

# Fashion and Textile Design Using Emotion and Personality

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## Abstract

Good design should engage personality and emotion. Using appropriate psychological approaches to the measurement of both personality and emotion offers a humanitarian approach to design. From a design perspective this project explores the preliminary development of the traditional design process or formula, using psychological methods to inform the process.

*'By describing the individual's standing on each of the five factors [of personality], we can provide a comprehensive sketch that summarises his or her emotional, interpersonal, experimental, attitudinal, and motivational style', (Costa & McCrae, 1985). Emotion, once experienced, will create or enhance either a positive or negative mood affect (Watson & Tellegen, 1985). Mood affect has been strongly associated with personality. If the designer is more aware of their own personality and emotional self, by fusing emotion, mood, personality and an understanding of the self-concept in the design process it could help the designer offer an alternative and informed method of tailoring a product to an individual.*

Drawing upon data collected from a short project carried out by Level One students in fashion and textile design, and examples of the first author's visualization work, we explore how fashion/textile design concepts reflect personality, how they capture emotion and mood, and how this information can be used to inform the design process or even be used to develop design and retail services. It will also consider the implications within design education.

Using a personality framework, results indicated that personality factors are expressed in design work and that these factors can be used to moderate personality and mood (and consequently the self), and therefore the design of fashion/textile products. This offers insight into design and the user where a product could seem conflicting for the same person if different levels of personality are considered.

**Key words:** personality, emotion, mood, self, design, design process

## Aims of the study

- Identify how level one students use fashion/textile design concepts to express their personality and emotional self.
- Determine how these methods can add to the teaching of design.
- By example, identify how this information can be used.
- Discuss how personality and emotion-driven design using psychological methods can be used in the collaborative process of designer and wearer/user.

## **Background**

This study supports parallel work that fuses science and fashion/textile art and design, consumer behaviour, psychology and cognitive fMRI of the brain (Functional Magnetic Resonance Imaging). The research is focused on wearer responses, perception, personality, emotion, moods and the self-concept. This study demonstrates how the design process can be fused with psychological methods to inform the process. Consumer researchers have found some relationships with personality and consumer behaviour (Hoyer & MacInnis, 2001), but they have not focused on a personalized approach to the unique needs of an individual, but rather a group or segment. It remains a difficult prospect due to the nature of product development, brand management and marketing of products, however suggests that personalisation approaches to design and the design process could become a reality in the future as it has with mobile phones and smart clothing.

### *Emotion, personality and fashion/clothing*

The experience of emotion depends on automatic arousal and its cognitive interpretation. Moods, e.g. happiness or sadness are background states that raise or lower our susceptibility to emotional stimuli and behaviour. A design stimulus induces positive or negative moods, i.e. sensory features of products (hedonics). It is hard to maintain a positive mood due to external factors; however sensory-emotion and mood cues have shown to improve mood (lift spirit) and used as an enhancement for healing. It's not just about sensory indulgence, but having a framework for the management of the senses and the self.

Jung (1923) believed there to be two personality types – introvert and extrovert. In this study the NEO FFI Personality Inventory was used (Costa & McCrae, 1985). It is a measure of the five major dimensions of personality or important traits that allow a comprehensive and concise measurement and assessment of adult personality. These are as follows (including factor facets) (Costa & McCrae, 1985).

<b>Neuroticism (N)</b>	<b>Extraversion (E)</b>	<b>Openness (O)</b>	<b>Agreeableness (A)</b>	<b>Conscientiousness (C)</b>
Anxiety	Warmth	Fantasy	Trust	Competence
Angry Hostility	Gregariousness	Aesthetics	Straightforwardness	Order
Depression	Assertiveness	Feelings	Altruism	Dutifulness
Self-Consciousness	Activity	Actions	Compliance	Achievement Striving
Impulsiveness	Excitement-Seeking	Ideas	Modesty	Self-Discipline
Vulnerability	Positive Emotions	Values	Tender-Mindedness	Deliberation

**Table 1**, Five Factors of Personality

The questionnaire takes into account different levels of personality and the uniqueness of an individual. The above personality framework indicates the psychological complexity of any given individual, summarising their emotion, interpersonal, experimental, attitudinal and motivational style, (Costa & McCrae, 1985).

