



Achieving Environmental Sustainability Using the Art of Patchwork in Contemporary Clothing Design

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Abstract

With a lengthy history, patchwork art was first used to meet people's most basic needs. Over time, major companies and trend-setters began to take notice of patchwork art due to its aesthetic and environmental value. And Without a doubt, sustainable development means enhancing the quality of life for all people and living things while reducing the amount of natural resources used beyond what the earth can sustain, as its activities shouldn't be focused on these developmental procedures carried out throughout the production process. Resources: the natural elements of the land, sea, and air; they can be harmed by pollution, deprivation, or deliberate subversion. In view of this abundance of interest, it is necessary to invest as profitably and sustainably as possible in the components of production and production processes. This can be achieved by utilizing a variety of strategies and systems to employ, protect, and preserve natural, human, and financial resources in the best possible ways. The word "sustainable" was used to refer to development in general or to a resource that is scientific, cultural, or economic.

Keywords: Patchwork, natural sustainability, contemporary , clothing Design

Introduction

Academics and practitioners are paying increasing attention to environmental sustainability, which has emerged as a critical managerial issue in recent years, as they attempt to achieve a balance between environmental and business objectives and because one of the most important aspects of life is environmental preservation. As a result, the concept of sustainability has gained popularity recently. It refers to the preservation of all life forms, including those of humans, animals, plants, and the planet as a whole. This means that optimal resources must be invested in production processes and elements in a sustainable manner, using a variety of strategies and systems to employ natural, human, and economic resources, protect and preserve them in ideal ways, and ensure that the industry does create a useful and sustainable balance over time.

Additionally, because ready-made clothing generally goes through several stages that lead to environmental pollution and harm to humans, consideration should be given to designing and

manufacturing environmentally friendly clothing. [1]

Section snippets

About the definition of fashion

Fashion 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. The dictionary defines fashion as taste, style, method, and method. As a result, it is possible to define fashion as the abrupt and regular shift in the tastes of all or some members of a community that results in a certain behavioral inclination or embracing a certain way of living. A person's choice of attire and fashion is influenced by a number of things, including their culture, customs, religion, and beliefs. [2-6]

The term "fashion" mainly refers to the art of clothes design. Fashion is an English term, whereas mode is a French word. Fashion is a type of tool

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that, via various tools including clothing, accessories, makeup, shoes, lifestyle makeup, hair, and posture of the body., and more, demonstrates existence and independence in a certain period and location.[7]

Fashion is defined as what the fashion industry declares to be fashionable. These words are true of the following: [8-11]

- The terms fashion and fashion relate to the same idea and have the same meaning
- Nudity and fashion are not the same thing
- Fashion is a problem that has always existed throughout history; it is not a recent concern or a phenomena unique to the previous 100 years
- Fashion is not just found in clothes; it is also evident in architecture, speech patterns, conduct, and cuisine, among other things.
- The notion of fashion cannot be encapsulated in Western fashion, which is only one type of it
- Fashion is a mental health problem that manifests itself differently in each person's thoughts and actions.
- Although fashion is a sales tool, the existential theory behind fashion's necessity does not center on boosting sales.
- While excessive fashionism can lead to issues for an individual, fashionism itself is neither an illness or a disorder.[7]

Sustainability in fashion and apparel

Sustainability is not limited in the clothing industry to production processes only, but extends to the stage of predicting environmentally friendly fashion trends and creating and creating designs that are compatible with green trends, the word fashion initially suggests diversity in clothing, although in fact it is not limited to this area only, but it is a phenomenon that occurs in areas of life, while its close association with clothing is due to being clearer, more general and faster to change and is also known as the new style or a group of clothing style or addition Decorative touches for clothes during a certain period of a particular season.[3, 4, 12-16]

fashion Sustainable

They can be defined as clothing, shoes and accessories that are manufactured, marketed and used in the most sustainable way possible, taking into account environmental, social and economic aspects. In practice, this involves optimizing all stages of the product life cycle, starting from design, raw material production, manufacturing,

transportation, storage, marketing, final sale, product use, reuse and recycling, and the goal is to minimize any undesirable environmental impact of the product life cycle through

