Fig 6 Mood board with photomontage technique in postmodern style

The next mood board, seen in Figure 7, photomontage is the process of creating a composite image by cutting and joining a number of different photos. Even in the colloquial language, the term (photoshopping) has been used for it, but such works are mostly manipulation. The word photomontage carries a certain cultural and artistic meaning and should be used more carefully. The combination of images is important in order to create new concepts in fashion design that will have a tremendous impact on the society of its time at certain times. The photomontage and combined photos of this work are the result of the creator's vision and creative thought to present a work that uses two or more components to achieve this coherent whole. The execution of the above work is by digital photomontage method. The type of looks and expressions of the faces in this work are full-faced, which has a neutral state. The use of warm and cold colors together has given a special look to the effect. Sport style is clearly evident in the above work. The sport style is a comfortable, yet attractive style. The use of sports jacket as the main element of this style is attractive. The color of the dress in this image is considered to be a breaking norm in design, which is a very interesting idea for fashion design. The composition of this work is asymmetrically designed in the form of a triangle. The orange-red fabric flower form on the dress contrasts with the cold turquoise color on the top of the frame, giving a beautiful balance to the effect. The use of energetic and warm colors conveys the sense of movement to the audience. Broken and diagonal lines on the clothes all show a sense of movement and excitement. All the elements on the page are arranged according to the main goal of the designer, which is to design a sports board with the photomontage technique. There is a kind of message hidden in the face that most of the time great artists used this method to express their messages in the form of pictures.

Fig 7 Mood board with photomontage technique in postmodern style

The next fashion board, which can be seen in Figure 8, is done by digital photomontage method. The main goal of the designer is to design a sports mood board. The use of dandelion flower and spongy accessory conveys a sense of freedom and lightness to the audience. The use of warm and cold colors with high brightness can be seen in this work. A cut of butterfly wing texture and patterned dress in this work gives a sense of excitement and an active style to the work. The composition in this work is asymmetrical and based on the similar form of the arrangements. The faces are three-faced and full-faced, and their gaze directs the eye to both sides of the frame. Diagonal lines cut the elements inside the frame and show a sense of dynamism and vitality in the mood board. The sports style of happy and summer colors is clearly visible. The use of patterned fabric derived from the shape of a butterfly can be seen. All the elements and details of this work show a sense of liberation and vitality, which are all in line with the main goal of the designer.

Fig 8 Mood board with photomontage technique in postmodern style

The next mood board, which can be seen in Figure 9, was done by digital photomontage method, and the effects that visual elements and qualities create in the design structure of photomontage and

photocollage works have a significant effect on understanding the message of these works. Digital photomontage method is used in this work. In the creative technique of photomontage, by putting together several images manually or using computer software, it is able to display many impossible dreams in the human mind in two-dimensional or three-dimensional form. In this fashion board, a kind of upward trend of diversification and tendency to consumerism can be seen in the life of today's modern teenage girl. The idea for designing photomontage and photocollage works from any source can cover color, texture, pattern and scale. Visual elements and qualities have a very high capability as a means of communication in photomontage works. The composition in these works is mostly asymmetrical, which can be seen in the above work. The use of warm and mature colors and the arrangement of flower and butterfly forms for this work of art has a kind of norm breaking, the use of warm colors along with neutral colors is very accurate and correctly determined.

Fig 9 Mood board with photomontage technique in postmodern style

3. Conclusion

In this article, the review and description of the collection and its relationship with the mood board, as well as the use of photomontage technique in the design of the mood board, were discussed. By studying and analyzing mood board design based on photomontage techniques and considering that mood board design using photomontage techniques has attracted the attention of international fashion designers, it can be said that in mood board, the designer should look for ideas and creativity. The important and key elements in the mood board design can be considered textures, visual metaphors, arrangement, color scheme or the same color palette and finally the desired output of the designer. Having visual literacy in fashion design is essential for both the designer and the audience. Therefore, the designer should consider the level of visual literacy of his audience so that his design is tangible and attractive to the viewer. The mood board can be presented digitally or physically, and examples are presented digitally in this book. Due to the high costs and limited facilities in some areas, it is not possible to provide a physical mod board. The reasons will be mentioned below:

1- The inspirations and attached images placed in the mod board will not be easy to access the required materials.

2- From an economic point of view, physical mood boards have less justification than digital mood boards, except that in cases where the design is very important and with an international or national perspective, then it is possible to provide a suitable justification for physical mood boards from an economic point of view.

3- According to the current era, when the Internet is widely used by the general public, both in cities and in villages and deprived areas, it is possible to provide viewers with digital mood board much more easily and creatively. Therefore, this is not easily possible for physical mod boards.

Photomontage is not a photo. Photomontage is the arrangement and creativity of placing photos and materials together. In the design of the mood board, the designer should not involve himself in the limitations and captivity of thought. It is suggested that the designer creates a new idea from various images and inspirations along with the arrangement of colors with the seasoning of trendy creativity. In today's modern world, traditional clothing design no longer meets the need for clothing. Therefore, after the creativity of the designer and then the creation of the mood board in his opinion, the designer must create his new clothes by finding ideas from the mood board. In creating a digital mood board, you can use modern software such as Photoshop, Light room, and any photo design and layout software. In the mood board design, using the photomontage technique, a kind of norm breaking with the tendencies of today's society can be seen, and the designer presents a new design and idea to his audience with a careful look. In this article, taking into account the criteria and tastes of the people of the society and their needs and coverage in the field of mood board design, it has been done using the photomontage technique. Therefore, this article is another proof of the truth of the claim that art is for art.

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Investigating Fashion and Clothing Design in the Theater Effectiveness

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Research Article

Abstract

Theater as a performance art plays a very important role in the culture and art of society. Fashion and costume design in the theater is also very important as one of the important factors in the performance of a show, to attract the attention of the audience and increase the quality of the performance. According to the concept of the scene, the characters and the story, theater costumes should be designed in a suitable way so that they can convey the artistic message of the show well. In this research, the role and importance of clothes in theater has been examined. First, the concept of theater and its role in the society is examined, and then the role and importance of clothes in conveying the concept of the stage to the audience is explained. In the following, the design of intentional, romantic and murderous theater costumes with the concept of the scene and its story has been analyzed and conclusions have been presented about their effect on the audience and actors. For this purpose, the study method included the study of library sources and the analysis of data collected through field studies. The conclusion showed that costume design in the theater plays a very important role in attracting the attention of the audience and increasing the performance quality.

1. Introduction

Theater is a collection of symbolic systems. Therefore, these are the signs that transform the show from a normal performance form into a work of thought and desired by the audience. Today's

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show has found a special place in people's life and culture. Although in the past it was mostly performed in celebrations or ceremonies for the mass of people, today it has become one of the forms of communication and thought arts that affects the behavior of today's people in society. If in the past, theater was considered to be the same as the word drama, and it was based on the root of this word in the Greek language, which means action, and they looked for the contradiction caused by the word, this is also a meaning for theater. But today there is no longer a complete meaning for this noble art because the main core and driving engine of a theater is the hidden thought or its discovery. Although this thinking or thought is derived from the playwright's mentality, which becomes an active and living work with the coordination of the symbolic system by the workers, and the audience can agree or disagree with it. Therefore, theater in its essence is a work taken from the narration of different thoughts of conscious people (Azadanish and Pouyan, 2021). Semiotics in dramatic texts and performances has a special place in terms of analysis. In other words, it is a tool for analyzing the show before knowing the subject of the story. Roland Barthes is one of the most important literary critics who points out the role of language in the clothing system and the confrontation of pieces and components of clothes whose changes cause changes in the visual meaning; It also considers the rules that they create on the continuity of clothing components among themselves to be important. In the elements of semiotics, Barthes clearly demonstrates his constructivist method in language studies by emphasizing non-verbal discourse types related to clothing, food, cars and furniture (Gasmian Dastjardi and Mohammadi Ardakani, 2018). Due to its wide dimensions, this art attracts the attention of different sections of the society. To create a play and actually perform a play, many factors and groups are involved, and other arts such as literature (story writing, dramatic literature), scene and decor design, costume design, lighting, music, etc., come with the help of this art. Even in many cases, this art has attracted the attention of psychologists, sociologists and even politicians (Nasiripour and Turkman, 2015). Clothing is a very important part of the show. Clothes are part of the actor and theater without actors is meaningless. The audience also moves away from the actor and gets closer to the represented character with the help of the features in the costumes. Clothing is the external manifestation and reflection of role-playing, emotions and inner mood of the actor and can express the meaning of the play through external signs. Clothing is a strong factor in expressing the emotions of the drama character and helps both the actor and the audience to better understand the play and the overall atmosphere of the work. It should be noted that the capabilities and functions of the clothes should be in the mind of the audience in order to show the character of the show as much as possible and help to advance the dramatic action. The character is formed during the action and emerges from the heart of the dramatic action. The clothes designed should also be according to the specific language of the performance; The clothes should be in harmony with the actions and promote their progress. Performance clothes create the necessary logic for every movement and action of the character (Khairollahi and Fanai, 2021). The type of clothing, its volume, lines, color and texture can have an important effect on theater mise-en-scenes. For example, it emphasizes acting with a special dress, or distinguishes the main and secondary characters from each other in the illustration. "Combining in its simplest form means assigning strong clothes - clothes that are impressive and prominent in terms of color, volume, line and texture - to the dominant characters" (Andalibi, Fanaian, and Kopal, 2021).

