Ancient Egyptian colours as a contemporary fashion

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There have been numerous terms used by historians to indicate how much Western arts and crafts have been influenced by Ancient Egypt over the years. 'Egyptomania' is a term that was first used in France in the 1990s, following on from Western fascination with Pharonic ornamental arts. This study initially analyses the colours of a number of jewellery artworks that were discovered in Tutankhamun's tomb. From this, a contemporary colour palette based on the Ancient Egyptian has been devised and applied in the design of a summer season's fashion collection. In all, eight designs have been proposed that mix colour symbolism of Ancient Egyptian arts with its significance at the present time.

Received 09 February 2010; revised 28 July 2010; accepted 26 August 2010

Published online: 01 November 2012

Introduction

In 1922, a wealth of history was also uncovered with the discovery of the tomb of Tutankhamun, an Egyptian pharaoh of the 18th dynasty (ruled *ca*. 1333 BC–1323 BC in conventional chronology). This discovery sparked a renewed public interest in Ancient Egypt and exhibits of artifacts from his tomb have toured the world. 'Egyptomania' is a term that was first used in the 1990s by Christine Ziegler, the manager of the Egyptian Antiquities Department of the Louvre Museum in France, following on from the Western fascination with Pharonic ornamental arts. Egyptomania was applied in fashion terms in 1923 as a means of advertising for clothes described as driven from the heritage of Tutankhamun. Furthermore, fashion houses made a new production line for clothes inspired from Egypt, some of which were reproduced in the fashion shows of April, 1923 [1]. Moreover, through concluding agreements between Egypt, represented by Dr Zahi Hawas, the secretary general of the Supreme Council of Antiquities and European countries, a monumental exhibition of Tutankhamun started in five American states as of December, 2009.

The fashion industry is made up many aspects, e.g. textiles, fibres and their mixtures, printing, dyeing and finishing, spinning and weaving, metal or plastic accessories, marketing and studying consumers and markets in addition to advertising and exhibitions. A fashion designer looking for new ideas may certainly take inspiration old books, magazines or films and antiquities. The idea may be a subject that has been dealt with before but has a new method of treatment in terms of materials, colours or texture.

In line with the revival of fascination with Ancient Egyptian arts, this study addresses the revival of Ancient Egyptian jewellery artworks. In particular, it looks at the shapes and colours of Tutankhamun's jewellery with a contemporary vision that has its own specific philosophy and symbolism in order to suit printed textiles and fashion designs for many years to come.

Experimental and methodology

The aim of this project was to study the symbolic philosophy of the jewellery artworks of Tutankhamun in order to select a palette of contemporary colours. This could then be utilised to give special symbolic meanings to contemporary designs of women clothes. Another objective was to forecast a number of fashion designs that could be used to print a range of textiles inspired by the decorations and colours of Ancient Egyptian art in a manner that would be acceptable and desirable to consumers. The decorative and colour elements of Ancient Egyptian art are applicable to contemporary and symbolic concepts of colour.

Colour forecasting

The business of colour forecasting has certainly been a subject of dispute for decades. Colour is reputed to be the first aspect of a product that consumers are drawn to and for many designers it is one of the first of the fundamental elements of the design process to be considered [2]. The colour forecasting process is a key aspect that is used by fashion experts. Individuals or teams attempt to accurately forecast the colours, fabrics and styles of fashion products that consumers will purchase in the near future, generally two years ahead. Also, colour itself can be used to great effect to create freshness in repeated styles and product ranges, and as a marketing tool through mood creation, colour communication and fashionable colour names [3].

Colour forecasting groups help to stimulate the discovery (or rediscovery) of new colours and combinations. Their purpose is not to force a new colour upon consumers, but to show them how new colours can enrich their lives. A colour forecaster must learn the art of observation. To forecast colour and design, one has to learn to look at everything and everyone; the influences that effect change come from every aspect of life, including politics, television, movies, books and personalities.

Marketing efforts are ever more centred on specific target customers, and trend forecasting is becoming an integral part in the marketing effort, in addition to its more traditional place in design and product development. Colours represent not only the principal element in the design of textile printing but also that of their acceptance and admiration. They give impression to recipients on seeing a dress or shirt made of printed clothes, before the mind starts to respond to identifying the shape of units and the texture of material.

