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Disrupting the Fashion Archive: The Serendipity of Manufacturing Mistakes

Abstract

Literature has documented how designers use fashion archives as explorative inspiration for designing and cutting fashion collections. (Clarke and De La Haye, 2014; Rhys, 2011; Riegels-Melchior and Svensson, 2014; Murphy, 2011). This derivative research can inform choices of fabric, silhouette, shape and the skills and technologies employed in the execution of the collection. This paper describes a case study that asked design students to identify mistakes in manufacture, in selected garments from the Yorkshire Fashion Archive held at University of Leeds. It explores the potential for accidental or intentional mistakes to be a source of inspiration for fashion design. There is a lack of literature that describes how fashion designers have been inspired by manufacturing mistakes in archive garments, which the research seeks to redress. A broader literature review emphasised how definitions of human mistakes have stimulated ideas and resulted in innovation in different disciplines and contexts and these ideas are transposed into a fashion context within this study. Some of the manufacturing mistakes identified in the archive garments included: sleeves sewn in the wrong way, incorrect stitch tension, using patterns that were unsuitable for a design, cutting fabric without making sure pattern pieces were straight, using the wrong interfacing or no interfacing at all, etc. These findings informed the design and eventual manufacture of a collection of contemporary garments. The documentation of this process provides an important reference point for garment creators to disrupt conventional approaches to fashion design and technology and supports the development of innovative skills. These can be utilised to create new and novel clothing designs with which to enrich the global fashion industry.

KeyWords: Mistake; Archive; Fashion; Garment; Creation; Serendipity

Introduction

Scrutiny of historic clothing in museum archives can inform designers about cut, silhouette, details and fabrics however in the fashion industry it is important that historical dress is re-interpreted in a new and contemporary way. This research explores how fashion designers can develop original garment ideas by identifying mistakes in historical clothing and utilises practice and object based enquiry within the fashion design studio. A project was devised to develop creative confidence and risk taking by asking 46 second year undergraduate design students at University of Leeds to investigate how technical mistakes could be utilised in the fashion design process. Boundaries between different cutting and make procedures were distorted by identifying manufacturing mistakes in vintage garments then transforming them into something innovative

and contemporary. The research also explores how this concept could benefit the global fashion industry, establishing different ways to create fashionable clothing.

Research has shown the fashion industry to be commercially cautious (Almond, 2010; McQuillan, Rissanen and Roberts 2013; Zac, 2016). The notion of identifying mistakes in order to be innovative is risky in an industry that needs to be marketable in order to sell clothes. Far less risk is taken in the mass market, which has the largest share of sales. High street retailers interpret designer innovations in a commercially palatable way and are risk averse in their focus on consumer sales and profits. In contrast designer and couture collections often include outfits that change or move fashion forwards - by taking risks (Entwistle, 2009; Florida, 2002; McQuillan, Rissanen and Roberts 2013, Plewka, 1997). For instance, Dior's New Look collection in 1947 re-introduced a luxurious and feminine silhouette to women in the midst of austerity and clothes rationing (Pochna, 2008). More recently the work of Alexander McQueen explored controversy and shock tactics, referred to by the writer, Caroline Evans as a: "Theatrical staging of cruelty" (2004, 142). The fashion designers, McQuillan, Rissanen and Roberts explored risk through their investigations into alternative methods of making patterns by employing what they termed: "Risky design practice" (2013, 39). They questioned: "What new knowledge arises in risky collaborative design practice? And how can this new knowledge be best communicated to foster an environment of risk taking within the traditionally risk averse fashion industry" (2013, 39). As an example, McQuillan and Rissanen pioneered the risk taking, design concept of Zero Waste Fashion, a process that allows no fabric wastage in design and production. The purpose of this research is to explore how manufacturing mistakes in garments can destabilize established ways to create fashionable clothing and alter our perceptions of how they can be designed and worn. The study therefore considers the following aims:

Aims

- To discover the extent to which the practices of garment creation can be the subject of the serendipity of mistake.
- To explore if new conceptual and technical skills for garment creation can be developed from identifying mistakes in the construction of historical dress.
- To investigate how this knowledge can be promulgated in both fashion education and the industry to sustain an environment of risk taking that promotes creativity.
- To situate the practice of risk taking through garment creation within the parameters of the fashion archive, fashion education and the global fashion industry.