In a comparative study of fashion design and theater costume design, Dr. Heron and his colleagues have examined the similarities, differences and potential interdisciplinary exchanges between these two creative disciplines. Through an in-depth analysis of the presented literature and sources, valuable insights into the creative processes, influences, goals, and execution of fashion

design and theater costume design have been obtained. This study has shown that fashion design and theater costume design have common elements such as creative process, effects and use of textiles to convey character or concept. However, they also differ in function and context, time constraints, joint nature, and durability and wear considerations. These differences highlight the specific requirements and unique challenges that designers face in each field (Haroon, Sajib, and Nizam, 2023).

According to the features mentioned about show clothes, it seems that most of the clothes include several features at the same time. This means that clothes, while presenting realistic data - iconography - also have symbolic meaning at the same time. For example, choosing a color or a special artistic style for clothes can determine the mood and meaning of that show. This is while clothes have the same function as index indicators; That is, by using special clothes, you can emphasize important characters and direct the attention of the audience to them. In this way, show clothes can have iconic, symbolic and profile signs at the same time. In general, what was said about the capabilities and functions of the clothes, should be in the audience's mind in order to show the character in the show as well as possible and ultimately help to advance the dramatic action. Francis Hutch, in the book Directing the Play, has provided one of the best interpretations about the theater costume: "Theatrical costume should be seen as a part of a live stage set, which appears as the actor's clothing in a specific role and in a specific play" (Golshan, 2014).

Narguni says that the role and performance of the costume designer is an important factor in a theater scene. Theater is a group work and all the actors work hand in hand to achieve a successful work that is liked by their viewers. Also, a theater costume designer is responsible for many tasks and its main task is to be in harmony with the text of the play. The work of the costume designer begins with studies to design the clothes of the actors of the show under the supervision of the director, and the costume designer must be present in the group until the end of the show. Clothing may refer to the specific dressing style of a nation, a class or a period. In many cases, it may help complete the artistic and visual world that is unique to a particular theatrical or film production. The most basic designs are produced to indicate status, offer protection or modesty, or provide visual interest to a character. Costumes may be for, but not limited to, a theater, cinema or musical performance. Costume design should not be confused with costume coordination, which simply involves altering an existing outfit, although both outfits set the scene. Four types of costumes are used in theater design: historical, imaginative, dance and modern (Nargouni, 2023). In a research, Montazeri and Munsi Sorkheh came to the conclusion that from the point of view of theorists such as Durkheim, Bourdieu and Giddens, social changes have many effects on the individual and collective lives of people. Covering style is among the things that are affected by these changes. Of course, this statement often remains as a hypothesis and has been less studied in practice. In this research, it was found that clothing can be affected by a major change in life. War is one of the changes that can sometimes cause cultural transfer or affect clothing in other ways. Some researchers believe that, in the Second World War, sadness and sadness can be recognized on the faces of people, and the cheerfulness and vitality of the people are involved. Therefore, the use of cheerful clothes along with extensive decorations and the use of looser clothing in the stage of the show to keep the minds of the people and citizens away from the effects of war is one of the changes that can be seen in the clothing of the artists of this period. And its purpose has been to strengthen the weakened morale of the people. The findings of our research showed that this influence ranges from the smallest dimensions of artists' clothing, such as its material, to its most important and prominent features, such as the color and design of their clothes. In fact, although these features cover a wide range, most of them are done with only one specific purpose; and that is

to create changes in the spirit of the people. This issue, in addition to the high importance of clothing, can also be caused by the "quick yield" of the change in clothing style. That is, in addition to clothing and covering and making changes in it, in terms of its appearance, it is visible before any other feature. But more than any other component, it can be effective in influencing the citizens of a society (Montzari and Munsi Sorkheh, 2019).

2. Results and Discussions

2.1. Analyzing and Comparing Intentional, Romantic, Murderous Theater Costumes with the Concept of the Stage

The show "Deliberately, Romantically, Murderously" was in three episodes with the theme of four murders in recent years, and the cases of three of these murders have been more important and sensitive for the society for various reasons.

The show "Deliberate, Romantic, Murderous" may appear at first glance to be a form of documentary theater, while on closer inspection, despite its many similarities, it constantly and consciously distances itself from the definitions of documentary theater. In the play "Deliberately, Romantically, Murderously", although a large part of the materials and materials of the play are extracted from the contents of the murder cases and the news and reports related to them, these documents are not presented in the show. In other words, the audience of the show should only trust the words of the playwright/director in accepting that what they see in the show is definitely what existed in reality, and apart from this trust, no document or evidence is presented to the audience during the show. Another point is that Sanaz Bayan, as a playwright and a little later as a director, throughout the show fully consciously blocks the audience's unprejudiced judgment of what they see on stage and guides them in their desired direction. Even in the first episode (which seems to be a deliberate word chosen for this episode in the name of the three-part show), despite the fact that all the evidence of the case and Nasreen's explicit confessions of several murders proved her crime, But the collection of what is presented to the audience in this episode of Nasreen's life and circumstances will make the audience feel sympathy and companionship with Nasreen more than her victims. Leaving aside this episode, in the next two episodes (romantic and murderous), all the ambiguities in the Shirin and Jaleh cases come to the audience with the help of strengthening this feeling, and in general, it puts the audience to judge the path designed by the director.

By considering long gray coats for these three killer characters, the costume designer provides the audience with a free judgment about the guilt or innocence of the characters. But the color of each scarf is different.

The first episode is dedicated to the representation of the case of a woman (Nasrin), whom some call Iran's first female serial killer (a woman driving a Renault who killed old women in her car and stole their property). Nasreen is a woman from the lower class of society who commits murder due to financial need and to pay her debts, and finally, after confessing to the crime, she is executed by the court's decision. This is when Nasreen says in her interviews that she is not willing to take a piece of forbidden food home and that all her thefts are only for her debt and the expenses of her disabled child.

The dress designer has designed a long coat and long gray vest with a black scarf for Nasreen. Nasreen's black scarf represents her guilt and guilt.

Fig 1 An example of a theater episode

Fig 2 An example of a theater episode

The second episode represents the story of one of the most noisy murders in recent years. Shahla Jahed (in the show, Jaleh) is a famous footballer's concubine who was accused of murdering the footballer's wife. After the murder, the police arrested Jhaleh, and during the long trial, he confessed to the murder several times and retracted his confession, and finally, after several years of trial, he was executed by the court's decision. In the end, it was not clear if Jaleh is really guilty or if he accepted the crime because he was heartbroken by his love. Because in the course of the story, it becomes clear that his wife did not support him in the events after the murder and also blames him for the murder of his first wife. But in the course of the story, according to the evidence of the police, Jhaleh cannot be the murderer alone, and a man may have been his accomplice. Also, in a part of his memoirs, he says that at the time of his arrest, Amir (his wife) told him that if you don't confess, He is the next suspect, and in this case, his position will be in danger.

Jaleh's outfit includes a long gray coat, a vest and a brown scarf. The use of brown color in this character's look makes this person feel supportive and protective of his love. Also, this color can reduce the guilt of this character.

Fig 3 An example of a theater episode

The third episode is devoted to the retelling of the case of a woman (in the show, Sudabah) who killed her husband's friend who was trying to assault her in Qeshm due to defending her honor, stayed in prison for several years and was finally released from prison after paying a ransom. Here Sudaba is a mother who has completely adapted herself to her family and is loyal to her husband even in difficult situations, that's why she killed to defend herself.

Sudabah's clothes include a gray coat and shawl, which is entirely up to the viewer to judge whether this character is guilty or innocent. Also, Sudaba is the only character in this show who wears shoes and the others are barefoot, which means that only Sudaba is alive and the rest are dead.

Fig 4 An example of a theater episode

But the fourth murder that is shown in the show is the story of the accidental killing of a female reporter who fell down while struggling with a motorcyclist who was trying to steal her bag and was killed due to her head hitting a table on the side of the street. Unintentional murder, which has happened many times and naturally has not aroused sensitivity and attention in the society as much as the previous three cases.

The reporter, who is a key character in this play, is wearing a black dress and has disappeared behind all the stories and these three murders, as all cases happen in his mind. And in the end, it becomes clear that he is the only victim of this story and his black look expresses the hidden layers of his story.