- Ensure the efficient use of natural resources (water, energy, land, soil, animals, plants, biodiversity, ecosystems, etc.).
- Selection of renewable energy sources (wind, solar, etc.) at each stage. [14]
- The possibility of changing the product, remanufacturing it, reusing and recycling it from a socio-economic perspective.
- Improving working conditions for workers in this field.
- Fashion companies should contribute to promoting more sustainable consumption patterns, care practices, etc
- The term "sustainable fashion or eco-fashion" may not necessarily mean that it takes into account the environment exclusively and the conditions of hygienic degradation (it may mean that the costumes are made from recycled materials or that workers have received adequate working conditions and fair wages[17]

The difference between recycling and reuse

Recycle

Reprocessing means the operation again either of the product after the end of its useful life and of the remnants of raw materials or residues resulting during manufacturing.

Reuse

It means the use of the same product in another function after the end of its useful life, either by disassembling it or using it as it is[12]

Patchwork art's history and conteorary existence

Since prehistoric times, patchwork art has had great popularity. After many years of use, patchwork art has evolved from being a first utilitarian means-oriented saving technique to a design technique to display individualized beauty. In the West, patchwork art dates back to the early Renaissance and the Middle Ages, when resources were few.

In order to satisfy their everyday requirements, Europeans throughout this time recycled broken, outdated, and perhaps worthless idle objects. Naturally, the center of this movement was the leftover fabric after cutting clothes or the worn-out, torn clothing. People started to seek independence

and hunger for uniqueness as the 1960s brought about a period of significant social change. and avant-garde artists dominated patchwork art, which included many different components. Traditional patchwork was the first step toward actual creativity. Patchwork art is a popular art form in the United States that anybody may accept and develop, leading to a variety of unique patchwork pieces. At the same time, many American housewives have specific creative design demands. Additionally, patchwork art may be incredibly successful in garment design for this reason.[18]

The beauty of rhythm is frequently inextricably linked to the aesthetic sense of art. The picture's arrangement, color scheme, pattern composition, and transverse seam density all contribute to the patchwork's beautiful rhythm. The beauty of rhythm is a key component in patchwork design while creating patchwork art. This is an order as well as a form. The patchwork picture gains significant artistic importance from the formal laws of division and proportion, symmetry and balance, emphasis and contrast, repetition and continuity, golden section, variety, and unity.

The craft of forty-piece embroidery is practiced with a reverent attitude in various Central Asian nations. For a very long time, the inhabitants of Central Asia have used talismans as a means of protection against illness and to lift their spirits. This belief system, which takes the shape of a forty-piece needlework, also includes a demonic power defense component. Even for festivals and significant events in family and community life, these vibrant and meaningful textiles are utilized (Meller, 2013).

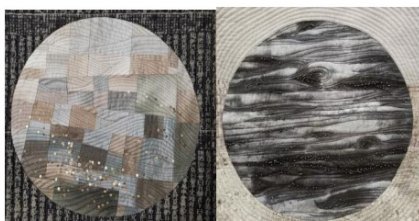


Figure 1 Asia's 11th Patchwork Festival

The winning piece from the 11th Asian Patchwork Festival in 2019, "Star," as seen in Fig. 1, draws inspiration from both living and the natural world. In order to convey his own views, the designer looks at the scenario as a whole and employs various patchwork combinations, such as balance, rhythm, and contrast. Fantastic quilting matches a variety of materials, and size Form uses bold, distinctive color to create an image that is rich and rhythmic while maintaining precise control over detail and proportion.

The patchwork is more aesthetically pleasing and provides visual enjoyment due to the rhythm's appeal. High fashion is defined as bespoke and one-of-a-kind clothing. Made entirely by hand, it represents the pinnacle of fashion and is also the costliest. It is made with the finest and priciest materials, and the majority of the unique textiles are expertly stitched. Haute couture is defined by some as extremely ornate and sophisticated clothes, while it is defined by others as extremely costly apparel. Actually, our clothing is not what defines fashion. However, it's the emotion we have when we put on clothes, and it varies for each person hoping to pursue a career in fashion. The term "haute couture" was first used to describe the works of Englishman Carl Frederick worth, a mid-19th century Parisian producer.

The term "Haute Couture" is protected in modern France and may be used only by certain firms; yet, it is the term most commonly used for custom clothes, not just in Paris but also in other major cities like London. In France, the term haute couture, which translates to "high fashion," is protected by law by the French Chamber of Commerce, which has its headquarters in Paris. Only those who meet certain requirements are permitted to use this designation. Milan, New York, and Tokyo.

