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*Enclothed cognition and hidden meanings in important Ottoman
textiles*

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Enclothed cognition and hidden meanings in important Ottoman textiles

Abstract

This paper illustrates how hidden details in garment design may reveal important clues about the motives of the wearer or designer that are of considerable cultural relevance. We suggest these hidden design features may reflect key psychological factors previously not considered. We illustrate this by doing a multilevel analysis of two important 16th century examples of Ottoman court clothing from the Topkapi Palace Museum. We show that these garments contain early examples of the use of ‘enclothed cognition’ where the designs themselves are likely to have influenced the mind of the wearer. We suggest that the historical-social analysis of clothing may benefit from considering the concealed, as well as the explicit, psychologically relevant design features. We suggest that psychosocial interpretations of clothing may help further our understanding of textile and apparel design more generally, even within an historical context.

139 words

Introduction:

Textile and clothing design reflects culture in many ways. The cultural influences include social factors, artistic, religious, scientific, technological, legal, and constitutional forces and these have been extensively researched theoretically and empirically (e.g. Gombrich, 1979). Very little research has explicitly considered the psychological forces at work in the designer, wearer and maker, although there is an emerging body of research in fashion or clothing psychology (e.g. Pine, 2014; Howlett, Pine, Orakcioglu & Fletcher, 2012; 2015). This paper presents an analysis of two important articles of Ottoman court clothing in order to illustrate how hidden psychological factors may be of important cultural relevance in determining explicit and implicit textile designs. The analyses suggests that a psychosocial interpretation may help further our understanding of textile and apparel design more generally, even within an historical context.

Aniconism (shunning the depiction of animal, including human, forms) is a feature of many Islamic cultures, especially for Sunni Muslims. Using animal representation for the purpose of worship may be considered idolatry and is discouraged. This may be one reason for the development of beautiful geometric motifs in Islamic textile designs. It is surprising, therefore, that one of the earliest textile motifs used liberally in Turkic textiles is the 'rumi' animal form which – over the years – became an increasingly stylised animal form.

There are many cultural and religious influences in these rumi textile motifs that reflected the movements of the peoples and various influences they were exposed to, including different languages, laws, customs and art. Early Ottomans were secular in their form of law and moral codes and their religious influences included Shamanism, Buddhism and Islam. During the second Seljuk period (1071-1299), for example, the depiction of animal form in the rumi motif became much more stylised and abstract which was a consequence, perhaps, of a more dominant Sunni Islamic religious view. Artistic expressions of rumi motifs needed to transform the animal forms to a level of abstraction that hid the animal inspiration within the motif to the casual observer. In this sense, rumi textile motifs concealed that which was potentially frowned upon to both the designer and the wearer. To a degree, perhaps, the power of art in human

culture is symbolised by the presence of these rumi motifs in classic Islamic cultural icons.

The earliest ancestors of the Turks are the Hsuing (or Hun, from 2000 BC-551 AD), followed by the Göktürks (551-744), Uighur (744-840), and the later, Seljuks (840-1299) and Timur (1336-1405). Each of these groups of peoples had notable religious and cultural practices with strong decorative arts depicting animal rather than floral forms (Diyarbebekiri, 1972). These animal depictions are seen from as early as 1000 BC (Aslanapa, 1989), perhaps reflecting the influence of fauna rather than flora because the vast territories were relatively devoid of foliage. Different forms of these rumi motifs became embedded in textile designs over succeeding centuries, especially from the beginning of the Ottoman period from 1299 onwards. The metaphoric rumi motifs became a recurring characteristic in the textile design of the Middle Ottoman period (1512-1844), often considered the pinnacle of classic Ottoman art (Birol & Derman, 1991).

Ottoman textile manufacturing was at its peak in the 16th century utilising the original Chinese draw loom that enabled the weaving of damask and brocade fabrics (Broudy, 1979). In the first case study we examine an important brocaded caftan possibly made for Sultan Selim I in the early part of the 16th century (there have been contrasting views about whether this caftan was made for Selim I or his son Selim II from the second half of the 16th century as suggested by Rogers & Ward, 1990). We will argue that the central design contains a hidden human form integrated into the design of the fabric. We further suggest that this hidden form – which confronts social and religious dogma of the time – is an early example of enclothed cognition, or an attempt to affect the cognitive psychology of the wearer.

In the second case study we examine one of an important set of Ottoman Talismanic shirts made in the second half of the 16th century for Sultan Selim II. The shirt is decorated all over with grids of numbers and letters. It has long been assumed that these letter and numbers refer to passages of the Koran. We decode these letters and numbers and suggest that – in addition to the Koranic references – the numbers can also be deciphered to reveal underlying messages and visual motifs or patterns. We

suggest these shirts may also be early examples of enclothed cognition where the hidden detail enhanced the wearers perceived power.

Textiles, especially silks, played a very important role in the Ottoman Empire and in the political, economical, social life and commerce with other countries. Our interpretations of these two important pieces suggest that hidden designs might also show an early subversion of social and religious mores that may have been intended to raise the Sultans to a place of their own beyond normal mortal considerations.

Case Studies:

1. Sultan Selim I Caftan Case study

Sultan Selim I ruled the Ottoman Empire from 1512 to 1520. He reorganised and augmented the court artisans with new artists brought to the court from Persia after his conquests there (Roxburgh, 2005). These new artisans are thought to be responsible for creating the superb brocaded silk caftan in Figure 1.