3. Conclusion

Theater and performing arts are one of the most important cultural and artistic factors of human societies, which have always had a special place in culture and art since the past. This art has always been of interest due to the charm and joy it conveys to the audience. One of the important factors in theater and performing arts is costume design. Clothing design, as an important element in this industry, must be done with great care and sensitivity so that it can play its role well.

Costume design in theater and performing arts is one of the important factors in creating attractiveness and different characters in the show. The costume designer must design clothes that are in harmony with the character and the environment of the show according to the story and role of the actors. Important elements of theater costume design include color, form, texture, details and materials. The color and texture of the clothes should be in harmony with the story and the environment of the show. For example, dark and bright colors are used in historical and fantasy shows. While in contemporary shows, bright and natural colors are used. Clothes with soft and flowing textures are suitable for romantic shows and clothes with tight and firm textures are suitable for action shows. The form of the clothes should also be in harmony with the character of the actors and their roles. For example, clothes with curved and curved forms are suitable for oblique and strange characters, while clothes with simple and straight forms are suitable for serious and sensible characters. The details of the clothes are also very important. The clothing designer should pay attention to small details such as decorations, ornaments, etc., in order to design clothes that are more attractive and beautiful. The materials used in clothes are also very important. The designer must use high quality materials so that the clothes are more durable. Also, the use of high-quality materials allows the designer to reuse the clothes.

The process of designing clothes on stage and theater includes several stages. At first, the costume designer meets with the writer and director of the show to get to know the story and characters of the show. Then, by examining the scenes and environments of the show, the costume designer must design clothes that are in harmony with the environment and characters of the show. Also, by writing a birth certificate for each character, you can design a suitable dress. After designing, the clothes must be made. At this stage, the clothing designer collaborates with manufacturers and tailors so that the clothes are made with high quality and precision. Also, if certain clothes need a special structure, like the clothes in historical times, more specialized tailors and clothing manufacturers are used. Finally, the costumes should cover the actors well. At this stage, the costume designer works with the director and the actors so that the clothes are properly placed on the actors' bodies and are in harmony with their roles and personalities. This includes adjusting and changing clothes during the show.

In general, costume design in stage and theater is a complex process that requires cooperation and coordination between the costume designer, writer, director, producers and actors. The purpose

of this process is to create clothes that are in harmony with the story and characters of the show and help to perform the show better.

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Peace Dress Design Based on Globalization Phenomenon

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Research Article

Abstract

Clothing is one of the most important characteristics of the culture of any civilization. Humans have always been thinking about the evolution of their clothing style and also the initiative and innovation in bringing about its diversity, to show their appearance in the most beautiful way possible in the society. Therefore, people's clothes should have a beautiful and creative design and color, suitable for the environment and the fashion of the society. Therefore, creativity in the field of clothing design has a special importance and position and can play an important role. The importance and motivation of this research is the design of peace clothes in line with the phenomenon of globalization in the design and sewing of modern clothes with intelligent creativity. In this article, the design of peace clothes is specifically discussed. These clothes have been examined from two approaches. The first approach is to design clothes that clearly inspire a sense of peace by using peaceful elements, and also in the second approach to design peaceful clothes that can walk in line with the globalization phenomenon in the fashion and clothing industry. In the following, with the design of the mood board and the findings regarding the effectiveness and uses of the peace dress, as well as the peaceful elements around the world and all cultures and societies, the digital implementation of the initial plans will be carried out in this direction. After approving the desired designs using the Color Board, the new digital design method (Technical Fashion) was used to implement them, and also, creative designs were designed using artificial intelligence capabilities. In terms of method, the current research is descriptive and analytical, and in terms of structure, it has an applied purpose, which has been used to collect data in the form of an observational library method.

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1. Introduction

Peace is a concept of social friendship and empathy and kindness, justice and equality in the absence of hostility and brutality. In this sense, peace is a state of calm, carefree and free from anxiety, conflict and conflict. Peace is considered a universal ideal. Peace is not an absolute concept and it can have a different definition depending on the religious and cultural point of view. In the same way, peace can be studied from different aspects, including issues related to war, disarmament and control of military weapons and other issues (www.einaudi.cornell.edu).

World peace is an ideal and ideal concept of establishing freedom, peace and happiness in all countries of the world or among all beings. World peace is a universal idea of non-violence that the nations of the world willingly cooperate to achieve, voluntarily through a system of government that prevents war. This term sometimes refers to the elimination of all enmities and enmities between all people. For example, world peace can be considered as an end to all wars or conflicts between brothers and sisters (www.ipl.org).

Peace clothes include peaceful messages, paintings, photos, symbols and symbols of peace. These signs are usually placed on the clothes in bright and cheerful colors and using simple and understandable writings. Also, in some peace clothes, there are pictures of animals, flowers and other symbols that refer to peace and friendship. These clothes are used as a kind of non-violent protest and their purpose is to create awareness about issues of peace, justice and equality. Peace dress is a dress that is used to show protest against war, violence and racial and sexual discrimination, humanity, peace and justice. These clothes are usually designed with bright and peaceful colors such as white, yellow and green and include wearable such as t-shirts, clothes and flags. These clothes are used as a kind of non-violent protest and its purpose is to create awareness about the issues of peace, justice and equality.

Peace clothes are a peaceful movement that was formed in the 1960s in America. This movement was created as a sign of protest against war and violence, using simple and colorful clothes. In this movement, people in simple and informal clothes took to the streets to show that they are against war and violence. The first designer of the peace dress, that is, the person who used this idea for the first time, is not known. However, many designers and cultural activists in the 1960s and 1970s used the peace dress as a symbol for the peace movement. Several different designers, including Gerald Holtom, who designed the well-known peace dress for the peace movement, are known as peace dress designers. Also, Mary Quant and Barbara Hulanicki also designed peace dresses in the 1960s. Designers of peace clothing can be human rights activists, artists, fashion designers, social activists, etc. Some prominent examples of peace clothing include T-shirts with the message coexist, make love not war, love unity respect peace. Of course, the concept of peace does not mean the absence of war and has been used throughout history since the beginning of civilizations. For example, in ancient times, people wore colorful and happy clothes and celebrated together in their festivals and ceremonies to show peace and friendship. But the Peace Dress movement was recognized as a very powerful Islamic movement in the 1960s. This movement originated in America and quickly spread around the world. People took to the streets in simple and informal clothes and wrote peaceful messages on their clothes, showing that they are against war and violence. French fashion designers Jean-Paul Gauthier and Johannes Raymond Herzog designed the dress in 1960. The outfit consisted of a white suit with a green collar, which was introduced as a symbol of peace and friendship during the Cold War.

Globalization is the process of interaction and integration of people, companies and governments around the world. Globalization grew due to the advancement of communication and transportation technology. Increasing global interaction brings the growth of international trade of ideas and

cultures. Globalization is primarily an economic process in the form of economic interaction, which is associated with cultural and social aspects, however, conflict and diplomacy have always been a part of the history of globalization, especially modern globalization.

According to some views in favor of globalization, this event, in the case of coherence, can cause the expansion of links and mutual connections beyond the limits of governments and minimize the security of localities and ethnicism. In fact, globalization is one of the consequences of the rebirth of industrial civilization and the technological revolution and the expansion of capitalism, which, if realized away from corruption and violation, can replace the complex processes of civil societies and traditional city-states and bring about the development of all in an equal and balanced interaction.

Globalization means a social process that loosens geographical restrictions on social and cultural relations (Mahdavian, 2022). Globalization is the evolution of social geography, which is characterized by the growth of cross-border spaces. This development does not lead to the erasure of geographical borders, but the border and the borderless will coexist with a complex relationship (Scholte, 2000). This phenomenon, which is the result of various factors, including developments in information and communication technology, has had many positive results from cultural reproduction to economic efficiency.

But globalization is a type of new global liberalism that is supported by the United States and organizations such as the International Monetary Fund and the Organization for Economic Development and Cooperation (OECD).

This phenomenon puts pressure on governments to reduce acceptable social standards and to impose only free market economic standards on society (Reich, 1998). Never before have consumers had access to many current fashions in the world at such low prices. Having all of these options has almost become second nature, with sprawling malls constantly filled with a variety of new and fast fashion stores. This trend is not just a coincidence: it is part of the impact of globalization on the fashion industry. But what is globalization? Simply put, globalization is an economic and social process in which global markets and cultures increasingly dominate local markets and cultures. Globalization has played a huge role in the fashion industry. Indeed, rapid change in this industry is undoubtedly one of the most important effects of globalization. As a result of globalization, the fashion industry has opened up to a variety of styles, influences and production methods. As a result, the trend is easily available to consumers worldwide. Therefore, globalization has also changed the way of transferring clothing production trends. However, the relationship between fashion and globalization is a complex and multidimensional phenomenon that consists of many parts, not all of which are positive. In the following, we will examine the changes in the fashion industry due to the rapid evolution of fashion as a result of globalization. Using the global assembly line, the fashion season has increased the speed of production to match the rapid appearance of new fashions while simultaneously lowering the price. As a result, customers buy more products and the season industry is able to grow even bigger. While this may translate into short-term savings for consumers, the long-term damage to the fashion industry could be catastrophic.