Everyday colour

Specialists in the field of colours vary: some are physicists with their theories about the relationship between colour and light. Chemists have their own innovations of pigments, dyes and rules of mixing

colours. Psychologists have their own analyses of emotional responses to colours. Artists, on the other hand, participate with all such specialists to add and create new structures and relations of colours.

Every day thousands of colours flow toward us – colours which give us stimulation and happiness and which have become such natural elements in our lives that we have a hard time imagining an existence without them. We have also become more aware of how much the colour in our surroundings influences us, that colour is not just an aesthetic issue, but that it also has an effect on our well-being [4]. For example, our heartbeat will increase in a red room; in a blue room we will miscalculate the time. Too dark ceilings oppress us and too light floors will make our steps uncertain. We know that bright, clear colours one day will make us exhilarated and happy, while the same colours on a different day and in a different mood might make us tired, irritated or distracted. We also are constantly exposed to new colour combinations in fashion and interior decorating. What might not have worked yesterday may feel natural and right today. Many people insensitively and carelessly combine colours which may be physically painful and irritating in the same way as off-key notes are painful to the musical person.

Researchers say that people's colour sense has developed during past centuries [4]. The *Illiad* and the *Odyssey*, for example, describe an almost colourless world. The Bible often mentions the sky, but never describes it as blue. In cultures where colours do not play a practical role there are no wards for them either; you are hardly conscious that they exist. There are so called two-colour cultures, which only have words for black and white. In three-colour cultures, the third colour is always red, and in four-colour cultures the fourth colour is yellow; whereas, the colours of Ancient Egyptian cultures were very different [4].

Colour in ancient Egyptian culture

Egyptian colour terminology is divided into 'basic' and 'secondary'. There are four basic colour terms used in the Egyptian art: '*km*', '*hd*', '*dŠr*' and '*w3d*'; other terms were secondary. Although colour terms rarely translate exactly from one language to another, the general range of those terms is not in doubt:

– The term '*km*' corresponds to 'black' and had been used as a pigment from prehistoric times. In dynastic times, it was considered the colour of the fertile soil of '*kmt*' ('the black land'), which was one of the names for Egypt. It was also the colour of the underworld, where the sun was regenerated each night [5].

– The term for 'white' was '*hd*' which was also a pigment from prehistoric times. This term also meant the metal 'silver' and it could incorporate the notion of 'light'; thus, the sun was said to 'whiten' the land at dawn.

– The term '*dŠr*' seems to have had its focus on red, but it also included yellow and orange, as it is a warm colour. Red was a pigment used from prehistoric times. The term '*dŠrt*' ('the red land') referred to the desert [5].

– The last basic colour term was '*w3d*', written with a hieroglyph that represented a green papyrus, stern and umbel, had its focus on 'green' but it may also have included 'blue'. There was no basic colour term in the old Egyptian language for 'blue', and there was no blue pigment until about 2550 BC. But green had been used as a pigment from prehistoric times [5].

To the original four basic colour terms should also perhaps be added '*s3b*', a texture term meaning 'variegated' or 'multicoloured', used for animals' skins, birds' plumage and snakes' skins, but apparently not for anything else [6].

Natural, symbolic and conventional colour

The dual usage of colours – on the one hand where objects are given the same hue as they appear in nature, and on the other where objects are assigned colours to which they are symbolically linked – is clearly found in the colours used in the depiction of Egyptian hieroglyphs [7 p110].

It is only natural that the signs depicting the arm, leg, hand, mouth or other body parts were usually red, as is the portrayal of reeds and other plants as green, wooden objects as red, water as blue and so on. But the standardised depiction of other signs probably reveals a symbolic association between the object and its assigned hue, as may be seen in the coloration of the sickle (usually made of wood) as green, the metal butcher knife as red, or the white bread loaf as blue. Similarly, items of clay are depicted as blue (though this may be related to the common use of blue glaze), and the horns of animals may be painted blue or green.

The symbolic opposites red and white (or its alternate hue yellow) find completion together as a colour figure of men and women. Green and black are also often used in this way as symbolic opposites (life and death) that nevertheless parallel each other and thus constitute a completion.

