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Transparency considerations for the ethical fashion designer

Laurie Perkins

U1160574

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Abstract

The purpose of this research was to explore transparency in garment manufacturing and ethical sourcing, drawing on the researcher's personal experience working within the fashion industry, specifically as part of the garment supply chain. The motivation for this research stems from the researcher's personal experience that they have encountered during their career in the fashion industry. These personal experiences have been drawn upon and directed and added value to this research.

Literature was reviewed on the practices in the fashion industry and other topical issues that relate. Primary research was conducted, and the researcher experimented with creative pattern cutting techniques as a design tool, whilst taking sustainability into account whilst designing. Three mini case studies were conducted on other self-proclaimed transparent and ethical fashion businesses and outlined the difficulties faced when running such a business. The research also included a consumer survey to study the purchasing behaviour of the consumer and investigating their opinion on the ethical considerations of products in the fashion and clothing industry, to validate the study.

This research found that pattern cutting techniques, specifically with minimal wastage in mind, can create a space in which to design ethically and with transparency when wanting to create a fashion garment. The research also found that ethical fashion companies faced similar problems, in terms of ensuring their supply chain is transparent, as well as managing difficulties regarding cost price and therefore ensuring the retail price is attractive to the consumer. This was also a key theme that emerged from the consumer survey, in that consumers were willing to spend some more money on an ethical and sustainable product, but within limits. Overall, the consumer research survey found that consumers were interested in finding out more about the origins of the products they buy, and that sustainability can be an influence on their purchasing habits.

Key Words: Ethical Fashion, Pattern Cutting, Sustainability, Transparency

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Glossary of terms used in the study

Ethical – Of or relating to moral principles, esp. as forming a system, or the branch of knowledge or study dealing with these.

Sustainability – The property of being environmentally sustainable; the degree to which a process or enterprise is able to be maintained or continued while avoiding the long-term depletion of natural resources.

Transparency – Transparency in business is the process of being open, honest, and straightforward about various company operations.

Draping – To arrange cloth on the mannequin to design a garment

Calico – Plain, unbleached cotton fabric

Toile – A prototype sample

French seam – A seam with the raw edges enclosed

Lay plan – An in scale, visual representation of how pattern pieces should be positioned on fabric

Grain line – The direction in which fabric is weaved

Pre consumer textile waste – Textile waste created during the garment development and making process

Pre-production sample – A sample that represents what the production of a garment will be like, must include all components.

Bulk fabric and trims – All fabric and trims used in production of a garment

Cost price – The price at which goods are or have been bought by a merchant or retailer

Retail price – The price at which the end consumer pays for goods

Chapter 1 – Introduction

The project aims to investigate transparency in the fashion industry and educate the reader on the origins of their clothing, so they are more informed about the choices they make when purchasing a garment. The research explores the abuses within the fast fashion supply chain, drawing attention to this, and focusses on the effects of cheap clothing on the environment and economy. It also investigates the less well-known side of the fashion industry, which is often unknown by the consumer, these are the human rights abuses that are present in the fast fashion supply chain. A section of this project focussed on experimenting with a selection of different pattern cutting techniques to produce a creatively cut garment, whilst also staying within the parameters of being suitable for batch production. This was inspired on the following quote that was issued in a public statement back in 1941: "DO NOT BUY MORE THAN YOU NEED, NOR BEFORE YOU MUST" (Howell, 2012, p.89) as it still has relevance today, in that it supports ethical textile practice by minimising waste and contributes to the rationale for the project; the quotation is further explored within the literature review.

The fashion industry is currently facing increasing questions about sustainability and transparency, and the voices that are trying to make change are getting louder. The dynamic of consumer purchasing has had a huge shift, with highstreet stores collapsing, and online only retailers thriving. One of the brands causing constant controversy is Boohoo group, making headlines recently with more accusations of modern slavery in their supply chain (Duncan, 2020), as well as purchasing well known highstreet brands who have gone into administration (BBC, 2021). In contrast to this, the slow fashion movement is growing with more and more people investing in garments being made by smaller, more transparent businesses, as well as the increasing popularity of purchasing second-hand garments. Apps like Depop and Vinted provide a platform for users to buy and sell garments in the palm of their hands, rivalling the old school auction site eBay for selling second-hand products. Depop has over 15 million users across 147 countries, with 140,000 new items being listed daily (Renwick, 2020).

1.1 Rationale

The research topic was chosen primarily because of a personal interest in the issue of sustainability and transparency in the fashion industry, having worked in the fashion industry as a garment technologist and product developer and witnessed first-hand the issues with waste and unethical practice, such as subcontracting by overseas manufacturers to other

unknown manufacturers that are unregulated. The personal interest stemmed from pattern cutting and how this is implemented in the design process when creating a garment. This often creates substantial textile waste. It is acknowledged that research in pattern cutting, even for those exploring it with sustainability in mind, does not often link to the outcome of an item being a saleable product.

The fashion industry is heavily criticised for unsustainable practices and many consumers are unaware of the unethical practices associated with the labour in the industry's supply chain. Therefore, this research aimed to investigate a number of the key unethical practices and consumer awareness of these issues to determine if a raised awareness would influence the purchasing behaviour of customers. In the study, it is considered to be important that consumers are made aware of how the products that they buy are made so they can make ethical decisions when purchasing a product, as ethical purchasing can encourage keeping product for longer which in turn would result in less commercial waste.

'Transparency' is a buzzword used by brands to reassure the public that they are keeping their supply chain ethically above board, however this research aims to investigate how truly transparent they are. Brand transparency is important when educating the customer on how to make more informed choices when purchasing a new garment, however it can be used incorrectly as a marketing tool. To the designer-entrepreneur that wants to create and sell a sustainable (for example using zero waste pattern cutting techniques) and ethical product, transparency is key to ensuring the core values of the brand are upheld.

The use of the consumer research survey was an opportunity to investigate consumer behaviour and add value to the existing research on consumer behaviour. The research focussed on identifying how people consume fashion and how they feel about it to be able to make recommendations for educating people on the fashion industry so that they can make informed decisions regarding fashion purchases based on an ethical judgement. It is apparent that there is a lack of awareness amongst the public on the ethical and sustainability issues in the fashion industry. There is limited literature on the effects of the fashion supply chain on humans, with a focus mainly being on environmental issues.

The research also set out to inform on how to start an ethical fashion business, making garments that are sustainable and also ones that are appealing to the consumer. This was achieved by exploring the first stages of set up (the design process, the manufacturing process, and the market in which to sell it) with a view to use this as a point of reference when considering entering the fashion market.

1.2 Aim and objectives

Aim

The aim of this research is to explore ethical sourcing and the consideration of transparency in garment manufacturing while employing creative pattern cutting as a central technique within the design process.

Objectives:

- To explore the positioning and context of the practice through an investigation of the issues around transparency in the fashion supply chain.

- To investigate relevant methods for transparent fashion practice.

- To experiment with creative pattern cutting techniques to develop a fashion forward garment, through a personal reflection on the making practice.

- To examine ethical considerations within the garment supply chain and through examples of transparent ethical fashion clothing businesses.

- To study the purchasing behavior of the consumer and investigate the consumer opinion on ethical considerations of products in the fashion clothing industry.

1.3 Outline of chapters

Chapter 2 is a literature review. It provides a review of the relevant literature that relates to the research topic and makes references to different sources of literature and research, such as books, journal articles, reputable internet articles and blogs that were retrieved using a search strategy accessing various databases, such as The University of Huddersfield SUMMON and Google Scholar. The review outlines some historical context, exploring the effects of World War II on fashion and the needs for rationing and then outlines current topical global ethical concerns such as climate change. The review then focusses on ethical practice and sustainability within the fashion industry, with some focus on the ethical issues in relation to the use of popular fibres used in the fashion and clothing industry, such as the use of cotton and polyester. The review examines the human rights abuses within the garment supply chain and discusses how the concept of sustainability is being used as a marketing tool as well as the fast fashion industry. The review then explores consumer

awareness and consumer behaviour when purchasing garments and how ethical issues and sustainable practice impacts on customer decision making. Finally, it outlines a discussion on pattern cutting techniques and how these techniques can support the design process and help in reducing waste in the fashion industry.

Chapter 3 outlines the methodology approaches applied in the research. Three approaches were adopted, and this chapter provides a justification for why these methods were chosen and how they were applied. The selected methodological approaches were: autoethnography and action research, a consumer survey and three mini case studies.

Chapters 4, 5 & 6 presents and analyses the research findings. Chapter 4 outlines the findings from the pattern cutting research which is accompanied by still images of the practical work and a video with audio (Appendix 1A). Chapter 5 discusses the findings from the mini case studies carried out as part of the research are outlined and discussed. Finally, chapter 6 then states and analyses the findings from the consumer research survey and there is a visual presentation of the research findings, the data is presented in a visual graphical format.

Chapter 7 provides a summary of the key research findings and outlines recommendations for future research. It also presents an evaluation of the limitations of this research.

1.4 The impact of Covid-19

Since this research was started, the world faced a pandemic affecting the lives of everyone on the planet. The fashion industry was adversely affected, as the supply chain broke down during the height of the infection. Orders were cancelled, jobs were lost, businesses folded, on a global scale. Fortunately, the primary research was completed prior to lockdown in March 2020 and the pandemic has not impacted directly on the completion of this research. The supervision sessions and academic support was completed online.

Chapter 2 – Literature Review

The literature review provides an overview of the historical context of how garments were made to last in the past, specifically during and following World War II. It outlines the pertinent global ethical issues that are present in today's society, as well as those that specifically relate to the fashion industry, such as ethical considerations in the supply of raw materials and ethical issues within the supply chain in the production of garments. It considers the human rights promotions in the supply chain and how the concept of sustainability is applied as a marketing tool. The review continues, with an overview of the fast fashion industry, specifically fashion influencers, and it makes reference to consumer awareness of ethical issues in the fashion industry and consumer behaviour. It discusses how pattern cutting techniques can be used to support the design process and minimise waste and explains the concept of slow fashion.

2.1 Historical context

While conceptualising this project there was a consideration for how people engage with fashion for the sake of sustainable practice in a modern-day context. This led to a short enquiry into how a similar change occurred in the past which we may learn from. The most poignant example is possibly that of consumer behaviour change that had been imposed by the restrictions on the general public and on manufacturers during the second world war and this was a catalyst for change in the way people in the UK consumed clothing and textiles, along with other products. Clothing and textiles at this time were in short supply and rationed, which forced individuals to adapt to the new normal circumstances of that time. At the time of writing this thesis we are amidst the Covid-19 pandemic, at a time when new norms are again being imposed upon individuals across the globe.

In 1940, there was a letter from a Yorkshire man, Alderman A. R. Bretherick, who was involved in the textiles industry for many years, he suggested a rationing scheme to be put into place due to the "vicious spiral of ever-increasing prices which is caused by the demand being greater than the supply at present" (Howell, 2012, p.78). The suggestion of rationing would not only have ensured all individuals have a fair amount of clothing but to also eliminate the idea of a standardisation of garments. Bretherick felt that "standardisation threatened individuality by interfering with distinctive craft practices" (cited in Howell, 2012, p.79).

In 1941, the UK government finally came to a decision to implement a full rationing scheme for clothing and household textiles, boots and shoes (Howell, 2012). During the war, a public

notice by the board of trade, explained the implication of clothing rations as a "fair distribution of available supplies" and went on to state – in capital letters – "DO NOT BUY MORE THAN YOU NEED, NOR BEFORE YOU MUST" (Howell, 2012, p. 89). During the war each person was allocated 26 coupons for six months, these coupons did not stretch very far, with a coat taking up to twelve coupons and a girl's school gym skirt using four coupons (Anon, 2010). This resulted in other materials being used, for example flour bags were softened by washing the cotton which would be used to make underwear. Washed engineering plans also became reusable, soft cotton and carpet underlay was used to make handbags and broaches (Anon, 2010). Due to the fabric shortages, skirt styles became shorter, ending just below the knee compared to the mid-calf length skirts of the 1930's (Anon, 2010). The styles of dresses were adapted to have drape on the bodice, whilst still remaining slim on the skirt to reduce fabric consumption. A reaction to the rationing of clothing and textiles was to adopt a make do and mend attitude towards items of clothing, the consumer already owned.

A technique used to 'make do and mend' was to use two older dresses to create a new one. Men's fashion was also affected; lapels became narrower, jackets adopted a single-breasted style and trouser cuffs were removed in order to save fabric. The three-piece suit was adjusted, to have a knitted waistcoat (Anon, 2010). The consumption of clothing in the war was in contrast to the consumption of clothing today, however the 'made do and mend' concept is relevant today to help reverse the environmental crisis associated with fast fashion. Unless governments put policies in place, as they did during wartime with the make do and mend initiative, it is largely down to individuals to attempt to influence change. It is hoped that this project goes part way towards influencing a change through a responsible approach to fashion garment design that new designer-entrepreneurs could take ownership of.

2.2. Ethical issues

2.2.1 Global ethical issues

Politics plays a large part in the public's view of ethical issues in the world, for example the Paris Climate Accord (2015) is an agreement to reduce greenhouse gas emissions that has made news, when Donald Trump made the decision to withdraw the US from the agreement (McGrath, 2020). The Chinese Government have pledged to reduce China's emissions drastically. China is the world's largest polluter, overtaking the US in 2007 (Buckley, 2017).

Ethical issues are documented widely in the media. For example, the food sector has frequently been featured in recent years, with exposure on cruelty in abattoirs (Giordano,

2019) and horse meat being used in family favourite ready meals (Simpson, 2013). Most recently the effects of single use plastics in the world's oceans were brought to the public's attention when David Attenborough explained the damage they were causing on the award-winning BBC programme 'Blue Planet' (Attenborough, 2017).

2.2.2 Fashion ethics and sustainability

There are many ethical concerns regarding the global fashion industry today, such as modern-day slavery, and the use of sweat shops and the use of man-made fibres in comparison to natural fibres. The fashion and textile industry ranks high on the world's pollution scale. In 2015, the fashion industry was responsible for 1,715 million tons of CO_2 being released into the atmosphere (Wicker, 2020) regardless of the scrutiny on the plethora of statistics, the bottom line is that the fashion and textile industry needs to make changes and improve its impact on the environment and society.

The Transitions 2: Material Revolution conference

The Transitions 2: Material Revolution conference held in April 2018 at The University of Huddersfield discussed the circular economy in the textile industry, and the steps being made by the industry to work towards 'Future fit' businesses. Outerwear brand Paramo contributed to this conference with a talk by Ester Inwood Young titled '2020 Vision - Paramo's Journey towards Circularity' explaining how they continue to work towards improving the supply chain. Ester Inwood Young is a designer for Paramo who specialises in materials and colour trend development. She spoke about Paramo's ethics and the ways in which they contribute to the circular economy. For example, Paramo offers a lifetime guarantee and a repair service for all its items, as well as a recycling scheme for old garments. Paramo works on a 'cradle to cradle' approach, working towards a closed loop recycling process. Old garments that are recycled by customers can be repaired and renewed for new customers or collected for chemical recycling to create new raw polyester monomers. Paramo garments are made in an ethical factory in Columbia, which helps women at risk learn how to sew (Inwood Young, 2018).

In contrast to the ideas of garment longevity, Fashion Designer Aniela Hoitink explored the opposite in her talk titled 'Why do we still make clothes that last for 40 years if we only wear them one or two years max?'. Hoitink explained that she thinks it is easier to change the materials and production techniques used in garment construction (which is a difficult task in itself) rather than trying to alter consumer attitudes towards clothing. Hoitink is using bio technologies to create MycoTEX, a sustainable fabric made from mycelium, the roots of

mushrooms. MycoTEX fabric makes garments fully biodegradable, and can compost in six months (Hoitink, 2018).

Catherine Counsell, the design and development manager at Camira Fabrics delivered an interesting talk titled 'Making a Material Difference', which explained the different ways that Camira have worked towards a more circular economy by developing fabrics from sustainable materials. For example, Camira have a range of fabrics that are blended with virgin wool like hemp, which comes from a UK hemp farm and stinging nettles which meets flammability requirements without added chemical finishing.

2.2.3 – Ethical considerations in relation to raw material

On the subject of textile fibres, there is debate about which are worse for the environment . An important point to make here is that no fibre is perfect, in that there are environmental impact considerations for each. For instance:

The synthetic fibre polyester, which is usually derived from petroleum, and the extraction process being rigorous and damaging to the environment (Hodakel, 2019). Celulose fibres, such as Viscose, are a manmade natural fibres that come from wood pulp. This again has quite a rigorous process which you could say almost cancels out that fact that its natural (MasterClass, 2020). Wool isn't so innocent either, the de-greasing process is a lengthy one and uses a lot of detergent and water (Hodakel, 2019). There is also much press attention around animal welfare of the sheep, and mixed opinions of the use of mulesing. Mulesing is a procedure carried out by farmers to remove strips of wool baring skin around the buttocks of sheep to prevent flystrike, a parasitic infection (RSPCA, 2018)**.** Cotton would seem to be a lovely, natural choice of fibre however these fluffy little balls are the cause of some of the most hideous examples of unethical practice. For example, Uzbekistan cotton is referred to as 'White Gold' cotton due to the absence of machinery in the picking process. The cotton bolls are picked by the hands of children, who are forced into working on farms at a certain age. The children are shipped out to the farms by the government to pick cotton over a 2 to 3month period instead of attending school. These children are subjected to poor living conditions, punishment if daily targets are not met and even sexual abuse (Siegle, 2011).

A selection of states in India that are referred to as 'the cotton bowl' produce the 2nd highest amount of cotton in the world (Wright, 2020). Hidden underneath the latter statistic is the horrifying suicide rates in Indian farmers in these regions, which has been informally renamed 'The Suicide Belt'. According to the National Crime Bureau of India, there was shy

of 200,000 suicides on Indian farms between 1997 and 2008. It was reported that in 2008 alone, there was a minimum of 16,196 farmer suicides in India, and although not all of these reported suicides can be directly attributed to cotton, nearly 70% of the suicides took place in the cotton bowl. Almost every 30 minutes an Indian farmer commits suicide (Siegle, 2011). The reason behind these sickening statistics lie pesticides; these companies drive the farmers into debt, they also own the companies that sell the seeds, creating a vicious circle for cotton farmers (Morgan et al, 2015). Literature on the high rates of male suicide in India fall into the category of economics and sociology, and the increase in cotton farmer suicide is discussed in relation to genetically modified crops driving the farmers into debt. However, as an example 60% of women's clothing contains cotton fibres and 40% of women's clothing is made from 100% cotton (Howell, 2019). It is clear from this small cross section of the fashion and clothing industry that cotton is the dominating fibre used to produce garments. Through personal experience within the industry, the researcher knows first-hand that the cost of clothing is constantly being driven down, therefore the cost of raw materials is being driven down simultaneously. Clearly fashion designers / manufacturers need to think every carefully about how to work with fabric from a sustainable point of view and to work with a transparent supply chain. For example, sustainable brand Izzy Lane has a farm of not for slaughter sheep that were saved from slaughter by being bought from markets which produce wool for the brand. The sheep live life out on a farm in the Yorkshire Dales, and the wool is processed in the UK keeping the supply chain transparent (Lane, 2018).

2.2.4 – Ethical issues relating to garment manufacturing

With the purpose of this research in mind, a designer may need to outsource their production. It is essential in any ethical clothing business that the production is transparent, and in mass manufacturing this is on the manufacturer themselves to be transparent, to help designers operate in the most ethical way possible.

From the researcher's personal experience within in the fashion industry, factories often use 'Sister Factories' to outsource production, these factories are owned by the same person, however these issues are not widely reported on in the media or in literature to give researchers direct access to this information. Fashion companies and suppliers confidently place orders with an audited and approved factory, who then outsource the production to a 'sister factory' that produced the garments cheaper. These factories may not necessarily be working to ethical trading standards and health and safety guidelines, and without transparency in the supply chain and, or workplace, it would be difficult for designer-

entrepreneurs to know this. If suppliers do not know that a factory is outsourcing its work and keeping this information from fashion companies, there is little that can be done to stop the factory owners outsourcing. UK based suppliers working with factories overseas do not have a lot of presence in the factories to ensure they are being compliant. This allows such factories to move production into other units unknowingly to others. An insightful documentary, 'Fashion Factories Undercover' (2013) filmed undercover footage in a factory in Bangladesh producing products for household named brands. The footage shows the garment workers being verbally and physically abused, with threats of violence for non-compliance, working illegal hours to get orders finished, amongst other unbelievable human rights breeches ('Fashion Factories Undercover (Investigative Documentary) | Real Stories', 2016).