Globalization can also have positive and negative sides. With all these advantages, perfume and cheaper are not always appropriate. In the past years, our society has adopted the style of consumerism, one of the examples of which is the clothes we buy and wear. Fast fashion these days is a topic that has received attention. Fast fashion is clothes made from popular trends presented on the runways of famous brands. They are going to sell out quickly at very low prices. These inexpensive items allow the consumer to continually purchase new parts. It was in the 1960s that

existing industries began to grow, when young people began to embrace cheaper clothes and abandon the traditions of older generations (Hind, 2021).

Companies with low prices use certain methods in order to keep their production costs low, such as transferring production to poor countries where clothes are produced at a lower cost. In these areas, companies face less quality control and transportation, and in these cases, workers from this fast-moving industry suffer from this rapid consumption. As mentioned, the factories start producing in the cheapest countries by reducing their costs and pay the workers an unfair amount.

The collapse of Rana Square was an alarm for the world. It happened in Bangladesh 2013, Rana Plaza was a factory where famous brands like S&M were located. This drop was due to the bad conditions of the factory. Over a thousand garment workers were killed and many injured, an average of 60 billion people work in the fashion industry and yet we seem to have forgotten about those who make our clothes (Kem, 2011).

2. Results and Discussion

2.1. Mood Board Design based on the Subject under Investigation

When we decide to design a clothing collection, we have a series of ideas and topics in our minds that we need to organize; that's why we are designing a mod board. The mood board contains images of the designer's source of inspiration, selected elements, personal interests and ideas of the designer, fabric material and color, type of clothing cut, etc., which may also have small notes written in it.

Fig 1 Mood board and color board

According to the materials collected in this regard, and also relying on the design of the Mod Board, the design of the primary masses was started. The initial studies were designed digitally in two categories, conceptual designs and practical designs. Idea and creativity are the main aspects in conceptual clothing design. The creative aspect is very important in fashion and clothing design, and the personality of the designer has an effect on it and makes the design unique. The designer must take new and new ideas and when he can do this, the quality of the design will increase and he

must control and use the visual elements. Functional clothes are clothes that can be used daily and in different places.

Fig 2 Basic conceptual sketches

Fig 3 Basic applied sketches

2.2. Analysis of the Applied Conceptual Design

In the first design, a dress is designed that will attract the attention of every viewer due to its rarity and the use of blue color. Regarding the color blue, it can be said that pure blue has no sign of yellow, no traces of red. Blue is always cold. Blue is always inward. Blue is connected with nerves. Blue is a strong color in nature. When nature shuts down and all the buds are asleep, the blue color begins its life and becomes manifest and glorious. Blue is always imperceptible, but at the same time, it shows a clear atmosphere. Blue is visible in the earth's atmosphere from sunrise to sunset and even at night. In nature, water exists from the lightest to the darkest liquid. It shows different aspects of a soul, it enters into the mind and soul of a person, connects with his psyche and penetrates to the depths and ends of the soul. It conveys the concept of faith and refers to the infinite space and soul. For this reason, it is one of the colors that can beautifully express peace and tranquility in the whole world. It is a color that is equal to the circle and their characteristic, blue is smooth and transparent. Blue color creates peace and has depth and spiritual space like a circle. In this design, vertical and diagonal lines are used. The vertical line is the effect of standing and

endurance, elevation, calmness, stability, dignity and elegance. Vertical lines soften when blue. If this line is thick, it represents dynamism, strength, warmth, happiness and movement from bottom to top or from top to bottom. The vertical line pulls the gaze up and instills a sense of stability and balance to the viewer, and shows height, not breadth, as a result, it shows warmth, not coldness.

Fig 4 Implementation of the concept plan of the first design

Fig 5 Implementation of the application plan of the first design

Fig 6 Conceptual and practical design set of the first design

If I want to talk about the second design, it shows a world that is bright and shining, and the beauty and brilliance takes us to a hopeful world. That's why pieces of the world map are worked in gold color on the skirt of this dress, which here is golden yellow, light with a soft glow that is weightless and unbalanced. Gold is a color that was used instead of light in the past and has had many uses. In the golden domes of Byzantine mosques and in the background of paintings by old masters, this color is used as a symbol of the hereafter, wonder, kingdom and royalty, light and sun. The golden halo that illuminated a holy body is the best use of this color. Yellow is used in this look, which is associated with the sun and light and is known as the color of freshness, energy and light. For this reason, it is also used as a peaceful color. If yellow is placed in the background of green, this color shines among the colors of its family because green is a combination of yellow and blue.

A straight line can be interpreted as birth, a broken line as youth, and a curved line as maturity and perfection. The curved line expresses a state of soft movement and gradual change. Here, according to the chosen color, we see a show of tenderness in the clothes.

Feathers are sacred gifts from God, a manifestation of power from heaven that listens to your prayers, wishes, and desires. It is a symbol of acknowledgment, that someone or something in the spirit world is looking out for you, keeping you safe and empowering you to take whatever path you take.

Fig 7 Implementation of the concept plan of the second design

Fig 8 Implementation of the application plan of the second design

Fig 9 Conceptual and practical design set of the second design

In the third design, inspired by the symbol of peace (three lines and a circle) and the use of feathers as the bird of peace, a long dress is designed that requires specific properties for use. Regarding the choice of color in this look, it can be said that because green is in the middle of blue and yellow and it is a combination of these two colors, it covers the earth with light, and the particles of water and air are released in the space, and green color is created. Green represents satisfaction, peace and hope. Green color is a combination of knowledge and faith. When green turns yellow, it creates a feeling of youth and spring energy. Forms have both sensory and mental value. Form and color reinforce each other's concept and expression. Therefore, in design, the role

of form should be considered in addition to the role of color. In this design, circular and oval forms are used, which are in the same family in terms of form. The circle represents a stable and circular movement. Also, in the drawing of feathers, a triangle shape is used, which is equal to the characteristics of yellow color. In this design, vertical lines are used, which has the effect of standing and endurance, elevation, calmness, stability, dignity and elegance. The warmth of the vertical line corresponds to orange and yellow. Here, expressive and penetrating lines are used in straight and curved ways, which are used to create structure and stability of the design. These lines are seen stronger than other lines and play an important and effective role in clothing design. Regarding the use of the concept of this design, as well as in the future designs, it can be seen that feathers have been used abundantly in this collection. Feathers in fashion have been a part of human history for centuries. It may seem obvious, but much of the symbolism associated with feathers in culture and fashion is rooted in the association of feathers (and birds) with the sky and the concept of ascension, freedom, and truth. The pigeon is also known as one of the oldest symbols of peace and has been used in all cultures since ancient times and has been used as a symbol of peace. The next concept used in this design is the symbol of world peace in the form of three lines and a circle, which is simplified and included here with a slight change in its original design. In general, it can be said that this dress is more conceptual and can be used in special celebrations and ceremonies.

Fig 10 Implementation of the concept plan of the third design

Fig 11 Implementation of the application plan of the third design

Fig 12 Conceptual and practical design set of the third design

In the fourth design, the dove of peace symbol is used. The story in this design is that this dove is in the middle of the dress and has spread its feathers and is ready to jump to the top, and since the dove is a symbol of holiness and purity, it carries a message from the earth to the heavens. Regarding the shape and lines of this design, we can briefly say that the square shows stillness and peace, the triangle shows thought and movement, and the circle shows the concept of soul and spirit and eternity. It is not an easy task to make pure purple, which is formed from the combination of red and blue, because it always leans towards red or blue. It is not so easy to recognize this color. Purple is the opposite of yellow in the color wheel and creates strong contrasts with it. Yellow

represents intelligence and knowledge, and against it, purple represents ignorance, lack of control, cruelty and difficulty. When purple is in contrast, sometimes it threatens and sometimes it is encouraging and hopeful. Purple in the color circle shows religiosity. When the purple color is bright, it is a sign of sanctification that will enchant us. Red purple is a sign of god's love and spiritual dominance. There are many purple flowers, among which yellow buds and stamens are placed, giving it a special effect. It is not an easy task to make pure purple, which is formed from the combination of red and blue, because it always leans towards red or blue. It is not so easy to recognize this color. Purple is the opposite of yellow in the color circle and creates strong contrasts with it. Yellow represents intelligence and knowledge, and against it, purple shows ignorance, lack of control, cruelty and difficulty. When purple is in contrast, sometimes it is threatening and sometimes it is encouraging and hopeful. Purple in the color circle represents religiosity. When the purple color becomes bright, it is a sign of consecration that will enchant us. Red violet is a sign of god's love and spiritual dominance. In this design, arced and curved lines are used, and small arcs in the curved line can express the visual dynamics of mobility and growth. In this design, rhombus and trapezoidal shapes are also used, which have a certain weight and can be a sign of thought and thinking, and their brightness is as bright as yellow. Regarding the concept of this design, which is the gift of peace and friendship to the world, the symbol of peace is used, but with small changes, a triangle is used instead of a circle, which shows a certain weight and dignity in the result of the work.

