Practices and Implications of Product Development and Sustainable Consumption in the Clothing Sector

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### Selected Publications Submitted for PhD by Published Work

#### Academic Journal Articles

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#### Book Chapters

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The publications start with chapters concerning fashion buying and garment sourcing, then diverge into two strands: retail buying on the left and sustainable consumption on the right, in the diagram below.
Critical Appraisal

2 Introduction

This PhD examines the practices of clothing product development, particularly in connection with retail buying, and their implications with regard to sustainability. These are two fundamental dimensions of the clothing sector, yet they have not received adequate attention in the literature. My research redresses this gap in three key ways. Firstly, there tends to be an assumption in much of the literature that the US system of retail buying is applicable universally. However, my research revealed that own-label buying processes in the UK clothing sector operate differently to those referred to in US texts. Secondly, my research found that other roles that work alongside buying and design teams are significant in clothing product development (e.g. merchandisers, textile designers and technologists), although this has been under-reported or omitted in previous studies. Thirdly, sustainability is a prominent issue which is affecting product development in the clothing sector increasingly, ultimately impacting upon consumer behaviour in terms of selection, purchase, maintenance and disposal of garments, yet it was virtually absent from existing studies.

The overall aims of this critical appraisal document are to introduce the two key strands of my research into clothing product development practices and their implications for sustainability, to locate my research within existing studies, and to outline the impact of my publications for my field of research. My research sits within the context of the UK clothing retail market, which is valued at £53.5 billion (Mintel, 2015) and is characterised by the dominance of large retail chains which sell their own-label merchandise. Consequently, the retail clothing sector forms a considerable component of the country’s economy, surpassed only by the food sector. However, there is a tension between the use of the terms ‘clothing’ and ‘fashion’, since clothing suggests more functional items whereas fashion has a tendency to imply garments aimed largely at female consumers, which are subject to frequent changes in style. The widespread use of the term ‘fast fashion’ during the last decade (Barnes and Lea-Greenwood, 2010) and the escalation in sales turnover of ‘value fashion’ retailers in the UK (Mintel, 2012)
have contributed to the view of fashion as being transient and disposable in nature. To some extent, clothing and fashion are used interchangeably within the publications in this PhD, but clothing takes precedence and is used in the title for clarity, since it encompasses all types of apparel and is not limited to fashion items.

This PhD comprises a selection of seven of my published works, which cover the two themes of practices in clothing product development and their impact upon sustainable consumption. Three of the works (Goworek, 2006; Goworek, 2010; Goworek, 2014a) explore the ways in which product development is implemented in the clothing industry, particularly from an organisational buying perspective, assessing the roles involved and the processes implemented. The remaining four works (Goworek, 2007; Goworek 2011; Goworek et al, 2012; Goworek et al, 2013) examine how products can be selected, sourced and consumed more sustainably, recognising the significance of the ‘triple bottom line’: social, environmental and financial sustainability (Elkington, 1999).

Besides contributing to the two, previously under-researched areas outlined above, my key contribution to the literature has been to develop stronger connections between theory and practice in terms of buying and product development in the context of the clothing industry, utilising qualitative methods. Furthermore, my research is informed by an action agenda, encouraging change in sustainable behaviour towards clothing beyond academic circles, by supporting students in gaining the knowledge to implement sustainable practices in their careers, and to provide information to practitioners that can enable them to do the same. The assembled publications have been used in research, teaching and industry, and have become authoritative sources in these fields.