If the designer is more aware of their own personality and emotional self, by fusing other variables into the design process it could offer an alternative and informed method of tailoring a product or services to an individual.

Extrovert people are generally expected to wear bright, bold colours, and bold textures, namely because as an extrovert they like stimulation and attention in a social setting. Optimum stimulation levels (Zuckerman, 1979), have been associated with extraversion, (Costa and McCrae, 1985). An extrovert's optimum stimulation levels differ to the introverted individual. The introvert we expect to see wearing dull colours and features. However this does not take into account the other four personality factors, personality management or external effects. How colours and textures are used to balance out personality levels is exciting here, i.e. to maintain a positive and confident self-concept and balance of the mood cues. In addition, not all symbolic meanings are shared due to different experiences, feelings and personalities - as low as 35% for clothing, (Hirschman, 1981).

Depending on the role and sensory impact of design variables from clothing on the wearer (colour, textures, line, shape, structure, style), it may be that differences in personality (and therefore emotion and mood) may have implications for choices in clothing and wearing patterns, therefore levels of depression, and high or low moods. Interestingly, Worrell

(1977), Dubler & Gurel (1984), Kwon (1991), and Kwon and Shim (1999), investigated the relationships between depression, morale, self-consciousness, mood and clothing interest, whereas Cash (1990) has shown that clothing is used as an aesthetic self and body image management tool and mood altering substance. Interestingly, *'One of the goals of counseling and psychotherapy is to help individuals understand themselves'*, (Cost & McCrae, 1981).

### *Self concept and fashion/clothing*

The 'self-concept' is critical in the affective regulation of an individual's cognitive system. It refers to beliefs a person holds about their attributes, and how they evaluate these qualities where some parts are evaluated more positively than others (Markus & Wurf, 1987).

Research has shown that we cognitively possess and create internal self-representations that are a shifting and changeable verbalised process of the social self. These are called possible selves (Markus & Nurius, 1986) and are shown to have an important role in self-regulation, i.e. self-discrepancies, as they function as incentives for future behaviour, e.g. the Actual, Ideal and Ought self, (Higgins (1987). Clothing and product features act as facilitators, e.g. an ideal self - how he or she would like to be, e.g. the successful or sexual self. These are also known as self and body images. Both are affected by self esteem. Self-esteem refers to the positivity of a person's self-concept (to an ideal self-concept) and often related to acceptance by others. This is why clothing can be seen as self-extensions (see Prelinger, 1959). Those with low self-esteem take control measures to avoid embarrassment, failure or rejection (may moderate the self using strong structural lines evident in suit jackets). Those with high self-esteem expect to be successful, take more risks and more willing to be the centre of attention (evident in unique or outrageous fashion choices).

The self-concept and its relationships with clothing and fashion have been investigated since early this century – Freud (1909), Flügel (1930), Atkins (1976), Ryan (1953) and Dubler & Gurel (1984). In addition, psychoanalytic accounts of fashion have shown that clothing is used as a means to address psychic conflicts that are acted out on the body (Boulton & Jerrard, 2000). Fashion or clothing in this case is an embodied entity that facilitates the process of self-development, role acquisition, and in achieving self-goals. The designer, who is essentially a creative problem solver, could find new ways to solve some of these problems.

### *Sensation through design variables*

*'Aesthetic integration in dress requires a satisfying balance between order (without which human sensations are confused) and interest (without which human awareness cannot be fully stimulated).'* (Horn, 1968; see Birkoff, 1933). Links can be made with aesthetic reaction, emotion, and personality factors as this study will show.