Fig 10 Implementation of the concept plan of the fourth design

Fig 11 Implementation of the application plan of the fourth design

Fig 12 Conceptual and practical design set of the fourth design

3. Conclusion

Fashion is not conscious, and it exists every day in our lives and is one of the important elements in social life. Therefore, in this article, an attempt has been made to find a collection that takes into account the phenomenon of "globalization" to design clothing that is modern and attractive to the audience, and a symbol according to the cultures and social conditions around the world and bring peace and friendship to the whole world. In order to achieve this goal, the issue of peace was first examined and we achieved a general understanding of the cultures and human society of the world. Finally, by counting the things that lead to the globalization of fashion, we designed a collection that is practical both from the aspect of being peaceful and from the aspect of being noticed by the world. In addition, in terms of culture, society and environment, it does not harm the world, it can have a sense of security and peace with it.

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Opportunities and Threats of Artificial Intelligence in the Fashion Industry

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Research Article

Abstract

Artificial intelligence is a set of technologies and algorithms that give computers and different systems the ability to learn, think and perform complex tasks. Artificial intelligence as a new technology has many applications in the fashion industry. Using artificial intelligence algorithms, it is possible to predict fashion trends, design clothes, optimize production time and cost, etc. But also, with the introduction of artificial intelligence into the fashion industry, threats will also emerge for this industry. In order to investigate the opportunities and threats of artificial intelligence in the fashion and fashion industry, in this research, artificial intelligence technologies in the fashion industry have been explained. Various sources have been used to collect the information needed for this research. These sources include scientific articles, books, reports and sites related to the fashion industry and artificial intelligence. In the following, with the help of these sources, the opportunities and threats of artificial intelligence for the fashion industry have been examined in detail. In general, despite the many opportunities that artificial intelligence provides for the fashion industry, there are also threats to this industry that must be taken into account.

Keywords: Artificial Intelligence; Fashion Industry; Fashion Technology

1. Introduction

Intelligence is a very general mental ability that includes the ability to reason, plan, solve problems, think abstractly, understand complex ideas, learn quickly and learn from experience. It's not just book learning, a limited academic skill, or test-taking smarts. Rather, it has a broader

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reflection and a deeper ability to understand our surroundings, to "make sense" of things, or to "understand" what to do. Human Reason Dreyfus explains that human intelligence relies on unconscious processes that cannot be achieved by conscious symbolic information. processes and finds it interesting and useful for researching that technology, reveals their limits. However, there are large investments in projects that try to mimic the brain, such as the Human Brain Project that investigates (Vollard, 2021).

Artificial intelligence is a field of computer science that studies and examines the logic of human intelligence (Lucy, 2021). The term artificial intelligence in its modern meaning was coined for the first time in 1956 by John McCarthy, Marvin Minsky and their colleagues at the Dartmouth Conference. The initial developments gave this courage to the scientists of this field to predict a very bright future for artificial intelligence. Herbert Simon predicted in 1958 that in the next ten years, computers will be able to be chess champions, this prediction of course came true to a large extent. Many definitions have been mentioned for artificial intelligence, all of which can be put in the form of two main approaches: "weak artificial intelligence" and "strong artificial intelligence". A strong approach to the problem of artificial intelligence seeks to build a machine that will reveal all the abilities that are associated with intelligence in humans. Therefore, it provides definitions corresponding to such a function of artificial intelligence (Matlabi Karabkendi et al., 2013).

With the rapid development of big data analytics technologies, artificial intelligence is being revived by the availability and power of big data. So, after years of hope and promise, AI is gaining traction among top companies. It has been reported that the use of systems equipped with artificial intelligence in organizations is rapidly expanding and artificial intelligence is changing business. The new wave of artificial intelligence systems has improved the organization's ability to use data for forecasting and significantly reduced forecasting costs. According to Gartner's 2018 Technology Trends Survey, artificial intelligence is listed as the first strategic technology. The ability to use artificial intelligence to improve decision-making, reinvent business models and ecosystems, and rebuild the customer experience will bring benefits to digital initiatives by 2025 (Yanqing Duan et al., 2019).

Artificial intelligence in robots to develop human-like characteristics significantly increases human dependence on technology. In addition, the ability of artificial intelligence (AI) to effectively perform any task is more limited and significantly increases people's dependence on technology. Recently, artificial intelligence has been reflected as an artificial representation of the human brain, which tries to simulate their learning process with the aim of imitating the power of the human brain. Everyone should be assured that artificial intelligence is equal to the human brain, which is not capable of creating it. Moreover, artificial intelligence (AI) is a combination of different technologies that give robotics the opportunity to understand, learn, understand, or complete human activities on their own. In this case, artificial intelligence programs (robots) are built for a specific purpose such as learning, acting and understanding correctly, while human intelligence is basically related to various multitasking abilities. In general, an AI tool mainly focuses on robotics that mimics human behavior. But still, artificial intelligence may fail at some points due to differences in human and computer brains. Artificial intelligence may be able to support us in performing tasks and functions that usually do not involve feelings and emotions. Until now, AI machines are not able to control their own process, for which they need the intelligence and minds of humans. The purpose of creating artificial intelligence is to make human life easier. However, there is still a huge debate about the pros and cons of AI in general. With the introduction and successful implementation of artificial intelligence (AI) solutions, many industries in the world have benefited from increased profitability and will continue to enjoy a good economic

growth rate. In addition, AI opportunities will be aimed at innovative, human-centered approaches and measuring the application of robotic technology in various industries and companies around the world. Artificial intelligence will also revolutionize the way companies grow and compete in the world by providing new production ideas that bring profitability to businesses (Jahanzaib Shabbir and Tarique Anwer, 2015).

Artificial intelligence algorithms play an increasing role in modern society, although they are not usually labeled "AI". Although current artificial intelligence presents us with few ethical issues that do not already exist in the design of cars or power plants, the approach of artificial intelligence algorithms towards more human thinking shows predictable complications. Social roles may be filled by artificial intelligence algorithms, which require new design requirements such as transparency and predictability. Sufficiently general AI algorithms may no longer be implemented in predictable contexts and require new types of safety assurance and artificial ethical considerations engineering. Artificial intelligences with sufficiently advanced mental states, or appropriate states, will have moral status, and some may count as persons, although they may be very different persons from the current kind, perhaps governed by different laws. And finally, the prospect of artificial intelligence with superhuman intelligence and superhuman abilities confronts us with an extraordinary challenge, which is to express an algorithm that is the output of supermoral behavior. These challenges may seem like a dream, but it seems predictable that we will face them. And they are not without suggestions for today's research directions (Bostrom, and Yudkovski, 2011).

Artificial intelligence has become an integral part of every industry. With the emergence of big data, industries, especially the textile and clothing industry, are on the threshold of relationships with consumers, suppliers and competitors. They have to manage different scenarios with a lot of complex correlations and dependencies between them and uncertainties caused by human interaction. It has become necessary to manage a huge amount of data to optimize their decision-making processes. In such a situation, artificial intelligence techniques are promising in every part of the value chain, from product discovery to robotics. The wide potential applications of artificial intelligence in industry have found their way in design support systems, recommendation systems, intelligent tracking systems, quality control, forecasting, predictive analysis in supply chain management or social networks and electronic commerce (Mahi Al-Din Babu et al., 2022).

Identifying the opportunity to deploy artificial intelligence depends on a wide range of factors that are specific to individual sectors and in those sectors, for different types of business. Given the wide range of applications of AI techniques, in general, if you want to know where AI can create the most value, you should follow the money. For industries where the main drivers of value are related to marketing and sales, including many consumer-facing industries, this is where the greatest value can be found from the application of artificial intelligence. The biggest value opportunities for artificial intelligence are in marketing and sales. In supply chain management and manufacturing, the greatest impact of potential value from the use of artificial intelligence is in both top-line functions (such as marketing and sales), and in bottom-line operational functions (including supply chain management and production at the company level). Each company should examine the mix of its functions to find the most attractive opportunities for using artificial intelligence and determine where it makes more sense to invest in the deployment of artificial intelligence (Michael Choi et al., 2018).

According to the awareness of artificial intelligence, consumers are divided into three categories: laggards, enthusiasts and realists. Most consumers are realistic, aware of both the benefits and risks of AI technology. Laggards believe that AI technology has a high level of risks and a low level of

benefits, while enthusiasts perceive a high level of benefits and a low level of risks with AI. Rapid advances in artificial intelligence technology enable new consumer experiences and therefore affect consumption values. Artificial intelligence technology is used in the retail fashion industry to improve consumer experiences (Csanák, 2020).