Methodology

The primary methodologies utilised in this research are qualitative, as this allows researchers to discover the meaning that events/objects hold for people. As the academics Corbin and Strauss explained: "Qualitative research allows researchers to get at the inner experience of participants, to determine how meanings are formed through and in culture, and to discover rather than test variables" (2008, 12). A case study approach was adopted. Case studies are reports related to a person, group or situation not previously studied. One of the pioneers of case study research, Robert K. Yin, defines this method, "As an empirical inquiry that investigates a contemporary phenomenon within its reallife context; when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used" (1984, 23). The case study in this research focused on student designer's work through practice-based enquiry in the fashion studio. The designers had to identify manufacturing mistakes in archived fashion garments and develop design and garment ideas from their studies.

An object-based approach was introduced because it allowed the designers to study the archived garments through observation and handling (Kawamura, 2011; Kim and Mida, 2015; Taylor, 2002). They had to carefully consider if the objects had been disrupted through cutting mistakes and errors in manufacture, distorting their original design and construction. Cohen, Manion and Morrison's work, *Research Methods in Education* (2011) described the primary risk associated with object methodologies is in the shortcomings of researcher interpretation, yet in this study, shortcomings and imperfections encouraged the designers to identify potential mistakes. These ideas were analysed through an unstructured questionnaire given to the designers at the end of the project. It encouraged them to think deeply about the power of mistake in garment creation, subverting its dictionary definition to promote an environment where manufacturing mistakes could be recognised as opportunities to develop interesting design ideas.

The Fashion/Costume Archive

The research also employed archival research, a qualitative methodology that involves looking for and extracting information from archived records. Contemporary fashion collections are often inspired by fashion history therefore fashion/costume archives are a useful resource. They can enhance knowledge of garments and inform contemporary design. Close scrutiny reveals details about fabric, colour, cut, detailing, construction, etc. Many fashion designers such as Vivienne Westwood, Marc Jacobs, John Galliano, Stuart Stockdale, and emerging UK designer, Nabil Nayal (whose Elizabethan inspired dress is featured in figure 1) are noted for utilizing fashion archives to inspire their work. Several fashion brands such as Burberry, Pringle and Jaeger have plundered their own archives in order to reinvent products for the contemporary market place. As Deidre Murphy, a former curator at the Historic Royal Palaces, UK, said: "Surviving historic garments and images which record what people have worn in the past provide an invaluable research resource for many fashion designers" (Murphy, 2011, 1). By analyzing historic details, updating technologies, or challenging what they have observed, fashion designers have brought a depth and conviction to their collections.



Figure 1. Dress by designer Nabil Nayal inspired by Elizabethan costume from the Elizabethan Sportswear IV (A/W17) collection. Photograph courtesy of Luca Trevisani.

This research focusses on a case study conducted using the Yorkshire Fashion Archive, held at the University of Leeds, UK (figure 2). The archive is a publically accessible collection of couture, ready to wear and everyday clothing and documents clothing produced, purchased and worn in Yorkshire (a region of the UK) throughout the 20th Century. It has been used extensively by fashion staff at University of Leeds for a variety of activities that have combined research and pedagogy (Backhouse and Watson, 2012; Backhouse, Watson and Webster, 2012). It has also been used as a source of reference for the global fashion industry. The archive was employed in this study to identify mistakes in garment design and manufacture. This subsequently inspired the learning of the conceptual and technical skills used in garment creation discussed throughout the student's practice and in a questionnaire issued to the designers at the end of the project.



Figure 2. Vintage garments photographed in the Yorkshire Fashion Archive. Photograph Kevin Almond.

Literature Review

The literature review focuses on the theory and concept of mistake. Little dedicated literature has explored how mistakes in the creation of fashionable clothes have inspired contemporary fashion design. However much has been documented related to human errors that have stimulated ideas and resulted in innovation in different disciplines and contexts. These ideas are transposed and discussed within a fashion framework to consider how they could stimulate and inspire new ways to create garments. Making room for mistakes is the outcome of serendipitous incidents. In arts and crafts, several practitioners have adopted

this practice in their work. For instance, the artist and designer, Claire Treadway values: "Playfulness, serendipity and happy accident" (p. 41) in her activities, where events develop: "Unplanned actions" (Treadway, 2007, p. 41). For many designers who work in mass production, a fear of making mistakes has resulted in an assumption that a mistake is detrimental to the notion of craft (Dormer, 1997, p. 141). However, the idea behind this study is to investigate how the identification of mistakes in garment manufacture could inform the development of creative ideas. It also highlights a contradiction identified as the research progressed. In the case study, the designers began to recognise how to identify mistakes in the archive garments but questioned the notion of consciously implementing anticipated mistakes into their work as they developed their design ideas. The anticipated mistakes were not those identified in the vintage garments but those which the designers considered could happen in the manufacturing process. This is explored further in the findings however the definition of mistake identified in the literature review explores the evaluation of unintentional mistakes in wider disciplines including fashion and the positive impact they have on outcomes.