The published works in my PhD have featured within a range of publications, which demonstrate the relevance and contribution of the research to the fields of marketing, social and environmental sustainability, fashion and textiles. The research in this PhD has led to current collaborations with two of those authors whose work initially inspired me in the field of sustainable consumption (Professor Deirdre Shaw and Dr Michal Carrington), endorsing the relevance of the publications to academic developments in this subject area. In conclusion, the PhD explores the route taken to playing an active part in the research community for the two areas in the title, in which gaps in knowledge were identified, followed by a synthesis of these topics. The different perspectives of the papers and the methodologies are discussed below and the contribution of the
publications to the literature and their place within it are evaluated. The research objectives of the body of publications in this PhD are:

- To examine the relationship between product development and sustainability in the context of buying for UK fashion retailers (Goworek, 2006; Goworek, 2007; Goworek, 2010; Goworek, 2011; Goworek et al, 2012; Goworek et al, 2013; Goworek, 2014a);
- To critically evaluate previous research relating to retail buying, new product development (NPD) and sustainable consumption (Goworek, 2006; Goworek, 2007; Goworek, 2010; Goworek, 2011; Goworek et al, 2012; Goworek et al, 2013; Goworek, 2014a);
- To assess the impact of social and environmental responsibility on clothing product development, sourcing and consumption (Goworek, 2007; Goworek, 2011; Goworek et al, 2012; Goworek et al, 2013).
Clothing product development practices: an understudied dimension

Retail buying has been addressed to a limited extent within the marketing literature, yet despite the topic’s significance in the fashion industry, it has rarely been covered in the context of clothing. For example, Swindley (1992) and Levy and Weitz (2012) summarise the buying role very broadly from various sectors, but these sources are outdated or focused on the US market respectively. Organisational buying is an area that was initially investigated in the literature in Robinson, Faris and Wind’s (1967) seminal study which went on to form the basis of the better-known consumer decision-process (CDP) model (Engel, Kollat and Blackwell, 1968), which features some of the same stages. The organisational buying model retains its relevance today, but recent societal and technological developments call for an updated version. Whilst much of organisational buying research focuses on the purchase of goods and services for use within companies, retail buying is a sub-category that operates as a central function within retailing, thus impacting both upon companies’ performances and consumers’ lifestyles. Consequently, retail buying has a significant impact on society and business, yet it tends to be shielded from public awareness and has even been omitted from the topics discussed in several of the key retailing texts (e.g. Gilbert, 2003; Berman and Evans, 2013). Conversely, Levy and Weitz (2012) offer the most detailed summary of retail buying in US textbooks, specifying sequential stages in the planning process used by buyers. My book Fashion Buying (Goworek, 2001) was the first to address this topic in a fashion context in the UK and was then updated in its second edition (Goworek, 2007).

My empirical research has been novel in adopting a qualitative approach, to allow opinions of consumers and insights from practitioners to be explored in depth, whereas studies in these fields largely use quantitative methods (see for example, Swindley, 1992; Shen, Wang, Lo and Shum, 2012). For the first strand of the research, which relates to clothing product development, convenience and snowball sampling were used to select appropriate respondents for interviews with specialists in buying, design and technology in the clothing industry. My contributions to this field concentrate mainly on own-label UK fashion retailers, an area which had previously garnered no academic
attention in the marketing field, despite its importance in the UK market. Levy and Weitz’s (2012) work is a rare exception, albeit addressing the US equivalent, i.e. ‘private label’ merchandise. A key factor in own-label buying is that retail buyers are involved in the product development process, whereas buyers of branded clothing (e.g. Nike and Diesel) that is not sold exclusively in an individual retail chain, purchase products for which the design has already been finalised.

One of the key insights provided by my research is that buyers’ engagement with product development is facilitated largely by designers who work in-house or are employed by their suppliers (Goworek, 2010). This has called attention to the ways in which this collaborative process operates and the central, co-ordinating role of the buyer, within a variety of retail formats. Collaborative product development was initially explored in my research in the chapters about fashion design, buying and technology in Careers in Fashion and Textiles (Goworek, 2006a). The topic was subsequently discussed further in my first conference paper, presented at the Design Research Society conference (Goworek, 2006b) and analysed in my first journal article (Goworek, 2010). Through having developed a more adequate account of product development as practice, a more nuanced understanding of its implications for sustainability can be offered.
4 Product development implications: Sustainable consumption in the clothing sector