The fact that each colour had specific symbolic connotations for the Ancient Egyptians is sometimes complicated for the modern viewer by the fact that the Egyptians appear to have classified some colours quite differently from the way in which we would categorise them, and some colours apparently were quite interchangeable. Blue and black seem to have been interchangeable in many circumstances – such as the representation of the hair and beards of the gods. While hair was normally depicted in its most common colour, black, the hair and beards of the gods were said to be of lapis lazuli, and thus blue.

Light blue and green are interchanged(able) in decoration of elements used in such things as necklace pendants. White and yellow were also interchanged on occasion; red and black could also interchange in representations of the underworld.

A natural explanation for this direct interchange of colours might exist – such as the interchange between the blue and black of the day and night skies, both representing the same heaven. In a similar manner, it is possible that pale blue and green were classified together since both are found in intermingling hues in the waters of the river and marshlands, or in the naturally occurring variant shades of the stone turquoise, which was highly prized by the Egyptians and which may range from light blue to green. In this way, red and yellow may both be seen in the flames of a fire and in the changing appearance of the sun. Also, interchanging white and yellow may represent the unity of the two colours as perceived in sunlight under different circumstances in nature, and for other symbolic reasons [7 p112].

Jewellery: materials and techniques

In ancient jewellery, many of the materials that were chosen for aesthetic, practical and symbolic reasons were particularly significant, since the bulk of jewellery worn in Ancient Egypt served as amulets (charms, etc.). Gold, which was considered 'the flesh of the gods', was valued for its inherent properties of sunlight brilliance, and resistance to corrosion. Silver, a manifestation of 'the bones of

the gods', symbolised the moon and lotus blossom, a flower that defeats darkness and death as it opens under the warming rays of the morning sun [8].

While casting was a known metalworking technique in Ancient Egypt, ornaments of precious metals were more likely to be fabricated from a hammered sheet metal, which was cut, shaped and joined through crimping or soldering. Hand wrought wires were used for securing beads and amulets, and left behind distinctive serration marks on the beads. By the New Kingdom, jewel makers were employing sophisticated bow-drilling equipment to drive the drills. Gilding, an inexpensive means of achieving the look of solid gold, was also used to enhance less costly materials such as wood and faience (non-clay, quartz-based, glazed ceramic).

The stones most prized for jewellery were those nowadays classified as 'semi-precious'. They included carnelian, green feldspar or amazonite, turquoise and lapis lazuli. Carnelian and amazonite were obtained locally, while turquoise and lapis lazuli were imported from Sinai and Afghanistan. Other stones, such as malachite, calcite, olivine, fluorspar, rock crystal, obsidian, hematite and jasper (red and green), were used less frequently [8]. The semi-precious, hard stones were used to make a variety of ornaments, including beads, amulets and pendants. These forms constitute the most popular items of adornment throughout the ancient world.

Organic substances were utilised for objects of adornment from the earliest of times. Flowers, seeds, shells and plant fibres were easily manipulated and accessible to all members of society. Patterned shells can be found in burials far from their source. Cowry shells, believed to possess amulet powers, pierced and strung as girdles, were worn by young women to protect and enhance their reproductive capabilities. Ivory, obtained from the tusks of the elephant and hippopotamus, was valued for its rarity, symbolism and visual appeal. Ivory was carved into hairpins, finger rings, bangles, cuffs, ear ornaments, amulets and beads. It was also used as an inlay material and could be dyed a variety of colours [8].

The most commonly used material for jewellery was the glazed ceramic faience which, in Ancient Egypt was named 'that which dazzles'. One of the advantages of faience is the extensive range of colours available to the craftsman.

After glassmaking was established in Egypt during the New Kingdom, it found application in jewellery production, especially as an inlay material.

Enamelling, the fusion of powdered glass through heating onto a metal surface, derives from the Egyptian predilection for coloured surfaces and experience with glassmaking. Enamelling would have eliminated the need for costly stone imports such as lapis lazuli. In addition, enamels can be set in small and curved areas difficult to fit with cut stones. The final product is also far more refined and delicate [8].

Several other processes were required for making the elaborate jewellery of Ancient Egypt by preparing pieces of stone as inlays for cloisonné work. In order to make cloisonnés, strips of gold were fastened to the baseplate, either by the colloid hard soldering method, or with solder. These cloisonnés were filled with cement-like paste onto which were fixed slivers of different coloured stones or glass cut in the exact shapes of the cloisonnés [9].