With regards to identifying the design variables, initially we have 'body variables' that include attractiveness, size, gesture and posture; and 'clothing variables' that include colour, shape, and design (Boulton & Jerrard, 2000), plus fabric/texture, design lines, drape/structure and style (symbolic associations/meanings). As we experience sensations from these, they then create cognitive associations and elements of fantasy, affecting thoughts, feelings, self and body images, and emotions - driven by moods and personality. They finally have an impact on the social and private selves and our behaviour. Design variables play an important role in terms of preference of clothing and so are worthy of further investigation.

We hypothesize that these variables counterbalance personality or emotion and mood variables. For example diagonal lines, prints, e.g. the Adidas stripes, promote the feeling of movement, making you feel active, as would some textures, e.g. denim due to its roughness and symbolic meanings. Research was carried out by Moody et al (2001) to investigate underlying fabric perceptions by vision and touch where texture and emotional/mood factors evolved. The softness or sharpness of a fabric can be used to reflect a mood (Taylor, 1999), as does the use of colour (Moody et al, 2001). Based on psychoanalytic theory of cloth and women there exists the notion of fabric or cloth fetishist fantasy (Hamlyn, 2003; Freud, 1909; Lacan, 1994), and as Flügel (1930) indicates, a reconciliation of modesty and eroticism ambivalences. Interestingly, like therapy, outfits and fabrics have been investigated to show how they enhance self-presentation, strengthen the self concept (Compton, 1962; Gibbons & Gwyn, 1975), help conform to an ideal self of femininity and social ability through clothing fabrics, colour and design, but also to strengthen weak body-image boundaries. (Compton, 1962, 1964).

### *Personality, design and education*

In education research those who are intelligent, different in thinking, independent, are imaginative and highly creative have direct correlation with the Openness factor (McCrae,

1987), i.e. designers and artists. This openness to feelings and experiences can also be related to creative dressing, openness to fashion or clothing concepts or an expression of individuality. This depends on the levels of the other four factors of personality and lifestyle factors.

Conscientiousness has been related to achievers, self-discipline and intelligence. They may prefer to dress smartly in fitted or tailored clothing (even outside of professional wearing), feel stronger when wearing tailored clothing during their careers (also if they have lower levels of conscientiousness), possess high expectations in their choices and have high levels of neatness in their appearance – all to promote the traits related to this factor of personality. It is also notably an opportunity for how designers can design. During wearing they are also thought to be more hedonistic and interested in sex and therefore direct sexual overtones, when required, may be used in their clothing choices. The other four factors may counteract the effects of this factor (styling), so again this needs to be considered.

Traditional approaches to fashion and textile design takes references from music, culture, art, architecture, technology, nature and people, which is then developed into a contemporary and innovative context. These approaches to the practice, and teaching and learning of fashion and textile design remain in the curriculum for practical reasons, i.e. employment. However within design a more cognitive and psychological approach could be considered, i.e. cognitive technology.

This study considers how the reflective designer becomes more aware of intuitive feelings and the possibility of engineering their design work to the user. This may encourage more sensitive approaches to design. Also, if “*design is a social process*”, (Gleeson, 1996), then this study demonstrates a case for it.

## **How do students use design concepts to express their personality and emotional self?**

### **Methods**

#### *Participants*

Participants were 40 level one students aged between 19-25, studying fashion and textile design at Liverpool John Moores University.

### *Materials*

The NEO Five Factor Inventory, (Costa & McCrae, 1985) was used. This has been used in both clinical and non-clinical instances, (Lievens et al, 2002). It was designed to measure five factors of personality in a test-booklet format. It contains 60 questions and asks for relevant demographic information, e.g. age. On completing the questionnaire a NEO Summary feedback sheet provided a description of the participants' personality traits on the five factors showing whether they were High, Average or Low on each personality factor. A one page document with additional adjective based information regarding the five factors to aid their design thinking was also provided.

Using current projects 'Sensations of the Future' on futurology, or a previous one they had completed previously - 'Blackpool', and in response to their NEO Summary, they were asked to design a fashion and/or textile product that they believed reflected their personality traits or that of others who may share the same traits. They could either focus on one or two traits or all five factors of their personality.

