How can my interest in protective clothing lead to a research question with a theory-practice relationship?

Sally Grant
Department of Material Arts, Cardiff School of Art & Design, Cardiff, UK

ABSTRACT

My practice interest is in the role that cut and construction play in the design of protective clothing. In my recent collection, I used performance sportswear cutting on a sheepskin jacket to allow greater freedom of human movement. To develop this collection, it may be necessary to examine the practices of Issey Miyake and Ossie Clarke, and my interest as a designer is in the relation between these two. Their two very different approaches to cutting produce a contemporary garment with freedom of movement. Their differences, I suggest, are due to their different understandings of protective clothing. Miyake presents clothing which, by his own admission, is textile-led in its design and development (Miyake 1987). In contrast, Clarke’s interest in 1930s Hollywood has led to a closer reading of the female form in protective clothing, for example, his use of biased cutting to create an enclosed but nonetheless articulate garment-structure. With Miyake, protectiveness comes from the material, whereas with Clarke, it comes from a sense of drama and reliance on filmic and historical references.

Keywords: Protective Clothing, Material, Drama

1. INTRODUCTION

This research has been designed to consider an identified gap between protective clothing and clothing that feels protective. The aim of this research has been to investigate the qualities of protection in textiles and clothing, and one of the main motivations for this was the observation that not enough attention was being given to how Smart clothing actually felt to the wearer or end user (Hurford, et al., 2007). This abstract notion has been brought into being in the informed and sensitive use of textiles, and the cut and construction of a garment. This research has been concerned with locating this in the choice of textile and representing it in the construction of a series of garments. I have taken a traditional, indigenous and ancient protective, comforting material, (sheepskin) and imbued it with aspects of modern technical garments. For the purposes of this project, I am not concerned specifically with the area of ‘protective clothing’, which is a specialist area in its own right. Instead, I have contextualized the work, (in terms of cut and construction), within the related area of performance sportswear design. The project has been brought into sharper focus by what I believe to be the absence of the more psychological considerations of what clothing feels like, within the context of protection as an end product.

Sheepskin seems to be inextricably linked with protection. It is light and waterproof in its more recent incarnation, (AquaLam) and is undergoing something of resurgence as an indigenous and sustainable material. It is a waste product and a biodegradable one, and therefore, one of the last acceptable furs. Sheepskin clothing has been made within a traditional context for many years and it has been important to re-evaluate its potential against a background of both the expanding casual sports and leisure wear market, and also as a material increasingly found in high-end designer collections.

Sheepskin seems to be inextricably linked with protection. It is light and waterproof in its more recent incarnation, (AquaLam) and is undergoing something of resurgence as an indigenous and sustainable material. It is a waste product and a biodegradable one, and therefore, one of the last acceptable furs. Sheepskin clothing has been made within a traditional context for many years
and it has been important to re-evaluate its potential against a background of both the expanding casual sports an printing technique where you place the screen in a specific area of the garment to control exactly where it goes as a part of the overall design rather than using a printed textile.)

I made the practice in the research a collection of sportswear cut jackets printed with 'lo-tech' silk screen (printed) images, that were directed engineered onto particular parts of the body inside the jackets. The prints were made in the spirit of embodiment – meaning, hand printing with a small screen directly onto the surface and in response to the cut-out pieces of a garment that relate directly to the body, was like an act of spontaneous crafting- part instinct/part performance. The images are photographs I took of iconic industrial monoliths, for example the ‘transporter - bridge’ in Newport, and applied to the garments and are the last stage in the transformation of (sheepskin) jackets into contemporary urban street wears. The rendering of images of post-industrialisation act as a foil on a natural material. They mediate between the atrocity of living with a scarred landscape and wanting to function within the fabric of an urban centre. In effect the problem becomes transformed into the solution. Such objects offer warmth and protection from what the sociologist, Auge (2002) calls ‘non-spaces’ or the terrain vague prevalent in our inner cities, and they speak to the consequences of that type of isolation. The garments are craft objects made within an urban context.

Secondly, the characteristics in everyday clothing, which has changed at a faster pace than the equivalents in corporate and protective clothing, create, a gap of expectations and usage between workers’ on and off-duty clothes. In the Portable Environment, Susan Watkins (1995) differentiates between ‘the ‘normal’ processes of clothing, and fashion design and the functional design process necessary to achieve the rigorous solutions often required for protective clothing’. It is clear that the separation of the fashion design and functional design processes has adversely affected functional clothing design, including Wearable technology. (Hurford et al, 2007).

2. ?

In recent research into textiles and protection the case has been made for increasing synergy between fashionable aesthetic considerations and functional design, asserting that the reconciliation of the two factors must be taken into account:

‘A gap exists in the provision of designers with a common language to understand the disparate mix of aesthetic, technical and cultural needs of the potential market for smart clothing. There is an increasing demand for designers to be confident in the application of smart textiles and wearable technologies in the design development of functional ranges that also look good and that are appropriate for the cultural demands of the end-user.’ (McCann, et al, 2007, p.19).

Based on research at trade fairs and sampling, relevant cultural contexts must inform the final selections and ‘protective clothing must have a design element’. (Rohan, 2006). Designers of clothing also need to comprehend the importance of what McCracken (2005) refers to as, ‘the metaphorical readings of clothing to their environment,’ urban or otherwise. In ‘the key text Techno Fashion’, Hadley Quinn sums it up really well:

‘From sportswear, fashion has learned to protect and equip the body, while from fashion, sportswear has learned to decorate the body and tailor clothing and follow its shape.’ (Quinn, 2004).