Granulation was the high art of invisibly attaching tiny gold balls to a smooth gold background to produce geometrical patterns, by melting chips of wire and attaching them to the base in a pattern either free-hand or by means of transfer [10].

Therefore, the industry of fashionable jewellery in Ancient Egypt was based on natural environment materials, like minerals, stones, beads, shells, ivory, flowers and other natural raw materials from which the Egyptian manufacturers made artefacts in jewellery since ancient times, to achieve

compatibility between the bright mineral raw materials and the other coloured materials. The Egyptian culture has reached a degree of excellence in colour taste of jewellery metal artefacts.

Artistic analysis of jewellery samples

Examples of actual examples of jewellery from Ancient Egypt are outlined in this section. Figure 1 shows a pectoral that hangs from a single string of cylindrical beads of blue faience and gold, a rearing Uraeus guards, the Wadijet-eye and the hieroglyph Sa is placed beneath it on the inner side [11].

Figure 2 shows a pectoral scarab that contains gold, silver, cornelian, lapis lazuli, calcite, obsidian and red, black, green, blue and white glass. The central necklace motifs consist of a bird with upward curving wings whose body and head have been replaced by a fine scarab. It represents the sun about to be reborn. Instead of a ball, the scarab is pushing about containing the scarab Wadijet-eye which is dominated by a darkened moon, holding the image of Tutankhamun become a god, guided and protected by Thoth and Horus. Heavy tassels of lotus and composite bud forms are the base of the pendant [12].

Figure 1 (left): Pectoral in the shape of a Wadijet-eye.

Figure 2 (right): Pectoral with a bird scarab.

In Figure 3 there is a bracelet made of gold, lapis lazuli, cornelian and turquoise. The gold bangle with openwork scarab is set in lapis lazuli. At the king and the clasp are clusters composed of fruit in yellow quartz, buds in cornelian and completed with gold rosettes [11].

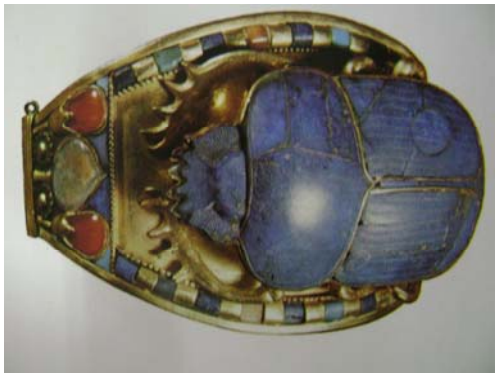

Figure 3 (left): Scarab bracelet.

Figure 4 (right): Wadijet-eye pectoral.

The piece in Figure 4 contains the materials gold, lapis lazuli, green stone and coloured glass. This pendant consists of the Eye of Hours, symbol of the entity of the body, on the right Uraeus, wearing the royal crown of the north, on the left the Vulture of the south seem to be defend and protect the Wadijet-eye which is to help rebirth [12].

Figure 5 (left): Pectoral in the shape of Tutankhamun's first (throne) name, Nebkheperure.
Figure 6 (right): Scarab pectoral under the protection of Isis and Nephthys.

Another pectoral is shown in Figure 5. The jewel here is a rebus for the throne name of Tutankhamun, i.e. Nebkheperure, which can be translated as 'Re is the lord of manifestation'. At the bottom is a basket representing Neb made of turquoise. Above this is a lapis lazuli scarab beetle is the sign for kheper, with three vertical lines below to make it plural. A cornelian sun disk is also visible, symbolising of the sun god Re [13].

Figure 6 is a scarab pectoral made up of gold, cornelian, red and blue glass. This pectoral has an exterior shape which is massively architectural. The interior decoration has as its principle motif a stone scarab with wings. Its protection is assured by Isis and Nephthys; the words of the goddesses and names of the king are inlaid in gold bands above the scarab. Again, the scene is dominated by the solar disk, winged with rich feathers and accompanied by two protective Uraeus [12].

Figure 7 (left): Necklace with pectoral.
Figure 8 (right): Royal diadem of Tutankhamun.

A necklace with pectoral is shown in Figure 7, made of gold, electrum, lapis lazuli, green feldspar, calcite and glass. The necklace has a gold pendant symbolising the moon sailing across the sky, along with lotus flowers growing in the celestial waters and rain drops falling to earth [14].