The Theory and Concept of Mistake

1. The Idea and Experience of Mistake

The literature review identified definitions of error and mistake in religion and spirituality and disciplines such as social sciences, arts and literature, psychology, science, philosophy and in health. The professor of management, Thomas Kida discusses his research in psychology and neurobiology, where error is considered an ability to see things that are not immediately apparent. In his work, Don't Believe Everything You Think, (2006), he suggests what we observe is not necessarily how it first appears. He says: "Perception is not just replicating an image in our brain; instead, perception requires an act of judgement in our brain" (Kida, 2006, 101). He labels human thinking patterns as mistakes that can be readjusted. As the academic, Stephen Haines said in his review of Kida's book: "In Kida's hands, thinking is like learning to ride a bicycle. There may be bumps and scrapes until you form a new sense of balance. Once you've grasped the concept and gained a bit of experience, it becomes second nature" (2017, 1). In her work, Being Wrong (2011), the journalist Kathryn Schultz considers how human beings continuously revise and regenerate ideas from making mistakes. She considers the shortcomings in human error in areas such as, medical mistakes, relationships, unjust criminal convictions, failed memories or false prophecies. The ideas of thinkers and philosophers such as Darwin, Gertrude Stein or Freud are discussed to consider how incorrectness can transform world views and ourselves. As she said: "It is about being wrong: about how we as a culture think about error, and how we as individuals cope when our convictions collapse out from under us. If we relish being right and

regard it as our natural state, you can imagine how we feel about being wrong" (Schultz, 2010, 5).

2. Embracing Mistake

Mistakes in the creative arts often happen and there is a body of work that shows how they can lead to positive outcomes (Luyken, 2017; Mueller, 2016; Haining, 2015). Mistakes can guide creative endeavours and take practitioners on unexpected paths that open minds and change perspectives. The titles of both Mueller's work, Praise of Error: Productive Mistakes in Culture, Cuisine and Science (2016) or Haining's, Wrotten English: A Celebration of Literary Misprints, Mistakes and Mishaps (2015) lure us into positive interpretations of negative creative doings. However, if mistakes are perceived as an act or judgement that is wrong, why are they encouraged as an agent of change? This concept is explored through various works (Gilovitch, 1993; Harford, 2012; Heath, 2009; Kida, 2006). Heath considers that mistakes can be a launch pad for change and encourage further risk taking when pursuing life's goals. The professor of psychology, Thomas Gilovich explores the fallibility of human reason in his work, How We Know What isn't So (1993). He encourages us to critically think about everything we see and hear in life. He discusses how people only seem to value information that confirms what they already think however if prepared for the conflict and disharmony instigated by guestioning beliefs, human beings can arrive at new and exciting ways of thinking and doing.

Kathryn Schultz declared: "In our collective imagination error is associated not just with shame and stupidity but also with ignorance, indolence, psychopathology and moral degeneracy" (2010, 5). An internet search exploded these negative ideas. Typing the words *Mistake and Creativity* into Google, revealed many sites that discussed the positive traits in mistakes and how they can fuel ingenuity. Their optimistic titles include: *40 Things you can Learn from Making Mistakes* (Hill, 2017, 1). Of these 40 things, four are especially significant. Hill declares that mistakes can: reveal a new insight, teach us how to experiment, point us in a more creative direction and hasten change. The writer Adam Sicinski supports these ideas in, *Quit Complaining and Start Learning from your Mistakes* (2017, 1) and explains how the mistakes we make as humans give us opportunities. He discusses: the benefits of making mistakes, the dangers of dwelling on mistakes, how to be at peace with your mistakes, how to shift your perspective about mistakes, how to learn from mistakes and gain more knowledge.

3. Mistakes in fashion

This research focuses on mistakes that inspire creative opportunities for developing fashion garments. The literature review revealed little work that explored how pattern cutting or manufacturing blunders have led to the development of new ways to create fashionable clothes. Traditional rules for making clothes have been documented in a plethora of pattern cutting and garment making manuals (Aldrich, 2008; Bray, 1986; Fischer, 2008; Joseph-Armstrong, 2013). Disrupting these rules has been explored by some designers and pattern cutters in practice, however their findings remain relatively unrecorded. The Channel Four television programme, Undressed: Fashion in the Twentieth Century (1998), filmed designer, Rei Kawakubo from Comme des Garcons and her team working in the studio in Japan, identifying mistakes in technical processes that resulted in inventive ways to cut clothes. The UK based fashion designer Nabil Nayal was interviewed for this research (Almond, 2018). He has explored the use of manufacturing mistakes within his work and also developed a working process that consists of photographing historic clothing from archives then disrupting the photographs through collage to inspire garment creation. He confirmed there was little documentation of disruptive approaches to garment technology in literature but discussed how an edited work by the writer Dorothea Mink, Fashion Out of Order: Disruption as a *Principle* (2011) had inspired him. The publication includes essays related to cultural history, design and literary theory as well as technology and explores how the concept of *Out of Order* considers dissonance as a creative formula in fashion. Contributors debate the tensions between right and wrong which create fashionable effects that deviate from the norm (including digression resulting from mistakes). One essay from Barbara Vinken, considers the transvaluation of values and declares: "For it is fashion's very nature to consistently overrule the systems it has created" (Vinken, 2011, p.59).