As part of the brief they were asked to produce:

1. A mood board
2. A design visualization board
3. A summary which was to outline how they believed their personality was reflected in the visual work presented

On giving the NEO Summary feedback sheets to the students, they commented on how surprised they were that the feedback was correct. This was proof that science can work in a creative teaching setting. The project was left open to interpretation for creativity to flourish.

### *Analysis*

The students visual work was qualitatively analyzed, thematically (Miller & Crabtree, 1992).

## **Results**

### *Emerging themes*

The student work was shown to reflect two key themes:

- a) Moderation of self through personality (enhance, deflect, compensate, contradict/disguise; i.e. control of moods/emotions)
- b) Reflection/expression of self through perceptions and feelings of personality fused into a response to a theme

The most common products designed in order were a dress, bag, separates and textiles.

If individual personality characteristics were mid or low within the five factors, participants were more likely moderate their levels (enhance, exaggerate, compensate), to achieve higher or lower levels of each factor.

#### *NEOAC and design factor variables*

Various symbolic design features were correlated with the personality factors (extended design variables). An example of this is a grid print corresponding to the 'Conscientious' personality factor. Please see Table's 2-10, for correlations with key themes and personality variables. The visual work shows how students 'Moderate' or 'Reflect' personality through design, but also shows how their design can be used to moderate personality, and therefore emotion, mood and motivation.

#### *Project summary feedback of NEOAC and design work*

Through some extensive translation of factors some students had delved deep into themselves demonstrating the emotional impact their personality has on their design work and thinking processes, (see Table's 4-10).

#### *Secondary factors*

- Art and identity factors (illustrative)
- Social design – Extraversion was the most popular factor used by the students. This supports the social design theory for fashion and textile design (Gleeson, 1996), e.g. clubwear; use of fabrics, comfort, warmth and happy factors to replace family and friends - compensatory factors.

#### *Effectiveness in the promotion of learning*



Students used from one to all five factors of their personality. Thorough expression of all five factors however produced heightened creativity and concept in the work but also contradicting elements (moderating).

Different types of colours, textures, clothing shapes, associations, details (zips, buckles) and design feature symbolism was reflected in the responses thus demonstrating underlying responses to the five factors of personality through design.

Interestingly the most popular factor of their personalities that was used to design a product was Extraversion. This was followed by Openness, Conscientiousness, and equally Neuroticism and Agreeableness. Emotional well-being is closely linked with the Neuroticism factor, so suggests the opportunity or need to understand design across all the five factors.

The group studied here statistically fall into typical personality factors of the general population of college age students, with a slightly higher deviation of 4.33 for the Openness factor.