Finally, Figure 8 shows a royal diadem (crown). It is composed of a sheet gold band encircled by cloisonnés inlaid with cornelian. From the back hang two long streamers decorated in the same fashion as the headband. A hinged curved streamer at each side ends in cobra inlaid Uraeus and sheet-gold vulture head at the front are detachable [15].

Symbolic meaning of the colour of semi-precious stones

Most semiprecious stones were selected for their hardness, rarity and colour. The coloration of the jewellery was very important to the Egyptians as the various colours had symbolism associated which was synonymous with their essence [16].

Examples of red colours in Ancient Egypt are shown in Figure 9. Red (*desher*) was the colour of blood with all its connotations of energy, dynamism, power, even life itself. But it was also the colour of the evil – tempered desert – God Set, patron of disorder, storms and aridity, and murderer of his brother Osiris [15]. In jewellery, the most frequently occurring red stones were *hnmt* ('red jasper'), mostly used for beads and amulets, and *hrst* ('carnelian'), mostly used for inlay [5]. Sard was the third red stone employed by the Egyptian lapidary, and from the New Kingdom onwards all three could be imitated by red glass and glazed composition [15].

Figure 9: Red colours of Ancient Egypt (L–R): red lead, red ochre, madder lake and kermes (carmine) lake.

Blue (*irtiu* and *khesbedj*) was the colour naturally associated with both the heavens and with water it functioned as a symbol of life and rebirth [7 p107] (Figure 10). In old Egyptian, lapis lazuli was called *hsbd*, and the term was then extended to mean, secondarily, the colour blue. The stone, and by extension its rich blue colour, was associated with the night sky – often rendered in dark blue paint with yellow stars – and with the primordial waters, out of which the new son was born each day, the rising sun was sometimes called the 'child of lapis lazuli' [5].

Figure 10: Blue colours of Ancient Egypt (L–R): Egyptian blue (two examples shown), azurite, lapis lazuli and indigo.

Yellow (*khenet* and *kenit*) was used as a colour for the sun disk and so carries solar significance, in art, yellow pigment was often used to represent the metal 'gold' (*nbw*), and gold, too, was closely associated with the sun god, who was said 'to be made of gold' and 'to flood the two lands with gold' (Figure 11). In the eighteenth dynasty, black ground coffins were decorated in yellow or gold, symbolising the nightly renewal of the sun in the underworld, from which it rose each morning [5]. White gold (the mixture of gold and silver, now called electrum) was often regarded as being the equal

pure gold, and the colour yellow could also interchange with white and take on the symbolic meanings of that colour [7 p108].

Figure 11: Yellow colours of Ancient Egypt (L–R): orpiment, lead antimonite, yellow ochre, ochre, realgar and gold.

Green (*wadj*) was the colour of new vegetation, growing crops and fertility, hence of new life, in particular, the colour of the papyrus plant, which in hieroglyphs actually wrote the word *wadj* (*w3d*), meaning 'to flourish' or 'be healthy' [15] (Figure 12). The term *w3d* seems to have had its focus in green (as the term for malachite, a green mineral), but it may also have included blue [5]. In the *Book of the Dead* (the Ancient Egyptian funeral text), chapters 159 and 160 are for making an amulet of green feldspar (also known as Amazon stone) to ensure the regeneration of the deceased. The most valued of the green stones was *mfk3t* (turquoise), which was mined in the Sinai. This stone was connected to the deity Hathor (the Egyptian goddess associated with love), who was called 'lady of turquoise'. The common amulet known as the 'Eye of Horus' is usually green because of the positive connotations of the colour as an expression of the aspects of healing and well-being associated with the eye [7].

Figure 12: Green colours of Ancient Egypt (L–R): malachite, verdigris, chryscolla and turquoise.

White (*hedj* and *shesep*) the colour best suited to denote cleanliness, and thus ritual purity and sacredness (Figure 13). The term for 'white' was *hd*. This also meant the metal 'silver', which symbolised the moon and lotus blossom [5]. The most occurring black (*kem*) stones was 'obsidian' a translucent shiny black, naturally formed volcanic glass which was used from the early dynastic period for beads, and later for amulets (especially scarabs) and inlays [15].

Figure 13: Black and white colours of Ancient Egypt (L–R): chalk white, lead white, silver, ivory black and lamp black.