The academic, Eva Iszoro Zak from ETSAM School of Design, in Madrid, submitted a PhD, whose principal contribution to knowledge was the theoretical foundation of a pattern cutting method she named Accidental Cutting (2016-1). This is detailed in figure 3. She said: "This method is located on the most experimental side of direct creative pattern cutting, where the introduction of chance, randomness and improvisation in the processes of building clothes can lead to the generation of volumetric form that can be applied in other fields, not only fashion" (Zak, 2016-2, 6). Zak discusses the work of the designer and pattern cutter, Julian Roberts throughout the thesis. Roberts invented the concept of Subtraction Cutting, which is an experimental method of hollow construction that has been made freely available on the internet since 2001 (figure 4). This method of cutting is promoted in his book, *Free Cutting* as: "These are not step-by-step guides. I want you to trip up and make your own mistakes" (Roberts, 2013, 3). His methods incorporate: "Chance, discovery, distance and the ability to cut fast and inaccurately without too much reference to numbers, fractions or sizing scales" (Roberts, 2013, 13). In the case study with the student designers, reference was made to Roberts work and he gave a live masterclass in subtraction cutting four weeks into the project. This

presentation was a key turning point in the case study as it enabled the designers to understand and contextualise Robert's serendipitous approach to garment creation within their own practice.



Figure 3. Pattern and dress using the accidental cutting method pioneered by Eva Iszora, Fall/Winter 2011-2012. Pattern photograph courtesy of Eva Iszoro. Dress photograph courtesy of Valencia Fashion Week.

The White Vintage Project: Identifying Mistakes

The White Vintage project was devised to challenge student designer's ideas related to garment creation. Initially they were put into groups and each was allocated a male and female garment from the Yorkshire Fashion Archive. They were asked to consider; fit, construction, silhouette, shape, fabrics, zips, fasteners, hoods, trims, prints, pattern etc. How the fabrics were used, what the special features of the garments were as well as the seam details, trims and embellishments. They were also asked to consider how the silhouette had been achieved in the construction process. Following initial scrutiny, the designers were asked to identify any manufacturing mistakes discovered in the artifacts. They were then asked to develop garment creation ideas from the mistakes they had discovered. As the designers were required to produce a collection of season-less, all white outfits for a market/brand of their own choosing, development work was recorded in sketch books through photographs and drawings and used to inform design development, patterns and final garments.

A presentation was shown to inspire the student designers, detailing the work of

experimental pattern cutters such as Shingo Sato and Julian Roberts. It also included the clothes of fashion designers such as Martin Margeila and Comme des Garcons, whose ideas have subverted conventional approaches to design and cut through exploring alternative ways to create clothes. The presentation also included references to error and mistake from the wider disciplines identified in the literature review that emphasized how human mistakes have stimulated ideas and resulted in innovation in different disciplines and contexts (Haining, 2015; Kida, 2006; Luyken, 2017; Mueller, 2016; Schultz 2017). This provoked discussion and the designers were further encouraged to consider the architect and craftsman David Pye's theory (Pye, 1995). He argued that by allowing an element of risk (in this case study, it was the serendipity of mistake), creativity is achieved and craft develops. Despite this initial research and the discussions, the majority of design students struggled. When beginning to work with the vintage garments, they had to consider what had gone wrong in the manufacture process, for instance; poor sewing, patterns cut without grain lines, haphazard pleats, unfinished hems, unconventional approaches to fit, darts, volume, size, etc. The first year of their course had taught them about the basic principles of fashion design and garment construction. Tuition followed pre-established rules related to cut and make. Mistakes deviate from the correct way of doing something and understanding how mistakes in garment creation could inspire a collection proved to be a stumbling block for the student designers.