Figure 1 about here (*note there are 2 versions of this – only one to be used, depending on which is best for the Journal visually*)

The caftan in Figure 1 is from the Topkapi Palace Museum and has inventory number 13/46. Some of the following technical details are from Tezcan & Delibas (1986). It is made of brocaded silk woven on a draw-loom. It is 138 cm by 63.3 cm, and the technical repeat of the main motif is 15.8 x 32 cm. In the museum records it is recorded as having belonged to Selim I although Rogers & Ward (1990) say it is stylistically later 16th century. We question their assessment since we think the motifs and style are earlier 16th century. We provide another reason from the analyses presented later. The fabric of the caftan is quilted every 2.5 cm with vertical stitching and the garment is lined with apricot-coloured cotton. It is fastened by 15-corded buttons and loops attached to the chest area down to the waist. Tezcan & Delibas (1986) describe the brocaded silk caftan as a ‘caftan of honour’ worn over garments by the Sultan when officials were invested on their appointment, or when foreign ambassadors were received.

The ground or background is ruby red silk damask – a colour used only by court officials and the sultan and dyed from the kermes insects from Eastern Anatolia. The middle ground is brocaded and has a gold thread in the weft. The final decorative structure in the foreground is built from threads from the middle ground weft of the fabric also in ruby red, light blue and green colours.

The motifs that form the design of the fabric include both palmette rumi (mirrored bird wing forms in gold in the middle ground), and hatai floral motifs in the foreground as stylised lotus blossoms, rosettes and various buds and small leaves. The middle ground is separated from the foreground by a thin very light blue line. There is a deliberate optical illusion that serves to switch the relative position of foreground and background as is typical of visual illusions in Gestalt psychology (Gregory, 1997). The golden palmette rumis are decorated with ruby red, light blue and green coloured hatai style flowers and small green leaves.

There are three points to note about the design. First, the symbolic animal or rumi motifs compose a large part of the design impact – perhaps because Shia Muslim designers of the time were less constrained in their use of symbolic animal motifs. Second, we argue that the predominant rumi motifs that comprise the main decorative impact of the caftan also hide a human form that is a physical symbolic representation of the Sultan himself. The figure is like a discreet abstract silhouette form. It is in the form of a person who has a distinctive turban or crown and is kneeling down with feet pointing inwards and placed both sides of the small palmette form. The silhouette has open and raised hands and arms and also has wide shoulder and a narrow waist. This human figure breaks the structured ogee which is the prime structural element in the composition. The figure is more easily seen in black and white with the repeated larger palmette motifs removed (see Figure 2). The repeated figure is in an upright orientation and arranged in the centre of the caftan starting from under the neckline. The praying position with the arms spread could suggest either embrace, or piety or magnanimity, and may also relate to sectarianism or theological differences over which the Sultan had to preside. As with other common figure-ground visual illusions (Gregory, 1997), once seen the figure is unmistakable and large in size, forming as it does an integral part of the structural gold thread *ogees* of the main design.

Figure 2 about here

Thirdly, we also suggest that this hidden human form helps to date the caftan because it represents Selim I, not the later Selim II. This third claim is based loosely on resemblance of the head of the hidden figure to portraits of both sultans – Selim I used a unique and special jewelled turban (serpus) named after him ('Selimi') and he decorated it with a pearl crown similar to Persian Shahs or emperors. The wearing of this type of turban by Selim I was quite unique since it is his death gown that he carried with him to remind him of his ultimate destiny to return to meet Allah. He is said to have commissioned an unknown Italian artist to paint his portrait, so we have a visual record of this (Uzunçarşılı, 1988). We also know that Selim I differed from his predecessors in many ways. He did not, for example, have a beard at a time beards distinguished the Sultan from others in the Ottoman court. Selim I also had a long moustache and he wore earrings, neither of which were common practice.

This hidden form – previously unreported to our knowledge – we suggest, represents a deliberate attempt on the part of the maker or the Sultan to subvert common customs, social or religious mores of the period. We would also suggest it is likely the Sultan did know of the hidden form, since the makers would not have risked incorporating this without his approval or suggestion. We also suggest this caftan represents an early example of enclothed cognition in which the religious and social context, coupled with the hidden design, is likely to have influenced the judgement and behaviour of the wearer. The gold and silk fibres were not normally used in for male garments and this too might, therefore, be seem to be a small challenge to orthodoxy.

Research on enclothed cognition suggests that clothing can have a shaping effect on the wearers' psychological processes. Douny (2011) has explored enclothed cognitions in the male dress of the Hausa in Western Africa. Riga is the name given to robes of honour sometimes worn by the Hausa which are multi-layered with hand embroidery and silk to look very big. They are worn to denote an elite status of some form. Douny's field research suggests such garments have 'transformative' powers for the wearer. It is not uncommon for the riga to be augmented with charm motifs of various kinds, or to be worn over a 'riga layu' or undergarment decorated with charm

motifs, especially with verses from the Koran. Charm gowns are widespread in many parts of the world (Paine, 2004) and wearers often believed their supernatural power required them to be hidden from view (Douny, 2011). Experimental psychological research suggests that clothes somehow activate various cognitions and behaviours compatible with the cognitive, social and cultural meaning of the clothes. Adams & Galinsky (2012), for example, showed that people wearing a white coat described as a ‘doctors coat’ were more careful and had higher levels of concentration and attention than otherwise. In fact, wearing the lab coat resulted in half as many errors. Pine (2014) measured a range of psychological variables for people who were asked to complete the assessments wearing either a ‘Superman’ t-shirt, a matched colour t-shirt, or their normal attire. She found that those in the superhero shirt reported they were physically stronger, more likeable and more superior to others on a social comparison scale. Fredrickson, Roberts, Noll, Quinn & Twenge (1998) have also shown that women wearing swimsuits do worse in maths tests than if they are wearing other clothes – an effect they ascribe to objectification of the body. Clothes, it seems, can have powerful cognitive effects on the wearer.