Colour symbolism is clearly an important aspect of the overall symbolism associated with Egyptian art which we may clearly grasp, and one which adds considerably to our understanding of the works produced by the ancient artists and craftsmen.

Colour in fashion

Colour is an integral element in the design process. Defining and shaping our perception of space and volume. Even a brief glimpse at the history at the decorative arts confirms the power of colour as the carrier of cultural messages: as a symbol of cultural, social, and familial identity, colour is primary in the traditions of heraldry and flag design.

While colour has played a powerful role in all of the arts of design, it has been in the past two centuries that our understanding of the power of colour has changed, primarily due to technological innovations. In the nineteenth century, natural dyes and pigments were replaced by synthetic chemicals that offered brilliant and long-lasting hues [17 p112]. The introduction of modern colouring agents radically changed the history of personal dress, in that rare and often spectacular colours became available to a wider audience than ever before thought possible, to the delight of the manufacturing and retail sector.

Fashions, and the colours in fashion, mirror the spirit of their age; their changes reflect the changing influences at work on society. Moreover, our perceptions of colour itself were revolutionised as in systems of illumination [17 p112].

Psychology of colour in dress

Costume designers, who use colour in the interpretation of the characters they dress, study the psychology of it minutely. As the colour of the costume makes its presence felt more rapidly than its actual form, it is necessary for the designer first of all to feel and reproduce the fundamental nature of a character through its colour presence [17 p158]:

– Red is equated with the heart, flesh and emotion. The bond between red and life has made it a significant colour in every culture on earth. The ritual representations of blood with the colour red pervade all tribal societies [17 p186]. Active, open-minded and energetic persons and those who have stamina and optimism preferred.

– Blue has historic and symbolic associations with royalty. It is a peacemaker of colours: cool, soothing, orderly [17 p212]. Sensitive and delicate persons prefer blue colour, while persistent, independent and strong persons prefer dark blue.

– Yellow in its pure form radiates warmth, inspiration and a sunny disposition. It is the happiest of colours [17 p200]. Mentally active and creative persons prefer yellow colour, while self-indulgent persons prefer golden colour.

– Green is associated with emotional balance (bred, as it is, from happy yellow and tranquil blue) also signifies freshness as well as the most vertiginous emotion, jealousy [17 p206]. Sentimental persons who lack the feeling of safety and stability prefer green colour.

– Purple and violet between them encompass vast differentiations in hue. Violet is a pure spectral hue; purple is a dual, or mixed colour. The appearance of violet in the human aura is interpreted as a spirituality if light and depression if deep [17 p218]. Ideal and romantic persons prefer violet colour.

– Orange behaves like yellow; cheerful, expensive, rich and extroverted. It is linked to comfort and security [17 p194]. Active, sociable and creative persons prefer orange colour.

– Black is the negation of colour. It is maximum darkness. Perceptually, black implies weight and solidity; darkness implies space, which is infinite. Persons who keep to formalities and etiquettes prefer black colour.

– White is maximum lightness [17 p178]. Insatiable and criticising persons prefer white colour.

– Grey spans the extremes between white and black. A neutral grey is obtained when all spectral wavelengths are absorbed more or less to the same degree.

Persons who are committed to customs and traditions, but have some sort of mutiny and rebellion prefer gray. In the realms of symbolism, however, white and black are free to be absolute. For there they are literally the alpha and the omega, the good and the malevolent. Apart from their individual implications, they are frequently paired: day and night, good and evil, lucky and unlucky, birth and death.

People's ideal colours are based on personal points of reference on an intuitive understanding of the rules of colour harmony and contrast as applied to their hair, eye or skin colour, and on their ideas about their status, role, age or disposition. In fact, anyone can wear any colour so long as its saturation and degree of lightness or darkness is aptly chosen. And apparel colours are modified by their relationship to other colours in the ensemble, and by the coloration and dimensions of the wearer.

Modern alternatives to ancient Egyptian colours

The next aim of this study was to select a palette of contemporary colours digital colours based on those of the jewellery collection of Tutankhamun. A range of 25 colours were chosen, as shown in Figure 14. These were then applied in the textile designs as outlined in the next section.