The book, 'To die for: is fashion wearing out the world' written by Lucy Siegle, investigates the suffering caused to humans in the garment industry. Siegle (2011) speaks first-hand to female garment workers in Cambodia who give accounts of long working hours, poor conditions and verbal abuse from supervisors and managers. Siegle is also named as a producer for the Netflix *docufilm* 'True Cost' (2015) which investigates a range of issues in the fast fashion supply chain, with interviews and undercover footage of garment workers in Bangladesh. The *docufilm* also looks into the effects of pesticides on cotton crops; footage shows how the pesticides effect the environment, and also the effect of the chemicals on the human workers, the inhabitants of the local area and their children. The excessive use of pesticides over the years has caused long-term health problems for workers on the farms, and also caused birth defects in their children (Morgan et al, 2015).

Manufacturing in the UK isn't always above board either, with factories in Leicester being regularly outed for paying below minimum wage amongst other human rights breeches. Documentaries by Panorama on the subject have since been removed from the internet which exposed large retailers on their use of these factories. Most recently, during the Covid-19 pandemic, Large online retailer Boohoo Group made headlines and are set to face a modern slavery investigation when they were exposed for being linked to garment workers in Leicester who were being paid as little at £3.50 per hour, not to mention the risk the workers were put under of contracting the deadly virus whilst they were still being made to work throughout the national lockdown in spring 2020 (Duncan, 2020). Despite Boohoos claims to have a 'zero-tolerance' approach and a 'strict code of conduct' when it comes to modern slavery (Duncan, 2020), these same stories rear their heads time and time again.

2.2.5 Human right promotion in the supply chain

Following on from sections 2.2.3 and 2.2.4, it is essential that human rights for those working within the garment supply chain need protecting. The researcher attended a conference at The University of Portsmouth titled 'Human Rights in the Fashion and Textiles Supply Chain' on the 20th April 2019, where one of the speakers was from 'The Karnataka Garment Workers Union' or KGWU, who works with garment workers and factories in Bangalore, India to improve working conditions. Sebastian, the representative from the union, spoke about the experiences of the garment workers they have worked with in the past, who can be subjected to verbal and physical abuse from their peers for speaking up about the poor working conditions and being in touch with a union. The KGWU are working tirelessly to improve working conditions for garment workers, as well as promoting fair pay and legal working hours.

The cost of a making and importing a T-shirt from overseas in comparison to a T-shirt made in the UK is discussed and illustrated in a blog by Kate Hills from 'Make It British' (2021). As seen in figure 2.1 a lot goes into the making of a T-shirt, not to mention the hidden costs of the development process etc. However, the illustration only scratches the surface on how a T-shirt is costed. For example, if a T-shirt is actually priced at £8, it is clear that compromises are made and corners are cut in order to keep costs so low, and this is often to the detriment of the workers within the supply chain.

COST BREAKDOWN OF A £25 T-SHIRT MADE IN THE FAR EAST WITH 60% SELL-THROUGH

Retailer Markdown £6.00

Retailer Margin £9.00

Brand Margin £3.00

Shipping & Duties £1.75

Agent Fee £1.00

Manufacturing Cost £4.25

FE PRICE LANDED £7.00

WHOLESALE PRICE £10.00

RETAIL PRICE £25
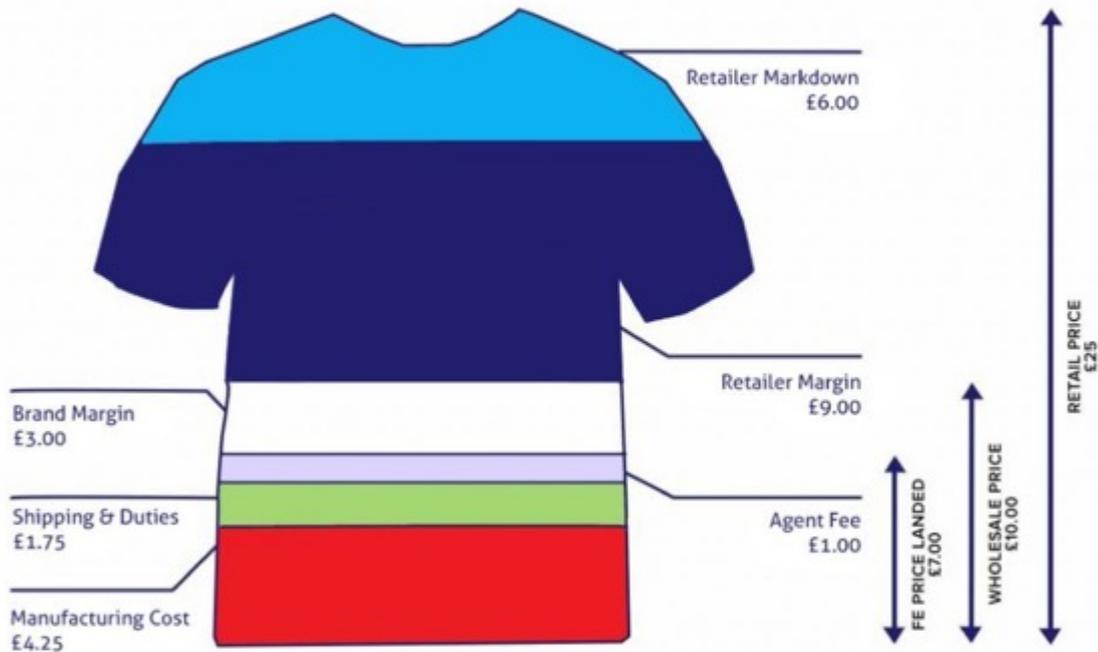
Based on prices for a plain white cotton T-shirt made in China

Make it British

Figure 2.1 cost breakdown of a £25 t-shirt made in the far east with a 60% sell through.
(Make It British)

The consumer is often fooled into thinking they are shopping ethically by buying a T-shirt with a label stating that it is 'responsibly sourced' and this, on the surface, seems to be adequate in satisfying the belief that they have shopped ethically. The reality is that it probably is not responsibly sourced and that somewhere in the supply chain it was not produced ethically. This is reflected in the recommended retail price and is something that the researcher has a personal experience of through working for a fashion clothing supplier in the past. The issues in the fashion industry run far deeper.

2.2.6 - Sustainability as a marketing tool

The sad reality is that large brands appear to use sustainability as a marketing tool (figure 2.2), often referred to as 'Green washing' (Kenton, 2021). In a talk given at The University of Huddersfield titled 'The true cost of fashion', a presenter deliberated on Cotton and the circular economy of cotton garments. A poster was used as part of the presentation that was created by Sainsbury's. The poster (figure 2.3) explained the end of life for clothing encouraging the consumer to donate to charity. This retailer encourages people to buy clothes with their shopping. The poster is being used by them to tell the customer how to dispose of their unwanted garments 'responsibly' to make way for new ones. This may be considered as an example of how brands use sustainability for marketing purposes, as they are most likely to be more interested in more sales than on how consumers dispose of their previous purchases but look like they care, given that Sainsbury's informs it customers on how to donate unwanted clothing by coming into store to do so. The reality of donating clothing to charity is that many of the garments are not deemed as 'resalable' therefore the path they take is a different one. The garments that are donated and are not saleable are sold to textile merchants who grade the unwanted clothing which is then sold on for profit (Brooks, 2015).

Figure 2.2 Point of sale in store marketing the use of sustainable cotton on clothes in Primark UK (Author's photograph)

Figure 2.3 Poster for donating and recycling clothes. (Sainsburys)

From 2019, M&S have claimed that all cotton garments they sell are sustainably sourced (Marks and Spencer, 2019), and H&M have a 'conscious' range, with garments needing to be made from at least 50% sustainable materials in order to qualify (H&M, 2021). As found

in the consumer research survey within this research (discussed in section 6), some consumers are happy to pay a little bit more for a T-shirt if it is going to help save the planet, but it still has to be relatively affordable. Primark are putting the Okeo-tex certification (figure 2.4) on their products and claims to use recycled materials (figure 2.5), sustainable viscose (figure 2.6) and organic cotton (figure 2.7), to show the customer that they *must* be thinking about the environment. Although the act of being conscious and buying a product that is labelled 'responsibly sourced' over a cheaper garment is beneficial to the beginning of consumer education in the subject of sustainability and ethics in the garment industry, this is only low-level awareness. It can be argued that these point-of-sale tactics are only there to ease the customers' conscience when buying clothing and / or to make the clothing brand appear to be more caring. for a low cost and are actually an empty promise. In reality, general consumers are unlikely to truly understand the supply chain and the underpinning issues that are explored in this project.

Figure 2.4 Okeo-tex certification on swing tags in Primark UK (Author's photograph)

Figure 2.5 Recycled materials claim swing tags in Primark UK (Author's photograph)

Figure 2.6 Sustainable viscose claim swing tags in Primark UK (Author's photograph)

Figure 2.7 Organic cotton claim swing tags in Primark UK (Author's photograph)

The consumer is being led to believe they are making a change by responding to topical issues brought to their attention in TV documentaries, such as David Attenbourgh's Blue Planet (2017) that realised awareness of issues with plastic in the oceans affecting wildlife. This did have impact and some consumer desired to reduce their plastic usage.

2.3 Fast fashion

Cline (2013) outlines the devastating effects cheap fashion has on the planet, as well as the people who suffer in the process; and explores the decline of American garment manufacture, the transition into clothing manufacture overseas and the effect this has had on unemployment in America. This book examined the changes in the way people in America shop for clothing since the early 1900's and the shift in the set-up of stores and brands. Cline explains a timeline outlining the shifts in attitude towards clothing over the years, and how this has led us to the present day. Briefly, clothing was still a prized possession in the early 1900's, not to mention expensive. This meant that people made their own clothes or if they had enough money would pay a seamstress to make them. As ready to wear clothing became available in department stores, its popularity grew in the middle of the twentieth century. However, Cline also noted that the popularity of department stores began to decline, as shopping malls boomed, and the rise of discount clothing shops were embraced by the American consumer .

All of the above points from Cline's book, are also true of the UK and much of Europe, the decline in UK department stores seeing some of the UKs much loved department stores struggling to stay open on the high-street and compete with online only fast fashion retailers (Thomas, 2018). Furthermore, when the covid-19 pandemic closed the high-street for several national lockdowns, this was more than many of the larger retailers could take, seeing the collapse of Debenhams and Arcadia group (Nelson & Paton, 2020), as well as John Lewis announcing several store closures (BBC News, 2021).

In New York, in as early as the 1900's, the garment industry was one of the largest employers, but once clothing manufacture moved offshore, American manufacture declined as the factories could not compare to the prices being offered in the Far East. American garment workers were subject to slave labour, as early as the 1930's and 1940's, as factories tried to keep costs low to get the business. This is again true of the UK with a decline in the use of British manufacturing and a shift into offshore manufacturing (Strachan, 2021). Labour costs contribute to a large part of a garment's overall costs; in countries where labour costs are lower, this means the overall costs of a garment can be reduced

significantly. Fast fashion brands are leading the way in engaging with unethical practices when focusing on profit and driving sales with low retail prices. This is a practice that should not be adopted by transparent business owners, as sustainability and ethics should be at the core of their values for a profitable business, not profit per se.

2.3.1 The fashion influencers

"Nobody should die for fashion" and other impacting phrases are seen on social media a lot, it can be argued though that many do not understand the true meaning of the phrases and its origins. The environmental issues caused by the fashion industry were highlighted in the documentary 'Fashions Dirty Secrets' by Stacey Dooley, that aired on BBC 3 on 10th December 2018 and the consumer often reports that they cannot afford to buy expensive clothes, so they have 'no choice' but to shop at low- cost fast fashion outlets.

Following on from the above, advancements in social media mean there has been a rise in the number of people who blog and vlog about fashionable products. These people have become minor celebrities, having a large following on their social media platforms. Through the researcher's personal experience within the fashion industry, it is known that these people are used by brands as a marketing tool to promote their products and expand their reach to a wider audience, this encourages customers to buy more than needed. It is common for influencers to show their 'haul' from a recent shopping trip, as well as being paid to post certain items, such influencers work as affiliates to certain brands and accept gifted items in the hope of a surge in sales for the gifted product. This activity promotes a 'more is more' attitude, with influencers having an endless stream of garments to promote which may not be worn again. There are influencers working against this sort of problem, promoting ethical living and zero waste products. For example, 'Ethically Kate' is a New Zealand based blogger who promotes her lifestyle choices working with ethical brands including clothing, cosmetics and household products (Hall, 2018). UK Based blogger Ruth MacGilp works with sustainable brands and campaigns for change in the fashion industry (MacGilp, 2021). Also using the power of influencers on social media who blog about clothing 'hauls' to sell an endless stream of product, encourages consumers to focus on the low recommended retail price of the garment, triggering impulse buying in mass (Dooley, 2018). Many bloggers are working on videos showing 'how to wear' a capsule of garments in lots of different ways, which is a start to reducing the consumption of fashion but is not enough to stop the unethical manufacture of high-street clothing. While it is important to acknowledge the role that the media plays in the fast fashion phenomenon, for the purpose

of this project the consumers of fast fashion hold perhaps more importance as they are the typical consumers that the designer-entrepreneur's business would be targeting.

2.4. Consumer awareness

Referring back to section 2.2, It is made clear that the UK consumer cares about a range of ethical issues that have made the headlines in recent years. The number of people following a vegan diet in Britain has risen by 40% in 2020 (Chiorando, 2021), and the impact of veganism on the environment is huge as livestock are the biggest contributors to methane gas in the atmosphere (Spiro, 2020). The reduction in single use plastics may be considered to be at the forefront of the sustainable movement at the moment with companies big and small banning the use of plastic items, such as straws and single use carrier bags, and the increase in 'plastic free' grocery stores. There is also literature surrounding the issue with laundering clothes, and the micro plastics that are released into the water and ending up in the world's oceans (De Falco, *et al*, 2019).

Transparency is of great concern in general terms, as well as in relation to fashion. For example, the transparency of what goes into our food has also changed over the years, and after the British public were shocked to find out that much-loved family favourite ready meals contained horse meat (Simpson, 2013), the demand to know what is in their food has become even bigger. Similarly, transparency in the fashion industry is being demanded with the help of organisations such as 'Fashion Revolution' and 'Dirty Fashion' and more news coverage on modern slavery means the consumer is starting to have more excess to better education in relation to the garment supply chain.

Attempts have been made to make consumers aware of certain issues in relation to fast fashion, for example how many gallons of water it takes to make a pair of jeans, but other issues are not often brought to the public's attention. For example, as previously mentioned, how farmers commit suicide in India after being driven into debt by the low-cost of cotton (Plewis, 2014) and that children are forced to pick cotton in Uzbekistan by hand and are subject to poor living conditions and abuse (Morgan et al, 2015).

The consumer may often be fooled into thinking they are shopping ethically by buying a T-shirt with a label stating that it is 'responsibly sourced' and this, on the surface seems to be adequate in satisfying the belief that they have shopped ethically. However, the reality is that it probably is not responsibly sourced and that somewhere in the supply chain it was not produced ethically.

Education for the consumer on the effects of fast fashion is taking place on social media; @fash_rev on Instagram was launched in the wake of the collapse of the Rana Plaza, a garment factory in Bangladesh. The campaign #whomademyclothes encourages the consumer to ask its favourite brands to show them who made their clothes and brands have responded with an overwhelming transparency (Fashion Revolution, 2021).

In Winter 2017, the cosmetics retailer LUSH launched a campaign alongside Humane Society Internatill (HSI) asking the consumer the question 'How faux is your fur?' exposing how some clothing and accessories claiming to use fake fur are actually made from real fur. HSI carried out extensive research revealing that products as cheap as £3.50 were available to buy in the UK that used real fur. It seems that the consumer presumes that the cost of fur is too high to be on such cheap products, however overseas fur farming means that real fur can often be cheaper than fake fur. The campaign from HSI and LUSH aims to educate the consumer on how to recognise the differences in faux and real fur, and who to speak to if they suspect that they have been miss-sold a product as faux (Dancey-Downs, 2017).

Cline also has met with different bloggers and examines their shopping habits and opinions of fashion clothing from the consumers' point of view. One blogger judges the quality of garments by how much it costs and how many washes she gets out of it, with no consideration into its country of origin, fabric fibre composition or construction of the garment. Cline (2013) is quoted as saying,

> "fashion largely deserves its bad reputation. It's now a powerful, trillion-dollar global industry that has too much influence over our pocketbooks, self-image and storage spaces. It behaves with embarrassingly little regard for the environment or human rights.' (p.6).

2.4.1 Consumer behaviour

A paper by Bin Shen et al. (2012) called 'The impact of ethical fashion on consumer purchase behavior' collected data in Hong Kong that confirms the ethical responsibilities of a fashion company does influence the consumer. Further investigation contradicts these findings in a cross section of the UK and German consumer (Catrin & Joergens, 2006).

In a paper titled *Sustainable Fashion: Consumer Awareness and Education* by Muthu (2018) the author explores consumer education in relation to sustainability as a concept in garment manufacturing. A survey was carried out as part of the study, and the results were analysed and found that consumers were aware of the environmental implication that garment

manufacturing has, and that the lifestyles of the consumers was the major influencing factor in their purchasing habits.

Furthermore, in 2018, Fashion Revolution commissioned a survey of 5000 people aged 16-75 in the five largest European markets, which included the UK, Germany, Spain, Italy and France. The survey was conducted to find out how supply chain sustainability and transparency effected their purchasing behaviours. The survey found that one in three participants considered the social and environmental impacts when buying clothes, but these people would also like to know more about who make their clothes, and where they are made. Of the participants, 72% agreed that fashion brands should be doing more to improve the lives of the women who make their products.

Another survey was conducted in 2018, this time by Dirty Fashion. It was commissioned by the Changing Markets Foundation to survey 16-75 year-olds across 7 countries, including the UK, US, France, Germany, Italy, Poland and Spain. The survey was carried out online, and there was a total of 7,701 interviews conducted, with over 1,000 interviews per selected country. Just under half of the people surveyed were concerned about the environmental impact of their purchasing habits, and two in five people surveyed had taken some-kind of action towards sustainability in the last 12 months.

It is clear from the research that consumer attitudes are shifting, but there is still a long way to go. This study furthers the research in this area by taking a selective cross section of the UK and questioning the purchasing behaviour of the consumer and investigate their opinions on ethical considerations of products in the fashion clothing industry.

2.5 Pattern cutting as an ethical and sustainable fashion design tool

Literature began to emerge in the eighteenth century that informed on dress, for example Josephs Strutts' 'Complete view of manners, customs, arms, habits, etc., of the inhabitants of England' (Riello & McNeil, 2010, p. 15) and in the twentieth century more specialist books were written with regard to the history of dress.

In history, garments were used for practical reasons, to cover bodies and protect them from injury (Schofield, 1974). As time moved on, clothing was used to define gender and class and convey a message of status to others (Riello & McNeil, 2010).

There is plethora of literature that explores pattern cutting, focusing on explaining the techniques both in the past and in today's manufacturing processes. This section focuses only on the techniques that informed the primary research method to explore more creative

design solutions for controlling the waste that is normally produced from flat pattern cutting processes.

Pattern cutter and designer Julian Roberts developed a pattern cutting technique called 'subtraction cutting' that explores the space around the body, using patterns for design purposes rather than cutting patterns for design. He published a free, downloadable publication called 'free cutting' which encourages the pattern cutter to "trip up and make mistakes". The idea of subtraction cutting is that the garment is constructed by taking away fabric in order to create a space for the body to occupy whilst also affecting how to fabric drapes around the body (Roberts, 2013). These ideas put forward by Roberts are considered in section 4.1 of the primary research in this study when working through certain draping techniques in the research exercises, specifically exercise 2 (section 4.1.2).

2.5.1 Zero waste pattern cutting

Zero waste pattern cutting is a critical influence on the primary research conducted in this research. According to Rissanen & McQuillan (2016), zero waste pattern cutting focuses on cutting down pre-consumer textile waste, which is created throughout the manufacturing process. It includes yarn, fabric and defected garments . The fabric waste is reduced by working with fashion designs that waste no fabric, by integrating pattern cutting techniques into the design process . Rissanen and McQuillan's outline shows historical examples of garments from different cultures and how the ideas of zero waste or 'less waste' are used throughout the years and how these ancient ideas have been applied to modern day designs. For example, the ancient Japanese Kimono is constructed from five narrow lengths of cloth that are woven to the required length. The fifth length of fabric is split into four pieces. No fabric is wasted and excess fabric in the front neckline is pleated to add to the garment's structure rather than cutting it away and discarding it . The minimal waste element to these historical examples was not driven by design, but by scarce raw materials and the slow processes of making yarn and fabric (Rissanen & McQuillan, 2016).