Artificial intelligence is currently used in many fields of fashion, and experts currently see the best possible opportunities to exploit it more. Machines and robots compatible with artificial intelligence easily sew fabrics well. While they can detect fabric defects and provide quality assurance to ensure that the actual design shades match the new colors. Some retail giants, such as Amazon and Walmart, already have their own clothing brands and use machine learning systems to create fashion trends that customers prefer to buy in the not-too-distant future. . Artificial intelligence can identify new trends by reducing (human) prediction error. Artificial intelligence can design to create endless combinations of variables. Changing something will change everything. Many possible connections between design variables and performance lead to different performance (Csanak, 2020).

2. Results and Discussion

2.1. Technology in the Fashion Industry

At present, artificial intelligence has become one of the most important and influential technologies in the world, and many industries are using it. One of these industries is the clothing industry, where artificial intelligence is continuously used in the design and production of new clothes. This has caused clothing designers to create new initiatives in designing and manufacturing clothes using artificial intelligence. These technologies are used in the design, production and use of clothes and provide facilities and capabilities that are beyond ordinary and analog clothes. One of the common examples of smart fashion is the use of electronics and sensors in clothes. These sensors can measure various information such as heart rate, blood pressure, body temperature and movements and transmit them wirelessly to external devices. This information can be used for health monitoring or more creatively in clothing design to create effects and lighting.

New technologies such as augmented reality and virtual reality are also used in smart fashion design. These technologies allow fashion designers to create virtual clothes on 3D models and allow customers to experience them in a virtual environment before buying. Also, artificial intelligence and machine learning algorithms are also used in fashion and smart fashion design. These technologies can create suggested patterns for clothing design based on the customer's taste and style, and also work more efficiently and effectively in the production and distribution process. Smart fashion and fashion design, using advanced technologies, gives us innovative clothes design and unique capabilities and leads to new and different developments in the field of fashion and clothing.

2.2. Virtual Reality (VR) Augmented Reality (AR)

AR and VR technologies have already been influential in fashion and the potential for their growth and adoption is high. They can provide immersive virtual shopping experiences, virtual fashion shows and virtual dressing rooms, and increase the way consumers interact with fashion. AR technology allows customers to try on clothes and accessories virtually using their mobile devices or proprietary AR applications. They can see how clothes fit, test different styles and colors, and make more informed purchasing decisions. For example, programs such as Dressing

Room and Z-Kit can be mentioned. VR technology allows fashion brands to create virtual exhibitions and fashion presentations. These immersive environments provide a digital platform for displaying collections, the possibility of remote presence and providing an attractive brand experience. Brands such as Tommy Hilfiger, Dior and Balenciaga have explored VR exhibitions. VR technology allows fashion designers to create virtual prototypes and visualize their designs in a 3D space. They can check the details of the garment, evaluate the fabric, and make changes to the design before moving on to physical production. Tools such as Clotridi and Optitex offer VR capabilities for design visualization. Fashion magazines and advertisements with augmented reality capability: Augmented reality can bring fashion static images to life by placing digital content on print media. Users can scan magazine pages or ads with their mobile devices to unlock interactive experiences such as 3D models, videos or behind-the-scenes content.

Virtual reality can be used in fashion education and educational programs. Students can participate in virtual design studios, participate in virtual workshops, and experience fashion events from remote locations, providing a more inclusive and accessible learning environment. Augmented reality-based styling applications can provide personalized fashion recommendations based on user preferences and body measurements. Users can virtually style clothes, receive design recommendations, and discover new brands and products that match their style preferences.

2.3. Artificial Intelligence (AI)

AI has the potential to help fashion designers in many ways, such as trend forecasting, personalized style recommendations, and even creating design concepts. Virtual fashion assistants based on artificial intelligence and fashion recommendation systems can become more common in this industry. Artificial intelligence is changing various aspects of the fashion industry, from design and production to customer experience and supply chain management.

Algorithms based on artificial intelligence analyze vast amounts of data, including social media trends, online shopping behavior, and fashion publications to predict future fashion trends. Companies such as Trendelitex and Editet provide trend forecasting services that help fashion brands make informed decisions about their collections.

AI algorithms analyze customer preferences, past purchases, and browsing behavior to provide personalized style recommendations. Virtual style platforms such as Stitch Fix and Amazon Echo Look use artificial intelligence to suggest clothes and help customers discover new fashion items.

Visual search tools based on artificial intelligence allow users to search for fashion items by uploading images or using descriptive phrases. Companies like Pinterest and Google Lens use artificial intelligence algorithms to recognize patterns, colors and styles and allow users to find similar fashion products.

Artificial intelligence algorithms analyze customer body measurements, product specifications, and historical fit data to provide accurate size and fit recommendations. This helps customers make more informed choices when shopping online and reduces the return rate. Brands such as True Fit and Fit Analytics specialize in artificial intelligence-based sizing solutions.

During the Corona period, brands often couldn't bring models to shoot safely. For many e-commerce stores, this was a serious problem, because model photos can sell items up to 60% more. Not surprisingly, some of the most popular fashion brands came up with creative solutions. British online fashion and cosmetics retailer Asus, for example, uses artificial intelligence technology to hold virtual photo shoots in which six real-life models wear virtual replicas of the brand's clothing real pictures of clothes are provided to buyers. Perhaps it is no coincidence that the company tripled its profits from the end of 2020 to the beginning of 2021. Some famous models are now completely

artificial intelligence, such as Brazilian-American model Mikola Souza, who has 3.1 million followers on Instagram and has collaborated with Givenchy and Prada. While the advent of artificial intelligence models may seem a bit surreal, the benefit of virtual shoots is that they can increasingly help reduce the environmental waste that physical shoots produce. As a result, for brands that need to quickly change advertising images, virtual photography provides an opportunity to not only improve efficiency, but also reduce costs. As more people shop online, this year we'll see an increasing number of brands experiment with artificial intelligence to build their catalogs on real or AI-generated models and even show the buyers themselves.

2.4. Opportunities and Threats of Technology and Artificial Intelligence in the Fashion and Clothing Industry

The fashion and clothing industry is one of the most competitive industries with many opportunities and threats. Considering that customers' tastes change rapidly in this industry, companies must keep up with market changes and be up-to-date in order to be successful in the competitive market. On the other hand, the use of social networks, the development of the global market and new technologies provide many opportunities for companies in this industry. But due to fierce competition in this industry and changing customer tastes, companies are also facing many threats.

Opportunities:

According to these points, companies should focus on improving the quality of products and services, improving processes and reducing costs in their planning in order to be successful in the competitive market. Also, the use of new technologies and the development of online business are also opportunities that companies should pay attention to.

• Improving the design and production process: by using artificial intelligence and digital technology, the design and production process of fashion products is improved. For example, by using artificial intelligence, you can quickly check different design patterns and choose the best option. Also, by using digital technology, it is possible to produce three-dimensional samples of products and check them before starting production and fix the problems.

• Improving the shopping experience: by using artificial intelligence, customers can easily find the products they want, and by using digital technology, they can buy more quickly and confidently. For example, by using artificial intelligence, it is possible to provide purchase suggestions that suit the tastes and needs of each customer, and by using digital technology, the process of payment and sending products can be improved.

• Improving the distribution process: by using artificial intelligence, it is possible to more accurately predict the needs of customers and deliver products more quickly and accurately. For example, by using artificial intelligence, it is possible to quickly respond to ongoing orders and determine the best shipping methods.

• Cost reduction: By using artificial intelligence and digital technology, production and distribution costs can be reduced and product quality can be improved. For example, by using artificial intelligence, it is possible to quickly identify the needs of customers and adjust the production of products based on these needs. Also, by using digital technology, it is possible to optimize the production and distribution process and reduce additional costs.

• Increasing the speed of the process: by using artificial intelligence and digital technology, the design, production and distribution process can be done faster and provide better services to

customers. For example, by using artificial intelligence, the design process can be done faster, and by using digital technology, the production and distribution process can be optimized.

• Improvement of decision-making: by using artificial intelligence, better decisions can be made in the field of design, production and distribution of fashion products. For example, by using artificial intelligence, it is possible to quickly identify the needs of customers and make decisions on the design and production of products based on these needs.

• Increasing the speed of production: by using artificial intelligence and digital technology, the speed of production and supply of products in the fashion and clothing industry increases. This makes it possible for companies to easily respond to market requirements and deliver to the market at a high speed.

• Improving the quality of products: the use of artificial intelligence and digital technology improves the quality of products in the fashion and clothing industry. This allows companies to achieve quality and acceptable products for their customers.

• Increasing sales: by using artificial intelligence and digital technology, companies can easily respond to customer needs and offer quality products at reasonable prices. This makes the company's sales increase and, as a result, their profitability also increases.

• Using social networks: Using social networks allows companies to be in contact with their customers and benefit from their opinions and suggestions.

• Global market development: Using digital technology, companies can easily target the global market and export their products to all over the world.