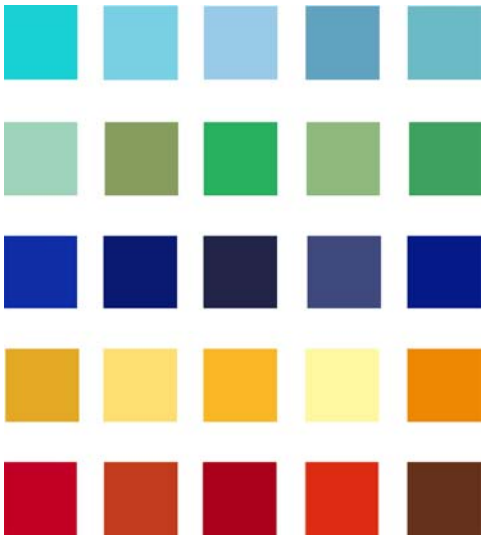

Figure 14: Contemporary alternatives to Ancient Egyptian colours.

Innovation design

Each designer has his/her own style and vision in altering, changing and re-organising the elements in different ways. This study is based on analysing elements and colours, and rebuilding them for linking heritage with contemporary life, without affecting the essence of such heritage and its genuine features. The elements were also analysed by conducting sketches, in order to identify their nature and plastic-art features, as well as drawing an imaginary image for determining the possibility of using the element as a plastic-art unit, or using the method of repetition, sequence and relation between the shape and space. Through such attempts, new relations between elements can be obtained. In

addition, a proposed method for using designs was developed, in order to forecast to what extent such designs would be suitable for use within a printed textile design.

The fashion designs were used all styles of lines (horizontal, vertical, curves and diagonal) to give movement and freedom to the body. The clear colour was used for easier coordination; for example: red for hot, energy, dynamism and power; blue for calm, life and rebirth; yellow for sunny, bright or cheerful; green to calm, fresh.

In design no.1 (Figure 15), the blue colour symbolises birth and life, and is connected with water and flood. This is confirmed by the use of lotus flowers that vary in size from small to large, since plants are dependent on water. The brown colour used in the lines and spaces of the design symbolises the silt of the Nile, which is essential for the growth of plants. The interrelationship between the yellow and blue colours in some spaces symbolises the bright golden colour of the sun in the sky.

Figure 15: Design no.1.

In designs no.2 (Figure 16) and no.3 (Figure 17), the cold colours represented in the ultramarine blue and turquoise blue were combined for achieving calm harmony and congruity. In addition, the various sizes and directions of lotus flowers express movement and life which the blue colour symbolises. Design no.2 (Figure 16) fits the classical personality, i.e. elegant, conservative and committed to traditions, and wears a dress of two pieces, a skirt and a jacket [18].

Figure 16: Design no.2 (left) and suggested usage (right).

In designs no.4 (Figure 18), no.5 (Figure 19) and no.6 (Figure 20), symbolic colours were used. Green is the colour of plants and symbolises a new life. Red is the colour of blood and symbolises the main element of life. Blue symbolises life and birth, and yellow is the colour of the sun. In design no.4 (Figure 18), a dynamic movement was generated from the different horizontal, vertical and inclined lines which, in turn, confirmed the symbolism of the used colours. In design no.5 (Figure 19), a dynamic movement was generated from the wavy lines and different directions of the wings. Design no.4 (Figure 18) fits a natural personality, a simple and informal woman who wears comfortable and simple clothes consisting of separate pieces (blouses and skirts) made of natural materials [18]. Design no.5 (Figure 19) fits a woman who is courageous, striking and self-confident. She prefers soft lines, charming accessories and low-necked dresses. Design no.6 (Figure 20) fits a romantic personality, a charming and fascinating woman who wears dresses made of soft materials [18].

Figure 17: Design no.3.