The idea of fabric and other components being precious and being treated with respect could not be further away from the attitude towards fabric and clothing in today's society.

Liu was a pioneer in zero waste design and zero waste pattern cutting, launching a zero-waste design label and collection in 2008. Liu explains how zero waste design is not about new, innovative materials and technologies, it's about a "new way of thinking—a philosophy that forces you to challenge existing techniques and become a smarter designer" . Liu's

research continues into a new pattern cutting technique called Non-Euclidean Patternmaking, this revolutionary form of pattern making which is based on "mathematics of curved Non-Euclidean geometry" (Liu, 2016).

Zero waste pattern cutting techniques have been investigated to be utilised in the fashion industry, transforming the design and make process. For example, James, Roberts and Kuznia's (2016) article discussed applying zero waste pattern cutting to the design process for mass market, the fabric choice was pushed to the beginning of the chain as this affected the parameters in which the pattern cutter could work. This shake up to the chain meant that the process was no longer linear, the fabric quality and width took priority over trend and the relationship between design and pattern became stronger due to the back and forth of both elements during development, encouraging the designer and pattern cutter to work closer together (Roberts & Kuznia, 2016). This concept is viewed to also be a critical aspect of ethical fashion as the designer can take immediate control over the fibres and fabrics, they incorporate into their design work in a much more deliberate fashion. Of course, transparency, as previously discussed, would make this process far easier for the designer-entrepreneur to operate a more truly ethical fashion business/brand. These concepts of zero waste pattern cutting that are researched in this study are documented and presented in video format with audio commentary.

In a paper named Precious cut: exploring creative pattern cutting and draping for zero-waste design, Elahe Saeidi and Virginia Schreffler Wimberley experiment with the application of Transformational Reconstruction within a zero-waste framework. Transformational Reconstruction (TR) is a pioneering pattern cutting technique by Shingo Sato, who is a Japanese designer; the technique requires the pattern cutter to manipulate the pattern pieces in 3D form, rather than traditional 2D. The pattern cutting is integrated firmly into the design process, by working design lines into an already fitted on-the-body toile (Saeidi & Wimberley, 2017, p. 245). Saeidi & Wimberley (2017) found that despite the belief that zero waste design results in bulky, unusually shaped silhouettes, they were able to achieve a close-fitting shape whilst eliminating fabric waste.

2.5.2 The slow fashion movement and transparent clothing brands

The slow fashion movement is ever growing, with small boutique brands popping up all over the word trying to put a stop to the fast fashion monster. The idea of slow fashion is that garments are designed with longevity in mind; garments that are to be well-made and responsibly sourced, with the consumer making to commitment when purchasing to love,

care and wear the garments for years to come (Pookulangara & Shephard, 2013, p. 205). An excellent example that marries this section with section 2.5.1 is the New York-based fashion designer Zero Waste Daniel, who creates gender-less garments and accessories from pre-consumer textile waste sourced from the garment factories of New York City, aiming to send absolutely nothing to landfill (Zero Waste Daniel, 2021.).

UK based brand Lucy & Yak have gone from strength-to-strength since launching in 2017, working to be as transparent as possible with their supply chain, sourcing responsible materials and also proudly being a living wage employer (Lucy & Yak, 2021.). Starting out by selling corduroy dungarees, the brand now has an ever-expanding offering of brightly coloured, often genderless garments that the purchaser is encouraged to love and wear time and time again.

2.6 Summary

In summary, the key points made within the literature review come full circle, starting with the make do and mend campaign from World War II, and ending with the slow fashion movement that encourages its customers to adopt a similar principle of looking after and caring for their clothes. With the emerging environmental issues across the globe, teamed with the fashion specific human rights issues, more and more consumers are being made aware and seeing the damage being done by the fast fashion industry. The steady uncovering of slave labour in the modern day is becoming more apparent to the UK consumer and the consumer continues to smash down the walls on greenwashing by huge, corporate fashion retailers and start to put an end to over-consumption. The consumer is continuing to be educated, making small changes to their lifestyles and taking notice of what needs to be done to save the planet. It is interesting to see emerging literature from professionals in the fashion industry working to challenge the traditional concepts of design, particularly pattern cutting, to keep pushing the boundaries and tackle the issues in the industry from the inside out. Finally, there are now many pioneering brands who are making u-turns in the fashion world, with many more who were not examined in the literature review, who base their practices on sustainability and transparency.

Chapter 3 – Methodology

Methodological approaches and justification

Autoethnography was also another research method adopted, this involved the researcher keeping regular reflective blogs on relevant articles as well as reflections on practical tasks that the researcher has engaged in, in relation to pattern cutting. The research outlines three mini case studies undertaken on a range of ethically transparent clothing brands to see how they operate, as well as exploring how each part of their supply chain effects the ethical outcome of a final garment. Finally, a consumer survey was conducted to gather data on consumers' attitude towards fashion and their buying habits.

3.1 Autoethnography and action research

Autoethnography is a qualitative research method in which the researcher uses self-reflection and personal experience to record the findings throughout the research they are conducting (Adams et al., 2014). It is a research method that allows for the exploration of personal experience. Action research was also applied. Action research is a research process that is interactive and involves problem-solving actions (Reason & Bradbury, 2001).

The research approaches were chosen because the methods were appropriate for the research topic and best suited the way the researcher engages with her practice. In this case, it allowed for critical reflection while working 'hands on' directly with the materials used. Furthermore, researching by experience allows for the refining of the process and is 'tried and tested' rather than being theoretical (Adams et al., 2014). Trial and error play a substantial role in this research method and making mistakes in order to learn from them was an essential part of the creative pattern cutting and design processes employed.

This approach was applied as the researcher attended and completed the activities in a series of pattern cutting workshops that explored different creative pattern cutting techniques. To apply the autoethnographic approach, blogs were written (Appendix 2) about the experience, focussing on the techniques applied and the researcher's thoughts and feelings about the process included.

The combination of this way of working allowed for an understanding of the different techniques and how they can be merged together, with the main aim of reducing fabric waste whilst designing through draping. Furthermore, as part of the autoethnographic approach, the researcher filmed herself working through the different tasks which were later edited (Appendix 1A), and the videos were used as evidence of the practical research. Moreover,

they were used as an important tool for reflection to address the questions which were raised as part of the research. The researcher also reflected upon each workshop / technique and recorded her thoughts and feelings about each experience and through reflection identified how ideas could be developed. Appendix 2 outlines the researcher's explanation for how she researched and recorded the findings through a blog-style report and discussion.

Throughout the process the researcher considered and reflected upon the ethical issues that are present within mass garment manufacture.

3.2 Consumer survey

It was decided that a survey would be appropriate to explore consumer behaviour when purchasing fashion garments. The main focus of this type of quantitative research is the development and answering of questions in a natural setting. However, question 18 invited qualitative responses. Qualitative research examines the data for phenomenon after the data is analysed and grouped together (Flynn & Foster, 2009). A survey allows for the collection of relevant data and is relatively cheap and quick to administer.

The purpose of this survey was to discover how people make shopping decisions when wanting to buy a new piece of clothing, and if the data could be cross referenced with their personal factor groups to determine any patterns of buying behaviour. The survey was also conducted to reveal how people would factor in ethical and sustainable factors into the purchase decisions if at all, and if further education into these factors would have an effect on their consumer habits.

3.2.1 Recruitment and sampling

The survey was posted on LinkedIn, it was also given to personal acquaintances of the researcher and it was emailed to all Postgraduate Research Art and Design students in the School of Art, Design and Architecture, at The University of Huddersfield. A total of thirty-seven responses were gathered. The sampling method was random sampling because the researcher wanted to include as many people as possible. The inclusion of a person when using random sampling is entirely by chance, and random sampling also ensures that there is no bias influence on the sample in anyway by the researcher themselves (Denscombe, 2014). The sample included both male and female respondents aged over 18 and for those that were employed information on earnings was also obtained (Appendix 3A).

3.2.2 Method

The survey was devised and had eighteen questions (Appendix 3A) using the survey tool Qualtrics. A briefing statement (Appendix 3B/C) accompanied the questionnaire in the email that was sent to all potential participants. The majority of the questions were multiple choice making the survey quick and easy to complete and respondents were provided opportunities to make additional comments at the end (Appendix 3A). For example, they were asked to comment on their thoughts and opinions when purchasing a new item of clothing. There were also scenario-based questions which were included to further explore the thoughts of the participants when deciding on making a purchase of an item of clothing. The respondents were asked about how ethical and sustainable factors in relation to garment manufacture may affect their purchase decision. The survey was short in the hope that once it was distributed more people would be prepared to respond, therefore collecting a relatively large cross section of data. A pilot survey was completed prior to the final survey, and the questions revised based on feedback.

3.2.3 Ethical considerations

The survey was anonymised in order to protect participant confidentiality. The participants were briefed on the research prior to engaging and completion of the survey indicated their consent to participate (Appendix 3). An ethical approval form was completed prior to sending out the survey (Appendix 4). Completion of the survey indicated the participants' willingness to consent. They were informed that they had the right to withdraw at any time and that the research data would not be passed to any third parties.

3.2.4 Data collection and analysis

The data was collated, analysed and key themes identified. The themes identified relate to consumers' shopping habits in relation to the decision-making process. The sub-themes focus on purchasing frequency, the chosen retailers where items are bought from and reasons for the decisions made, such as price and ethical consideration. The findings of the survey are outlined in the findings section (section 6).

3.2.5 Limitations

While the sample size was small and would have been beneficial to have obtained more responses, generally response rates are low for questionnaire surveys. More importantly, the quality of the responses were still of extreme benefit to the research. While it would also have been possible to include more questions, the main topics for the enquiry were

covered concisely yielding a sufficient number of responses that may not have been possible if the questionnaire required more of a respondent's time to complete.

3.3 Mini case studies

A case study is a research method that allows researchers to examine a person, a group of people, an organisation, or a concept in greater depth (Ridder, 2017). The findings from three mini case studies are outlined in section 5. In each case, the company's representatives were approached in person at a wholesale event titled *Pure London* held in London in February 2019; they were asked about their ethical and sustainable business practices. They were briefed on the research before agreeing to participate and the company representatives who agreed to answer the short questionnaire (Appendix 5A/B/C/D). They were kept anonymous as was the name of the company and for the purposes of this research the companies were referred to as case study A, B and C, the analysis can be found in chapter 5. Each company had declared that they market their business as transparent.

A questionnaire (Appendix 5A) was devised and the representatives of the company responded to the questions and consent was gained beforehand (Appendix 5B/C/D). Furthermore, emails were sent to other companies, on the 'off-chance', who engage in ethical and sustainable practices inviting them to answer a short survey, but none responded which was not entirely unexpected.

3.4 Summary

This section set out the methods used within the research and the following section sets out of the findings of the research and the discussion.

Chapter 4 – Research findings and analysis for objective one

The researcher attended a module on creative pattern cutting for a taught MA in the School of Art, Design & Architecture, University of Huddersfield, in order to explore the sustainability concept further as an ethical designer. During the module the researcher undertook a number of exercises that were directed by the tutor. This gave the researcher some boundaries in which to start to explore different techniques, which would then feed into the design process of the final garment. Each exercise was set out by the tutor, and then was discussed and evaluated by the researcher in several blogs (Appendix 2). The key themes were identified in each task and these themes and other outcomes influenced the approach used for the next task. Many of these tasks and techniques are not widely available in literature, and therefore the value of these exercises cannot be underestimated. This benefitted the researcher as a variety of techniques were demonstrated prior to each task being undertaken which allowed the researcher to approach each task with confidence. A video recording was made to record the exercises which accompanies this thesis (Appendix 1A). A voice-over was added to the recording at a later date to narrate the processes of the pattern cutting exercised and the other subjects related to this research. The stills in this chapter are taken from by the researcher during the exercises.

4.1 – Pattern cutting research

The idea behind working on the pattern cutting exercises was to explore creative and analytical thinking whilst practising the craft of pattern drafting. This experimental work was initiated prior to the consumer survey and case study work. Working through these exercises led to create questions throughout the process, which would then feed into the next project and develop even further.

4.1.1 Exercise 1 – Draping the Dior jacket

This was the first exercise during the direct practical work to model a version of a Dior jacket on the stand using fabric draping techniques, following design details from an image of the original jacket. The process of draping became very engaging and enjoyable as the researchers was able to explore the material and folds whilst modelling directly on the stand. This exploratory and questioning technique became extremely engaging and felt natural. Because of the researcher's pattern cutting and garment technology experience, a lot of time was spent visualising how to solve pattern and fit problems which has always been an integral aspect of the practice. This led to a process of applying this skill to the draping of the garment using the pictures for reference. It was found to be a highly beneficial tool to be

creative with, creating shapes directly to the fabric is a fun and engaging activity, with a love of being 'hands on' means really being able to focus without being distracted. The only grievance is that it is quite wasteful with regard to the fabric that is discarded when cutting away at the different pieces, especially for a novice (figure 4.1 A/B/C/D). With more practise and the development of draping skills there would be less fabric waste, the first and second attempts here did produce quite a bit of material wastage which goes against the project's concept and required further deliberation.
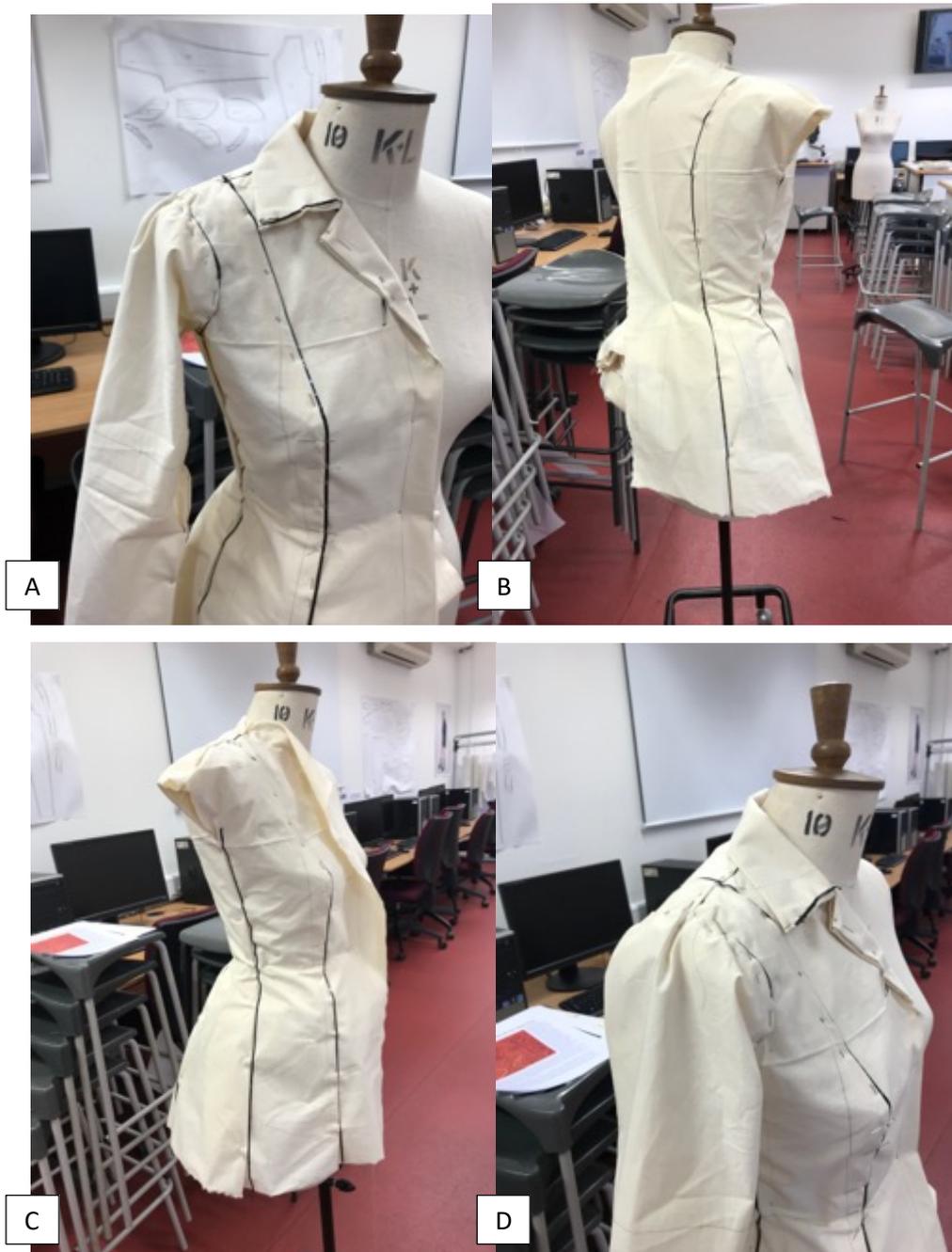
Figures 4.1 A/B/C/D showing the Dior jacket on the stand (Author's own)

During the draping exercise the research process began to reveal specific questions:

- 1. Was it possible to do this without creating so much waste?
- 2. And, at the same time, to not restrict the creative outcome of draping.?

The challenge was to still make a functional garment and be creative with the process whilst achieving this with minimal waste. Finding a middle ground was challenging, though of course it could be possible to find a way to recycle the waste that was created. The initial ideas for a final product actually involved slow fashion, creating a product with longevity and quality that is to be invested in, that can be easily adaptable and updatable to meet the needs of the consumer, so they can have up-to-date new garments. Achieving charisma and character in the garment from the design process is the aim rather than simplicity with no character i.e. plain and boring whilst also accomplishing a classic feel that appeals to a wider range of people rather than something that's a bit more 'out there' in terms of design.

4.1.2 Exercise 2 – Zero waste draping

The second exercise was to take a 1m length of calico, draw lines both straight and curved through the fabric to split it into 4/5/6 different shaped pieces. The challenge was to piece the different shapes together on the stand (figure 4.2 A/B/C/D), they could be pleated, tucked etc. but nothing could be cut away. The key is to explore the space around the body, rather than the body itself, this concept is discussed in section 2.5 of the literature review.

Figure 4.2 A/B/C/D showing the Zero Waste garment on the stand (Author's own)

Natural instinct would lead, wanting to fit everything close to the body however it was possible to ignore the mannequin's form and create a garment without making any waste. The purpose of the exercise was not to create a full garment, but to evoke design ideas whilst working on the form (dress-stand). This task was a new direction in the research, and

it was thoroughly enjoyed, working freely to create different shapes 'by accident' was inspiring. This exercise allowed the researcher to get lost in the work, creating shapes and experimenting with ideas, asking questions and developing the potential answers throughout these exercises (Appendix 2). The sample produced from this exercise provided inspirational shapes and ideas that were taken forward into the design of the final product.

4.1.3 Exercise 3 – draping a Dior jacket, with influence of conceptual art and zero waste in its design

The challenge was to take a subject from a list set by the tutor and then to research the subject and design a half toile jacket on the stand that incorporates the subject but is in keeping with the classic Dior jacket from exercise one.

First of all, it was important to review the half toile of the Dior jacket from exercise 1 and the zero-waste garment from exercise 2 together for initial inspiration. The Dior Jacket is a classic shape, it is exquisite, however this technique created a lot of waste whilst making the toile; then whilst reviewing more innovative shapes made on the stand for exercise 2, wasting no fabric at all, it was clear that there should be a middle ground that allows garments to have style, be exciting and fashionable without wasting so much fabric.

Following on from reviewing exercises 1 and 2, Pinterest was used to view images and collect them together as a starting point, and then words were brainstormed that related to conceptual art and the Dior jacket. This initial research showed that in many conceptual art pieces, there was a marrying of two or more 'things' - 'things' being different materials, subjects, craft techniques - that would seem like polar opposites that come together to create something thought-provoking and beautiful. What was seen when viewing the Dior jacket was how structured and fitted it was, and how it was tailored to the body and was very feminine. This sparked the idea to keep the feminine look of the jacket, so it fitted the body, nipped in at the waist with the volume at the bottom to accentuate the hips and incorporate a relaxed sports look to the jacket by dropping the shoulder and adding a hood, all whilst incorporating zero waste techniques (figure 4.3 A/B/C/D).

Figure 4.3 A/B/C/D showing the Dior jacket X conceptual art on the stand (Author's own)

The outcome of the jacket was very pleasing, even though a few small pieces had to be cut off in the draping process, most of the waste came from the hood due to its shape. The hood needs to be rounded to curve around the head. Trying to keep the waste to a minimum by adding folds/pleats to each side at the front edge to shape the opening but leaving the volume in the side of the hood worked out to be the best way to drape the hood. A sleeve

was also created that has an opening like a cape, so that fabric was not wasted trying to make a fitted sleeve, whilst also creating the relaxed sporty look that contrasts with the fitted bodice.