**Table 2, Student Responses – Reflect**

<b>Theme</b>	<b>Neuroticism</b>	<b>Extraversion</b>	<b>Openness</b>	<b>Agreeableness</b>	<b>Conscientiousness</b>
<b>Reflect</b>	<ul style="list-style-type: none"> <li>- ball and chain</li> <li>- calming blues and purples (reflect mid)</li> <li>- fun and relaxed – plastic material</li> <li>- organization – bold print</li> <li>- primary colours</li> <li>- white heart – not bear all</li> <li>-/+ (mid) simple design</li> <li>+ Dreamy style</li> <li>+ gingham</li> <li>+ healed shoes – instability</li> <li>+ light pink and yellow - naive</li> <li>+ many layers</li> <li>+ pink heart on sleeve</li> <li>+ pinks – sensitive</li> <li>+ roses – vulnerability/ naivety</li> <li>+ silver butterflies</li> <li>+ soft delicate fabric</li> <li>+ Virgin Mary</li> <li>+ white</li> <li>+ yellows</li> </ul>	<ul style="list-style-type: none"> <li>- eye</li> <li>- blend in</li> <li>- bound arms</li> <li>- cross stitch – barrier</li> <li>- dark colours</li> <li>- fabric wraps round body</li> <li>- hooded</li> <li>- pink</li> <li>- short</li> <li>- textured</li> <li>+ bells (enhance as mid)</li> <li>+ bikini</li> <li>+ bright colours</li> <li>+ bright colours – happy emotions</li> <li>+ bright colours – purple, reds, blues, orange, greens</li> <li>+ bright colours – red, contrast with blue and yellow</li> <li>+ bright pink</li> <li>+ bubble bag – bubbly personality</li> <li>+ busy textures</li> <li>+ circular patterns</li> <li>+ clubwear</li> <li>+ friends as print on bag</li> <li>+ fun spotty print</li> <li>+ hugged waist (to be around people)</li> <li>+ queens’ crown</li> <li>+ revealing</li> <li>+ shiny textures</li> <li>+ size of skirt</li> <li>+ smell and colour range of flowers</li> <li>+ spots</li> <li>+ stripey textures</li> </ul>	<ul style="list-style-type: none"> <li>- traditional/conventional shape</li> <li>+ a bag – to collect inspiration</li> <li>+ art reference</li> <li>+ bikini symbolizes going places</li> <li>+ c-thru pockets</li> <li>+ dancing with an umbrella amidst floating fruit – looks crazy</li> <li>+ eye smudge (quirky) – interaction with N</li> <li>+ floaty fabrics</li> <li>+ flowers</li> <li>+ flowing skirt</li> <li>+ funky, modern</li> <li>+ hearts and flowers</li> <li>+ original design</li> <li>+ revealing</li> <li>+ revealing design - confident</li> <li>+ traffic light buttons</li> <li>+ rose tinted heart shaped glasses</li> </ul>	<ul style="list-style-type: none"> <li>- black</li> <li>- hammer (illustration/textile)</li> <li>- hard shell leather</li> <li>- nails</li> <li>- red</li> <li>- red – stubborn</li> <li>- red/black netting (hard headed)</li> <li>- safety pins</li> <li>- skull and cross</li> <li>- Tank Girl cartoon character</li> <li>-/+ love and hate</li> <li>+ diamonds</li> <li>+ dried flowers</li> <li>+ flowers – nature – good natured</li> <li>+ long length and old fashioned</li> <li>+ natural colours and knitted</li> <li>+ pearls</li> <li>+ pink</li> <li>+ pink flowery long dress</li> <li>+ white feathers</li> <li>+ yell – honest</li> <li>+ green – trusting</li> </ul>	<ul style="list-style-type: none"> <li>- circles</li> <li>- clumsy painterly drips</li> <li>- floaty fabrics</li> <li>- flowing fabric</li> <li>- hand stitching – not neat or precise</li> <li>- many layers</li> <li>- messy</li> <li>- messy machine cords (textured) – loose threads</li> <li>- mixed up colours and textures</li> <li>- no pattern to colours used</li> <li>- regular circular patterns</li> <li>- stitch</li> <li>- torn edges</li> <li>- unorganized</li> <li>- messy (not really)</li> <li>- sketchy</li> <li>+ buckles at front</li> <li>+ clear illustration (organized)</li> <li>+ dish cloths, knitted – hard working</li> <li>+ many pockets – organized</li> <li>+ matching accessories</li> <li>+ not too busy</li> <li>+ one pocket on right</li> <li>+ organization – bold print</li> <li>+ organized spot print</li> <li>+ tailored</li> </ul>

		<ul style="list-style-type: none"><li>+ Tank Girl</li><li>+ textured (fraying, netting, lace)</li><li>+ bright /muted contrast of colours</li><li>+ tight knight dish cloths – portrays close relationship with people</li><li>+ childish</li><li>+ circular shapes</li><li>+ glitter, sparkle</li><li>+ lime green, electric blue and orange</li><li>+ repetition</li></ul>			
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+ = reflect positive personality factor (higher levels)

- = reflect negative personality factor (lower levels)