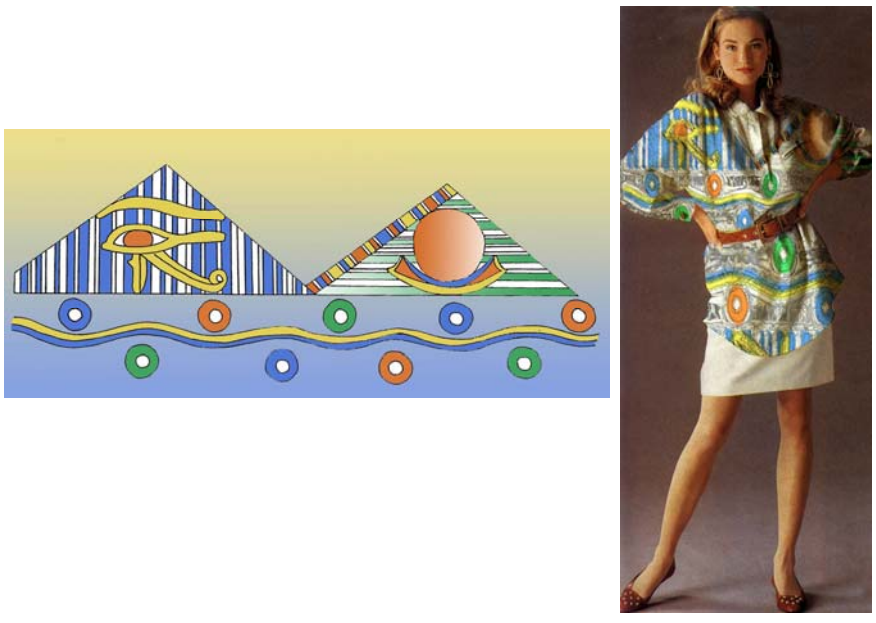

Figure 18: Design no.4 (left) and suggested usage (right).

Figure 19: Design no.5 (left) and suggested usage (right).

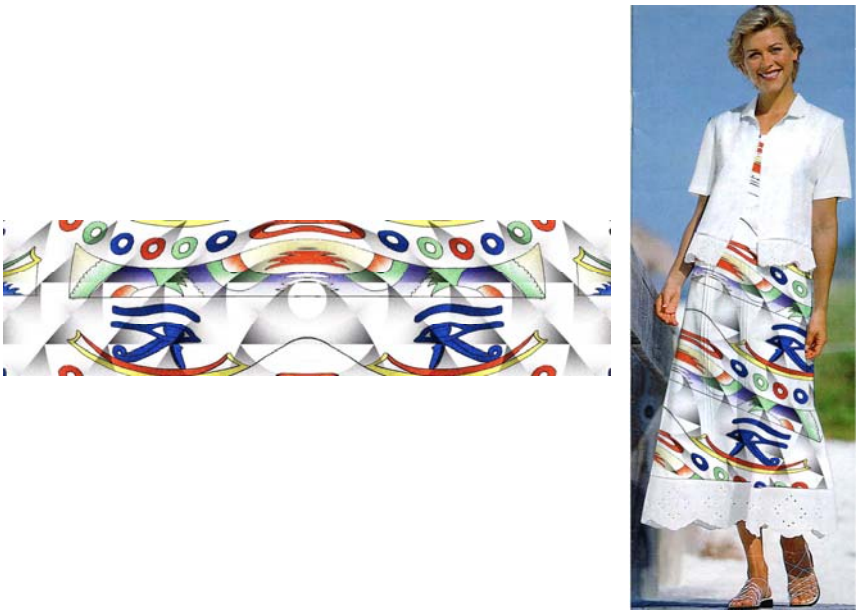

Figure 20: Design no.6 (left) and suggested usage (right).

The red colour which symbolises blood and vibrant life in design no.7 (Figure 21) was merged with the light turquoise blue and the bright ultramarine blue symbolising the heavens, which gives the design an aristocratic and royal nature. This design fits a creative personality, an innovative and creative woman who is fond of art and adventures [18].

The unity, disunity and continuity of lines in design no.8 (Figure 22) highlight the nature of the red colour and its symbolic indication of dynamism and energy, while the blue colour indicates life. The use of the black and white asserts this symbolism.

Figure 21: Design no.7 (left) and suggested usage (right).

Figure 22: Design no.8.

Conclusions

Colour is a powerful tool in shaping our world. We have limited its use primarily as a result of our lack of knowledge of how to tap into the power to improve, enrich and enhance the quality of our lives. And, it is the continuing search for keys to unlocking the power of colour that presents one of the most rewarding challenges for young designers today. This research presents a series of 25 digital colours inspired by the Ancient Egyptian heritage. These colours which are called 'historical colour collection' have enormous symbolic and philosophic indications. We forecast that these colours (with their different hues) will be used in fashion in the coming years according to the types of women summer clothes. Eight designs were conceived for a range of summer styles, combining the symbolism of colours in the Ancient Egyptian art and that of modern clothes.

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