Starting at the centre front, the bodice was shaped by folding the darts in a similar position on the body to the original jacket and making the volume by stopping the darts at the waist. The front bodice was made from one piece of fabric and it was cut straight at the side seam. Moving around to the centre back, using the same folding of the darts to shape the back to create the back bodice; again, using one full piece for the back, but this time using the excess to create a cape style sleeve. The front and back at the side seam were attached together underneath the cape sleeve and an opening was cut for the arm to go through was cut. The hem of the cape sleeve was then levelled and the cut off pieces were used to construct the stand collar that the hood would be attached to. Working on the hood was quite hard without a head on the mannequin, so a full hood had to be made rather than a half hood to get the shape right. The next step required unpinning the toile after marking up all the darts and pleats etc., and then it was traced out on calico to make up the other side, this is where the most waste was created. Draping a hood over thin air was not very easy but knowing the basic pieces needed for a hood pattern definitely made it easier. It is clear how important both draping and flat cutting skills are when creative pattern cutting. It wouldn't have been achievable to create a wearable garment without knowing what each flat piece of that garment should look like, but it would not have been easy to create a pattern so quickly for this garment if it was being drafted flat.

The key to draping during this research is to be mindful of the waste that could be created and try to avoid waste by folding and tucking to create shape, and to think carefully about how it would be put together. For instance, the hood would be French seamed to reduce the need for it to be lined, it would be a good idea to either use scraps to create a facing for the hood opening or bind the raw edge. The excess fabric was used on the collar to fold over where the hood attaches to the neck, as if it was a grown-on binding.

The experiment was taken forward by taking the garment apart and laying it out flat to copy and make the other half of the toile (figure 4.4). This was to see how much fabric is wasted in the process, and also to see if it is possible to use the gaps in the lay plan for other pieces like binding, facings and other details. If the pattern cutting element of this research was to be taken even further, it would be exciting to experiment further with the hood, to see if the fabric waste can be reduced ideally to zero; Perhaps also to move away from the circular

shapes needed to fit around the contours of the head and work with an angular shape that can be pieced together to give a voluminous effect.

Figure 4.4 showing the Dior jacket X conceptual art pieces being laid out to cut the second half of the jacket. (Author's own)

When comparing the amount of fabric waste from the drape to the flat lay plan there is not much difference. The advantage of the flat lay plan over the drape is that smaller pieces can be laid together, meaning any waste is large enough to be used for other parts of the garment, like facings and binding, etc.

All in all, applying minimal waste whilst draping is translated into the flat lay plan, and where it may seem like there is more excess waste, in fact it is actually usable waste, whereas the waste from the drape is in smaller pieces and not always re-useable.

During this exercise there was a lot to think about in regard to the manufacturing process of this jacket and which techniques would be used to sew it together. It would be possible to french seam the hood and create a cut and sew channel along the front edge and insert a draw string or elastic to gather it together to give it a rounded shape. The cut and sew channel would have to be created from the excess fabric somehow, it may have to be in more than one piece to be able to utilise the waste. It is also an option to french seam some

other seams, for example the inside seams of the body of the garment if possible, but if not these seams could be bound. Using the cut off scrap from this drape it is possible to make facing pieces for the front arm openings of the cape sleeves from scrap and these would be turned through and mitred. It may be possible to make enough binding for some of the manufacture out of the scraps, but maybe not of the binding without cutting extra which would need to be avoided to keep the fabric used low. There is also the possibility that it needs to be bias binding, which when cut from self-fabric creates a lot of waste so that defeats the object of zero waste. Instead, a pre-made binding tape would be the answer if binding is required.

Draping is a great way to be creative, it is fun and allows the researcher to experiment with design and be technical at the same time. Problem solving is key and from a career perspective, finding the balance between being creative, whilst also having a strong set of technical skills is important in the fashion industry.

4.1.4 Exercise 4 – Delpozo Jacket

This task was set to explore the use of grain lines when draping on the stand, and how this effects the fall and fit of a garment.

This exercise was executed with the idea of using grain lines in mind, whilst also applying zero waste concepts to the task to keep it in line with the research. First of all, a single piece of fabric was used, cutting into it without removing excess fabric to place around the neck of the stand, and then moving the grain line around to get the right swing on the cape style sleeve, as seen on the image given to us for inspiration (figure 4.5). This experimentation mirrored the design features of the top of the jacket from exercise 3, whilst ensuring as little was cut away from the fabric as possible. The volume on the cape style sleeve was really nice and worked well with how the grain was directed. Some fabric had to be cut away to create the front neckline, but an attempt was made to create a front neck facing with the cut-offs to keep waste to a minimum (figure 4.6 A/B).

Figure 4.1.5 showing Delpozo jacket (Pinterest)

Figure 4.6 A/B showing the draped Delpozo style jacket on the stand. (Author's own)

This was more of a quick-fire challenge, an opportunity to be creative with a different technique rather than something to be fully immersed in like exercise 3, however it did show the importance of fabric direction when draping and how different styles can be achieved through this method.

4.1.5 Exercise 5 – Pattern cutting around a shape

This task was to pattern cut around a shape that was on the body. Starting with a triangular shape made from cardboard it was placed on the hip of the body of the stand to create a pocket like shape. The idea was to create a pattern around the shape, so it could be incorporated into the style lines of a garment. Starting with the first shape on the hip pocket fabric was used to mould around the shape, following the folds and corners of the shape. To enable the removal of the pattern, drawing along the contour lines of the shape roughly whilst on the body meant that when it was removed it was possible to use the pattern master to mark them up on the pattern. The pattern piece was then given a seam allowance and cut out of the fabric. The cardboard shape was removed from the stand and the fabric pattern piece put back on the body in the same place.

This created an interesting shape with the fabric as it was softer than the original cardboard shape and draped differently. It was very simple and gave a nice volume to the hips as the sides were folded into a gusset to give the pocket space (figure 4.7).

Figure 4.7 showing the first attempt of the shaping on the hip. (Author's own)

Using the same cardboard shape, it was placed at the centre back and a series of random triangle shapes from more cardboard (figure 4.8) were made and placed across the top back of the stand. This time paper was used to mould around the shape, cutting and taping the pieces of paper together until it covered the triangles completely (figure 4.9). The paper was also extended over the shoulder and around the arm holes in a way that when the paper pattern was removed the process of thinking about how the pattern would be made flat was questioned/deliberated, as it could be incorporated into the back piece of a garment.

Figure 4.8 showing the cardboard shaping on the back. (Author's own)

Figure 4.9 showing the cardboard shaping on the back covered in paper to create the pattern. (Author's own)

Figure 4.10 showing the paper pattern pieces once removed from the form. (Author's own)

Figure 4.11 showing the pattern pieces drawn onto the fabric with seam allowance.
(Author's own)

Triangles were used as they create volume and fit together nicely, creating different shapes easily. It was also a chance to experiment with triangles at this stage after the ideas raised from exercise 3 to create a zero-waste hood as part of the research.

However, when it came to the stage of cutting out the different pattern pieces to sew together to go over the shape the idea was flawed as the different pieces were not marked up with enough detail, and when sewing it together a piece was missed out.

The use of this from a design perspective hand in hand with zero waste is good when thinking about space around the body, rather than the body itself, however the introduction of intricate shapes can end up creating a lot of waste, so it needs to be thought about more carefully.

4.1.6 Exercise 6 – Minimal waste coat

This was the final exercise, pulling together all of the questions and answers from the previous exercises and creating a prototype for a potential product.

This exercise was started by draping the body and sleeve as experimentation for the final coat using minimal waste ideas. The starting shapes were interesting, the folding/darting

was marked up for when it is eventually laid flat to create the paper patterns. When starting with the collar, the stand was created by darting the shaping into the square, this can be seen through the original drape, paper pattern and the final prototype (figure 4.12).

Figure 4.12 original draped collar. (Author's own)

However, it was not unsuccessful, but upon reflection it was not an ideal way to work. The multiple darts are fiddly and the fall of the top collar was not as nice as it would be using a cut and sew collar pattern. After weighing up the minimal waste of the collar against the importance of the fit/shaping for the overall product, the decision was made to flat cut a traditional collar shape to match the pattern from the draped body of the coat as once the product is finished it needs to be of high quality as well as being as economical as possible.

Figure 4.13 A/B/C/D Minimal waste jacket, work in progress. (Author's own)

The draped pattern of the coat (figure 4.13 A/B/C/D) was removed from the mannequin (after making up the fold lines of the darts etc.) and any seams and shaping were pinned down. The trimming of the excess fabric was kept to a minimum whilst keeping the cloth patterns as close to the paper patterns as possible.

The paper patterns were drafted using the cloth patterns, ensuring all fold lines, darts, markings etc. were transferred. This was then an opportunity to refine any folds/darts that create the shaping and review the pattern flat with a tape measure to ensure it all would fit back together correctly. After tracing a working pattern, some time was spent laying out the pattern pieces to ensure as little fabric is wasted as possible. The second half of the garment was cut out using the paper pattern on fabric, to make a full garment prototype using the original draped fabric pattern as one half for a direct comparison. The drape transferred well to paper and then back to cloth to make the second half of the coat.

For the final product the exploration of how to reuse / recycle any cut-off fabric is essential and keeping cut-offs to a minimum where possible. It could be an option to look into different ways that pre-consumer textile waste is recycled and see if this is something that could be applied to the project. The jacket looks edgy in its design without being too complicated. The end-product needs to be as versatile as possible with the options of adding or removing certain style features to keep the jacket fresh and up to date.

4.1.7 Summary

If this section of the research was to be taken further and more in-depth, work would be done to refine the coat pattern further and include all trims etc. It would also be helpful to take the pattern digitally and work on Computer Aided Design [CAD] to research different lay plans to ensure the garment can be as economical on fabric waste as possible. Further experimentation would be conducted in the same way with some more design ideas, maybe working on a different product type than a coat, potentially expanding the range into a capsule collection. If the manufacture of the garments were to be outsourced, they would be produced in more of a batch production environment using a skilled seamstress, the patterns and all manufacturing instructions would be provided along with a sample for reference and all manufacturing materials. A pre-production sample would be required in bulk fabric and trims to be made by the seamstress for approval before going into mass production. The purpose of these exercises in the manufacturing process is essential, to ensure quality of production. This is important in relation to transparency as it allows for an accurate cost to be calculated for manufacture, as well as allowing an opportunity to eliminate any issues that could arise in production which could lead to avoidable wastage.

Chapter 5 – Research findings and analysis for objective two

5.1 – Mini case studies

Given the time scale of the research project and the time taken on the other elements of the research, mini case studies were conducted by the researcher by meeting face-to-face with a representative from each company. The interviews were conducted suing a list of specific questions for each company representative, in order to discover more about each company's operation and to identify any difficulties faced whilst operating as a transparent fashion business.

5.1.1 Case study 1

Company A - A sustainable shoe brand established in 2017.

Company A manufacture shoes using sustainable materials. It is a small, local based company that prides itself on ethical fashion. The environmental impact of the materials used in Company A's shoes is the component that makes the brand believe it is ethical. The shoes are made from economical and responsible fabrics that are produced using 50% solar power, as well as natural rubber for the soles. The shoes also feature batik designed wax cotton from Africa. It is assumed that the company does not appear to produce its own fabric at source, therefore any ethical issues in the fabrics manufacture cannot be verified.

The company is based in Africa and Europe and manufacture the shoes in Portugal. Making the shoes nearshore is important for the brand's responsibility for sustainability. Company A chose to launch a sustainable brand to make a better future. The founders of the brand refer to themselves as 'Generation Y' and feel that it's their responsibility to reduce impact on the environment.

When interviewed, the challenges the company declared to face whilst running the company are as follows: the small number of ethical component suppliers and the price they have to pay for small quantities of each component. Another challenge they face is that the 'consumer' is not ready to pay a higher price point for footwear, and the cost of components can only be reduced when the amount of shoes being made increases. This will increase with a boost in sales. The target market are customers who are ethically fashion conscious.

Sustainability is the main value of the brand; this is the key focus when promoting the product to the customers. Company A outlines the story of how each shoe is made and why, on social media platforms, to educate the customer on the importance of buying ethical and sustainable products. As the shoes are made nearshore to Company A's headquarters, this helps with keeping their supply chain transparent, as regular visits can be made to the Cut Make and Trim factories, and regular audits are carried out on the supply chain which make the different components for the shoes. All suppliers are selected personally by the founders of Company A. Company A plan to incorporate even more eco-friendly materials into their products in the future and introducing more fabric alternatives to leather. They also plan to make the brand more appealing to a wider market, so the cost of materials can be reduced as more customers buy the brand – therefore in time it is hoped that this saving will be passed onto the customer by lowering retail prices. In addition to Company A's ethical and sustainable product, they are also giving back to the community by financing one day of schooling for girls and women in Africa when each pair of shoes is sold.

5.1.2 Case study 2

Company B – An ethical and sustainable clothing brand established in 1989.

Company B were established in 1989 by a couple who started buying artisan items wholesale and re- selling them at markets. This brand grew organically and eventually they began to design their own collections whilst also remaining fair trade. Company B use natural fibres, using organic sources where possible and they have also recently introduced Lyocell. Lyocell is a form of cellulose fibre, made from wood pulp. They removed polyester liners from their products and use biodegradable fabrics instead.

Company B manufactures its products offshore and they visit the factories twice a year and carry out regular interviews and audits with suppliers to ensure all practices are fair trade. The company has built a personal relationship with their suppliers which helps to ensure the supply chain remains ethical and transparent. The suppliers are also required to provide certification for the origins of its raw materials, for example, for the organic cotton and cruelty free Merino Wool. Company B makes a conscious effort to work with Global Organic Textiles Standard [GOTS] certified suppliers. Over the last five years the brand has faced challenges with meeting minimum order quantities whilst also keeping costs low for the consumer but maintaining good quality of make-up and raw materials.

Company B focuses on showcasing its use of natural fibres and organic cottons when promoting the brand, and also being open about its fair-trade policies. The brand is working towards working with even more GOTS certified suppliers, as well as sourcing new fabric with good economic credentials. Company B make a conscious effort to support traditional crafts, like handloom fabrics, hand block printing and tie dying. Company B have also recently collaborated with a jewellery company, who are a social enterprise improving the lives of artisan communities in India. Company B also sell their products wholesale, and have a fair-trade process to support smaller, independent boutiques allowing them to place small order quantities of stock.

5.1.3 Case study 3

Company C – An ethical and sustainable clothing brand established in 2017.

Company C was established in 2017 by a woman who, after travelling to a number of different countries, fell in love with India, and had a dream to one day establish a fair-trade company. The brand's owner personally sources vintage saris across India which are up cycled and made into garments in a workshop in Mumbai. This workshop employs women who have escaped from the sex trafficking industry and prostitution. Company C works alongside a charity in Mumbai that helps the women and children, teaching them skills to gain employment. For the women working in the sex industry, it is extremely difficult to get out of, and through the help of the charity and Company C's owner, these women are able to start a new life.

The company owner believes in empowering women and openly speaks about the company's efforts to help sex trafficked women through the workshop in India. The main focus of the brand is the women who have had their lives changed by Company C, as well as how each piece is one of a kind, it has a story and is filled with love. Company C's owner faces the challenges of sourcing good quality saris as they are vintage. However, this is a small issue in comparison to the other challenges faced by Company C. The women who work in Company C's workshop often have HIV, this means they are not always in the best of health and the women's wellbeing is very important to the brand owner. It is also difficult to get some women to leave prostitution for a number of reasons, one being the fear of the repercussions from pimps and the fact that the sex trade is all they know.

The supply chain for Company C is very transparent, as the raw material used is vintage and sourced personally by the owner who works from the workshop for several months at a time. All the workers are trained and hired through the charity and employed directly by the owner to work in the workshop. Company C plans to move forward by giving more jobs to women and girls who have escaped prostitution, whilst also expanding their range and selling more in order to create more jobs. Company C's owner wants to raise awareness of this problem and finds that people struggle with the subject of 'sex workers'. The owner wants to raise awareness of the sexual exploitation of women world-wide and to start making changes.

5.1.4 Summary

Several key themes were identified from the three mini-case studies, these related to the retail price of the products and the consumer being willing to pay for a sustainable product. The retail price of the products was determined by the cost price from the supply chain, which relies on higher order numbers in order to give a better price on the components. All the companies manufactured their products offshore, which added a difficulty when trying to ensure transparency from their suppliers. The companies were passionate about what they were doing, with sustainability and ethical practice of the company being placed at the heart of the companies' values. Each one of the companies has strong ethical values and these were the main driving forces. These values centred around supporting and improving the lives of humans as either a part of the company's supply chain or as a result of the sales generated. All the companies researched can continue to move forward in the industry by increasing their popularity with consumers, and growing the brands by offering an expansion on product types etc. The larger of the three brands, company B, also worked to support smaller independent retail businesses with a small-scale wholesale offering, which could be something that could be adopted by Companies A and C in the future as they grow.

Chapter 6 – Research findings and analysis for objective three

6.1. Consumer behaviour survey findings

The survey responses were analysed, and key themes and sub-themes were identified. The themes relate to consumers' shopping habits in relation to the decision-making process. The sub-themes focus on purchasing frequency, the chosen retailers where items are purchased from and reasons for the decisions made, such as price and ethical consideration. It also illustrates patterns of buying behaviour in the survey data collected to show the different consumer attitudes. The questions can be found in appendix 3.

6.1.1 Survey findings expectation

The expectation of the findings was that many people would be driven by the price of the clothing first and foremost, as the cost of clothing is constantly being driven down in the industry to encourage more frequent spending. It was also anticipated that people who are interested in purchasing clothing that does have more transparency on its ethical and sustainable factors would be willing to pay more for this garment. Even though consumers are willing to pay more for ethical and sustainable garments, there is still not a fully transparent supply chain for that garment so they may still be unaware of the extent to which the garment was ethically and sustainably manufactured. The factor of low cost will still be expected to be influential in the purchasing decision, even if the garment is more ethical and sustainable, because the label of an ethical and sustainable purchase is to do with making an informed ethical purchase, but it is argued that this does not go far enough. This was also indicated in the literature discussed in section 2.3.1.

6.1.2 Demographics

Out of all the people surveyed, 87.5% of them were female (figure 6.1 A), with the most common age bracket being 25-30 at 42.5% (B). In addition, 65% of those surveyed have an annual salary of up to £30k (C). According to Statista (2021) the UK national average for 2019 was £30.5K annually which concurs with the survey findings.