**Table 3, Student Responses - Moderate**

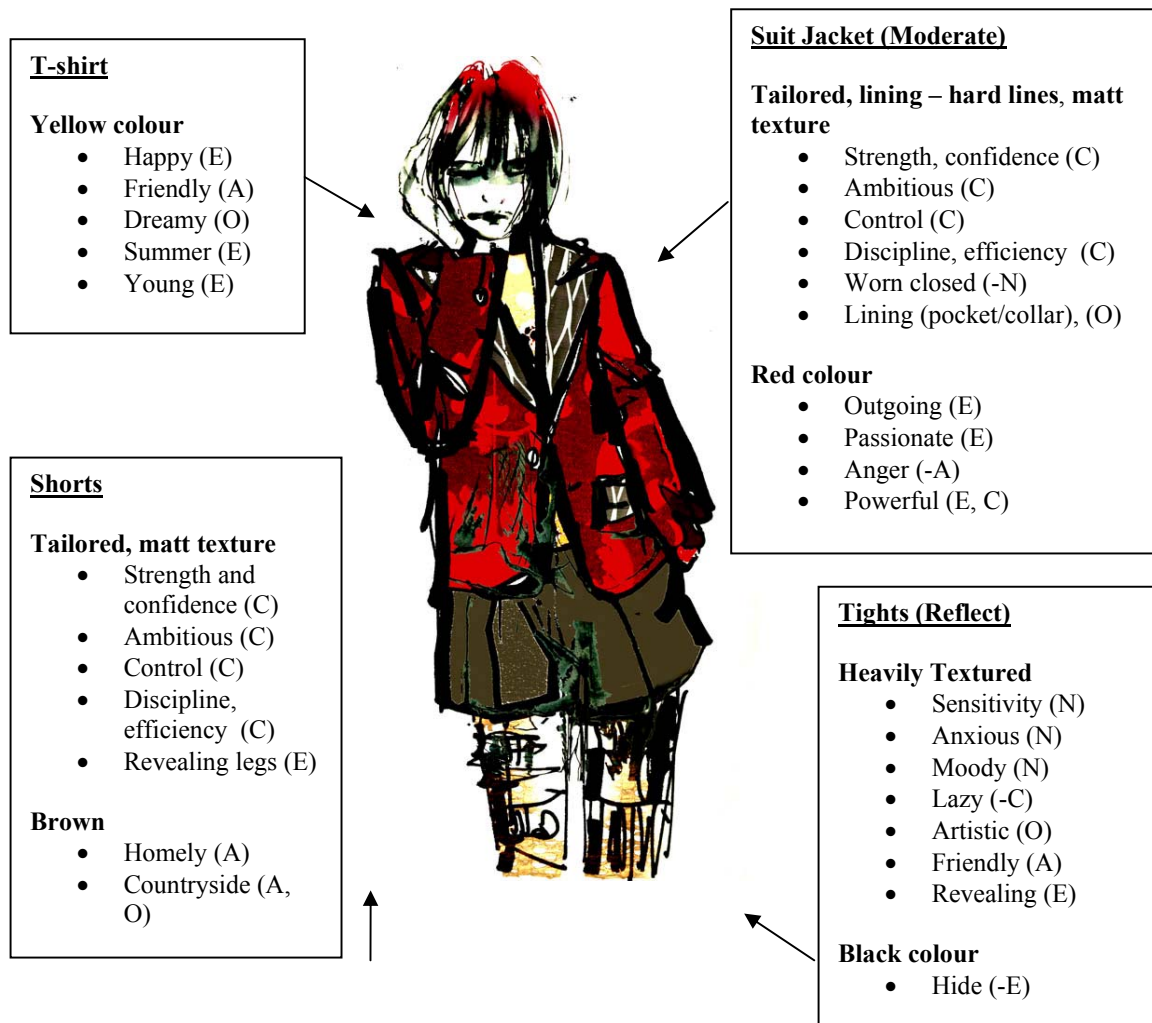
<b>Theme</b>	<b>Neuroticism</b>	<b>Extraversion</b>	<b>Openness</b>	<b>Agreeableness</b>	<b>Conscientiousness</b>
<b>Moderate</b>	<ul style="list-style-type: none"> <li>- blue</li> <li>- blue metallic</li> <li>- calm blue</li> <li>- centre paneling – to keep calm</li> <li>- grid print</li> <li>- mood protector and advisor</li> <li>- purple, textured</li> <li>- relaxation chair as +</li> <li>- rose tint (to reduce anxiety)</li> <li>- sensory underwear</li> <li>+ bound vines - restricted</li> <li>+ pink, textured</li> <li>+ shell shape</li> <li>+ sketchy/decorative</li> <li>-/+ simple design</li> <li>+ pale pink</li> </ul>	<ul style="list-style-type: none"> <li>- blend into background - blurring pattern</li> <li>- half masked</li> <li>- non bright, textured, not as decorative</li> <li>- tiny fine jewels (enhance +)</li> <li>-/+ (mid) print inside plain outside (blend in on outside)</li> <li>-/+ zip as</li> <li>+ bright colours – dolly mixtures</li> <li>+ bright colours, textures and decorative (beading), fun, extravagant</li> <li>+ bright pink and sparkly</li> <li>+ confidence enhancer</li> <li>+ decorative kitsch: colours and texture