The second key area of my research relates to issues regarding sustainability. Increasing awareness of both environmental and social sustainability impacts in recent decades has led to escalating concern, in business and in society in general, about the effect of current levels of consumption. Elkington (1999) is a notable author in this domain, having identified the importance of the triple bottom line to business, thus providing an innovative perspective on the performance of organisations. The major environmental problems caused by consumption are twofold: depletion of resources and the pollution caused by manufacture, distribution and disposal (Abeliotis, Koniari and Sardianou, 2010). Consequently, Assadourian (2010) questions the ability of humankind to thrive if we do not re-orientate our actions towards more sustainable behaviour. Sustainable consumption is therefore a significant issue, as demonstrated by Low and Davenport’s (2006) view that the behaviour of ethical consumers has the potential to change the world. Key methods of sustainable consumption are the selection of sustainable products, boycotts of unsustainable products (particularly with regard to social sustainability) and anti-consumption (Harrison et al., 2005). Despite the availability of these options, however, Yates (2008) describes consumers as typically being ‘locked in’ to unsustainable consumption behaviour due to lack of incentives for more sustainable consumption. Accordingly, Schaefer and Crane (2005) place responsibility for sustainability beyond individual consumers by advocating that governmental policies in Western countries should be implemented to accelerate the adoption of such behaviour. These arguments demonstrate the importance of adopting more sustainable behaviour and thus support my focus on the societal and environmental implications of product development practice.

Publications in various formats on the theme of sustainability and marketing have emerged during recent years, indicating growing interest in this area and making this a timely topic to investigate. Articles in the major marketing journals reflect growing mainstream coverage of this field, illustrated by the inclusion of an article examining sustainability marketing research by McDonagh and Prothero (2014) for the 30th anniversary special issue of the Journal of Marketing Management about key future
themes in marketing. Journals focusing on sustainability and business have been launched, such as *Business Strategy and the Environment* and the *Social Responsibility Journal* (in 1992 and 2005 respectively) thus offering further outlets for research on sustainable consumption. SRJ was the first journal to accept one of my articles for publication, after I presented a paper on the topic of sustainability in the fashion industry, at the 2008 International Conference on Corporate Social Responsibility (Goworek, 2011).

An increasing acknowledgement of the importance of sustainability as an academic topic is also illustrated by the publication of textbooks on this theme by authors such as Belz and Peattie (2011) and Martin and Schouten (2012). Alongside sustainable marketing, the field of ethical consumption, much of which comprises sustainability issues, has also developed. Carrigan and Attala (2001) and Harrison et al. (2005) published ground-breaking research in this emerging field, by debating the existence of ethical consumers, and this remains a topic of continuing interest to researchers (for example, Carrington, Neville and Whitwell, 2010; Eckhardt, Belk and Devinney, 2010; Carauna, Carrington and Chatzidakis, 2015). Sustainable consumption could be viewed as a contradiction in terms, in that acts of consumption generally use up the earth’s resources. However, my research explores the ways in which clothing organisations and consumers can behave in a more sustainable fashion by minimising their detrimental sustainability impacts, rather than insisting on a narrow and less viable target of consuming in a manner that is *entirely* socially and environmentally sustainable.

Fashion retailers have an essential part to play in enabling more sustainable consumption, in that consuming products is a central function that enables the organisation to exist. Retailers have a direct impact on the products that are in turn consumed by their customers (Goworek et al, 2012) and large volumes of fashion products are manufactured at the request, and sometimes to the explicit design specification, of retail buyers. Accordingly, the publication of books on sustainable fashion gathered pace from 2008 onwards, with outputs by various fashion academics (Fletcher, 2008; Brown and Small, 2010; Black, 2011; Gwilt and Risannen, 2011). This trend gained critical mass in 2013 in the peer-reviewed book *Sustainable Fashion and Textiles* by the founders of the Sustainable Textiles Centre in Argentina, Ana Laura Torres and Miguel Angel Gardetti, which comprised content from various authors at
every stage of the fashion and textiles supply chain, with an analysis of consumers’
attitudes towards sustainable fashion (Goworek et al, 2013) as its final chapter.