GENDER

12.5%

87.5%

■ Female ■ Male

AGE

10.0%

10.0%

0.0%

5.0%

12.5%

20.0%

42.5%

■ 18-25 ■ 25-30 ■ 30-35 ■ 35-40 ■ 40-45 ■ 45-50 ■ 50+

ANNUAL SALARY

35.0%

65.0%

■ Upto 30K ■ 30K+
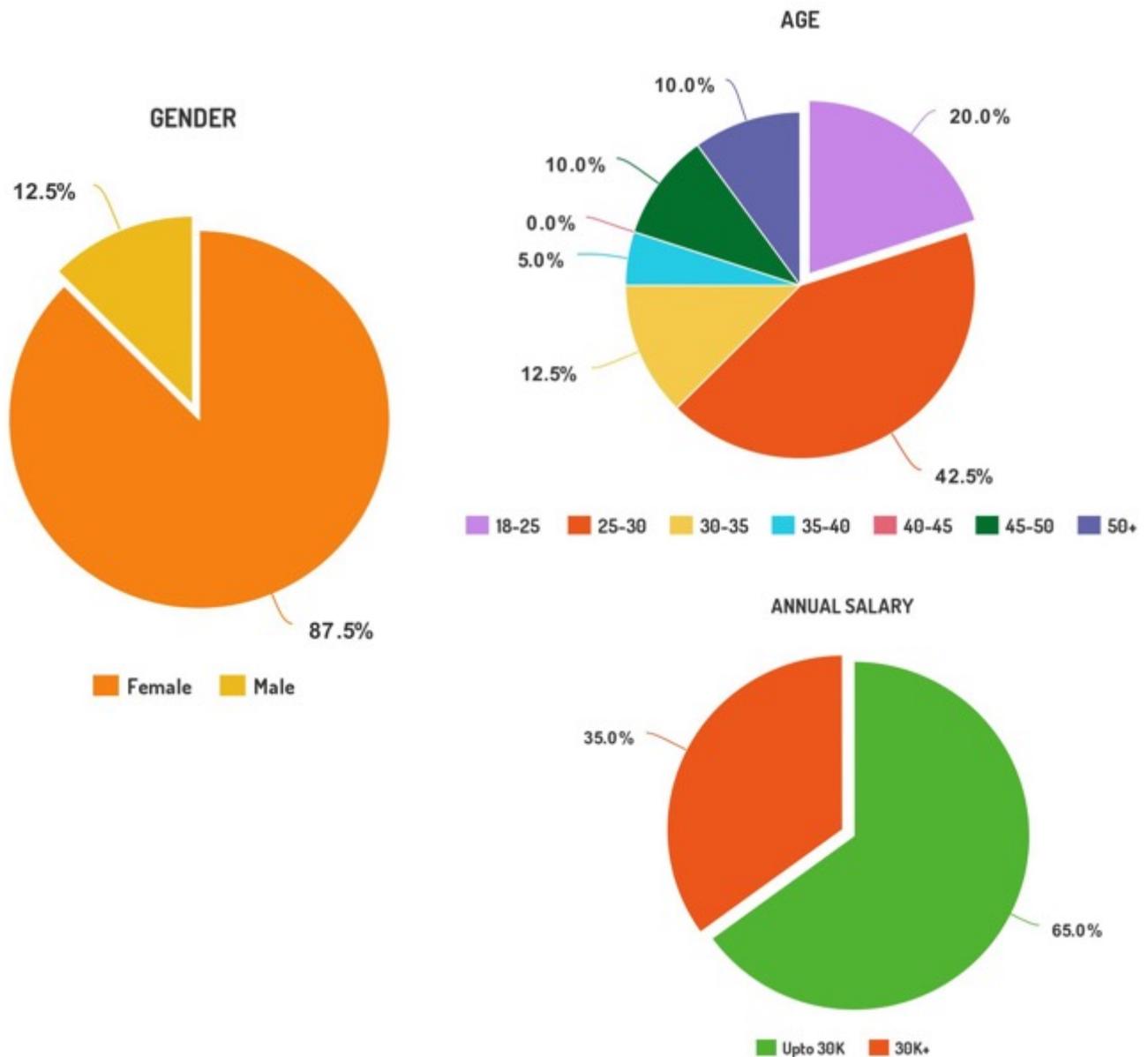
Figure 6.1 A/B/C showing the survey data for gender, age and annual salary.

Shopping habits n=37 (Author's own)

6.1.3 Purchasing frequency

From the survey, 57.5% of respondents said they purchase a new item of clothing on a monthly basis, and 25% claimed they purchase new items every 3-6 months. A further 10% said they purchase new items weekly, and only 7.5% said they purchase a new item of clothing every 6-12 months (figure 6.2). This data shows the contrast in attitudes towards buying a new garment and some appear to be more liberal than others, purchasing an item once a week. Most respondents purchased a garment once a month and this highlights the effect of the frequent shift in fashion trends that are made by high street and online brands,

which encourages frequent purchases of clothing. This finding supports the findings of a survey documented in a paper titled *Sustainable Fashion: Consumer Awareness and Education* by Muthu (2018) from section 2.3.1 of the literature review. The results of this survey showed that 41.7% of the customers prefer to purchase a new item of clothing once in a three-month period. Of the respondents, 31.5% said that they purchase an item of clothing once a month. Although the parameters of the answer options were slightly different in the survey by Munthu (2018), there were comparisons that could be made. The results clearly show that the majority of respondents surveyed make frequent clothing purchases. A small percentage of the customers mentioned that they will buy garments only for special occasions (17.75%) and once in a year (5.25%). This finding was also reflected in the findings of this research.

HOW OFTEN DO YOU PURCHASE A NEW ITEM OF CLOTHING

7.5%　　10.0%

25.0%

57.5%

■ Weekly　■ Monthly　■ 3–6 Months　■ 6–12 Months
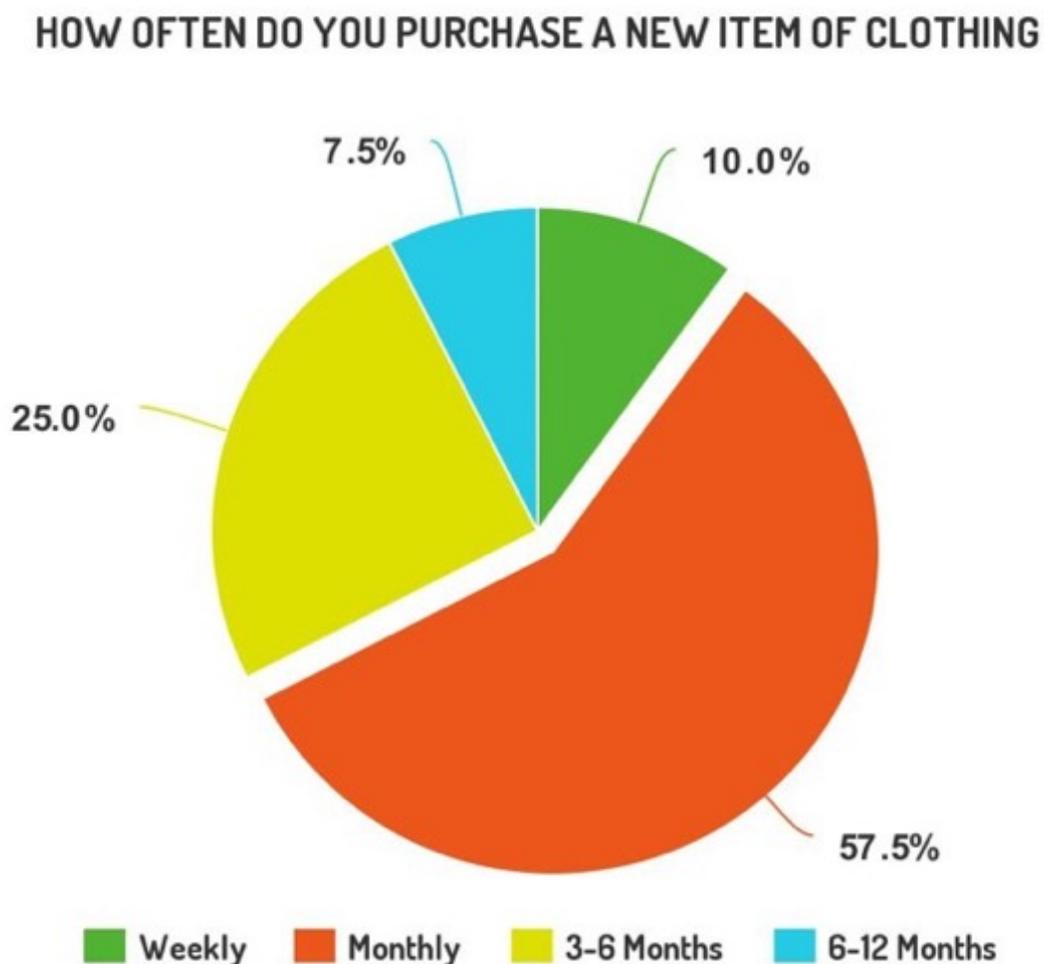
Figure 6.2 showing survey data for question 4 asking the respondent how often they purchase an item of clothing (Author's own)

6.1.4 Brands and retailers where purchases are made

When the participants were asked to list the brands and retailers they shop at, Topshop, Primark, ASOS, Zara, Boohoo, PLT and Missguided were mentioned the most. These brands are known for dropping new items weekly with a constant renewal of trends, whilst also selling 'affordable' fashion. The age group of the target market for these types of brands (according to the brand websites) is reflected in the demographic of the respondents in this survey, with 42.5% of people who took part being aged between 25-30 (figure 6.1 B). Some participants mentioned shopping at charity shops and at independent brands and boutiques, which show there are some shifts in attitudes beginning to happen, but all of these answers were given also mentioned shopping at major high street and online retailers.

6.1.5 The decision-making process

Through the researcher's industry experience of developing fashion garments, question 6 was written to explore the consumers driving factors when purchasing a new item of clothing. When asked which factors they would take into consideration when buying a new item of clothing, the main answer was 'How much the item costs' followed by 'If you will wear the item multiple times', and then 'If the item of clothing is well made'. These answers illustrate the consumer attitude towards the fashion industry; they want quality, but they do not want to pay for it, however the answers given to the question about if it will be worn multiple times again notes a slight shift away from disposable fashion and the consumers' attitude towards what they buy.

Once again, this reflects the findings of Muthu's survey (2018), as it was identified that the top three most popular reasons for the question 'What is the important factor you will consider while selecting apparel?' were comparative to those in this research survey. The respondents in Muthu's survey responded with 'quality' but they believed that this varies between online & high street shopping as it was considered to be the important factor, followed by style and then price. It is interesting to see the same reasons influencing the consumer purchase decision and supports the findings of this research.

6.1.6 Price and place of purchase

Of the respondents surveyed, 64.9% were willing to pay between £10-£30 for a new top for a social occasion, with only 24.3% of people willing to pay £30-£50, and 5.4% of people willing to pay £50 plus for the new top and 5.4% wishing to pay less than £10 (figure 6.3).

Furthermore, 64.86% of those surveyed said they would shop online to search for a new top, with only 24.32% going to the shop; 70.27% of people claimed to only spend up to 1 hour looking for this new top.

YOU ARE BUYING A NEW TOP FOR A SOCIAL OCCASION WITH FRIENDS..... HOW MUCH ARE YOU WANTING TO SPEND ON THIS ITEM OF CLOTHING?

5.4%   5.4%

24.3%

64.9%

■ Less than £10   ■ £10-£30   ■ £30-£50   ■ £50+
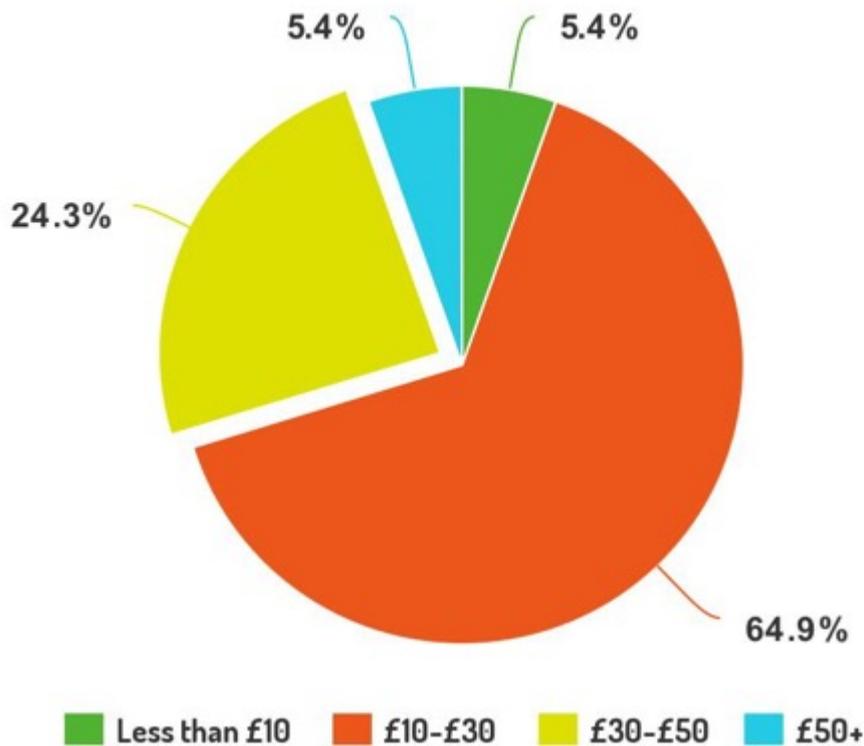
Figure 6.3 showing survey data for question 7 how much the respondent is willing to spend on an item of clothing (Author's own)

6.1.7 Ethical decision making

When the participants were asked if they would be willing to spend more money on a garment based on sustainable and ethical factors, the most popular answer, at 31.82%, was 'a better-quality garment' with the second most popular answer, at 20.45%, was 'the garment is made to last a long time'. This shows the consumers' priorities when considering spending more on a garment. In addition, 62.2% of people were willing to spend up to £20 more on a garment when the factors from the previous question were taken into consideration, with only 29.7% of people willing to spend between £20 and £40, and only 8.1% of people willing to spend over £40 (figure 6.4). The results again were similar to a question posed in Muthu's (2018) consumer research survey who asked participants how much extra they were willing to spend on environmentally friendly clothing. In Muthu's survey 37.25% of respondents

were willing to pay an extra 25% on top of the actual price, 26% of those surveyed were willing to pay 50% more for environmentally friendly products. Furthermore, 18.25% of participants were willing to pay 75% - 100% of the cost and 18.5% were only willing to pay from 0 – 25% of the cost. Although the available answers to the questions are structured slightly differently, they do show a similarity with the findings of this survey, highlighting that generally consumers are willing to pay a little more towards an ethical garment but not an excessive amount. In a study by the Co-Op in 2019 which has tracked ethical consumerism across a range of products including food and clothing has shown that the consumers expenditure on ethical products has increased significantly (Co-op, 2019).

HOW MUCH MORE MONEY WOULD YOU SPEND ON A GARMENT WITH ETHICAL FACTORS TAKEN INTO CONSIDORATION?

8.1%

29.7%

62.2%

■ £0-£20   ■ £20-£40   ■ £40+
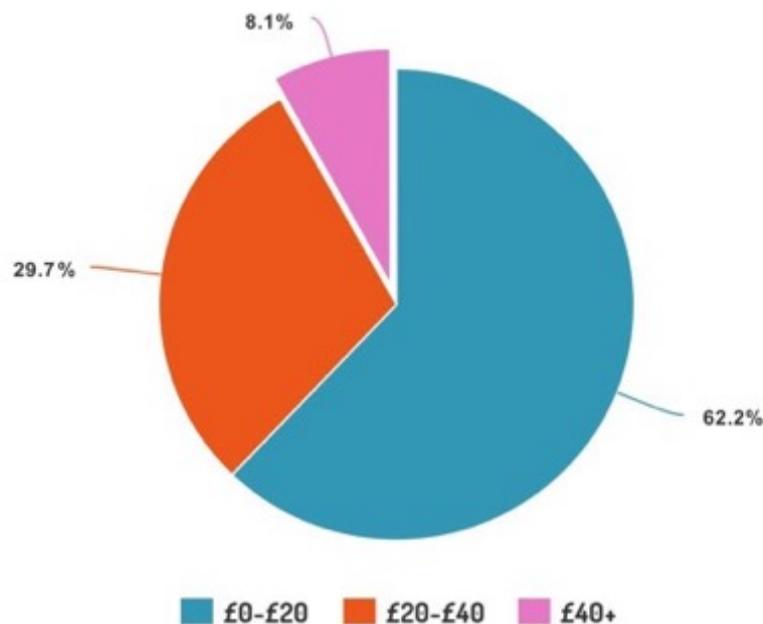
Figure 6.4 showing survey data for question 12 asking the respondent how much money they would spend on a garment that is considered as ethical (Author's own)

With reference to the consumer survey conducted in this research, 67.57% of those questioned said that recent environmental issues that have been raised in the media had an effect of their buying habits across all consumable products (figure 6.5). This is a very positive outcome from the survey as again it shows that consumers are starting to take note and make ethical purchasing decisions. Another positive finding was seen in the data when 70.27% of participants said that finding out more about the issues in the fashion industry supply chain would affect their buying habits (figure 6.6) and 67.57% of respondents said that if they knew the full background of a garment as it moved through the supply chain that

this would affect their decision to buy it (figure 6.7). This is also reflected in a survey conducted by Fashion Revolution in 2018, where 49% of the UK residents that were questioned, strongly agreed or somewhat agreed that they would like to know how their clothes were manufactured, and 72% said fashion brands should publish which factories are used to manufacture their clothes and which suppliers they use to source the materials used in their clothing. Fashion brands simply making public information of the manufacturers they use would not be enough to address full transparency, as issues run far deeper in the supply chain than stating manufacturers names.
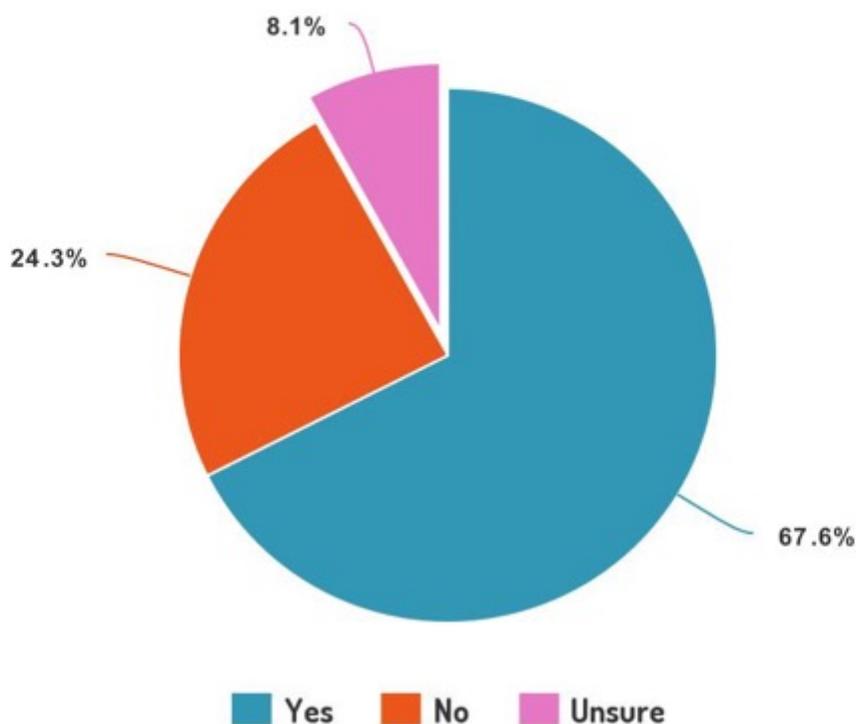
Figure 6.5 showing survey data for question 13 asking if the respondent if recent environmental issues raised in the media had an effect on their buying habits (Author's own)

IF YOU WERE TO LEARN MORE ABOUT THE ISSUES IN THE FASHION INDUSTRY, WOULD THIS EFFECT YOUR BUYING HABITS WHEN PURCHASING CLOTHING?
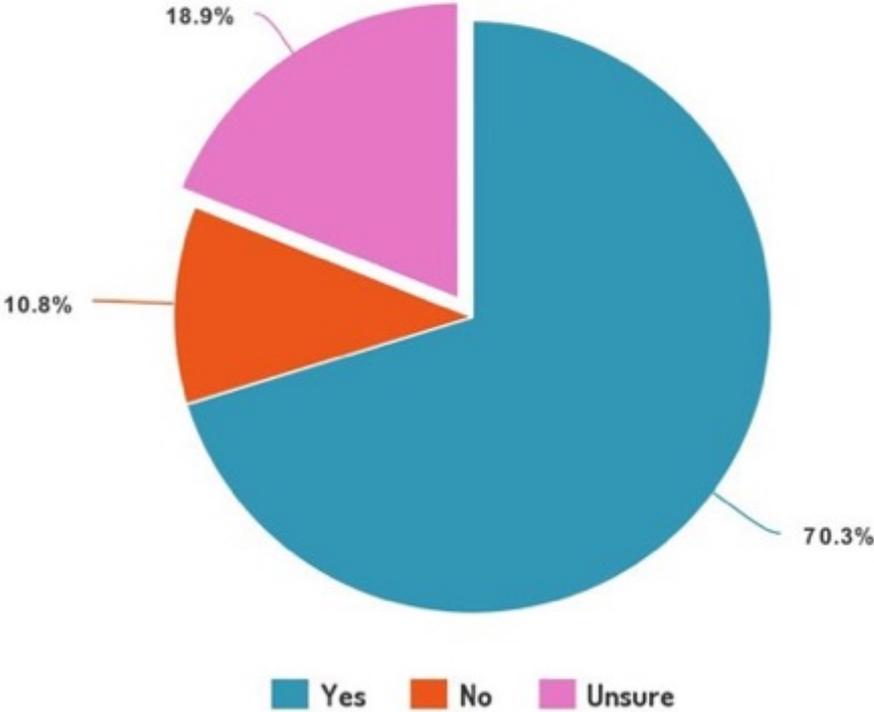
Figure 6.6 showing survey data for question 14 asking if the respondent they were to learn more about issues in the fashion industry would it effect their decision to buy it (Author's own)

IF YOU KNEW THE FULL BACKGROUND OF A GARMENT AS IT MOVES THROUGH THE SUPPLY CHAIN, WOULD THIS EFFECT YOUR DECISION TO BUY IT?
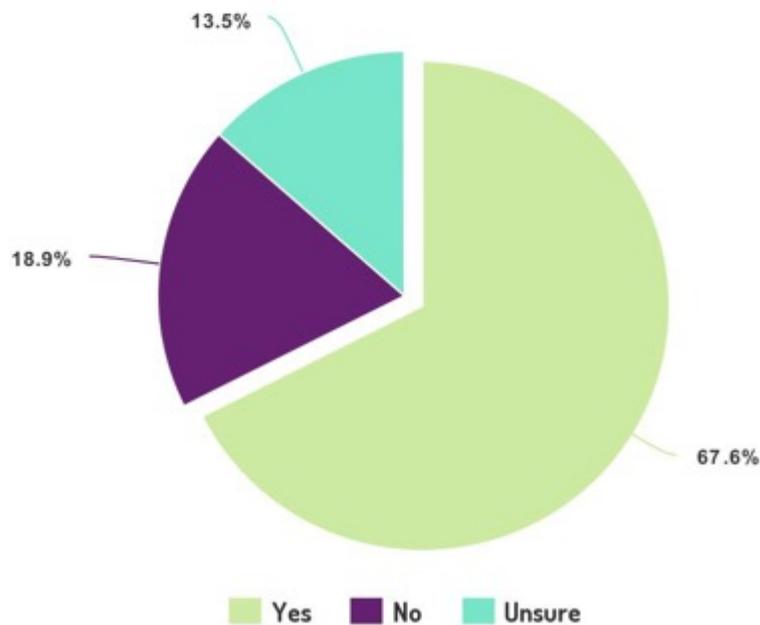
Figure 6.7 showing survey data for question 15 asking if the respondent knew the full background of a garment would it effect their decision to buy it (Author's own)

Of the participants surveyed, 51.35% said that they did take notice of how much packaging is used when purchasing products online (figure 6.8), with 83.78% agreeing that they would rather purchase from a company who used less or recyclable packaging rather than from a company who does not (figure 6.9). These positive results of this question are also highlighted in Fashion Revolution's 2018 consumer survey discussed in section 2.3.1 of the literature review, where 65% of UK residents said it is very or somewhat important for fashion brands to publish how their products are sustainable on the packaging.