2. Case Study 2: Talismanic shirt

The second case study takes this argument to another level with a new analysis of one of a group of well-known Sufi Talismanic shirts that were made later in the 16th century for the Sultan Selim II (Figure 3). In Tezcan (2011; page 50 Figure 2) it says this shirt is “*Height:106 cm Prince Selim the 2nd son of Suleyman the 1st was made by Derviş Ahmed bin Süleyman and dated 1565-1566.The Topkapi Palace Museum-Sultan Garment ,13/1133*” (our translation).

In the Ottoman court there was a well-regulated system of who was allowed to wear what, when and where. The social station of each and every individual was prescribed rigidly and generally the highest quality fabrics and refinements were reserved for the highest level of personage. Fabric colour also denoted social status in the court. The palace officials, the Janissary, ensured quality in terms material and craftsmanship by charter to the guilds and also ensured that court dress codes were adhered to (Uzuncarsili, 1988).

There were a number of different Sufi sects throughout the reign of the Ottomans several and several of these designed and produced talismanic shirts, which were said to have mystical properties to protect the wearer. Perhaps as a consequence of political pressures the Sufi used a coded abjad system of letter/number substitution. Each of the 28 letters of the Arabic alphabet have a corresponding abjad number. Numbers can be decoded to give alphabetic correspondences and alphabetic characters can also be assigned numbers. So the Arabic alphanumeric characters on the shirt may have alternative referents that are not explicit. Abjad is not a place notational system in which the position of an abjad number depends on the positions of others. Letters can also be derived from numbers in a simple way. For example, Allah (الله) has the value 66 from $1+30+30+5$. We examine various levels of encryption of the shirt symbols and explore a variety of complex ways in which the symbols may refer to, for example, chapters and verses in the Koran, or by some phonetic or other correspondence to meaningful words.

We suggest in this case study that the use of abjad codes was to hide meanings and content so that only the wearer, or a restricted group of people, would be aware of the true referents in the designs. The wearer could wear the shirt without any observer knowing what meanings were hidden in the design. The shirt's design did more than integrate religion and culture (Atasoy, 2000) – it also enclothed the wearer with secret meanings.

We have analysed explicit and implicit meanings embedded in the design of the shirt by doing various kinds of decoding of the alphanumeric characters contained in many grids that decorate the shirt. These grids are also known as 'vefks' when they are used as charms or contain magic formulas. We suggest that the grids do hide different kinds of verbal or visual messages and patterns that are only known or discernable to the wearer or those able to decipher the characters. We consider four different levels of analysis of the marks on the shirt that show different levels of abstraction from the literal marks:

1. *Level 1* – the shirt contains verses from the Koran and other words that are clearly and identifiably written in Arabic script. We translated these.

2. *Level 2* – there are coded abjad numbers/letters hidden in many of the vefks that we have deciphered to reveal their hidden references to specific chapters/verses in the Koran.
3. *Level 3* – some of the vefks contain adjad numbers which – with decoding - provide clues to letter strings with possible phonetic word equivalents in Arabic/Turkish. The resulting phrases or poems are then interpreted.
4. *Level 4* – some of the vefks contain numbers that we believe may hide visual patterns or motifs. We have provided a unique analysis of the numbers on the shirt to reveal these decorative motifs or patterns. Although these patterns are obviously not discernable visually – even when the coding is made explicit – the designer or wearer may have known what these were.

We wish to argue that the hidden messages and patterns represent a deliberate example of a design to influence the wearer's psychological state as a result of an enclothed cognitive effect. If this is so, it goes further than using number decoration to provide the wearer with the psychological feeling of being protected, as in Douny, (2011). This protective effect from the numbers and letters would be provided by the coded phrases from the Koran. Other hidden patterns may have other meanings or importance not previously considered.

Figure 3 about here

The primary function of the talismanic shirt is to offer protection to the wearer from a variety of mishaps ranging from infection of illness, curses or spells cast against them or, as in the case of these Ottoman Court vestments, protection and victory during campaigns. This custom of seeking mystical help against the unknown is a characteristic of many cultures (Paine, 2004). It also has a long history. This ancient belief is expressed in the Jinajalamali Chronicle that tells the story of Queen Chamdevi of Lamphun who reigned in the 7th century AD. She sent a skirt polluted with menstrual blood to an enemy chief disguised as a turban. He unknowingly wore the turban (skirt) in battle and suffered a major defeat that was attributed to him coming in contact with the blood. The idea of enclothed metaphysical properties has been a long accepted notion (Conway, 2002).