• Using new technologies: Using new technologies allows companies to produce their products with higher quality and faster.

• Online business development: Using digital technology, companies can easily develop online business and access their online store.

• Increasing competition: With the use of artificial intelligence and digital technology, competition in the fashion and clothing industry will increase. For example, companies that use these technologies can quickly respond to customer needs and provide quality products at reasonable prices. This causes other companies to use these technologies to attract customers.

Threats

• Reduction of employment: with the use of artificial intelligence and digital technology, many processes in the fashion and clothing industry are automated and the need for human labor is reduced. This causes many workers in this industry to lose their jobs.

• Violation of privacy: using artificial intelligence, personal information of customers is collected and analyzed automatically. This causes the privacy of customers to be violated and their personal information to be used for commercial purposes.

• Increasing dependence on technology: With the use of artificial intelligence and digital technology, the fashion and clothing industry becomes dependent on technology. This makes the fashion and clothing industry affected in case of problems in technology.

• Reduction of human communication: by using artificial intelligence and digital technology, many processes in the fashion and clothing industry are done automatically and the need for human communication is reduced. This causes the communication between people to decrease and as a result, the spirit of work and cooperation in the fashion and clothing industry decreases.

• Increased imitation: Using artificial intelligence and digital technology, the ability to imitate is very high and competing companies can easily be inspired and imitate your designs and products.

• Increased risk: the use of artificial intelligence and digital technology in the fashion and clothing industry brings with it risks such as system failure, information theft, etc.

• Fierce Competition: With the increasing competition in the fashion and apparel industry, companies have to compete with their competitors to attract more customers. This makes companies have to be more willing to innovate and think creatively.

• Change in customers' tastes: Customers' tastes in the field of fashion and clothing change rapidly, and companies must keep up with these changes in order to maintain their customers' satisfaction.

• Changes in different seasons: Different seasons of the year have different requirements in the field of fashion and clothing, and companies should be ready to produce products that match the seasonal requirements.

3. Conclusion

This article examined the importance of artificial intelligence and its role in the fashion industry. Artificial intelligence, as an advanced technology, has the ability to perform complex tasks and provide quick and accurate solutions. However, there are some concerns about the negative effects of artificial intelligence on society and the economy. As a result, it is better to use artificial intelligence while trying to preserve human values and sustainable development. In general, artificial intelligence as a powerful technology can help improve people's quality of life and economic growth. According to the analysis of the opportunities and threats of the fashion and clothing industry, it can be said that the competitive and dynamic market of this industry requires innovation and creative thinking. The use of social networks, the development of the global market, the use of new technologies and the development of online business provide many opportunities for companies in this industry. At the same time, intense competition, changing customer tastes and changes in different seasons are threats that companies must keep up with and be up to date with. As a result, successful companies in this industry should be more inclined to innovation and creative thinking, and by using the opportunities that exist in this industry, they can maintain the satisfaction of their customers and be successful in the competitive market.

In the fashion industry, artificial intelligence is used to improve the design, production and sale of products. For example, by using artificial intelligence algorithms, it is possible to more accurately predict new fashion trends. Also, artificial intelligence is used to improve the production process and reduce costs in the fashion industry. By using artificial intelligence, it is possible to more accurately identify the needs of the market and customers and design products that are more to the taste of buyers and, as a result, more profitable. Although artificial intelligence can lead to significant improvements in the fashion industry, there are also some disadvantages and threats. These disadvantages and threats include reducing the need for human labor and increasing unemployment, distorting and reducing taste and creativity in designers, creating a security hole for users' information, etc.; Also, the use of artificial intelligence in the fashion industry may make some large and technological companies more powerful and make smaller and start-up companies face more problems.

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Investigating the Place of Patchwork in Fashion

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Research Article

Abstract

One type of handicrafts in Iran is the beautiful art of 40-piece embroidery. Forty pieces are a part of popular art and a language that expresses the culture and customs of every nation, and in the first step, they should be examined based on local and climatic components. But it is worth mentioning that these works, in addition to having local characteristics, also have a valuable place in contemporary art and are an inspiration for the creation of works of art for the artists of today's modern world. In forty-piece embroidery, colorful pieces of fabric in different sizes are sewn together, and it is known as forty-piece embroidery because of the juxtaposition of many pieces of fabric. The use of 40-piece embroidery in many items such as quilts, bedspreads, cushions, and today, with its entry into the world of fashion, has created a new evolution. Also, the works that are still sewn and used without any special patterns and methods, unaware that these works can be very valuable for our cultural and anthropological studies, but few people are aware of them. In this article, the art of patchwork and its application in clothing and fashion design have been discussed, and examples of the designs of famous designers in the world have been discussed.

Keywords: Clothing Design; Patchwork; Fashion

1. Introduction

1.1. Literature

In the dictionary, fashion is used in the meaning of taste, style, method, and method, and the term refers to temporary ways and methods based on the taste and taste of the people of a society and lifestyle, including the way of dressing, the type of reception and social etiquette, and the decoration and architecture of the house. Therefore, it can be said: fashion refers to the sudden and frequent change of taste of all or some people of a society and leads to a certain behavioral

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tendency or adopting a certain style in life. Choosing the type of fashion and clothing style depends on various factors such as religious beliefs, beliefs, culture and customs (Bukharai, 2015).

Fashion is a complex and multi-layered concept and has many meanings. In the theoretical literature, we come across various definitions of it that cover a wide range. Definitions that do not necessarily agree with each other and even negate each other in some cases. According to Simmel, fashion is nothing but one of the multiple forms of life and its purpose is the search for individual distinction and change. Fashion is the way in which certain forms of culture spread (Simmel, 1957).

Crane (2000) and Cranebowen (2006) and Tassie (1963) who describe clothing as the "raw material that constitutes fashion", use fashion to refer to the visible styles of clothing that at a particular point in time have they are a great value. By limiting fashion to the realm of clothing, they state that fashion provides important insights about the legitimate norms and contractual customs of society (Crane, 2000; Crane, 2006).

If in these definitions, fashion has become a permanent label of clothes and clothes, Kawamura (2005) inspired by Blumer (1969) uses fashion in a broader sense. According to him, we don't necessarily need visual objects to describe and explain fashion, because fashion has a much wider scope and is not limited to clothes and accessories. Kawamura defines fashion as an "army of institutions" that are involved in the social process of fashion production, distribution, and dissemination. According to him, the understanding and perception of fashion depends on the fundamental role of these mediating institutions, which are all involved in creating the belief about fashion in people's minds. Thus, in defining fashion, Kawamura gives priority to the element of subjectivity and the role of mediating institutions in creating this subjectivity. In this sense, "fashion is a belief that manifests itself in consumer choices, including clothing and people's clothing. Kawamura admits that it is not easy to distinguish between fashion - as an immaterial phenomenon - and clothes - as a material object - but he considers the definition of fashion to be illogical and insufficient. In addition, in the definition of fashion, he points to the element of "general acceptance" and believes that various material goods, including clothing, are considered fashionable only when a large number of people in the society accept and use them. In this sense, "a particular model or style of clothing must be widely spread and then accepted in every way to qualify for the label of being fashionable" (Kawamura, 2005; Blumer, 1969).

In another definition, from Lipovetsky (1994), "fashion is a form of change that is characterized by a limited time period of extensive imaginative movements and the ability to influence a diverse spectrum of parts of the social world". Lipovetsky understands fashion in relation to individuality and innovation, and rather than emphasizing the negative consequences of fashion, he considers it to be the cause of increasing equality and democratization of society. From his point of view, "the era of fashion is an important factor in the emergence of a process that has freed men and women from dark thinking and petrification, created an open public sphere, and shaped a generally more lawful, mature and skeptical human being" (Lipovetsky, 1994).

Finally, it should be mentioned that from the semiotic point of view, fashion is a symbolic system of clothing, whose distinctive feature is excitement and has a very high level of meaning. On this basis, fashion is considered a part of the wider phenomenon of creation and assignment of symbols and symbolic values to material culture and becomes relativistic. Although the definitions presented in some cases obviously conflict with each other, the common theme of most of them is the emphasis on "newness" and "variability" as the two main characteristics of fashion.

The art of clothing design is generally called fashion. Mode is a French word and fashion is an English word. Fashion is a kind of tool that shows existence and independence in a specific time frame and place, through different tools such as clothes, shoes, lifestyle, accessories, cosmetics,

make-up, hairstyle and body posture. Fashion is a definition that is declared as fashion by the fashion industry. The following are true about these words:

1. The words fashion and fashion have the same meaning and refer to the same concept.

2. Fashion is not equivalent to nudity.

3. Fashion is not a new issue and phenomenon specific to the last 100 years, fashion is an issue that has always existed throughout history.

4. Fashion is not only limited to the category of clothing and clothing and can also be seen in architecture, manner of speaking and behavior, diet, etc.