Patchwork is a needlework method where one or more colorful, distinct fabric pieces are layered and sewn onto a bigger backdrop cloth. The terms "appliquer" in Latin and "applicare" in French are the origins of patchwork, respectively. The word "joining" that these two names denote is a kind of needlework that is used to cover the perforations in clothing and other textile goods. This procedure involves sewing together tiny, huge, colorful bits of various fabrics; it's named forty pieces since so many of these pieces are arranged together. The vibrancy and variety of the materials utilized in a forty-piece creation are what draw attention to it. [7]

Although the exact date of its creation is unknown, this kind of stitching has long been popular in Iran. Nonetheless, the surviving pieces at the "Museum of Ancient Iran," "Leningrad

Hermitage," and "Metropolitan" museums show how common Khatami needlework was throughout the Seljuk era.

In Iran, forty-piece embroidery may be used for a wide range of purposes, such as wall hangings, quilt covers, chair covers, screw beds, rugs, bedspreads, and several more applications. [19]

In addition to its practical and artistic uses, forty-piece embroidery has evolved into an abstract language with a significant social expression that artists employ to convey their social-political issues and challenges. They can also use it to map

historical events or to depict their family history. The industries underwent a shift in the 1960s, from traditional crafts to modern crafts, as a result of the counter-cultural groups that emerged in California, including the hippies, who were the popular culture revivalists. The outcome of this change was the rebirth of domestic industry. Additionally, the way that young people approached clothing and coverings changed dramatically from before, and the process of turning forty-piece handicrafts into what is now known as an art quilt in America was developed in the years following World War II.



Figure 2 An illustration of patchwork in Sicily

An illustration of patchwork in Sicily. One of the other trends for this year's cold season is the patchwork forty-piece embroidery method, which had a resurgence with the global shift in perceptions regarding fast fashion and the subsequent economic downturn following the Corona outbreak. Hippies adopted this look following the Second World War and the Great Recession, particularly in the 1960s. These days, materials with various themes combined or printed fabric with the appearance of forty patches are used to create the patchwork style of cloth. This method is a representation of the examination of the apparel manufacturing process and the deliberate effort to cut waste in the textile sector

Texture beauty of patchwork

Rebuilding the components of color, material, structure, and order to showcase the beauty of texture and rhythm as well as order is the fundamental component of patchwork art. The texture created by the crossing and uneven texture changes on the fabric during splicing and assembly enhances the texture and attractiveness of patchwork and patchwork apparel. There is a lot of

room for creativity and advancement in patchwork art because of the inventive fabric designs and the tactile beauty produced by fabric transformation, whether in two- or three-dimensional patchwork designs.

A portion of the patchwork has an unparalleled feel because to the superb embossing and embossing design (see Figure) 3. The updated texture The most straightforward and efficient machine stitching technique creates patchwork cloth, which enhances the beauty of patchwork art. This type of fabric texture can be used as a design technique to emphasize the designer's concept and attitude in addition to giving the patchwork a distinctive feel.

Patchwork art underwent constant reconstruction and change, which not only considerably expanded the categories of textiles but also preserved old patchwork techniques while adding new ones, adapting patchwork art to the demands of the times and fashion trends.[20]



Figure 3 Patchwork of texture and beauty

Beauty of artwork

A particular sort of art is patchwork, and any kind of art that aspires to atmosphere and spirit must remain true to its creative notion and beauty. Some claim that "artistic conception is the unity of nature and heart," and that "learning from nature and getting heart" refers to a straightforward approach to finding Chinese romance. There are several ways to create patchwork's aesthetic attractiveness. Figure 4 shows the patchwork "My Fantasy Garden." gives visitors a great sensation of vision by portraying the stance background of a solitary lotus growing on sparkling water and showing the change of light and shadow from shallow to deep. Through the use of the free quilting method, the author primarily depicts the green lotus leaves and blossoming flowers. The incredibly smooth, seemingly random color lines also give the impression that the water is flowing and that a glimpse of surreal light and shadow is briefly seen on the water's surface. You can immediately recognize the poetic idea of ancient Chinese poetry that "the lotus leaves are the lotus blossoms appear red against the sun, yet they are

eternally blue close to the sky. The entire piece is just wonderful.