There has been relatively little analysis of the talismanic shirts in the Tokapi Museum. The shirt in Figure 3 is the same one described by Rogers & Ward (1990). The most notable feature in the design of the shirt are well over 100 grids– or vefks – filled with Arabic alphanumeric symbols. It is interesting that there may be 66 different vefks on the front of the shirt – the abjad number which signifies Allah. What constitutes a vefk is not always clear and the shirt contains many triangular shaped ones near the edge of the shirt that need to be read in conjunction with their other half. The alphanumeric characters are written in blue, black, red or gold. The vefks are mainly constructed of vertical and horizontal lines in gold and in some cases contoured with black. Some of the vefks have within them rectangular, diamond and triangular shaped arrangements defined by symbol colour. In addition, there are two roundels by the neck on the front of the shirt that contain six-point stars filled with alphanumeric characters. Within the smaller triangles the Sultan's name is written. The edges of the roundels are decorated with stylized writing, which at first glance looks like a Greek fret pattern, but on closer inspection are Kufik inscriptions. The borders all round the edges of the shirt, back and front, are decorated with verses from the Koran written in Arabic script.

At a most basic level, therefore, the talismanic shirts are composed of symbols whose meaning would not be at all apparent to the observer. There has been relatively little research on these shirts, although Critchlow (1976) suggested that the vefks, if decoded, would reveal a cosmic order or some kind of hidden plans or intentions.

Deciphering and decoding the vefks requires tacit knowledge of the Koran, the Arabic language, and number puzzle patterns and substitution codes. Given the very large number of vefks we selected a sample cross section of 15 of them to decode. We will discuss the decoding of a representative sample of these here. Their placing on the shirt can be seen in Figure 3. The decoding is time consuming and full of complications and ambiguities in the numbers and letters, their combinations, and the substitutions. There are several types of coding system used in the shirt and it is not always clear which can be applied in the analysis. Some parts of the shirt – those relating to the explicit Koranic inscriptions in Arabic script that adorn parts of the shirt – have previously been subjected to some analysis (e.g. Gokyay, 1976) and there are descriptive accounts of the shirt in various catalogues and books (e.g. Rogers &

Ward, 1990; Tezcan, 2011). A typical description of the shirt, taken from Rogers & Ward (1990), Plate 111:

“The shirt is made from one piece of white linen, lined with red silk, with an opening and a slit for the head and short sleeves. It is covered front and back with magic squares, both of numbers and letters. An inverted gold triangle beneath the neck opening bears an Arabic inscription for Sehzade Selim: *bi rasm al-sultan al-a'zam/wa'l-khagan al-mifazzam mawla/muluk al-arab wal-ajam/mawlana al-sultan ibn al-sultan/ al-sultan Selim khan/ibn al-sultan Sulayman khan/khallada Allah mulkuhumma/ila yawm al-qiyama*. The Sehzades commonly took the title of ‘Sultan’, but although Selim only acceded in 1566, he is named here as a joint ruler with Suleyman. The second dedicatory inscription omits Suleyman’s names and title altogether. Two six-pointed stars to either side of the neck opening are divided into smaller triangles. Selim’s name reappears on this arranged so that one letter appears in each small triangle of the top side of three of the ‘points’ of each star. The maker’s name Dervis Ahmet ibn Suleyman and the date 972/1564-5 appear in red ink in a square at the bottom of the back of the garment, and are repeated elsewhere” (pp.175-7).

Abjad coding and magic square vefks:

Yakit (1992) suggests that abjad characters were used by Sufis to refer to different meanings and references in the Koran. The importance of the abjad coding system in the design of the talismanic shirt is made clear by the decoding of the vefk shown in Figure 4. This is an 8 x 8 grid of 64 boxes with numbers in red and black Arabic script. Within the black number area is a 4 x 4 array of numbers in red.

Figure 4 about here

The abjad number-letter substitutions for the red outer row boxes and the decoded numbers are also shown in Figure 4. The inner, 4 x 4, red numbers sum to of 202 in all directions. This is an example of a ‘magic square’ where horizontal, vertical and diagonal sums of all the numbers reveal the same ‘sum number’. This vefk has added complexity since the addition of the adjacent black numbers produces a second sum number of 303 in all directions. If we use the abjad letter-number substitution rules, then adding the decoded outer letters to 303 creates yet another sum number of 404.

As if to underline this there is also a note written in Arabic in black ink outside this vefk at the bottom right which says “This vefk art was given to me from Allah” (*‘Vefk-I mutemmin-I sunates matbuk’*).

There are a number of vefks of this kind on the shirt that confirms the central importance of the abjad code in the design of the shirt.

Level 1 decoding: Explicit Koranic verses

At the most explicit level, the shirt contains many places that are decorated with sayings from the Koran written in Arabic script. Around the collar on gold in black writing there is an extract from Chapter 2 (*The Cow*), including verse 255 known as the *Verse of the Throne* that is amongst the most well known verses in the Koran. On the left of the six-pointed star of Figure 3, written in red, is an inscription from Chapter 11 (*Hud, The Prophet*), verse 6. Around the edge of the shirt, within the gold band written in gold lettering, for example, are parts of Chapter 48 (*The Victory*) especially verses 21, 22, 25, 27, 28. On the front of the shirt around the vefks at the bottom are sections from Chapter 3 (*The Family of Imran*), verses 26 and 27. These two verses are full of meaning and describe the power of Allah and the order in the universe.