5. Western fashion is only one form of fashion and the concept of fashion cannot be summed up in this particular form.

6. Fashion is a mental issue that appears in different forms in the mind and behavior of each person.

7. Although fashion is used as a tool for sales, the existential philosophy of the need for fashion is not to increase sales.

8. Fashionism is not a disease or problem, but extreme fashionism may cause problems for a person.

High fashion means unique and customized fashion. It is the most expensive and the highest level of fashion, which is made by hand from start to finish. The best and most expensive materials are used in it, and most of the unusual fabrics are sewn with great attention to details. Some people may consider haute couture as very elaborate and sophisticated clothing, while others may define it as very expensive clothing. In fact, fashion is not what we wear, but it is the feeling that we get from wearing clothes, this feeling is different for everyone who intends to move towards the world of fashion. Haute couture was originally applied to the productions of an Englishman named Carl Frederickworth, who worked in Paris in the middle of the 19th century. In modern France, "Haute Couture" is a protected name that may be reserved for specific companies; however, it is used for most custom-made clothing, both in Paris and in other capitals such as London, Milan, New York, and Tokyo. In France, the word haute couture, which means "high fashion", is protected by the law of the French Chamber of Commerce located in Paris so that no one can use it, and permission to use this name is given only to those who are qualified.

Patchwork is a needlework technique in which one or more pieces of different and colorful fabric are placed on a larger background fabric and attached to it. Patchwork in Latin and French comes from the Latin appliquer and the French applicare, respectively. These two terms mean "joining" and it refers to a type of embroidery used to cover the perforated parts of clothes and other cloth items. A process during which small and large and colorful pieces of different fabrics are sewn together, and because many pieces of these fabrics are placed together, it is called forty pieces. The attraction of a forty-piece work is the colorfulness and diversity of the fabrics used in it (Ostad Agha, 2016).

Forty-piece embroidery is known by different names in Iran, including Khatami embroidery, Landare embroidery, and sometimes patchwork embroidery. What comes from limited documents and documents; It means that Chehl Teke Dozi, especially when it is combined with Ajide Dozi or Matlese Dozi, is included in the group of traditional Iranian embroidery. The term embroidery or facing is an art in which various motifs are created on non-patterned fabrics by sewing or pulling a part of the fabric threads (Esfandiari, 2002: 40).

Although the time of the appearance of embroidery, which was originally used to decorate clothes, is not known exactly, but the existing documents and samples indicate the prevalence of embroidery in ancient Iran (Esfandiari, 2002).

This type of sewing has been common in Iran since the past, however, there is no specific date for its origin. However, the remaining works in the "Leningrad Hermitage" and "Metropolitan" and "Museum of Ancient Iran" museums indicate the prevalence of Khatami embroidery in the Seljuk period. Forty-piece embroidery has various uses in Iran, including: quilt cover, chair cover, screw bed, rug, bedspread, various curtains, very beautiful decorative panels, wall hangings and many other uses (Salman Mahini, and Soleimanieh, 2021).

In other countries in Central Asia, the art of forty-piece embroidery is performed with a sacred attitude. The people of Central Asia have been using talismans for a long time to protect against diseases and remove bad mood, this belief in the form of forty-piece embroidery has the aspect of protection against demonic forces. These colorful and meaningful textiles are even used for celebrations and important occasions in family and community life (Meller, 2013).

In North America and Western Europe, until 1950 AD, the art of forty-piece embroidery was discussed as a popular art that was practical and a part of domestic arts created by women artists, as in Central Asia. But from 1950 onwards, this art took on another color and smell; Because feminist movements confronted the classification of fine arts and which artists were called "artists" and who were called "masters"; Their question was why the art of forty-piece embroidery is considered a secondary art (Lozanoff, 2019). With the transformation that happened in the arts of the 20th century, this art became a medium to express artistic concepts and was placed in the place of fine arts (Lincoln, 2009).

Currently, apart from the practical and artistic aspect, forty-piece embroidery has become an abstract language with a prominent social expression that artists use to express their social-political concerns and difficulties; With its help, they show their family background or use it as a tool to map historical events. In the 60s, during the counter-cultural movements that arose in California, such as the hippies, who were the revivalists of popular culture, there was a transformation in the industries and it changed from traditional crafts to contemporary crafts. As a result of this transformation, home industries were revived. And the young people's approach to the type of clothing and covering became significantly different from before, and the process of converting forty-piece handicrafts, which is known today as (art quilt) in America, was formed in the years after the Second World War.

Since the 1970s, many art historians have acknowledged the similarity of many quilts to abstract art. When the major exhibition of Forty American Pieces and Abstract Designs was held at the Whitney Museum, traditional bedspreads were placed as a kind of painting on the museum's large walls, and this was the first time that a home occupation was presented as an art form. Since then, a new trend called traditional quilting has emerged in the discussion of abstract art. This art was most noticed by women, one of the educated women who worked a lot in this field was Mrs. Jean Ray Loury, who is known as the mother of quilt art. She encouraged women to create personal designs rather than traditional designs that have a specific pattern (Salman Mahini and Soleimanieh, 2021).

From the 19th century onwards, in Western Europe and North America, the creators of the forty-piece art exhibited their works publicly in art exhibitions. Art, which was primarily concerned with its practical aspect, has been concerned with its aesthetics since this time. The movement of crafts and modernism influenced the decorative arts of Europe and America from the beginning of the 20th century. Professionally trained artists and designers, graduates of new art schools, began to make connections between traditional arts and modernist art, while modernist artists looked to traditional arts as sources of inspiration for their contemporary works (Roderick and Elizabeth Johnson, 2004).

Fig 1 An example of Sicilian Patchwork

Patchwork forty-piece embroidery technique will be one of the other trends of this year's cold season, which was revived with the change in the world's attitude about fast fashion and the economic recession after the Corona epidemic. This style was used by hippies after the World War and after the economic recession, especially in the 60s. Today, the patchwork style of fabric is formed by combining fabrics with different motifs together, or printed fabric with the effect of forty patches. This technique is a symbol of the review of the clothing production process and the conscious desire to reduce waste in the textile industry.

2. Results and Discussion

The creative designers of the Dolce & Gabbana brand took help from Italian culture and forty-piece clothing models to present the 2021 spring and summer women's collection. For this collection, the Dolce & Gabbana brand asked different local artists to weave fabrics with local designs to use in this collection. Also, their purpose of using such fabrics was to convey the concept of unity and empathy. (Figure 2, left)

The creative designers of the Dolce & Gabbana brand drew inspiration from their 1993 collection and the 1970s to present their Spring Summer 2021 collection presented at Milan Fashion Week. This collection was full of maximalist style and full of colorful printed collages. Colorful clothes with various designs, among them speckled fabrics, silk fabrics with animal skin designs and even denim fabrics can be seen, and they were perfect for spring and summer. (Figure 2, right and middle)

This type of patchwork can be seen in 19th and 20th century Japanese textiles, which is called "buro". Stitches were used to put together, preserve and extend the life of home textiles. Boro in Japanese originally means patched piece of cloth, but sashiko has become a verb in Japanese.

Fig 2 An example of Dolce & Gabbana embroidery

Fig 3 An example of Sashiko fabric and Buro dress

Patchwork can be done with reasonably sized fabrics. The Dior brand has designed and implemented beautiful embroidered clothes and shoes in the fall and winter collections of 2018 and

2019. The nature of a forty-piece work is often maximal and ultimately, it creates a maximal phenomenon.

By putting together small pieces of fabric and sewing each leaf individually, as well as using colorful autumn leaves, a beautiful and lively design has been created that takes the human soul to the autumn of seven colors and falling leaves. With the use of recycled fabrics, such designs can be created that are strikingly beautiful, and with this creative work, pieces of fabric are prevented from being thrown away in the nature, so that our nature and environment will always remain healthy and beautiful. The attraction of a forty-piece work is in the colorfulness and diversity of the fabrics used in it.

Fig 4 An example of a forty-piece embroidered bedspread

Another advantage of forty-piece embroidery is that if there is little fabric to sew, parts of the dress can be made with small pieces of fabric of different models using the forty-piece sewing technique to create a beautiful and admirable dress (Figure 5).

Fig 5 An example of patchwork on clothes

3. Conclusion

Although the beautiful art of patchwork was completely traditional and primitive in the old days, it has become more popular now and has entered the world of hand-woven carpets in addition to the world of fashion, which has caused quite a stir, and has many fans. The art of patchwork, despite the simplicity of the appearance, which was connected with stitches without any pattern, defined many issues. That a person under the influence of environmental factors used special colors of his living area, or that people who lived in nature, their fabric designs had happy and warm colors and were closer to nature. Finally, patchwork can be considered as a complete cultural phenomenon, from the smallest and smallest part of it, which is a piece of cloth, to its work, in a cultural and social context, it clarifies valuable issues for us in relation to that society. This phenomenon has made a lot of progress in western countries and today it is known as a branch of visual arts and textile art called art quilt, which has a very wide world for itself.

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