The strand of my research which focuses on sustainable clothing consumption starts
with a case study of sustainable fashion brand People Tree, incorporating an interview
with the company’s Managing Director, Safia Minney (Goworek, 2011). The other two
publications in the same strand (Goworek et al, 2012; Goworek et al, 2013) analyse the
findings of *Public Understanding of Sustainable Clothing*, a study which investigated
consumers’ knowledge and practice via qualitative research with 99 participants. I was a
member of the research team for this study, which was funded and published by the
government’s Department for Environment, Food and Rural Affairs (Defra). In these
two publications, original data and findings were analysed to examine their implications
for clothing retailers, particularly in relation to the maintenance and disposal of
garments, thus disseminating the Defra report’s outcomes, with the aim of influencing
consumer behaviour more widely. I wrote the majority of the content in these two
publications (Goworek et al, 2012; Goworek et al, 2013) and the whole team were also
credited as co-authors, since they all participated in the study from which the key
content was derived, and some of the team members provided critique or input.
Synthesis: The relationship between retail buying and sustainable consumption in the clothing sector

Decision-making is a theme that cuts across my research into product development as practice and its impact in terms of sustainability: I have examined product development and sustainable consumption from the perspectives of organisational buyers and consumers. My interest in the topic of sustainable fashion developed initially from research for a section in the garment sourcing chapter of the 2nd edition of *Fashion Buying* (Goworek, 2007), inspired by attending the Association of Suppliers to the British Clothing Industry (ASBCI) conference in 2007. The conference was a seminal event at a point when awareness of environmental and social sustainability was beginning to head into mainstream clothing retailing. This is indicated by the involvement of the key speakers, who included a representative of Marks and Spencer discussing the imminent launch of its ‘Plan A’ sustainability policy and Dr Julian Allwood of the Institute of Manufacturing at the University of Cambridge presenting the findings of the ‘Well Dressed’ report about the sustainability of clothing in the UK (Allwood, Laursen, Rodriguez and Bocken, 2006). These presentations showed the significance of addressing sustainability issues in the clothing industry and the second edition of *Fashion Buying* offered an opportunity to communicate these developments to the academic community.

The body of work within the PhD critiques the dominant approach to questions of sustainability relating to clothing, within academic research, organisational and policy terms. This critique centres on three key points for debate. Firstly, definitions of sustainable clothing tend to be overly narrow. Secondly, there has been a failure to account for the complexity of consumption decisions. Thirdly, there tends to be an over-reliance on consumers as levers of change. The growth of ethical consumerism has inevitably brought with it a demand for ethical fashion, defined by Joergens (2006: 361) as “fashionable clothes that incorporate Fair Trade principles with sweatshop-free labour conditions while not harming the environment or workers, by using biodegradable and organic cotton”. However, this definition could be considered to be overly stringent, since only a small proportion of clothing conforms to each of these factors. Within the papers in this PhD, the terms ‘ethical clothing’ and ‘sustainable
clothing’ are sometimes used interchangeably, to mean garments incorporating features which are either environmentally or socially sustainable. Previous studies have found that, in general, consumers prioritise style above ethical issues in clothing purchase (for example, Joergens, 2006; Kim, Littrell and Paff Ogle, 1999). Shaw, Hogg, Wilson, Shui and Hassan (2006) investigated the reasons why this was the case and discovered that the cost, fashionability and limited availability of ethical clothing were the main barriers to consumers’ purchase of ethical clothing. Similarly, the majority of consumers in an earlier survey regarding ‘concerned consumers’ (Populus, 2007) believed that retailers needed to address social and environmental sustainability more effectively, yet many of them favoured shopping at ‘value’ clothing stores, with price, product range, service and style taking precedence over sustainability. Furthermore, market research by TNS found that 72% of consumers considered ethical production of clothing to be important to them (Wrigley, 2008), yet the existence of an attitude-behaviour gap is indicated when viewed in the context of an ethical clothing market that was worth an insignificant proportion of the total UK clothing market in the same year (Co-operative Bank, 2008; Mintel, 2008).