Figure 4

In current clothes design, patchwork comes in many shapes

Patchwork is a design technique that blends traditional culture with contemporary ideas of environmental conservation. The primary creative element of patchwork art is "collage." Various patchwork techniques can provide various patchwork effects. Consequently, the author will examine the many types of patchwork art in contemporary garment design from three angles: color, fabric, and pattern.

Beauty of color expression

Color, one of the three components of garment design, is crucial to patchwork apparel. Designers of contemporary apparel have used a broad range of hues. Two primary categories of colors exist. There are two types of contrast colors: the individual color (Figure 2-3) that is 180 degrees opposite in the hue ring, and the soft comparable color and nearby color (Figure 5). which, in the hue ring, is the color within 90 degrees. Adjacent hues and contrast colors are applied to garments in numerous patchwork clothing design pieces. For instance, a lot of the patchwork design at Westminster University uses hues that are in stark contrast to one another. The apparel lacks a sophisticated visual sense despite its multitude of hues, yet overall it is rather cohesive and harmonious. The audience is more drawn to groupings of contrast hues, such as blue and orange, green and red (see Figure 6). To add blue decorations, utilize the neighboring bright and dark purple, and splice using various materials. Coordination-wise, it offers a feeling of design

The beauty of textile technology

There is a vast assortment of fabric available for patchwork garments. A variety of fabric bits, including knitting parts, fabric fragments, silk, fur, lace, brocade, chiffon, velvet, and other compact, non-deformable textiles, are frequently used by designers to piece together garments. At the same time, certain common textiles are transformed into

creative garments thanks to the remarkable abilities of designers. People might frequently feel warm and fuzzy when wearing fur and knitted garments. Fur is frequently used with knitted or woven materials to create patchwork art. The knitted garments with patchwork patterns appear cozy and cozy. The Etro brand, for instance, mostly employs natural hues. Etro, as seen in Figure 7, expertly blends printed textiles and common materials with embroidery to create clothing that is both sophisticated and symbolic. The benefits of various fabric splicing were also demonstrated by Valentino's fall and winter collections, which were unveiled at Paris Fashion Week in 2015 (see Figure 8). In order to assure soft and comfy fur and prevent the shoulder or hem from deforming while being worn, Valentino mixes exquisite and fluffy fur fabric with a weave that is resistant to wear. It also improves the clothing's fashion sense from a visual perspective. The frequency of combining different materials—textile or otherwise—with clothing materials in clothing design will rise significantly with the fast advancement of textile technology and textile materials. This is because the combination of new and traditional materials can, in some cases, mitigate their drawbacks while preserving their benefits. It can also enhance the way that apparel appears visually.



Figure 5



Figure 6



Figure 7



Figure 8

The beauty expression of patterns

Rather than the patchwork itself, the creation of patterns represents a significant turning point in the history of patchwork garments. Rather of having an arbitrary or surprising beauty, the patchwork clothes actually has a scientific sense of being engaging and seductive. Patchwork clothing's meaning and level are mostly created by the patterns employed, which frequently represent the designers' inner ideas and perceptions of life as well as their approach towards incorporating patchwork art into the fashion business

Patchwork clothing designs may be broadly classified into two categories: regular patterns and irregular patterns. Unlike the subconscious uneven patterns of antiquity, patchwork clothing with irregular patterns is primarily associated with the contemporary era. The majority of designers meticulously create the uneven patterns that characterize modern design. The designer's

particular awareness is expressed through this type of pattern. It is a creative method that the designer developed by thought and trial. It displays the lovely color combination or unique designs on the seemingly haphazard cloth sewing. Actually, irregularity may enhance the patchwork's intrigue, better convey its sex appeal, and better capture the character of the original patchwork's design. The regular patchwork exhibits an organized elegance that the designer has skillfully combined and arranged. The typical design methods are monotonous. Simultaneously, the regularity feature offers an answer for the mass manufacturing of patchwork garments. A particular design feature can be quickly regularized by a computer, and this type of clothes with standardized patterns may be produced more quickly in the manufacturing workshop.