WHEN PURCHASING ONLINE, DO YOU TAKE NOTICE OF HOW MUCH PACKAGING IS USED?

10.8%

51.4%

37.8%

Yes   No   Unsure
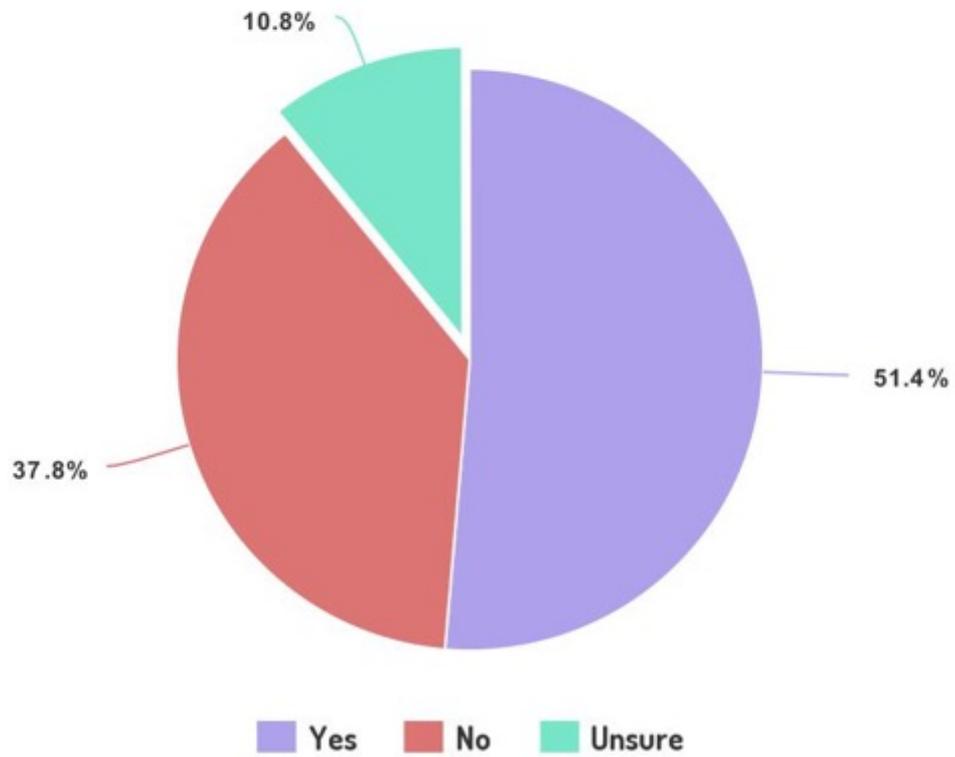
Figure 6.8 showing survey data for question 16 asking if the respondent notices how much packaging is used when purchasing products online (Author's own)

WHEN PURCHASING ONLINE, WOULD YOU RATHER PURCHASE FROM A COMPANY WHO USE LESS/RECYCLABLE PACKAGING THAN FROM A COMPANY WHO DOESN'T?

8.1%

8.1%

83.8%

🟨 Yes   🟥 No   🟪 Unsure
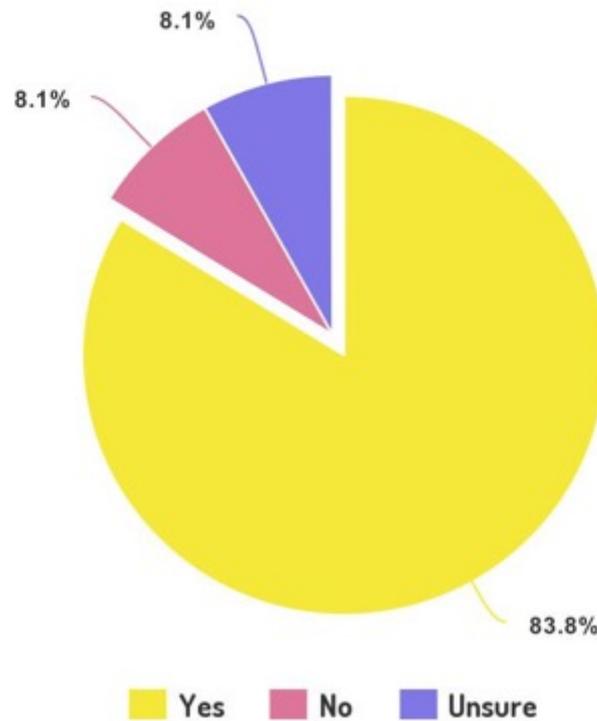
Figure 6.9 showing survey data for question 17 asking if the respondent would rather purchase from a company who uses less and/or recyclable packaging in their products (Author's own)

6.1.8 Participants comments

All of the respondents surveyed were given the opportunity to give their comments and thoughts on the fashion industry (question number 18 – appendix 3), not everyone used this opportunity to speak but 62.5% of respondents did with some interesting comments.

One participant said they would 'prefer to buy from the UK' and another saying that they are 'a big fan of quality over quantity' which is interesting, this is also reflected in this person's spending habits in their survey response, however, there were other comments with regards to the impact of social media on the frequency of purchasing new garments, and others saying that the industry will 'still be driven by price' no matter how sustainable a product is.

All of the comments made were somewhat expected and reflect many of the researcher's personal opinions on the industry, for example one participant discussed how they worked in the fashion industry themselves and had also recognised the need for change; Another

participant expressed how they were making a conscious effort to make changes in the way they purchase clothing, by making more informed decisions about what they buy, shopping second hand and also supporting smaller, more independent businesses. It was of interest though to see differences in the comments on how the respondents like to shop, and also how some sound like they want to make a change but do not know how or where to start. In a survey *by Dirty Fashion* conducted in 2018, 69% of UK residents who completed the survey agreed that they find it difficult to know which clothing brands or companies meet higher ethical standards and 49% of those people would trust third party certification to prove a brands sustainability, closely followed by 38% trusting Non-Governmental Organisations. In comparison, only 18% would trust information given by the brand themselves. This is interesting, and hopefully this begins a shift in how sustainability and ethics within a brand are measured and illustrated to consumers, to help further their education on the industry.

It was also interesting to see people speaking out about social media influencers and their education on the industry. In the *Dirty Fashion* survey from 2018 from section 2.3.1 of the literature review, 51% of UK residents surveyed thought that social media influence would be effective in improving the impact that the fashion industry has on the environment.

Comments were also made from people with lower incomes, who want to make better choices but are restricted financially. This must be frustrating for those with this obstacle in their way when it comes to purchasing more ethical garments. However, with a shift in public attitude towards how fast they consume fashion products and a break down in stigma in regard to multiple wears of garments, this will allow for consumers to be re-educated on how to make informed purchases, that may cost more but don't have to be replaced frequently and the purchaser is encouraged to make repairs instead of throwing away.

6.1.9 Summary

The findings highlighted the following original concepts: that people want convenience, low budget fashion that is still good quality. The participants showed that low cost and quality is important when they make a decision on a purchase, and when faced with the opportunity to pay for a more ethical product, they were willing to do so but only at a small extra cost. This finding is also reflected in the results of Muthu's (2018) survey, which provides another interesting set of data from a cross section of consumers. It seems that value for money, in terms of cost and quality is important to a lot of people and this behaviour has been driven by high street and online brands who put pressure on suppliers to keep driving down the cost of clothing so low, that no one is prepared to pay the true price anymore. This has

pushed clothing manufacture to continue to be offshore, across the world in developing countries where labour and wage laws are a lot different to the UK's, so they can take advantage of the opportunity of low-cost garment workers. It is already known that moving manufacture to the UK doesn't always mean the manufacturer is automatically more ethical, as the industry it is known for modern slave labour and this is happening in parts of the UK today as discussed in section 2.2.4 of the literature review and many high street and online retailers take advantage of this, for example large online retailer Boohoo.com. The positive outcome that is apparent is that educating the consumer should result in a shift in consumer behaviour. A willingness to view a garment's transparency before purchasing and taking into consideration the retailer's environmental impact in its use of packaging shows that the customer is willing to learn, and already is learning about the environmental issues in the fashion and textile industry and the media has raised awareness of this, for example as observed in the reduction in single use plastics and the rise in popularity of vegan products. These findings are reflected in the 2018 *Fashion Revolution* survey which concluded that a significant number of participants would like to learn more about where their clothes come from, and that fashion brands should be more transparent.

7. Conclusions and recommendations

7.1 Conclusions

In conclusion, the aim of the research was to investigate ethical sourcing and transparency in the supply chain for garment manufacturing, and to explore the use of creative pattern cutting as a design technique. This study was conducted to bring together the ideas of sustainability, ethics and transparency to create a tool kit for a designer-entrepreneur who wishes to design and manufacture a fashion garment product. The information presented in this report is also beneficial to designers, including freelancers, working within small fashion businesses who are interested in slow / ethical fashion. The importance of transparency for any fashion clothing business, who wish to work ethically and sustainably is essential, as all elements that go into a product's design and manufacture need to be considered before making sustainable and ethical claims. Transparency becomes difficult when less control is had by the company and can fall down when it comes to choices of materials used within a garment and how its then manufactured. It is also important that profit does not outweigh the businesses desire to be transparent, and this is another factor that can cause blurred lines and an opportunity for the supply chain to become non-compliant with ethical and sustainable policies set out by the business itself or other governing bodies. It is also important to consider the sustainability and ethics regarding the design of a product, as this is the time to consider problems, such as pre consumer textile waste, the transparency of any trims or components manufactured by a third-party company, as well as the development process for example prototype sampling etc.

The research found that using zero / minimal waste techniques could be used during the design process to create interesting silhouettes, that can be taken through into batch / mass manufacture. It was important to the study that the techniques applied in the final garment experimentation allowed for a usable garment to be made, as zero waste techniques can sometimes hinder the wearability of a garment. The final garment was designed on the stand with the ideas of minimising waste in mind, rather than eliminating it completely to allow for a wider parameter to design within. It was important that the final garment resembled a traditional garment, in this case a jacket, and that the minimal waste techniques added interesting, but subtle design features to its silhouette.

The mini case studies showed that other businesses that work towards being sustainable and ethical face the same challenges regarding transparency in the supply chain, such as working with the right suppliers to provide sustainable materials, using transparent

manufacturing units, as well as challenges when selling to the end consumer, like a desirable retail price. The cost price for products was a key theme in the case studies, as this affected the retail price, and the companies expressed that making more sales, would allow for a better cost price by purchasing / producing larger quantities of product.

Finally, the study was validated with a consumer survey, which found interesting results about consumers' attitudes and their shopping habits and this was in line with other emerging data, however it seemed that although they were willing to pay more for an ethical garment, it is not much more. This means that it is difficult for brands to fulfil the expectation of the consumer, to provide a more ethical and sustainable product within what the consumer considers a reasonable price range. Overall, a key theme detailed in this research is the impact of retail cost and what consumers are willing to pay for a product, and how this effects the supply chain's transparency. This is something that the researcher has experience of within their career in the fashion industry and has witnessed first-hand how the push from buyers to reduce cost price, results in corners being cut by suppliers to meet the unrealistic expectations.

7.2 Limitations

The limitations faced in this study vary, firstly the researcher was a novice, and this was their first research project. The study also had limited funding, as well as limited time to conduct the research. Other limitations faced during the primary research included the participation of the companies in the case studies; this meant that the studies were less in-depth than anticipated, resulting in them being downsized to mini case studies.

7.3 Recommendations for future research.

There is unlimited opportunity to research further into the subjects covered in this study, starting with garment manufacturing. There is scope for further research, especially as a lot of elements in the supply chain happen behind closed doors, and even some professionals in the fashion industry do not truly understand the garment supply chain. A more in-depth exploration into the garment supply chain itself would be beneficial to study how a garment moves through the supply chain from start to finish, and how this effects the humans who work within this supply chain, with a view to complete primary research through visits to factories both in the UK and in the Far East. This would also be beneficial in educating the consumer as well, with climate change and other topical issues surrounding the fashion industry continues to change consumer awareness.

The fashion industry has adjusted recently due to the impact of Covid-19, which has crippled well known fashion giants and changed the highstreet significantly, and this has thrust it into the spotlight for consumers. Further recommendations for future research, could include an expansion on the pattern cutting experimentation using the final experimentation techniques to create a small capsule collection, and an introduction of CAD into the process to add another opportunity to optimise fabric usage and to prepare the collection for production. It is important that the garments designed, using the minimal waste techniques. are suitable for mass manufacture, therefore further experimentation to push the boundaries further would be very interesting. There is also an opportunity to create a more in-depth consumer research survey, with a larger sample of participants in order to get more in-depth and rich data.

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Appendices

Appendix 1:

A. Pattern cutting video with voice recording

https://youtu.be/lJryfwqdq0U

B. Studio filming consent form blank

<div align="center">

University of Hudsdersfield

School of Art, Design and Architecture

Participant Consent Form

</div>

Title of Research Study: A study of creative pattern cutting techniques, questioning ethical standards in the fashion clothing industry and the effects of ethical processes on consumer behaviour

Name of Researcher: Laurie Ruth Perkins

Participant Identifier Number: (*student number*)

☐   I confirm that I have read and understood the participant Information sheet related to this research and have had the opportunity to ask questions.

☐   I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason.

☐   I understand that all my responses will be anonymised.

☐   I give permission for members of the research team to have access to my anonymised responses.

☐   I agree to take part in the above study

Name of Participant: …………………………………………………………

Signature of Participant: …………………………………………………

Date: ……………….

Name of Researcher: ………………………………

Signature of Researcher:

Date: …………………………….

C. Studio filming consent forms signed

University of Huddersfield
School of Art, Design and Architecture

Participant Consent Form

Title of Research Study: A study of creative pattern cutting techniques, questioning ethical standards in the fashion clothing industry and the effects of ethical processes on consumer behaviour

Name of Researcher: Laurie Ruth Perkins

Participant Identifier Number: U1868060

☒ I confirm that I have read and understood the participant Information sheet related to this research and have had the opportunity to ask questions.

☒ I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason.

☒ I understand that all my responses will be anonymised.

☒ I give permission for members of the research team to have access to my anonymised responses.

☒ I agree to take part in the above study

Name of Participant: ███████████████████

Signature of Participant: ███████████████████

Date: 27/09/2018

Name of Researcher: L.Perkins

Signature of Researcher:

Date: 27/09/2018

University of Huddersfield
School of Art, Design and Architecture

Participant Consent Form

Title of Research Study: A study of creative pattern cutting techniques, questioning ethical standards in the fashion clothing industry and the effects of ethical processes on consumer behaviour

Name of Researcher: Laurie Ruth Perkins

Participant Identifier Number: (*student number*) U0575781

[X] I confirm that I have read and understood the participant information sheet related to this research and have had the opportunity to ask questions.

[X] I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason.

[X] I understand that all my responses will be anonymised.

[X] I give permission for members of the research team to have access to my anonymised responses.

[X] I agree to take part in the above study

Name of Participant: ▬▬▬▬▬▬▬▬▬▬▬

Signature of Participant: ▬▬▬▬▬▬▬

Date: 27/09/2018

Name of Researcher: L.Perkins

Signature of Researcher:

Date: 27/09/2018

University of Huddersfield
School of Art, Design and Architecture

Participant Consent Form

Title of Research Study: A study of creative pattern cutting techniques, questioning ethical standards in the fashion clothing industry and the effects of ethical processes on consumer behaviour

Name of Researcher: Laurie Ruth Perkins

Participant Identifier Number: (*student number*) U0866211

☑ I confirm that I have read and understood the participant Information sheet related to this research and have had the opportunity to ask questions.

☑ I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason.

☑ I understand that all my responses will be anonymised.

☑ I give permission for members of the research team to have access to my anonymised responses.

☑ I agree to take part in the above study

Name of Participant: ~~[redacted]~~

Signature of Participant: ~~[redacted]~~

Date: 27/09/2018

Name of Researcher: L.Perkins

Signature of Researcher:

Date: 27/09/2018

University of Huddersfield
School of Art, Design and Architecture

Participant Consent Form

Title of Research Study: A study of creative pattern cutting techniques, questioning ethical standards in the fashion clothing industry and the effects of ethical processes on consumer behaviour
Name of Researcher: Laurie Ruth Perkins

Participant Identifier Number: (*student number*)   U1072636

[x] I confirm that I have read and understood the participant Information sheet related to this research and have had the opportunity to ask questions.

[x] I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason.

[x] I understand that all my responses will be anonymised.

[x] I give permission for members of the research team to have access to my anonymised responses.

[x] I agree to take part in the above study

Name of Participant: ██████████ ....

Signature of Participant: ██████████ ....

Date: 27/09/2018

Name of Researcher: L.Perkins

Signature of Researcher:

Date: 27/09/2018

D. Participation consent form – recorded discussion

<div align="center">

University of Huddersfield
School of Art, Design and Architecture

Participant Consent Form

</div>

Title of Research Study: A study of creative pattern cutting techniques, questioning ethical standards in the fashion clothing industry and the effects of ethical processes on consumer behaviour

Name of Researcher: Laurie Ruth Perkins

Participant Identifier Number: N/A

☑ I confirm that I have read and understood the participant Information sheet related to this research and have had the opportunity to ask questions.

☑ I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason.

☑ I understand that all my responses will be anonymised.

☑ I give permission for members of the research team to have access to my anonymised responses.

☑ I agree to take part in the above study

Name of Participant: ██████████...

Signature of Participant: ██████████ ....

Date: 08/07/2020

Name of Researcher: L.Perkins

Signature of Researcher: _(signature)_

Date: 08/07/2020

Appendix 2: Research blog

https://fashionethics.wixsite.com/fashionresearcher

Appendix 3:

   A. Survey Blank

Consumer Survey

. Thank you in advance for taking time to participate in this research survey. completion and return of this survey will indicate your consent to participate.

Q1. Gender

Male

Female

Q2. Age

18-25

25-30

30-35

35-40

40-45

45-50

50+

Q3. Annual income

Less than £10,000

£10,000 - £20,000

£20,000 - £30,000

£30,000 - £40,000

£40,000+

Prefer not to say

Q4. How often do you purchase a new item of clothing

Weekly

Monthly

3-6 Months

6-12 Months

Q5. Please list 5-10 brands/stores you shop with

88

Q6. Which of the following factors do you take into consideration when buying a new item of clothing?

How much the item costs

How good the item looks on the picture, model or hanger

If you have seen this item on a celebrity or influencer

If the item is on sale

If the item of clothing is well made

The brand name of the item of clothing

The ethics of the brand/store you are buying from

The country of origin of the item of clothing

The fibre content and components used in the item of clothing

The durability of the item of clothing

Q7.