Since mainstream retailers rarely limit their products to more sustainable choices, consumers are therefore usually left to their own devices when making consumption decisions, with limited information available. Furthermore, in a study of purchasers of technology-based products, Young, Hwang, McDonald and Oates (2010) found that self-identified green respondents took into account product performance, product manufacture and second-hand availability as key selection criteria, with access to information, labelling and mainstream availability of green products acting as facilitators. Additionally, McDonald, Oates, Thyne, Alevizou and McDonald (2009:141) compared sustainable consumption patterns across different types of product and discovered that sustainability criteria are used inconsistently across product sectors. Therefore, consumers may not behave sustainably in their clothing consumption, even if they consider sustainability impacts when purchasing other types of product.

Information about sustainability is provided to consumers by various different sources presenting differing perspectives and there can even be conflicting views within the same field (Cherrier, 2007), thus making it difficult for consumers to decide which behaviour to adopt. Consequently, it is not realistic to presume that consumers can be completely informed about the sustainability of products (Newholm and Shaw, 2007).
The literature discussed above demonstrates that sustainable consumption is a complex process, influenced by a variety of enablers and barriers.

In response to these three issues, a broader definition of sustainable clothing is called for, since insufficient garment ranges currently exist to meet social and environmental sustainability criteria simultaneously. Sustainable clothing consumption could therefore be an unattainable goal at present, and recognition of its complexity is required by academics and practitioners, in relation to differences in purchase behaviour for clothing in comparison to other product sectors. Finally, although consumer demand clearly contributes directly towards sustainable consumption, the clothing industry also has a key role to play in developing products that both meet and stimulate this demand, placed within or beyond the guidelines of governmental policies. The evidence below establishes the need for a more interpretive approach to sustainable clothing.

Three of the key issues regarding the environmental sustainability of clothing are: consumption of resources (particularly fossil fuels and water), use of pesticides and the disposal of garments. Fossil fuels are consumed in the composition of synthetic fabrics and via energy usage in the manufacture and transportation of textiles and clothing of all types. Water is utilised heavily in the cultivation of cotton and in many dyeing and printing processes. Hustvedt and Bernard (2008) found that consumers were willing to pay a premium price for clothing which is organic and which is manufactured locally, thereby removing the need for pesticides and reducing the amount of fuel used in transportation. However, the garment manufacturing location does not indicate where the fabric was produced and this may not have been local to the manufacturer, thus the fabric may have been imported, requiring transportation from the textile mill to the clothing factory.

Fair Trade is the most high profile label used for ethical goods (Newholm and Shaw, 2007) and the most prominent example of social sustainability in clothing production, which can be applied to both clothing manufacture and the textiles from which the clothes are made. Fair Trade can be described as “a trading partnership, based on dialogue, transparency and respect, which seeks greater equality in international trade. It contributes to sustainable development by offering better trading conditions to, and securing the rights of, marginalized producers and workers, especially in the Southern
Hemisphere” (World Fair Trade Day, 2012: np). Despite this, Wright and Heaton (2006) found that recognition of Fair Trade labelling is limited amongst consumers and they recommend that Fair Trade companies should use stronger branding, in line with their mainstream counterparts. The impact of international promotions including World Fair Trade Day and Fair Trade Fortnight, as well as increasing internet access, are likely to have raised the profile of Fair Trade further since Wright and Heaton (ibid.) conducted their study.