Many decided to take a systematic approach when recording their development sketchbooks. They analysed the vintage garments and identified in manufacturing errors or flaws. They were then asked to consider these mistakes conceptually and practically, beyond the obvious physical flaws, within the development of design ideas in their sketchbooks. At each stage of this process the designers were asked to reconsider Hill's (2017, 1) ideas where mistakes can: reveal a new insight, teach us how to experiment, point us in a more creative direction and hasten change. Some interesting research and development work began to appear, however students tightened up when beginning to design. Although all had the freedom to select their own market/customer and the white fabric for the collection, many proved unable to utilise their identification of mistakes to develop legible and contemporary fashion ideas. They ignored a lot of the interesting experimentation in their sketchbooks and the literature they had been introduced to, related to mistakes and played safe. The majority relied on the conventional approaches to design learnt in first year.

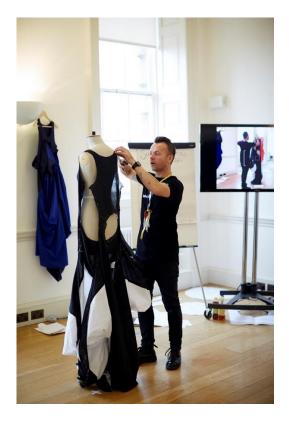


Figure 4. Pattern Cutting Workshop by Julian Roberts. *Photograph courtesy of The British Fashion Council.*

The tutors delivering the project questioned if it was too conceptual for the student designers at that stage of their learning. Was asking them to identify mistakes in the archive pieces too great a leap for their thinking process? McQuillan, Roberts and Rissanen argued that fashion designers have become stylists who continuously adapt their own ideas because with economic and deadline pressures, there is little time for experimentation. They suggested that true innovation happened on the fringes of the fashion industry and in fashion education: "Where both graduates and academics in many cases have more creative time and space without the financial restrictions demanded by the need to produce a commercial body of work" (McQuillan, Roberts, Rissanen, 2011, 9). Within the educational parameters of the project, the tutors decided the challenges needed to be met. Identifying mistakes encouraged a greater, intellectual consideration of the rudiments of garment design and construction and stimulated an approach to creation through different ways of seeing that would help the students become better designers.

The Journey into Mistake: Two different sets of vintage garments and patterns

This section describes the results of the designer's journeys into mistake. It discusses the manufacturing blunders identified in the vintage pieces from the Yorkshire Fashion Archive and how they inspired garment creation. It should be noted that before allocation, each garment was carefully selected because it included construction mistakes for the designers to identify. Time in the fashion studio facilitated the designer's exploration of ideas through draping on the stand, exploring garment details and cuts and developing design and pattern ideas. These were recorded in sketchbooks through photographs and drawings used to inform the development of designs for the finished collection. The designers were each given a menswear garment and a womenswear garment. The male garments were more structured or tailored and the female garments were invariably more unstructured and in some cases home dress-made. This strategy permitted the study of different types of garments and the serendipity of mistakes identified within them proved to be interesting and varied. The two case studies discussed focus on two sets of the vintage garments.



Figure 5. Holland Esq jacket c. 2000, Wool fringe dress c. 1945. Photograph Kevin Almond.

The first vintage artifacts are detailed in figure 5. These consisted of a menswear jacket from Holland Esq, circa 2000. Semi-tailored, it had been mass produced in cotton. The lining was in a softer grey cotton. The womenswear garment dates from 1945, made by a home dressmaker. It was produced in a grey wool and had a black fringe trim. The images detail how the designer, Annabel Williams developed her ideas for a womenswear collection. As discussed, the designers were asked to identify the brand to design for in the brief, in this case Williams selected fashion retailer COS. Figure 6 shows the grey dress photographed inside out. As it had been home-made, it revealed

some poor manufacturing skills, identified as mistakes. Over-wide seams had been snipped too close to the sewing line and were not overlocked so therefore frayed. Figure 7 shows how the garments were manipulated on the stand to identify any mistakes and design ideas inspired by the experiments were sketched up. The finished collection, in figure 8, shows how the journey into mistake inspired the designs. The garments included frayed edge seams and elements of the amalgamated garments worn in hap-hazard ways. The fringing has been disrupted and some of the garments are designed to purposely look unfinished.



Figure 6. Wool fringe dress c. 1945, photographed inside out. Photograph Kevin Almond.



Figure 7. Ideas sketched from stand experiments. Photograph Kevin Almond.



Figure 8. Mistake, womenswear collection for COS by Annabel Williams. Photograph Kevin Almond.