collages</li> <li>+ denim</li> <li>+ friends printed on garments</li> <li>+ Glamorous styling - diamonds</li> <li>+ heart shape</li> <li>+ newness: people and places</li> <li>+ textured</li> <li>+/- depends on mood</li> </ul>	<ul style="list-style-type: none"> <li>- conventional shapes – uniform – set in ways</li> <li>- repeat pattern</li> <li>+ bright colours – pinks, yellows</li> <li>+ coloured – pinks and reds</li> <li>+ cultures – Chinese print</li> <li>+ dreamy print imagery – flowers, ink blotting</li> <li>+ flowers</li> <li>+ inventive cut (top)</li> <li>+ net, silk</li> <li>+ open zip</li> <li>+ pattern variation (non repeat)</li> <li>+ revealing</li> <li>+ scribble writing print</li> <li>+ textured</li> <li>+ textured, beaded</li> </ul>	<ul style="list-style-type: none"> <li>- leather (tough) - hardheaded</li> <li>+ flowers and softness of material</li> <li>+ mirror on front</li> <li>+ padded</li> <li>+ pinks</li> <li>+ textured</li> </ul>	<ul style="list-style-type: none"> <li>+ flat shoes</li> <li>+ grid print</li> <li>+ health detector</li> <li>+ netting</li> <li>+ occupational library</li> <li>+ pointy shoes</li> <li>+ simple cut (trousers)</li> <li>+ virtual assistant - personal organizer</li> </ul>