The talismanic powers of the shirt at this Level 1 makes explicit the potential enclothed cognitive effects which were unambiguously known to Selim because these verses from the Koran can simply be read directly.

Level 2 decoding: Numbers revealing deeper meanings by referring directly to the Koran

Our deciphering of the vefks also reveals several other layers of meaning which are hidden from casual observation. For example, if we take the 15 x 15 grid vefk at the extreme left at the bottom of the shirt front, the numbers conceal other verses from the Koran. The letters are in gold and black ink. The decoded numbers are also shown Figure 5. They range from 1 to 225. Each row, column and diagonal add to the sum number of 1695. The black odd numbers are in a diamond shape and in the middle of

the square. The even numbers are in gold arranged as triangles in four corners of the square.

This vefk is very significant in decoded content. The black numbers in the central diamond are all different by 16 from their adjacent horizontal number horizontally and by 14 vertically. The diagonals differ by 30 in the upper left and lower right, or 2 lower left/upper right segments. The different sets of numbers in each of the surrounding triangular areas also differ by 16 horizontally and by 14 vertically.

These ‘lock’ numbers - 2, 14, 16 and 30 - are important for decoding for a multitude of converging reasons. For example, 30 divided by 2 is 15, which is the size of the matrix of the vefk (15 x 15), and also the missing number between 14 and 16 (which also both add up to 30). The number in the very middle is 113 which is also how many odd numbers there are in the vefk. There are 112 even numbers in the vefk which happens to be $(16 \times 14) / 2$. A 16 x 14 matrix would also contain 224 numbers, with the key number 113 from the centre, making 225 (as now). It is for these reasons among others that we believe that the vefk actually represents Chapter 113 (The Dawn) from the Koran. The 15 x 15 vefk may reflect the fact that the 5 verses that make up Chapter 113 are each repeated 3 times in the vefk - a significant number of repetitions in Islam. Chapter 113 is also in the 30th part or Juz of the Koran. The 5 verses are about being protected by Allah from black magic and from those who practice mischievous secret arts.

Figure 5 about here

Level 3 decoding: numbers that require further letter phonetic manipulation for their reference

The left-hand grid in Figure 6 contains characters written in gold. These translate as “*There is no god but Allah*”. The other 6 characters within the 3 x 2 grid are written in blue ink. In talismans and amulets blue is used to ward off evil spirits as a means of protection (Paine, 2004). The decoded numbers of these characters are 56, 55, 54 (top line), 43, 78, 44 (bottom line).

Figure 6 about here

The sum of the totals in each row is 165. In the abjad system a number can also be separated into constituent base numbers - hundreds, tens and units. The resulting letter consonants after deciphering can then be used to construct words. Using this abjad substitution the 165 becomes 100=QAF, 60=SEEN and 5= HA or QAF+SEEN+HA. The phonetics of the resulting QSH do not readily offer any Turkish candidates to translate. However, taking the numbers separately (from left to right) produces 56 which equals 50+6 or NOON and WAW which phonetically is VAN which could be the important city of Van (now in south eastern Anatolia); 55=50+5=NOON+HA which produces HANE which means HOUSE and 54=50+4=NOON+DAL or DAN which means FROM.

The second row of numbers when decoded become 43=40+3=MEEM+JEEM or MJ; 78=70+8=AYN+HAY or AH; 44=40+4=MEEM+DAL or MD. The string is therefore = MJAHMD for which a translation might be *Muhammad*.

The key words contained in this panel, therefore, could be read as a call to conquest:

'There is no god but Allah

From this house to Van

Muhammad'

The decoding of the right-hand vefk in Figure 6 is another example of a Level 3 encryption. In the 4 x 4 grid the first row is written in gold ink and these are letters. The letters, left to right are M, I, L, and ES which also spell 'SELIM' right to left. The remaining symbols, written in black, are numbers. These are shown in Figure 6 in the right hand table. Horizontally the numbers add up to 140 but do not do so vertically. However, using number substitution for the letters (SE=60, L=30, I=10 and M=40) they do so in all directions, including diagonally.

The encryption possibilities for each panel on the shirt is considerable, This makes decoding very difficult. It also provides additional potential for hiding messages within the shirt's decorative symbols.

Consider, for example, the phonetic substitution of the symbols in the right hand table of Figure 6. If we take the numbers in the cells separately, 29 becomes 20+9 or

20=KAAK and 9=TOIN with the resulting phonetic KT; 61 becomes 60+1 which is 60=SEEN and 1=ALIF, together becoming a phonic SA;
 39=30+9=LAAM+TOIN=LT and 11=10+1=YA+LIF=YA. Taken together the string becomes KTSALTYA which is similar to the phonic 'KISALTMA' which is the Turkish word for 'abbreviation' shortening, truncation or curtailment. If, however, the letters are reversed this forms AYTLASTK which sounds like 'atlastik' which means 'atlas', charts, plans.

The second row becomes:

62=60+2=SEEN+BA=SB

32=30+2=LAAM+BA=LB

8=8=HAY=H

38=30+8 =LAAM+HAY = LH.