You are buying a new top for a social occasion with friends.....

How much are you wanting to spend on this item of clothing?

Less than £10

£10-£20

£20-£30

£30-£40

£40-£50

£50-£60

89

£60-£70

£70-£80

£80-£90

£90-£100

£100+

Q8.
Which 3 brands would you head to first to find the new top?

1

2

3

Q9. Where would you head first to shop..

Online - brand website

90

Instagram

Google shopping

In store

Other - please specify

```



```

Q10.

How much time would you spend looking for this item?

1-30 mins

30 mins to 1hr

1 - 2 hrs

2hrs +

Q11.

Would you be willing to spend more money on this item based on the following factors, over a cheaper item of clothing?

91

92

Better quality garment
The garment is made ethically
The fabric and trims on the garment are sustainable
The garment is made to last a long time
The garment is Fair Trade
The person who made the garment is paid a living wage
The garment is made in the UK

Q12. How much more money would you spend on a garment where the above factors in Q11 are taken into consideration

£0

Less than £10

£10-£20

£20-£30

£30-£40

£40-£50

£50+

Q13. Due to recent environmental issues being raised in the media, for example plastic pollution, has this had an effect on your buying habits across all consumable products?

Yes

No

Unsure

Q14. If you were to learn more about the issues in the fashion industry, would this effect your buying habits when purchasing clothing?

Yes

No

Unsure

Q15. If you knew the full background of a garment as it moves through the supply chain, would this effect your decision to buy it?

Yes

No

Unsure

Q16. When purchasing online, do you take notice of how much packaging is used?

93

Yes

No

Unsure

Q17. When purchasing online, would you rather purchase from a company who use less/recyclable packaging than from a company who doesn't?

Yes

No

Unsure

Q18. What are your thoughts about the fashion industry - Please use the box below to be as brief or as in-depth as you wish.

94

B. Survey briefing statement email

M Gmail   Laurie Perkins <laurie.perkins11@gmail.com>

Research sustainability and ethics in the fashion industry - SURVEY - PLEASE PARTICIPATE

1 message

SADA PGR Admin <sadapgradmin@hud.ac.uk>   Tue, Oct 22, 2019 at 9:56 AM
To: All PGR Art & Design Students <AllPGRArt&DesignStudents@hud.ac.uk>

Hello everyone

Thank you for taking the time to read my email, and I hope you can help me by taking a short survey for my research masters.

I am researching into sustainability and ethics in the fashion industry, and part of my research is about consumer behaviour towards fashion. This survey allows me to study a cross section of people and their spending habits, as well as opinions on fashion sustainability.

All responses to the survey will be kept anonymous, and no identifying features will be published in my research. You have the right to withdraw at any time, and all data will be kept and store securely on a password protected drive.

Your data will not be passed onto any 3rdparty, this survey is purely for research purposes.

Please click the following link to take my survey:

https://qtrial2019q2az1.az1.qualtrics.com/jfe/form/SV_3EINsTnXkCTDtml

 If you have any questions, please do not hesitate to contact me at laurie.perkins@hud.ac.uk or my supervisor Jo Harris at j.m.harris@hud.ac.uk

Kind regards

Laurie Perkins

Postgraduate Researcher

University of Huddersfield inspiring global professionals.

TEF Gold   WINNER   *University of* HUDDERSFIELD   Find out more about the award-winning University of Huddersfield
                                                        www.hud.ac.uk/our-awards

C. Survey briefing statement Linkedin

Laurie Perkins   • • •
Garment Tech / Product Developer looking for new opportunities in the in...
10mo • Edited • ⊕

UK residents: please can you take 5 minutes to take part in my survey for my
MA, it would be much appreciated!

I am researching into sustainability and ethics in the fashion industry, and part of
my research is about consumer behaviour towards fashion. This survey allows
me to study a cross section of people and their spending habits, as well as
opinions on fashion sustainability.
All responses to the survey will be kept anonymous, and no identifying features
will be published in my research. You have the right to withdraw at any time, and
all data will be kept and store securely on a password protected drive.
Your data will not be passed onto any 3rdparty, this survey is purely for research
purposes.

https://lnkd.in/gqXdAXw

Thanks in advance!

**Consumer habits and opinion on sustainability and ethics in the fashion and
clothing industry.**

qtrial2019q2az1.az1.qualtrics.com

Consumer habits and opinion on sustainability and ethics in the fashion and clothing...

D. Participation information sheet

University of Huddersfield
School of Art, Design and Architecture

<u>Participant Information Sheet</u>

Research Project Title: Exploration of creative pattern cutting techniques, human rights and ethical standards in the fashion clothing industry, and the effects of ethical processes on consumer behaviour.

You are being invited to take part in a research project. Before you decide, it is important for you to understand why this research is being done and what it will involve. Please take time to read the following information and discuss it with others if you wish. Ask if there is anything that is not clear or if you would like more information. May I take this opportunity to thank you for taking time to read this.

What is the purpose of the project?
The research project is intended to provide the research focus for a module which forms part of my degree. It will attempt to research into sustainability and ethics in the fashion industry, and part of the research is about consumer behaviour towards fashion.

Why have I been chosen?
Anyone who is a consumer of fashion garments can take part in this anonymous survey

Do I have to take part?
Participation on this study is entirely voluntary, so please do not feel obliged to take part. Refusal will involve no penalty whatsoever and you may withdraw from the study at any stage without giving an explanation to the researcher.

What do I have to do?
You will be invited to take part in an anonymous survey. This should take no more than 5-10 minutes of your time.

Are there any disadvantages to taking part?
There should be no foreseeable disadvantages to your participation. If you are unhappy or have further questions at any stage in the process, please address your concerns initially to the researcher if this is appropriate. Alternatively, please contact Jo Harris at the School of Art Design and Architecture, University of Huddersfield.

Will all my details be kept confidential?
All information which is collected will be strictly confidential and anonymised before the data is presented in any work, in compliance with the Data Protection Act and ethical research guidelines and principles.

What will happen to the results of the research study?
The results of this research will be written up in the researcher's thesis. If you would like a copy, please contact the researcher.

What happens to the data collected?
The data will be analysed and discussed in the researcher's thesis

Will I be paid for participating in the research?
No

Where will the research be conducted?
Online via an anonymous survey link

Criminal Records check (if applicable)
Provide a statement declaring that the researcher who may have access to children or vulnerable adults has undergone a satisfactory criminal records check.

Who has reviewed and approved the study, and who can be contacted for further information?
Jo Harris j.m.harris@hud.ac.uk

Name & Contact Details of Researcher: Laurie Perkins Laurie.Perkins@hud.ac.uk

Appendix 4: Ethical approval

Form A

School of Art, Design and Architecture

No Specific Ethics Risk Declaration

Researcher:

Programme and Module (where appropriate):

Research Project Title:

In signing this declaration I am confirming that my proposed project does not involve:

- direct contact with human/animal participants
- access to identifiable personal data for living individuals not already in the public domain
- increased danger of physical or psychological harm for researcher(s) or subject(s)
- research into potentially sensitive areas
- use of students as research assistants

My proposed project does not therefore require an ethics review and I have not submitted a Research Ethics Application Form.

If any changes to the project involve any of the criteria above I undertake to resubmit the project for approval.

Signature of Researcher: L.Perkins   **Date: 18/10/19**

Counter-Signatory:

Role:

In signing this Declaration I confirm that I have reviewed the proposed project and am satisfied that that it does not involve any specific ethics risk as defined by the School policy.

Counter-Signature: **Date:**

THE UNIVERSITY OF HUDDERSFIELD
School of Art, Design and Architecture

ETHICAL REVIEW
(Limited or Significant Risk)

APPLICABLE TO ALL STUDENTS and STAFF

Undergraduates and taught postgraduates, lease complete and return via email to your Project / Dissertation Supervisor along with the required documents (shown below)

Staff and research students, please complete and return via email to school research administrator (S.E.Baines@hud.ac.uk) along with the required documents (shown below).

SECTION A: TO BE COMPLETED BY THE APPLICANT

Before completing this section please refer to the School Research Ethics web pages which can be found at this link. Applicants should consult the appropriate ethical guidelines.

Please ensure that the statements in Section C are completed by the applicant (and supervisor for PGR students) prior to submission.

SECTION A: TO BE COMPLETED BY THE STUDENT/ Pi

Before completing this section please refer to the School Research Ethics web pages which can be found at this link.

Students should consult the appropriate ethical guidelines. The student's supervisor is responsible for advising the student on appropriate professional judgement in this review.

Please ensure that the statements in Section C are completed by the student and supervisor prior to submission.

Project Title:	Exploration of creative pattern cutting techniques, human rights and ethical standards in the fashion clothing industry, and the effects of ethical processes on consumer behavior.
Student:	Laurie Ruth Perkins
Student number:	U1160574
Course:	MA by research, Art and Design
Supervisor:	Joanne Harris
Project start date	008/01/18
Risk level: (limited or significant)	Limited

SECTION B: PROJECT OUTLINE (TO BE COMPLETED IN FULL BY THE STUDENT)

Issue	Please provide sufficient detail for your supervisor to assess strategies used to address ethical issues in the research proposal
Aim / objectives of the study	Aim

These need to be clearly stated and in accord with the title of the study. (Sensitive subject areas which might involve distress to the participants will be referred to the Course Approval Panel).	• To bring to build a framework to bring an ethically sourced and manufactured fashion garment to market using creative pattern cutting techniques. Objectives • To research creative pattern cutting techniques and experiment to develop a fashion forward garment. • To explore ethical trading standards, human rights in the supply chain and other ethical fashion clothing businesses. • To study the spending habits of the consumer and investigate the consumer opinion on ethical products and human rights in the clothing industry
Brief overview of research methodology The methodology only needs to be explained in sufficient detail to show the approach used (e.g. survey) and explain the research methods to be used during the study.	Qualitative methods • Action research – interviews with business owners in person, by telephone or video call. • Consumer behaviour survey. • Practical Primary research – practicing different pattern cutting techniques in workshops at the university. Using this research to pattern cut a final product. • Prototyping – making samples of final product • Videos and photographs – to record only myself (no other people will participate in the videos) working on pattern cutting techniques and prototyping • Observation – observing others in the workshops to see how they use the same pattern cutting techniques in different ways.
Does your study require any third party permissions for study? If so, please give details	N/A
Participants Please outline who will participate in your research. If your research involves vulnerable groups (e.g. children, adults with learning disabilities), it must be referred to the Course Assessment Panel.	UK clothing factory owners/managers, Fashion clothing business owners, fashion consumers. No children or vulnerable adults.
Access to participants Please give details about how participants will be identified and contacted.	Contact with business owners and factory owners/mangers through linked in or be telephone to request meetings. Contact with fashion consumers by speak to students at the university, friends and family and also through linked in.
How will your data be recorded and stored? Please confirm that as a minimum this will comply with the university data storage policy and the Data Protection Act. Please indicate also any further specific details.	All data will be stored on a university 'K' drive. No data will be stored on a USB or personal storage device.
Informed consent. Please outline how you will obtain informed consent.	A participant consent form has been used for the case studies. An embedded consent form with a tick box will be used within the consumer survey.
Confidentiality Please outline the level of confidentiality you will offer respondents and how this will be respected. You should also outline about who will have access	A participant consent form has been used for the case studies. An embedded consent form with a tick box will be used within the consumer survey.

to the data and how it will be stored. (This should be included on information sheet.)	Participants will remain anonymous and organisation names will not be used.
Anonymity Do you intend to offer anonymity? If so, please indicate how this will be achieved.	Names of people or businesses will be anonymous. A participant consent form has been used for the case studies. An embedded consent form with a tick box will be used within the consumer survey. Agreement for use of photos will be requested.
To what extent could the research induce psychological stress or anxiety, cause harm or negative consequences for the participants (beyond the risks encountered in normal life). If more than minimal risk, you should outline what support there will be for participants.	None.
Does the project include any security sensitive information? Please explain how processing of all security sensitive information will be in full compliance with the "Oversight of security - sensitive research material in UK universities: guidance (October 2012)" (Universities UK, recommended by the Association of Chief Police Officers)	No.

Retrospective applications. If your application for Ethics approval is retrospective, please explain why this has arisen.

My ethics form from July 2018 was reviewed with feedback given, to which I amended and submitted seems to have been misplaced and not approved before research commence, which is why this is now a retrospective application.

SECTION C – SUMMARY OF ETHICAL ISSUES (TO BE COMPLETED BY THE STUDENT)

Please give a summary of the ethical issues and any action that will be taken to address the issue(s).

SECTION D – ADDITIONAL DOCUMENTS CHECKLIST (TO BE COMPLETED BY THE STUDENT)

Please supply to your supervisors copies of all relevant supporting documentation electronically. If this is not available electronically, please provide explanation and supply hard copy

I have included the following documents

Information sheet   Yes   x   Not applicable ☐

Consent form   Yes   x   Not applicable ☐

Questionnaire	Yes x	Not applicable ☐
Interview schedule	Yes ☐	Not applicable x

I confirm that the information I have given in this form on ethical issues is correct.

Signature _____L.Perkins_____   Date: _____18/10/19_____

Affirmation by Supervisor
I can confirm that, to the best of my understanding, the information presented by the student is correct and appropriate to allow an informed judgement on whether further ethical approval is required

Signature _____   Date:
_____

SECTION F: SUPERVISOR RECOMMENDATION ON THE PROJECT'S ETHICAL STATUS (UG/PGT)

Having satisfied myself of the accuracy of the project's ethical statement, I believe that the appropriate action is:

Approve	
Approve subject to recommendations [please specify]	
Approve subject to conditions [please specify]	
The project proposal needs further assessment by xxx	
The project needs to be returned to the student for modification prior to further action (details of required modifications must be provided)	
Reject	

Taught Students

Undergraduate and Taught Postgraduates- All documentation must be submitted to Unilearn as part of the assessment submission.

Research students/ Staff

Staff and Research students- All documentation must be submitted electronically to school research administrator (S.E.Baines@hud.ac.uk).

All enquiries should be directed to school research administrator (S.E.Baines@hud.ac.uk).

Appendix 5: A. Case studies questionnaire and consent form blank

Questionnaire

Brand name:

Established:

Contact name:

1. What makes your brand sustainable/ethical?

2. Why did you choose to launch a sustainable/ethical brand?

3. What challenges did you face when starting a sustainable/ethical brand?

4. What is your main focus when promoting the sustainability/ethics of your brand?

5. How do you ensure the supply chain is transparent?

6. How to you plan to move your brand forward in terms of sustainability/ethics?

Anything you feel should be discussed further? Points of interest?

University of Huddersfield

School of Art, Design and Architecture

Participant Consent Form

Title of Research Study: A study of creative pattern cutting techniques, questioning ethical standards in the fashion clothing industry and the effects of ethical processes on consumer behaviour

Name of Researcher: Laurie Ruth Perkins

Participant Identifier Number:

☐   I confirm that I have read and understood the participant Information sheet related to this research and have had the opportunity to ask questions.

☐   I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason.

☐   I understand that all my responses will be anonymised.

☐   I give permission for members of the research team to have access to my anonymised responses.

☐   I agree to take part in the above study

Name of Participant: …………………………………………………………

Signature of Participant: …………………………………………………

Date: …………………………

Name of Researcher: L.Perkins

Signature of Researcher:

Date:

B. Case studies consent form company A

University of Huddersfield
School of Art, Design and Architecture

Participant Consent Form

Title of Research Study: A study of creative pattern cutting techniques, questioning ethical standards in the fashion clothing industry and the effects of ethical processes on consumer behaviour

Name of Researcher: Laurie Ruth Perkins

Participant Identifier Number:

☒ I confirm that I have read and understood the participant Information sheet related to this research and have had the opportunity to ask questions.

☒ I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason.

☒ I understand that all my responses will be anonymised.

☒ I give permission for members of the research team to have access to my anonymised responses.

☒ I agree to take part in the above study

Name of Participant: ▮▮▮▮▮▮▮▮▮▮▮

Signature of Participant: ▮▮▮▮▮▮▮

Date: 10/02/19

Name of Researcher: L.Perkins

Signature of Researcher:

Date: 10/2/19.

C. Case studies consent form company B

University of Huddersfield
School of Art, Design and Architecture

Participant Consent Form

Title of Research Study: A study of creative pattern cutting techniques, questioning ethical standards in the fashion clothing industry and the effects of ethical processes on consumer behaviour

Name of Researcher: Laurie Ruth Perkins

Participant Identifier Number:

☑ I confirm that I have read and understood the participant Information sheet related to this research and have had the opportunity to ask questions.

☑ I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason.

☑ I understand that all my responses will be anonymised.

☑ I give permission for members of the research team to have access to my anonymised responses.

☑ I agree to take part in the above study

Name of Participant: ....

Signature of Participant: ....

Date: 10·2·19

Name of Researcher: L.Perkins

Signature of Researcher:

Date: 10/2/19

D. Case studies consent form company C

University of Huddersfield
School of Art, Design and Architecture

Participant Consent Form

Title of Research Study: A study of creative pattern cutting techniques, questioning ethical standards in the fashion clothing industry and the effects of ethical processes on consumer behaviour

Name of Researcher: Laurie Ruth Perkins

Participant Identifier Number:

☑ I confirm that I have read and understood the participant Information sheet related to this research and have had the opportunity to ask questions.

☑ I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason.

☑ I understand that all my responses will be anonymised.

☑ I give permission for members of the research team to have access to my anonymised responses.

☑ I agree to take part in the above study

Name of Participant: ▮▮▮▮▮▮▮▮

Signature of Participant:

Date: 10/2/19

Name of Researcher: L.Perkins

Signature of Researcher:

Date: 10/2/19.

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RESEARCH PLAN

Student Name	**Laurie Perkins**
Student number	**U1160574**
Research Degree	**Art and Design**
School	**Art, Design and Architecture**
Main Supervisor	**Jo Harris**
Date of enrolment (DD/MMM/YYYY)	**08/01/18**
Mode of Attendance	**Part time**
Planned completion date	**Jan 2020**

Is this proposal for practice based research? **(This can include an artefact, design, performance, composition etc.)**	**Yes**
Title of proposed research project	A study of creative pattern cutting techniques, questioning ethical standards in the fashion clothing industry, and the effects of ethical processes on consumer behavior.

A study of creative pattern cutting techniques, questioning ethical standards in the fashion clothing industry, and the effects of ethical processes on consumer behavior.

Aim:

The aim of this project is to establish a marketable ethically sourced and manufactured fashion collection for coats using creative pattern cutting techniques.

Objectives:

- The research creative pattern cutting techniques and experiment to develop a fashion forward capsule clothing collection.
- To explore ethical trading standards and other ethical fashion clothing businesses

- To study the spending habits of the consumer and investigate the consumer opinion on ethical products in the clothing industry

The opportunity to research creative pattern cutting techniques is very important; new and innovative ways to cut can affect the industry greatly by for example, reducing fabric waste, or exploring the shape of the human body in a different way. The mixture of creative pattern cutting techniques and ethical issues such as waste management and manual labor is important in today's society as fast fashion continues to get even faster, but at what cost? This research will take lessons from history in how to better utilize our clothing whilst also being fashion forward and ethical. This paper will connect with Britain's fashion roots and explore the consumer's opinion on a garments ethical background versus the garments retail price.

Working as a garment technologist in the fast fashion industry has enabled a collection of data and observations to inform this research into the effects of throw away garments on the economy and note the consumers desire to update they're wardrobe quickly and cheaply. Using skills obtained by this work offers opportunity to develop a product that follows ethical practices, using good quality materials and manufacturing, whilst also offering the customer value for money and the ability to wear time and time again. The collection will adopt a 'make do and mend' approach, with the idea of the consumer being able to customize the garment to keep it up to date and versatile.

A selection of articles exploring creative pattern cutting are available, such as 'insufficient allure: the luxurious art and cost of creative pattern cutting' (2010) by Dr. Kevin Almond and 'creative pattern technology' (2013) by Arena Page. Dr Almond's article goes on to discuss the retail price of the end product, and the costs that's go into the development of garments, however this proposed research will delve further into the ideas of bringing an innovative product to market.

Another paper by Jullian Roberts 'free cutting' (2013) discusses Julian's innovative pattern cutting technique called 'subtraction cutting' which explores the space around the body to make patterns.

Zero waste pattern cutting techniques have been investigated to be utilized in the fashion industry, transforming the design and make process in an article by A. M. James, B. M. Roberts & A. Kuznia (2016).