Contemporary fashion has been heavily informed by sportswear over the last few decades. Its influence cannot be over-estimated in the design and mass-consumption of casual and leisure clothing. Functional clothing systems, like protective clothing and Smart Clothing and Wearable Technology would really benefit from what Renbourn (1971) and Quinn (2002) call the ‘psychological functioning’ of Fashion over and above the physiological, so apparent in both of the former.
The pieces that I produced as my final outcomes speak to this space and are made as craft pieces in opposition to the received aesthetic of hi-tech ‘futuristic’ ‘Smart’ clothing. (Bolton, 2005).

The pieces have a contemporary casual sports feel because I have been able to apply the principles of performance sportswear cut to the pattern making. This has contributed to the contemporary casual look of the garments and has made a significant difference to the look and fit of the garments and this has become one of the central shifts in the outcomes of the designs.

I was steered towards Jane McCann, Director of Research Wearable Technology and Smart Clothing. I was fortunate to be placed with a Research Fellow in Pattern Cutting (Xiang Dong, Professor of Technical Pattern Cutting, China Women’s University, Beijing) who was specialising in cutting for movement. This technique of pattern cutting is based on the premise that clothing needs to accommodate movement and fully comprehend the use of textiles in the process and is based in the area of performance sportswear. We worked together on the blocks and subsequently the patterns. This allowed me to produce the patterns in the right context, directly from my design drawings and not just have to adapt the sheepskin factory blocks to my designs.

The Chinese industry use Japanese blocks and so I was able to move between that system of pattern cutting and cutting for movement. I took into account the movement implicit in the material used and the technical issues to overcome. In folk clothing textiles are showcased. Similarly, in Performance sportswear, different textiles are pieced and panelled in, and this in turn has defined the way sportswear design has evolved. The garments that I have produced work well because they reference performance sportswear cut and elements of ethnic garments – they look contemporary and thus have modern appeal. This was my aim achieved through the rigours of specialist pattern cutting, which was available to me in UWN. I took the decision to deviate from the more traditional patterns of sheepskin garments and break away by merging and fusing issues of comfort and protection with contemporary sports casual look implicit in the garments. With Xiang Dong I developed shapes that were fitted all over the body and omitted the panelled structure of traditional sheepskin garments. I would like to do further research about this whole subject area of Performance Sportswear. I have always been interested in folk clothing and the pattern cutting in ethnic garments, and for me, performance sportswear is a good modern parallel. In Smart Clothing and Wearable Technology, I was also exposed to research about protective clothing.

This is a specialised area of design in its own right and one that I felt I needed to investigate. I decided to focus upon this area of clothing to research because it was the 'named' protective clothing area, the physiological aspect. In a sense processing all of the research about protective clothing has enabled me to work through the kind of work that I did not want to pursue, and the work that I have made is commenting upon those deficiencies that I sensed and acted upon as a primary motivation for this project. Again, this connection with the Smart Clothing and Wearable Technology researchers was essential for this part of the work. I was given access to the library of specialist books and articles and journals in the research centre, thus, I was able to carry out research using up to date material that was topical. (See Chapter 3). This knowledge of other areas of clothing design, particularly the knowledge of protective clothing, has given ballast to the work I have done for the practice pieces. It has informed me about a whole breadth of ideas about the nature of protective clothing in general and has helped me to position my own work through an overview of companies working in the fashion/protective clothing area in the UK (– companies such as Vexed Generation, Maharishi, and Howies are good examples). It has enabled me to see potential in areas of the protective/fashion market and observe the synergising of these areas and their potential, (Quinn, 2005). Fashion trends and forecasting were considered alongside, to compare what was happening globally. Other visual comparisons were made constantly, through magazines’ documentation of new collections. I also travelled to centres of output for leather and sheepskin clothing, amongst them Florence, New York and London. It has been an integral part of the research process to receive critical feedback from other practitioners and engage with other types of practice. (All of which are documented in the research Journal,
which was a requirement of the course).

It’s been suggested above that Protective clothing is not just about the physiological and that Wearable technology is not just about the technology. These are both negative statements, but by making practice pieces I have responded in a positive way to these questions.

3. CONCLUSION

The research process has taken me into areas of new knowledge. I have always valued tacit knowledge and understand the importance of it in design education. Being from a textiles background I wanted to retain the materials-led context of my training, whilst moving away from a heavy reliance upon drawing and mark-making for surface decoration and pattern-making. The MA Design has compelled me to ‘search and research’ – and discovers new materials and new ways of working. Although I engaged effectively with the area of protective clothing research, the area of theoretical reading has extended the life of this particular project because I have been able to include elements of performance sportswear (pattern cutting) in some parts of the garments that I have worked on. I had access to expertise to make that part of the research project possible because I was studying in UWN and gained access to people with relevant specialist knowledge. In the attempt to produce ‘shields’ and ‘screens’ I have come away from the project with a different view on what makes clothing ‘protective’ a view that has something to offer in contemporary debates around Wearable Technology, and why no one is wearing it!

Fundamentally I have hoped to demonstrate with the pieces, that

Protective clothing is not just about waterproofing fabric. Textiles as an emotional subjective agent are an untapped area of potential in clothing design. Engaging with some of the themes around Smart Clothing and Wearable Technology, I was able to look at the theme I had chosen in a very practical sense, initially whilst counter-balancing some theoretical ideas that have remained a preoccupation in functional clothing design.

The project was effectively managed; I took ownership of it and I took risks. The work is innovative – it is original and it has market appeal. But I do not know where the work fits, or what its place is, if indeed it has one. In all of the research carried out, the work is bold, exciting and forceful. In terms of the aesthetic appeal, the pieces have a big impact, they fit, and they are comfortable and warm. In that sense they meet a dual criteria – there is a form and function balance. Despite the challenges of the materials, there has been a retaining of a sense of craftsmanship from inception to final conception. The pieces have been conceived for an urban context but with a craft sensibility.