The resulting string is string SBLBHLH, or right to left, is HLHBLBS. If we put the letters in reverse order we get YAH MAAL, YAH, AB MAAL, AB NEES. We can then find the nearest Turkish phonetic equivalents. For the first elements YA MAL means 'Oh God'. MAL also means 'product' or goods or property. For the second, YAH becomes YA, which means also translates as 'Oh God' AB MAAL becomes ABLAM which means 'older sister' and AB NEES becomes ABINE which means 'to your brother'.

Using the same decoding, the numbers in the bottom row become:

9=9=TOIN=T; 37=30+7=LAAM+ZA=LZ; 63=60+3=SEEN+JEEM=SJ and

31=30+1=LAAM+ALIF=LA. In reverse order this becomes FILA MAAL, MEEJ NEES, AZ MAAL, NIOT. The Turkish phonetic substitutes are FILAMA (which means both 'flag' and 'signals'); MECLIS, which means 'council' or assembly and AZ MAL, which is 'small product good or property'.

The whole vefk therefore becomes:

Selim,

Plans,

Oh God, product, Oh God, older sister, to your brother,

signal, council, small product.

The language is a little strange, perhaps, as a list of words but with added prepositions, possibly poetic. One interpretation of this vefk is that Sultan Selim's older sister has given permission to the Dervish maker to produce this shirt – the small product - and sees it as a small wondrous item reflecting his majesty.

Level 4 decoding : Hidden visual patterns

In some of the vefks we suggest that visual patterns might also be embedded in the number codes. In some, the characters are painted in different colours which themselves show an explicit pattern. In Figure 5 it can be seen that there is a central diamond written in black ink that is distinguished from all the other vefk numbers in gold ink. Closer inspection of the table of numbers also reveals that all the black numbers are odd and all the gold numbers even.

There are also examples in the shirt when the numbers odd/even differences hide visual patterns without the ink colour clue. Take, for example, the major 40 x 40 vefk on the front of the shirt shown in Figure 7 (left-hand panel).

Figure 7 about here

This vefk contains 1600 numbers in total. It is also a true vefk or magic square with a sum number of 88,734 - the sum of all the numbers in each row, column or diagonal comes to 88,734. This is explicitly said in Arabic writing outside the frame of the vefk which says: *“This shirt was made for conquest. It has 40 x 40 numbers and 88,734 numbers of the Victory. 1418 numbers of verse are not here”*. This probably reflects the fact that the actual numbers in the vefk start at 1418 and the highest number is 3018. Note that 3018-1418 is a difference of 1600 – the number of cells in the vefk.

There may be other levels of complexity within the numbers that we have not considered and further analysis of deeper relationships between them may reveal even further patterns in these and other vefks. For example, in the vefk in Figure 7 the numbers, 1, 39, 40, 41 and 42 are revealed from different types of decoding, some of which are relatively complex and hidden. The numbers 1, 39 and 41 are the

differences between pairs of diagonal numbers in the vefk. The number 40 requires a more complex numerical operation and is the sum resulting from the difference between the numbers of two adjacent columns. For example, the numbers in the top row begin with the sequence 3018, 2599, 2978, 2559, 2938, 2519, 2898, and 2479. Successive pairs of numbers differ by 419 and 379. The difference between these resulting numbers is 40. The number 42 is the result of the differences between the numbers in each column. For example, the first row begins with 3018, 1419, 2976, 1461, 2934 and 1503. The difference between the first two numbers is 1599, the second two numbers 1557, the third 1515 and the fourth 1473. In each case successive numbers are different by 42. These complexities were probably meant to hide various meanings and messages.

We believe, however, that this vefk also hides a pattern in the numbers that can be visually realised in colour. When the odd number cells are represented in one colour and the even numbers in another, a clear pattern is revealed. This is shown in the right hand part of Figure 7, using blue for even numbers and yellow for the odd numbers. This pattern could represent many things including the idea that all paths lead to the centre or goal.

From our analysis of other vefks in the shirt it seems that many others may also hide visual patterns of different types. For example, Figure 8 shows the resulting patterns for two 12 x 12 vefks located on the front of the shirt under the roundels.

Figure 8 about here

The resulting hidden motifs are neither identical nor symmetrical within or between vefks but are visually complimentary in form with a common mid axis and alternating stripes.

Discussion

We have attempted a unique analysis of two important Ottoman textiles that may suggest a new way of considering some textile motifs and decorations that decorate historically important clothing. In particular, we have proffered the idea that – as a result of culturally defined norms and rituals – the Sufi designers may have hidden

different kinds of psychologically powerful meanings in the clothing designs. A repeating motif in the first case study could be interpreted as a human figure, as shown in Figure 2. The type of turban thought to have been worn by Selim I seems strongly suggested by the head shape of this hidden figure. If our interpretation is correct it could represent a striking example of the rejection of aniconism in the design of the caftan. Was the sultan aware of the hidden figure? It would seem unlikely that the designers in the Ottoman court would risk producing such a design without court approval, even if this explicit knowledge was restricted. However, to answer this question would require a much greater contextual analysis of evidence from a range of other sources. We would predict that other textiles and clothing will contain hidden examples of the human form and would suggest that another example from Selim I can be seen in another caftan in the Topkapi Palace Museum, inventory number 13/42 (see Plate 263, p 305, Roxburgh, 2005).