Types of patchwork

Block Patch Work

It is units that are sometimes similar or different from each other from woven materials and each unit is cut separately, and then placed on the floor in its specified places to complete the design, and often these materials are different colors from each other and from the color of the floor, and each unit may be placed next to the other directly, or some units are placed on the other from its edges and then these units are fixed with visible or invisible stitches according to the design, and the installation line is usually of material and color Different to create a kind of harmonious combination between more than one material or more than one color in one design.

One patch design Patch Work:

In this type, the work is formed as a whole by repeating one form of fabrics of different colors, types and textile textures, and then these fabrics are woven with each other either manually or by machine, and this type depends on full coverage so that these fabrics are floor design, and the fabric is cut from different materials in one shape in the form of a rectangle, but different in length and width from the other piece while leaving an amount of sewing around each piece and the pieces are woven with each other, and placed on the floor surface, and fixed with pins Then it is knitted on the side

Mosaic patch work

It is frequently used to turn any natural shape into a geometric shape and is filled with tiny fabric pieces that are knitted by hand or by machine next to each other. The pieces of fabric are completely

different from each other in space and color and are numerous, so when assembled on the floor surface, it looks

Geometric patch work

The squares, rhombuses, forms, or triangles that make up the cut pieces are geometric and regular, and they are secured to the ground using machine or human stitching.

Crazy Patch work

It was called this name due to the heterogeneous diversity in its color, shape, design and material, it is the collection of a number of woven materials with exquisite colors, with the synthesis of other non-woven materials such as beads, wood, and metal shapes, and any materials can be used in any forms within the design, and the randomness of this style in its general appearance is no less attractive than other types and is the closest type to the art of posters Oven [12]

Summary

Although the exquisite craft of patchwork was entirely traditional and primitive in the past, it has gained popularity in the present and has even infiltrated the hand-woven carpet industry in addition to the fashion industry, which has created quite a stir and garnered a large following. Despite its seemingly straightforward appearance—it was made with randomly spaced stitches—the patchwork technique identified a number of difficulties. That someone living in a natural setting would utilize the unique colors of their surroundings, or that those influenced by their surroundings would choose cheerful, warm hues that were more in line with the natural world. Last but not least, patchwork may be seen as a whole cultural phenomenon. From its tiniest component—a piece of cloth—to its use in a social and cultural setting, it helps us understand important questions about that civilization. In western nations, this phenomena has advanced significantly, and it is now recognized as a subset of visual arts and textile art known as art quilts, which have a vast following.

And We have looked into the fashion industry's supply chain environmental sustainability issue; this is an industry that is usually explored from many angles (e.g., brand management, marketing and retailing).

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Conflict of Interest

There is no conflict of interest in the publication of this article.

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تحقيق الاستدامة البيئية باستخدام فن الترقيع في تصميم الملابس المعاصرة

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المستخلص:

مع تاريخ طويل، تم استخدام فن الترقيع لأول مرة لتلبية احتياجات الناس الأساسية. مع مرور الوقت، بدأت الشركات الكبرى وصانعو الاتجاه في الانتباه إلى فن الترقيع نظرًا لقيمه الجمالية والبيئية. ومما لا شك فيه أن التنمية المستدامة تعني تحسين نوعية الحياة لجميع الناس والكائنات الحية مع تقليل كمية الموارد الطبيعية المستخدمة بما يتجاوز ما تستطيع الأرض تحمله، إذ لا ينبغي أن تركز أنشطتها على هذه الإجراءات التنموية التي تتم في جميع أنحاء العالم. عملية الإنتاج. الموارد: العناصر الطبيعية من الأرض والبحر والجو. يمكن أن يتضرروا من التلوث أو الحرمان أو التخریب المتعمد. وفي ضوء هذا الاهتمام الوفير، من الضروري الاستثمار بشكل مريح ومستدام قدر الإمكان في مكونات الإنتاج وعمليات الإنتاج. ويمكن تحقيق ذلك من خلال استخدام مجموعة متنوعة من الاستراتيجيات والأنظمة لتوظيف الموارد الطبيعية والبشرية والمالية وحمايتها والحفاظ عليها بأفضل الطرق الممكنة. واستخدمت كلمة "مستدامة" للإشارة إلى التنمية بشكل عام أو إلى مورد علمي أو ثقافي أو اقتصادي.

الكلمات المفتاحية: الترقيع، الاستدامة الطبيعية، المعاصر، تصميم الملابس