This body of work will experiment with a selection of different pattern cutting techniques to produce creatively cut pieces, whilst also staying within the parameters of being suitable for batch production.

Looking back at history, a book by Geraldine Howell (2012) maps out the timeline as changes in fashion during the second world war and the effect this has on the general public and they're relationship with clothing and textiles. The consumers attitude towards value for money and high quality became apparent through rationing and the amount of clothing ration coupons they were allocated. During the war, a public notice by the board of trade, explained the implication of clothing rations by explaining it was a 'fair distribution of available supplies' and went on to state – in capital letters - 'DO NOT BUY MORE THAN YOU NEED, NOR BEFORE YOU MUST" (Howell, 2012). This paper will work towards promoting an attitude similar to the quote issued in that public statement back in 1941, to today's society.

The term 'capsule wardrobe' is used to describe a small selection of clothing items owned by an individual that are everyday essentials (skirt, blouse, Coat etc.). The term 'capsule collection' is used to describe a collection from a designer or retailer that consists of garments that are timeless in their design, as well as the construction and usage (Hodin, 2014). Through this research I will prototype a capsule collection that will take into consideration timeless design, creative construction and quality components to give the consumer a coat with a longer life.

Politics plays a large part in the public's view of ethical issues in the world, for example the Paris Climate Accord (2015) is an agreement to reduce greenhouse gas emissions that has made news lately, when Donald Trump

made the decision to withdraw the US from the agreement. The Chinese government have pledged to reduce Chinas emissions drastically; China is the worlds largest polluter, overtaking the US in 2007 (Buckley, 2017).

Ethical issues have been brought to light in the media across other sectors. The food sector has had a lot to answer for in recent years, with exposure on cruelty in abattoirs and horse meat being used in family favorite ready meals. Most recently the effects of single use plastics on the world's oceans made Great Britain sit up and take notice when David Attenborough explained the damage they were causing on the award-winning BBC program 'Blue Planet' (2017)

The consumer is encouraged to pay more in the supermarket for free range eggs and palm oil free peanut butter, driving up the cost of their food bill to help the planet and put the brakes on animal cruelty. Businesses are making efforts to reduce plastic waste, from smaller, independent bars and restaurants pledging to stop the use of plastic straws, to larger high street coffee shops like the American coffee company 'Starbucks' who offer discounted coffee when using a reusable cup. The general public have been able to make these responsible changes to their lives, by adapting their food shopping habits and taking advantage of incentives to reduce waste.

The same transparency needs to be applied to the fashion industry, encouraging the consumer to shop responsibility for their clothing items and to consider the supply chain when purchasing a 'bargain'.

The book 'Overdressed: the shockingly high cost of cheap fashion' by Elizabeth L Celine (2013) looks at the devastating effects cheap fashion has on the planet, as well as the people who suffer in the process. The Transitions 2: Material Revolution conference at the University of Huddersfield in April 2018 discussed the circular economy in the textiles industry, and the steps being made by the industry to work towards 'Future fit' businesses (2018).

Education for the consumer of the effects of fast fashion is taking place on social media; @fash_rev on Instagram was launched to mark 5 years since the collapse of the Rana Plaza. The campaign #whomademyclothes encourages the consumer to ask its favorite brands to show them who made their clothes and brands have responded with an overwhelming transparency. This paper will continue by conducting case studies on ethical clothing brands to see how they operate.

A paper by Bin Shen et al., (2012) called 'The impact of ethical fashion on consumer purchase behavior' collected data in Hong Kong that confirms the ethical responsibilities of a fashion company do influence the consumer. Further investigation conflicts these findings in a cross section of the UK and German consumer. Catrin Joergens, (2006). This paper will further the research in this area, by taking a cross section of the UK and questioning they're opinions on a products ethical background vs the cost of the product.

The research will conclude by asking a cross section of the public if the ethical background of a garment would affect their desire to buy it, and if they would be willing to spec more money on a socially responsible product.

The following questions will be explored throughout the research:

- How can the patterns for garments be creatively cut whilst taking into consideration the final products ethical values?
- What ethical processes can be applied to the product?
- How do other ethically trading fashion clothing businesses operate?
- Does the ethical transparency of a fashion clothing company effect the consumers decision to buy the product?

Methodologies - Action and Qualitative Methods:

- Practical research by experimenting with pattern cutting techniques

- Physical prototyping of parts for garments and final product
- Recording practical techniques through video and photographs
- Reflection of processes through visual and written journal/diary
-
- Case studies of businesses through interviews and online research
- Data collection through surveys
- Data analysis of information collected through surveys

Research Timeline

Task Name	Q1			Q2			Q3			Q4			Q1			Q2			Q3			Q4			Q1		
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
− Reading and Planning																											
Initial Reading		Initial reading																									
Literature Review					Literature review																						
Skills Audit					Skill Audit Due																						
Research Plan					Research Plan Due																						
Trend research					Trend research																						
Ongoing blog/documentation of journey																									Ongoing blog/docs		
Transitions 2				Transitions 2																							
Case Studies																											
Ethical Trading							Ethical Trading																				
Consumer Habits						Consumer Habits																					
Factory Visits							Factory Visits																				
Interviews							Interviews																				
− Practical Investigation																											
Initial Design Ideas							Initial Design Ideas																				
Pattern Cutting Techniques								Pattern Cutting Techniques																			
Final Line Up							Final Line Up																				
Pattern Cutting Final Collection									Pattern Cutting Final Collection																		
Presentation of Practical Work																							Presentation of Pract				
Writing																											
First Draft Due													First Draft Due														
Second Draft Due																		Second Draft Due									
Intention to Submit																				Intention to Submit							
Checking																						Checking					
Final Draft Due																								Final Draft Due			

Research poster from Transitions 2 conference.

Post Graduate Research (Masters by research - Art and Design) supervised by Joanne Harris   Contact: Laurie Perkins Email: U1160574@pgr.hud.ac.uk

Style & Substance

University of
HUDDERSFIELD

Exploration of creative pattern cutting techniques and ethical standards in the fashion clothing industry, and the effects of ethical processes on consumer behaviour.

Key Words:

● Ethical ● Pattern Cutting ● Creative ● Made in England ● Capsule ● Socially Aware ● Consumer Behavior ● Experiment

The opportunity to research creative pattern cutting techniques is very important; new and innovative ways to cut can affect the industry greatly. The mixture of creative pattern cutting techniques and ethical issues such as waste management and manual labour is important in todays society as fast fashion continues to get even faster, but at what cost? In this research I hope to take lessons from history in how to better utilise our clothing whilst also being fashion forward and ethical. I want to connect with Britain's fashion roots and explore the consumer's opinion on a garments ethical background versus the garments retail price.

'Ethical consumerism and corporate social and environmental responsibility will play significant roles in achieving a sustainable fashion industry'

(Bin Shen et al., 2012)

Aims:

To bring to market an ethically sourced and manufactured fashion clothing collection using creative pattern cutting tecniques.

Objectives:

● To research creative pattern cutting techniques and experiment to develop a fashion forward capsule clothing collection
● To explore ethical trading standards and other ethical fashion clothing businesses
● To study the spending habits of the consumer and investigate the consumer opinion on ethical products in the clothing industry

'Pattern cutting and design are physical activities, they extend from the hand and eye, from rotations of the wrist, elbow & shoulder, but they also flow from the mind '

(Julian Roberts, 2013)

Key Questions:

● **How can the patterns for garments be creatively cut whilst taking into consideration the final products ethical values?** Zero waste pattern cutting techniques have been investigated to be utilised in the fashion industry, transforming the design and make process. *A. M. James, B. M. Roberts & A. Kuznia (2016).* Through practical investigation this research will push creative pattern cutting techniques, resulting in a fashion forward capsule collection which encompasses all aspects of ethical fashion practices.
● **How do other ethically trading fashion clothing businesses operate?** Case studies on such businesses in the UK will outline the aspects of ethical trading and the importance of these standards.
● **Does the ethical transparency of a fashion clothing company effect the consumers decision to buy the product?** Data collected in Hong Kong confirms that the ethical responsibilities of a fashion company influence the consumer. *Bin Shen et al., (2012)* Further investigation conflicts these findings in a cross section of the UK and German consumer. *Catrin Joergens, (2006).*

Research Methods:

● Sampling ● Experimenting with pattern cutting and sewing techniques ● Interviews ● Factory Visits ● Surveys

References: ● Fig 1. & Fig 3. https://thefoldline.com ● Fig 2. https://www.thecraft-studio.com ● Fig 4. http://1granary.com/

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Ethics

1. What ethical principles/codes of practice will guide the research?

I have completed and signed the university ethics forms, declaring my research as low risk. I will endeavour to ensure all survey participants are fully aware of the outcome of the research, all participants will be entitled to anonymity if they wish and will be able to remove the data

collected during the survey process before the closing date. Any interviewees will also be made fully aware of the outcome of the research, all participants will be entitled to anonymity if they wish and have the right to refuse to participate.

2. Are any particular ethical issues likely to arise in this research, and how will you address them?

N/A

Health and safety
1. Have any health and safety issues arisen, or might arise, and how will you address them? **N/A**

Skills Audit (Please attach the completed Skills Audit)

Skills Audit Template

Student Name	Laurie Ruth Perkins
Main Supervisor	Joanne Harris
School	Art, Design and Architecture
Date of Completion	Click here to enter text.

Completion of section 1 is a compulsory element of your Research Plan

Section 1 : Key Competencies, Research Skills and Techniques

	(cross referenced with Domain A:1,2&3 of the Researcher Development Framework -Vitae)		
Research Skills Training Needs Analysis	**Where do you feel you are in relation to the attributes currently?**	**Self-assessment & development priorities agreed with main supervisor**	*Evidence Required for Progression?*
Subject knowledge	No Experience ☒ Some Experience ☒ Very Experienced ☐	The research is a continuation from my BA(hons) in Fashion design with Marketing and production. I work in the fashion industry as a Garment Technologist and have previous experience as a Pattern Cutter in a factory.	☐
Research methods: Theoretical knowledge	No Experience ☐ Some Experience ☒ Very Experienced ☐	I completed a research module on my Undergraduate degree. I will continue to learn research methods throughout my work.	☐
Reseach methods: practical application	No Experience ☐ Some Experience ☒ Very Experienced ☐	I conducted practical research on my Undergraduate degree. I also conduct practical research in my job. I will continue to develop my practical research skills throughout my work.	☐
Data Collection Techniques	No Experience ☒ Some Experience ☐ Very Experienced ☐	I have no experience and I require more training in this area.	☐
Data Analysis Skills	No Experience ☒ Some Experience ☐ Very Experienced ☐	I have no experience and I require more training in this area.	☐
Statistical packages for data analysis knowledge	No Experience ☐ Some Experience ☒ Very Experienced ☐	I have basic skills on MS Excel, however I require more training in the area.	☐
Academic Misconduct	No Experience ☒ Some Experience ☐ Very Experienced ☐	I have no experience of academic misconduct, however I do understand the implications of this and I am happy to learn more about it.	☐
Referencing	No Experience ☐ Some Experience ☒ Very Experienced ☐	I used the APA 6th referencing system for my dissertation on my Undergraduate degree. I understand how the system works, however I will have access to a study skills mentor to help me in this area.	☐

Section 1 Continued : Key Competencies, Research Skills and Techniques – Language			
(cross referenced with Domain A:1,2&3 of the Researcher Development Framework- Vitae)			
Research Skills Training Needs Analysis	*Where do you feel you are in relation to the attributes currently?*	*Self-assessment & development priorities agreed with main supervisor*	*Evidence Required for Progression?*
English Language (Oral Skills)	No Experience ☒ Some Experience ☐ Very Experienced ☒	English is my first language. I understand how to use appropriate language.	☐
English Language (Written skills)	No Experience ☐ Some Experience ☐ Very Experienced ☒	As above. I have written a research paper on my Undergraduate degree. I have dyslexia, and I have access to a study support mentor to help me in this area.	☐
Academic Writing Skills	No Experience ☐ Some Experience ☒ Very Experienced ☐	I have written a research paper on my Undergraduate degree. I have dyslexia, and I have access to a study support mentor to help me in this area.	☐
General English Skills	No Experience ☐ Some Experience ☐ Very Experienced ☒	English is my first language. I understand how to use appropriate language.	☐
Proof Reading	No Experience ☐ Some Experience ☒ Very Experienced ☐	My dyslexia makes my ability to proof read slightly harder, however I can proof read better if I come back to re read my work a day or 2 later. I have access to a study support mentor to help me in this area.	☐
Plagiarism	No Experience ☒ Some Experience ☐ Very Experienced ☐	I have never had an incident of plagiarism, however I understand the importance of referencing correctly and am aware of the implications. I have used APA 6 and the Harvard referencing systems.	☐

Section 2 : Personal Effectiveness & Communication		
(cross referenced with Domain B:1,2&3 of the Researcher Development Framework -Vitae)		
Research Skills *Training Needs Analysis*	*Where do you feel you are in relation to the attributes currently?*	*Self-assessment & development priorities* *agreed with main supervisor*
Preparation and prioritisation	No Experience ☐ Some Experience ☒ Very Experienced ☐	My organisational skills were tested during my final year on my Undergraduate degree, and I have carried these skills forward into my job. I used my organisational skills every day at work, organising and prioritising my own workload and communicating with the far east. I have used Gantt charts and excel.
Time management	No Experience ☐ Some Experience ☒ Very Experienced ☐	I have very good time management. I will also strive to be on time or arrive early if possible. I have experience working within time frames to complete tasks on both my Undergraduate degree and in my job. I use a diary to plan my time.
Presentation Skills	No Experience ☐ Some Experience ☒ Very Experienced ☐	I have some experience of presentations, mainly in my Enterprise Placement Year when I had to pitch my business to an independent panel. I occasionally have to present at work. I have used software like power point and prexi.
Section 3 : Research Environment, Governance and Organisation		
(cross referenced with Domain C:1 &2 of the Researcher Development Framework -Vitae)		
Research Skills *Training Needs Analysis*	*Where do you feel you are in relation to the attributes currently?*	*Self-assessment & development priorities* *agreed with main supervisor*
Health and safety	No Experience ☐ Some Experience ☒ Very Experienced ☐	I have a good knowledge of heath and safety through my role as a supervisor in a retail environment. I also work with some aspects of it at work and understand the importance of health and safety in a factory environment. I attended a health and safety induction at the university.
Ethics, principles and sustainability	No Experience ☐ Some Experience ☒ Very Experienced ☐	This subject is of interest to me and is a large part of my job. Ethics, principles and sustainability are very important in the fashion industry and I am also looking to expand my knowledge in this area.

Discipline Specific legal requirements (if applicable)	No Experience ☐ Some Experience ☐ Very Experienced ☐	N/A
IPR and copyright	No Experience ☐ Some Experience ☒ Very Experienced ☐	I have some experience in this area form my Enterprise Placement Year and would benefit some more information on this.
Attribution and co-authorship	No Experience ☒ Some Experience ☐ Very Experienced ☐	I have no experience in this area.
Equality and diversity	No Experience ☐ Some Experience ☒ Very Experienced ☐	I understand equality and diversity issues. I require more training on this in terms of research.

Section 4 : Career Management & Professional Development		
(cross referenced with elements of both Domain B & D of the Researcher Development Framework - Vitae)		
Research Skills Training Needs Analysis	*Where do you feel you are in relation to the attributes currently?*	*Self-assessment & development priorities agreed with main supervisor*
Career management development	No Experience ☐ Some Experience ☒ Very Experienced ☐	My Enterprise Placement Year advanced my career management and development skills. I also have a middle weight job as a Garment Technologist and I always strive to push my career development where possible.
Interview skills	No Experience ☐ Some Experience ☒ Very Experienced ☐	I have attended several successful interviews in the past. I have also conducted interviews in a previous job role as well as for my dissertation on my Undergraduate degree.

CV Writing	No Experience ☐ Some Experience ☒ Very Experienced ☐	I have experience in CV writing for my self, I have also helped friends write their own. I would always benefit from help to refine or enhance my CV.
Using social media for your research	No Experience ☐ Some Experience ☒ Very Experienced ☐	I have successfully used social media for business and understand the importance for appropriate use of social media. I do not feel the use of social media will be appropriate for my research at this time.
Teaching	No Experience ☐ Some Experience ☒ Very Experienced ☐	I had experience teaching on my placement year on the BTEC National Diploma in fashion and clothing at Bradford College. I am very interested in expanding my teaching knowledge and experience.

Section 5 : Knowledge Exchange and Commercial Awareness

(cross referenced with elements of Domain A of the Researcher Development Framework - Vitae)

Research Skills *Training Needs Analysis*	*Where do you feel you are in relation to the attributes currently?*	*Self-assessment & development priorities* *agreed with main supervisor*
Research strategy	No Experience ☐ Some Experience ☒ Very Experienced ☐	I have some experience of research strategies and I will continue to gain experience throughout my work.
Project planning **and delivery**	No Experience ☐ Some Experience ☒ Very Experienced ☐	I have planned several project on my Undergraduate degree, especially on my Enterprise Placement Year and in Final year.
Income and **funding generation**	No Experience ☐ Some Experience ☒ Very Experienced ☐	I have pitched for funding and grants on my Enterprise Placement Year.
Financial management	No Experience ☐ Some Experience ☒ Very Experienced ☐	I have experience in managing finances through my Enterprise Placement year. I handled and banked cash in a previous supervisor role in a retail environment. I have strong money management skills as I live independently and manage my own household finances.

	No Experience ☐ Some Experience ☒ Very Experienced ☐	I have experience in applying for business grants/funding on my Enterprise Placement Year.
Bid Writing		

Section 6 : Leadership, Networking & Team Working

(cross referenced with elements of Domain D of the Researcher Development Framework -Vitae)

Research Skills *Training Needs Analysis*	*Where do you feel you are in relation to the attributes currently?*	*Self-assessment & development priorities* *agreed with main supervisor*
Managing people	No Experience ☐ Some Experience ☒ Very Experienced ☐	I have previous experience as a supervisor in a retail environment where I had to manage staff on a daily basis. I have also supervised back stage as fashion events when teaching on my placement year. I often lead small teams at work when necessary.
Supervision	No Experience ☐ Some Experience ☒ Very Experienced ☐	I have worked as a supervisor managing people. I have no experience of supervision in an academic environment. I am happy to participate in teaching classes to further my experience.
Research collaboration	No Experience ☒ Some Experience ☐ Very Experienced ☐	I have no experience in this area, however I would like to learn more and potentially participate in research collaboration.

Section 7: Discipline Specific

Research Skills *Training Needs Analysis*	*Where do you feel you are in relation to the attributes currently?*	*Self-assessment & development priorities* *agreed with main supervisor*
Business and enterprise	No Experience ☐ Some Experience ☒ Very Experienced ☐	As part of my Enterprise Placement Year I attended several workshops and business meetings alongside the set up and running of my business.

2D/3D design software	No Experience ☐ Some Experience ☒ Very Experienced ☐	I am comfortable using Adobe creative suite (Illustrator, Photoshop, In design) as well as pattern and marker software (Gerber, Assyst) I would like further training, especially on the pattern making software.
Research methodologies	No Experience ☒ Some Experience ☐ Very Experienced ☐	I will research different techniques and attend lectures where possible. If I am unable to attend I will watch lectures back on Unilearn and use the slides provided. I will work with my supervisors who have extensive knowledge in this area throughout my research.
Pattern cutting and grading skills	No Experience ☐ Some Experience ☒ Very Experienced ☐	I have an intermediate knowledge of this subject through my pervious experiences (college, Undergraduate degree, my job). I will attend workshops and short courses where possible and read and practice techniques whilst conducting my research.
Click here to enter text.	No Experience ☐ Some Experience ☐ Very Experienced ☐	Click here to enter text.

Resources

Please describe any resources/facilities required (including whether these are readily available)

Reading material is required through the university library and any online sources for articles and journals through summon. Studio space will be required when conducted practical research, the university has a large and well-equipped fashion studio which is available to use. Travel to workshops and factories will be needed, this will be provided by my self through access to a car, as well as possible independent train travel. I am entitled to DSA which provides me with support for my dyslexia through the university.

Notes for the Applicant

- I wish to apply to my supervisory team for approval of my research programme on the basis of the information given in this application.
- I confirm that the particulars given are correct.
- I understand that, except with specific permission, I may not, during the period of my enrolment, be a candidate for another award.
- I understand that, except with the specific permission, I must prepare and defend my thesis in English.
- I agree to address any Skills Audit requirements that are necessary for consideration for progression.

SIGNATURES

Student: **Laurie Ruth Perkins** **Signature: L.Perkins** **Date:** **11/05/18**	**Main supervisor:** **Signature:** **Date:**