Can we say that Selim I was deliberately representing a human form on the caftan? We have presented some reasons to answer this question affirmatively. However, if this were true, it is against Islamic conventions, even for a Sultan. Further research requires a consideration of other historical documents that may give insights into how he viewed his position and his powers. The enclothed cognition perspective would suggest that he wore the shirt to show himself (and, perhaps, only himself) that he was a superior being.

The talismanic shirt we analysed in the second case study presented a different kind of challenge in our research. These mystical garments bear designs that emphasise their alphanumeric characters rather than their visual beauty. They appear to contain highly complex embedded messages that are not discernable to even the most perceptive and analytic observer. We have identified at least four different levels of encoding of the characters within the shirts panels. At the simplest level the characters refer directly to verses of the Koran, but deeper analysis also suggests they conceal more indirect Koranic references, messages and poems. At the deepest Level 4 encoding, we believe that the characters also represent visual patterns that cannot be viewed except in the mind's eye, or psychologically.

In these analyses we have only been able to report our decoding of a small number of the alphanumeric panels on the talismanic shirts. On the front of the shirt alone there may be 66 panels alone. A full or complete decoding of all elements of the talismanic shirts may well be impossible, especially given the required knowledge of Turkish, Arabic, Sufism, Islam, the Koran, number theory, mathematics, textile design, culture and mores of the time, historical context and so on. Added to these uncertainties is the likelihood that the designer(s) deliberately attempted to conceal important messages and motives. However, there is every indication from our analyses of the panels we have omitted from this paper that we have chosen a representative sample of the all the panels on the shirts. We also tried to provide a representative sample of the panels we have decoded and shown here. It may be, however, that each panel or vefk itself can be decoded in multiple ways, many of which we have not considered. It may also be that the relationships and placing of the vefks on the shirt has significance we cannot begin to consider, or that they are to be considered in a specific order by the person who knows the complete picture. Whilst these considerations are important in their own right, they are not critical for the major purpose of this research which was to posit that such garments may contain important psychological power – in terms of encloded cognition – for the wearer. Perhaps the design features of many other historically important garments, as well as other everyday clothes, served psychological functions over and above simple adornment. Multiple layers of decoding of the talismanic shirt may still remain, but each will only serve to prove the main thesis about the added psychological dimension in design.

The talismanic shirt contains many thousands of numbers within the many panels/vefks. The numbers within the vefks often have clear mathematical relationships to each other and some of these we have outlined. It is also apparent from our research that the numbers in the different vefks vary by several orders of magnitude. We do not know whether the numbers in the different vefks are actually related to each other mathematically. It is quite possible that they are. It is also quite possible that other deeper levels of hidden meanings might be revealed from a full analysis of the mathematical inter-relationships between the vefks. This research is well beyond the scope of this paper, but it raises many possibilities to investigate further.

We have been unable to understand the significance of many of the actual numbers used within the vefks – such as the lock numbers and the differences between adjacent numbers - or the pattern of mathematical differences between them. We have in a few cases been able to suggest simple explanations, but there remains much to be done to understand these numbers and numerical patterns. We would speculate that there will be meanings embedded that would be revealed with further research. We have observed that some vefks contain multiple encodings including hidden references to the Koran. Full knowledge of the Koran – including an intimate knowledge of verse letter and word counts, significant numerology, as well as sophisticated scholarly knowledge – may also be required to fully appreciate the potential layers of enclothed cognition contained within the garment. Sufi scholarship in this regard may also reveal much more than we have been able to discern from our modest knowledge of significant numbers within Islam.

Whatever remains to be understood from this new line of research will doubtless be far greater than what we have reported here. We do believe, however, that we may have uncovered an interesting new angle for research on historically important textiles and garments that goes far beyond the technical analysis, or that which is the immediately apparent aesthetic. Many social and psychological layers are hidden within garments.

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Figure 1: Caftan 13/46 (reproduced with kind permission from Topkapi Palace Museum)



Figure 1: Caftan 13/46 (reproduced with kind permission from Topkapi Palace Museum)