The second set of vintage garments are detailed in figure 9. They consisted of a man's coat in a brown wool check, double faced fabric, from the 1960s. This

was half-lined in a polyester satin. The dress was a shapeless garment with a drawstring at the waist. It was produced by a home dressmaker in the 1980s from an Issey Miyake pattern and manufactured in black, rayon jersey. The seams inside were not overlocked. The designer considered the use of pocket bags, (which were found to be unfinished on the coat) on the outside of garments, revealing their construction details and also began to experiment with sleeves placed below the natural armhole detailed in figure 10. When worn, the garment puckered up on the body creating a draped effect. The sleeve experiments show how the sleeve from the coat has been mocked up in calico and placed in incongruous positions on the dress. This lead to further seam experiments inspired by the non-overlocked seams on the dress and how poor stich tension created unintentional gathered effects. The ideas were sketched up in the white collection in figure 11 and the designer, Isabella Pearson selected Comme Des Garcons as her brand. The collection incorporated the use of frayed edge seams discovered on the dress, inside out pockets and the incongruous placement of sleeves below the natural armhole, creating drape effects. The designer also introduced a further element of mistake with the unfinished ribs on the sweatshirts.



Figure 9. Black rayon jersey dress c. 1980s, men's coat c. 1960s. Photograph Kevin Almond.

Sleeve Experiment



Figure 10. Mistake sleeve experiments. Photograph Kevin Almond.

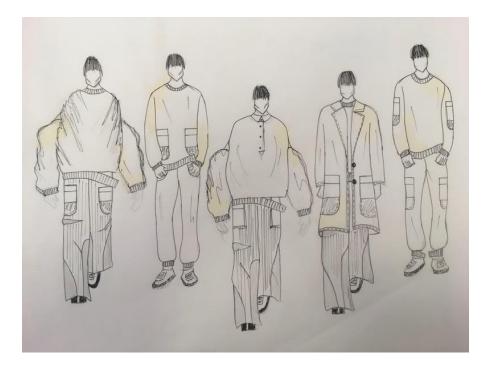


Figure 11. Mistake, menswear collection for Comme des Garçons by Isabella Pearson. Photograph Kevin Almond.

The work of Williams (Fig 10) and Pearson (Fig 14) are two examples from a group of 46 second year undergraduate students and detail both a womenswear and menswear direction for garment creation. As emphasized each designer had the freedom to select their own brand/company to design for and these selections proved disparate. In the two case studies, one designed for the high street retailer COS, the other Comme des Garçons and each had to carefully consider the impact of the design process and the choice of how they broke design rules to incorporate mistakes for the different brands. The designers had to select an outfit to make up and during the manufacture stage, experimentation with mistakes continued, facilitating a continuous fusion of garment creation with the concept of mistake. Although initial development was by the culmination of the project mistakes identified included: slow. misplacement of pattern pieces on garments, outside pocket bags, trouser lengths cut off, split seams, rips through fabrics, incorrect stitch tension, fraying pockets sewn in the wrong place, twisting, threads not cut off in garments, excess fabric used, rips and cuts through fabrics, odd sleeves, misplacement of pleats, pattern pieces cut incorrectly, fabric used in incorrect ways, mismatched seams, excess fabric, inverted lapels or cut off lapels, fraying of fabric etc.

Analysis of the Questionnaire

A questionnaire was sent out to the designers on completion of their workshop sessions. It was devised after considering, the University of Delhi academic, Geet Manral's commentary entitled: *'What is the meaning of to err is human to forgive divine'* (Manral, 2015, p.1). The title was taken from a famous quotation in, *An Essay in Criticism* (1711), one of the first major poems written by the English writer, Alexander Pope. Manral considered sayings from successful, artists, designers, politicians and writers, whose work had grown and flourished from making mistakes. She observed that: "Believe it or not, it's widely believed that not making mistakes could be the worst mistake you ever make" (2015, 1). The fashion designer Alexander McQueen summed this up when he said: "Of course I make mistakes. I'm human. If I didn't make mistakes, I'd never learn. You can only go forward by making mistakes" (BrainyQuote, 2017. 10). These sayings informed the development of the questions, which co-ordinated the thoughts and opinions of the designers. The responses are discussed below.

1. Making mistakes teach us valuable lessons.

"Even the knowledge of my own fallibility cannot keep me from making mistakes. Only when I fall do I get up again" - Vincent Van Gogh (Blackie and Son, 2008, 117). Question – What lessons have you learnt from the approach in this project?

This question asked the designers to consider what they had learnt from linking the theory of mistake to garment creation. The concept was liberating to some,

as one respondent said: "To actively design from identifying mistakes means that you must know and understand the correct way to do something in order to make it wrong. This felt like we were learning twice as much" (respondent 1). The challenge taught some of the designers to be bolder and less precise with some elements of design. The notion of mistake had been perceived as negative however the project led them to be less afraid of trying new things and how this could lead to more innovative garment solutions. One respondent commented: "By making a mistake you can often accidentally stumble across an idea that you would not have previously considered, making your work more creative and original" (respondent 2). Several other respondents considered they had learnt to take risks in the design process, developing different ideas to gain more diverse outcomes.