+ = to increase personality factor levels

- = to decrease personality factor levels

## How this information can be used

The first author uses illustration as a means of expression to visually demonstrate and investigate the reflection or moderation of self through the use of style and design. This work builds on the theories of Boulwood & Jerrard (2000), Kwon (1991), Kwon & Shim (1999) and Cash (1990). Correlating personality and design has revealed practical insight into how and why the self is and can be moderated through clothing/fashion by an understanding of cognitive design. Through illustration we visually demonstrate how this information can be used.

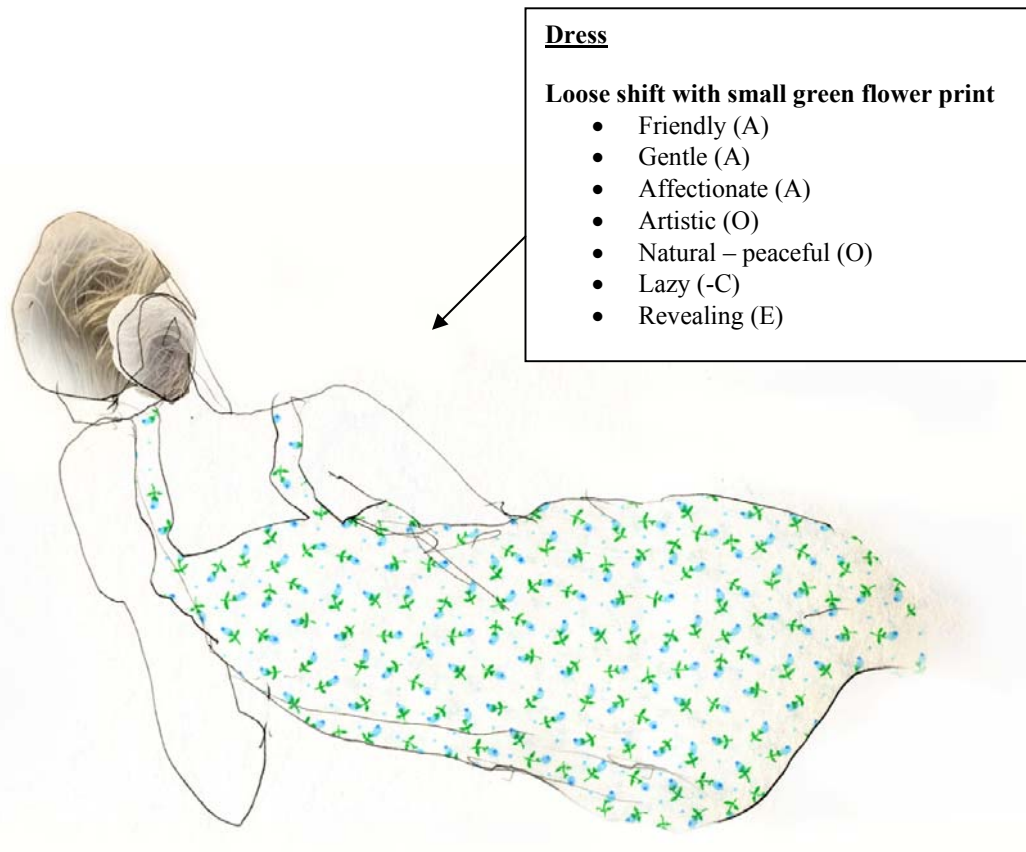


(+ = increase personality factor)

(- = decrease personality factor)

Figure 1, Untitled illustration

Figure 1. shows an individual moderating a low mood (Neuroticism) and an ambivalent personality.



**Figure 2, Untitled illustration**

Figure 2. shows a positive individual reflecting Agreeableness and Openness factors, smaller moderating elements, and a less ambivalent personality.

If the wearer's personality and moods and feelings are recorded and evaluated, the question will be what motivational indicators (design variables) within clothing will they need to moderate the self?

## **Conclusions**

Using a personality framework, results have shown that personality factors are expressed in design work and can be used to moderate personality and mood (and consequently the self), and therefore the design of fashion/textile products. This offers insight into designing a product where there could be conflicting or complementary factors for the same person - like a balancing act, if indeed the different levels of personality are being considered.

Emotion-driven design using such psychological tools outlined here can be used in a collaborative and interdisciplinary network of designer, psychologist and wearer/user. If design students are educated in both design and psychological methods, consumer profiling could become a part of our intelligent future. Correlating underlying sensory-emotional and aesthetic factors with personality factors could channel responses and bring new scope for design strategies (customer profiling), design teaching, and add to design and retail services. In addition it could add to other areas of product design and the traditional teaching of art.

More testing is required; ideally a virtual based testing experiment or a mock shopping environment. This would involve using design and wearer variables (being identified through a parallel study) with in-depth focus on the different levels within each of the personality factors. Clothing is also an indication of social status (Paek, 1986), age, gender and role (Davis, 1992) and an indicator of possible selves (external factors), so these factors will also need to be considered. Such work may also provide new insight into clinical disorders.

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