Figure 2: The hidden human form of Selim I

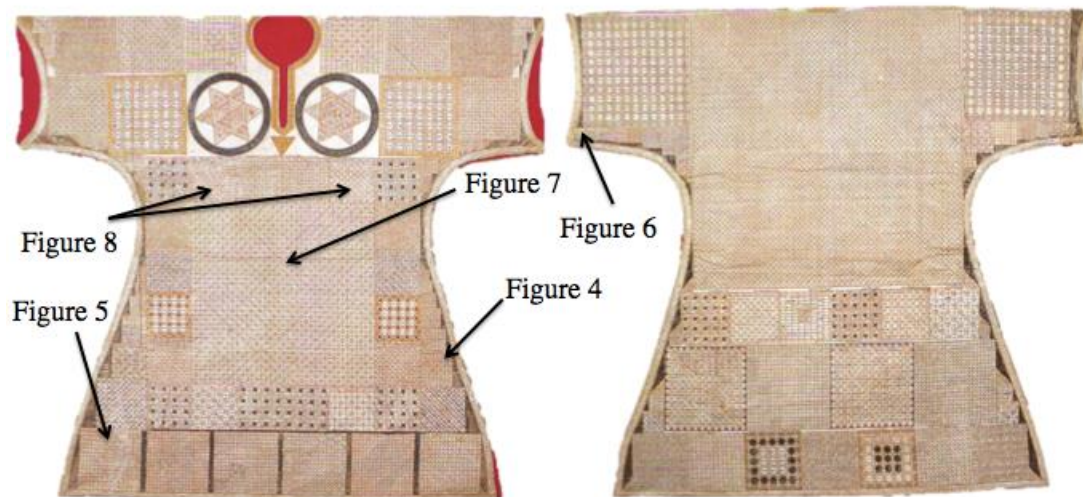


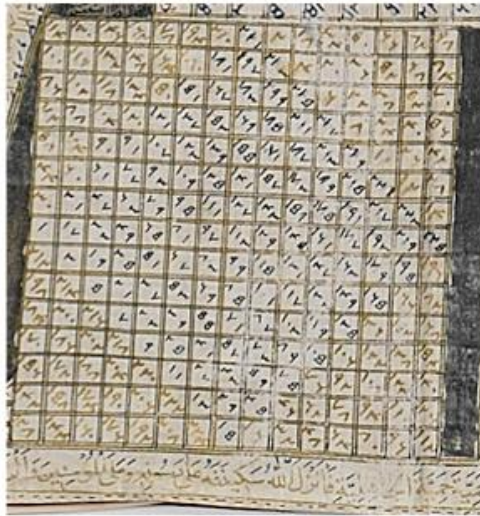
Figure 3: The Talismanic Shirt and location of vefks considered in detail.

Enclothed cognition in important Ottoman textiles



21 KA	32 LB	70 AYN	71 A	29 KT	79 AT	82 FB	20 K
23 LC	36	66	64	62	42	33	78 AH
77 AF	34	50	53	56	43	67	24 KD
76 AV	41	55	44	49	54	60	25 KH
26 KV	61	45	58	51	48	40	75 AH
27 KZ	63	52	47	46	57	38	74 AD
73 AC	68	35	37	39	59	65	28 LH
81 FA	69 ST	31 LA	30 L	72AB	22KB	19 YT	80 F

Figure 4: Abjad vefk with multiple sum numbers of 202, 303 and 404



114	130	146	162	178	194	210	211	2	18	34	50	66	82	98
100	116	132	148	164	180	181	197	213	4	20	36	52	68	84
86	102	118	134	150	151	167	183	199	215	6	22	38	54	70
72	88	104	120	121	137	153	169	185	201	217	8	24	40	56
58	74	90	91	107	123	139	155	171	187	203	219	10	26	42
44	60	61	77	93	109	125	141	157	173	189	205	221	12	28
30	31	47	63	79	95	111	127	143	159	175	191	207	223	14
1	17	33	49	65	81	97	113	129	145	161	177	193	209	225
212	3	19	35	51	67	83	99	115	131	147	163	179	195	196
198	214	5	21	37	53	69	85	101	117	133	149	165	166	182
184	200	216	7	23	39	55	71	87	103	119	135	136	152	168
170	186	202	218	9	25	41	57	73	89	105	106	122	138	154
156	172	188	204	220	11	27	43	59	75	76	92	108	124	140
142	158	174	190	206	222	13	29	45	46	62	78	94	110	126
128	144	160	176	192	208	224	15	16	32	48	64	80	96	112

Figure 5: Level 2 decoding of a vefk

Enclothed cognition in important Ottoman textiles



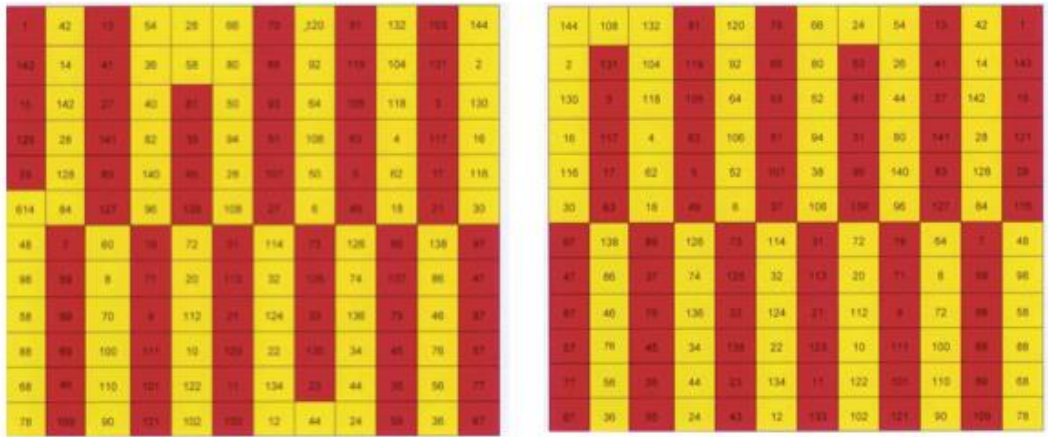
Allah	No God but	There is	M =40	I =10	L =30	ES =60
66	32	67				
56	55	54	29	61	39	11
43	78	44	62	32	8	38
			9	37	63	31

Figure 6: Two panels from the rear of the shirt with their abjad numbers/letters



Figure 7: The major 40 x 40 vefk on the shirt front with the hidden visual pattern

Enclothed cognition in important Ottoman textiles



Left-hand vefk

Right-hand vefk

Figure 8: Colour substitution of even and odd numbers for 2 complimentary vefks on the shirt front