One respondent felt that human beings only know they have made a mistake after it has happened. This is when they realise what they have done or are told it has happened. Asking the designers to create garments by identifying mistakes in the vintage artefacts was considered paradoxical because: "Design is a purpose, while mistakes happen without purpose" (respondent 3). Another respondent further questioned the concept, commenting: "What actually is a mistake and why are we calling it a mistake? It should be looked at more like a change or an innovation and the lesson to be learned is to not reject the difference only because it is not perfect" (respondent 4). This is a slightly ambiguous reaction as the project clearly asked the designers to identify manufacturing mistakes.

2. Mistakes help us let go of our fears.

"You can only go forward by making mistakes" - Alexander McQueen (Fulla, 2017, 202). Question – How could what you have learnt in the mistake project be best communicated to foster an environment of risk taking in fashion education and the fashion industry?

To encourage risk taking the designers were urged to identify mistakes in a similar way to the team of pattern cutters at Comme Des Garcons who explored technical errors, in order to be creative. The majority of respondents felt the project allowed them to think beyond the limitations of their prior experience. It also allowed them to explore ideas they would not previously have considered. One respondent commented that: "Many designers associate mistakes with failure but if they understand that mistakes can be learning opportunities through first-hand experience, then it is an effective tool for encouraging creativity and innovation" (respondent 5).

Respondents generally conceded that the project helped them develop a tolerance for ambiguity. In the early stages there was much confusion as to what

constituted a mistake. One respondent said: "How do you define mistake? How can you judge if someone is doing it 'right' in a project where the entire concept is to do it wrong" (respondent 6). The same respondent considered that risk taking in fashion education and the industry is *risky*. As the overriding concept didn't provide them with security, many of the designers became anxious about whether the final outcomes would be successful and earn them good marks. Another respondent commented that: "Looking back, it was the moments where we weren't sure what we were doing when the best ideas would come. Ultimately, I've become more comfortable in the moments of ambiguity that come with creative projects such as this and in future will try to further let go of the need for security and taking the safe route" (respondent 7).

3. Mistakes inspire us.

"Nobody made a greater mistake than he who did nothing because he could do only a little" - Edmund Burke (Gleditsch, 1996, 432). Question - What benefits can you identify for the fashion industry from exploring mistakes in the construction of historical dress and what new knowledge do you think can arise from this?

Many respondents agreed that historical garments served as inspiration for fashion design and the benefits of identifying mistakes in their construction highlighted skills and techniques. As one designer commented: "Using archive garments as an initial point of inspiration helped me to think about how to push past what has already been done" (respondent 8). Some respondents conceded that identifying mistakes in historical dress extended design thinking because the effect of a mistake is often unknown and therefore creates unexpected results. Whilst the majority of designers felt the approach was more appropriate for designer led fashion, some questioned whether it was fitting in the more commercialized fast fashion arena due to time and cost constraints. It was recognized however that if a major fashion trend evolved from the concept of mistake, fast fashion would need to find a way to successfully embrace this zeitgeist by developing clothes for their customers.

By exploring errors in the construction of historical garments, the designers identified techniques, which expanded their knowledge. One respondent commented: "The most successful technique I developed was that looking at the garment is one of the most important things a designer can do. Understanding the construction and fabric is something you need to take forward so you can design, especially if it has mistakes" (respondent 9). The learning process was not always stress free. Some designers felt it was important to look at every detail, to consider if it had evolved through an initial mistake. Many considered that identifying what had gone wrong in the manufacture process, was challenging. As one respondent remarked: "I would

not say that I have developed any newtechniques in the project but more things such as patience and not giving up" (respondent 10). This highlights the pedantic approach many designers had to develop during their initial struggle to grasp the concept of error.

4. Mistakes serve as a warning.

Never interrupt your enemy when he is making a mistake anonymously." – Napoleon Bonaparte (Brainy Quote, 2018,1) – Question – *Mistakes can serve as a warning - from your experiences, describe any ways that error and mistake inhibited your development with the project and how did you overcome this?*

At the beginning of the project, the majority, of respondents described the challenges faced when subverting their prior learning and experience. As one commented: "At first it was impossible to engage with any sort of mistake and error because I am a perfectionist." (respondent 11). This designer was initially cautious then became more creative when experimenting on the dress stand, taking ideas from two-dimensional research and trying them out in three-dimensions. Some of the designers overcomplicated their approach. One respondent said: "When starting the project, the mistake element did inhibit my designs. I ended up over designing and not actually showing how the mistakes I had identified could inspire ideas. This made it difficult for me" (respondent 12). Once the initial challenges were overcome, many designers believed the project helped them change their mindset and it was important to work with mistakes instead of negatively dwelling on them, turning them into viable designs.

A further challenge lay in the designer's limited knowledge of manufacture however once they began to work with garments three-dimensionally, they became prolific. One respondent said: "The main difficulty I came across, was having a lot of separate ideas which didn't flow together. I found it difficult to develop ideas while staying true to the brief and my target brand. Lots of separate ideas also meant they wouldn't come together in a collection" (respondent 13). The students learnt to be discriminate with ideas and organize them in a logical way to produce a coherent collection of outfits. As one designer observed: "At the beginning of the project I only looked at mistakes in the archive garments. As I got further into the project and began to think deeply about the concept of mistake, I began to think more creatively, when manufacturing my outfit. The ultimate lesson learnt was that something can be wrong and still be correct (respondent 14).



Figure 12. Finished garments from the White Vintage Collection 2018. Photograph Kevin Almond.

Conclusion

The literature review considered how the concept of mistake has stimulated ideas and resulted in innovation in different disciplines. These wider concepts were transposed into a fashion context through the activities of the practice based White Vintage project (Fig 12), merging fashion design and risk taking within the parameters of the fashion archive, fashion education as well as the global fashion industry. In this study, it advanced the fashion design curriculum by introducing student designers to a wider vocabulary of techniques and ideas, through discussions, workshops and practice. As emphasized, this approach is relatively unrecorded in literature related to garment creation. The study expands the literature and aims to set a benchmark for further exploration and documentation of techniques to enhance creativity in fashion design. There were restrictions to merging mistake within the fashion design process and these are highlighted in the guestionnaire responses. The designers struggled initially because they had previously been taught to do things in ways they perceived to be correct. Some respondents suggested that human beings only know they have made a mistake after it has happened, however the effect of a mistake is often unknown and creates unexpected results. In garment creation this could be described as incidental design because the product cannot be planned, it happens during the process and the process becomes more important than the design. Another limitation to the project was observed as the case study only focused on the students at University of Leeds. A broader consideration of the risk taking mindset of students at other institutions in the UK and internationally could be an avenue for future research to compare and measure this culture of experimentation with different bodies of students.

Ultimately, two themes emerged from the case studies and the questionnaire. These are a combination of evaluating mistakes in the construction of the archive garments and mistakes that are intentionally made, through the breaking of pattern cutting and/or construction rules (which some designers began to do in their research and design development). The former fits the definition of mistake identified in the literature review and conforms to the original brief that asked the designers to identify mistakes in the archive clothes. The latter is less about making a mistake and more about intent. In other words, by purposely breaking down garment construction and pattern cutting rules a mistake is not necessarily made, however a decision is made to explore another avenue of garment creation. An example of this was seen in the work of Isabella Pearson, who made an intentional decision to place a sleeve location in an unconventional position. In choosing this path mistakes could still be made, but this is different from breaking an accepted rule through interpreting identified manufacturing errors to inspire designs. In the questionnaire, one of the designers stated: "If you design something unprecedented how can it be a mistake. It is new and never seen before, therefore creating something new is not a mistake, it is different" (respondent 15). This suggests the student understands the lack of clarity in calling something different, but intentional, a mistake. It also highlights that some students questioned the viability of the research when faced with making intentional mistakes by breaking rules they had previously been taught when designing and manufacturing garments.

A further idea for progressing the research would be to explore the work of professional designers within the fashion industry. For instance, a case study could consider two established fashion designers with contrasting approaches to their work: one with a risk averse design philosophy and one with a more experimental slant. Each designer could test the hypothesis of mistake in the development of a collection and evaluate the results from a commercial perspective. This would extend the innovative ideas and new thinking practices introduced in this research, by exploring the development of three-dimensional ideas that result from risk taking and mistake within the industry itself. As the Scottish architect, Charles Rennie Macintosh, once said, "There is hope in honest error. None in the icy perfections of the mere stylist" (Shariff and Tankard, 2010, 42), therefore the intention of this study was to form a catalyst

for new creative thinking. The documentation of the results expands the limited literature that explores how fashion designers have identified mistakes in the technical construction of dress and should encourage fashion designers to experiment further. It also builds on the work of McQuillan, Rissanen and Roberts by exploring risk taking through investigations into alternative ways to create garments. The overriding contribution of the study to fashion education and the industry lies in identifying mistakes in garment manufacture and exploring how to create ideas from these mistakes. In so doing, this presents a direction for encouraging much greater creativity in the classroom, as well as for practicing designers within the fashion industry.

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