The body of work within this PhD is attentive to the ambiguities and complexities demonstrated in the paragraphs above, and counters the criticisms that have been set out, thus enabling a more attainable definition of sustainable clothing to be established, which acknowledges the joint responsibilities of consumers, product developers (in retailers, manufacturers and fashion brands) and policies in clothing consumption. The currently limited availability of garments which are both environmentally and socially sustainable, means that, regrettably, purchasing sustainable clothing that meets Joergens’s (2006) definition is impractical for many consumers. Relevant policies and legislation could potentially be implemented to force the clothing industry to produce garments that are sustainable in both respects, but until such time as this might occur, consumers are being deterred from behaving sustainably by a lack of sustainable purchase options. Therefore, defining sustainable clothing as garments which incorporate either environmentally or socially sustainable aspects, during the product development or production stages of their lifecycle, could break down certain barriers, to allow producers and consumers to engage more widely with products that address sustainability in at least one respect. Although this approach could be criticised for its leniency, due to the urgency to address climate change, for example, it could enable progress to be made towards improved sustainability with a view to imposing a more stringent definition in the future. A practical method of approaching this issue would be to attach a scorecard or ‘traffic light’ labelling system which rates various sustainability aspects of products, as proposed in the report on Developing and Trialling New, More Resource-Efficient, Product Offerings, (funded by Defra, forthcoming 2016).

Sustainable clothing consumption can be divided into three stages: purchase, maintenance and divestment (Goworek et al, 2012; Goworek et al, 2013). Each of the three stages offers various opportunities for consumers to behave in more sustainable
ways than have traditionally been the case. The significant impact on the environment of the final stage appears to have largely been disregarded in the past, yet the literature suggests that it is now beginning to be addressed by both companies and consumers. My research offers insights into the perspectives and practice of contemporary practitioners in the clothing industry, which have hitherto had sparse coverage, combined with consumers’ perceptions, thus providing a fully rounded view of issues related to sustainable clothing production and consumption. The publications therefore go beyond theoretical concepts, to demonstrate to academics, policy makers and present and future practitioners, methods of making clothing more sustainable in practice.

1. Clothing purchase
Consumers have typically perceived ethical fashion as unfashionable, but this view is beginning to change, driven by fashion brands at various market levels, which has led to increased opportunities for the purchase of sustainable clothing. Leading designer Katharine Hamnett spearheaded this change at the upper end of the market by using sustainable production in her garment range from 2007 and other British designers have followed her lead. Additionally, the ready-to-wear designer shows in various fashion capitals have established ethical fashion exhibitions alongside mainstream ranges and brands including People Tree have been featured in Vogue magazine (London Fashion Week, 2012). This change in perceptions is evidenced by the fact that 21-26 year-olds, probably one of the most difficult groups to please in terms of fashion, were pleasantly surprised by products available from some of the more trend-conscious ethical brands (Joergens, 2006).

Carrigan and Attalla (2001:578) suggested that “companies need to find ways to convince consumers about their ethical integrity”. Yet when investigating clothing retailers’ codes of conduct, Pretious and Love (2006) revealed widespread use of child labour in clothing factories: 43% of the participants in their survey of buying and sourcing employees had seen this happen. This offers tangible evidence that garments made in developing countries can involve unethical working situations, thus supporting the information disseminated by pressure groups. When selecting clothing, it can be very difficult for consumers to be aware of whether or not they are buying products that are sustainable, due to a lack of transparent information at the point of sale. Garments made from organic or Fair Trade cotton often have permanent labelling on the garments
to state this, a strategy which has been used by retailers Sainsbury’s, Monsoon and New Look. Ethical clothing brands People Tree and Patagonia take transparency a stage further by naming their manufacturers and describing aspects of social and environmental sustainability on their websites, enabling customers to be well informed about the sustainable nature of the company’s products before purchase (Patagonia, 2016; People Tree, 2016). People Tree practise ‘choice editing’ by only offering clothing which is both Fair Trade and organic, thus making it easy for their customers to make ethical choices, and showing that this concept is viable. Connolly and Shaw (2006) consider that ‘bundling’ ethical aspects together in this way helps to increase the appeal of the products. My chapter on garment sourcing (Goworek, 2007) and my article about social and environmental sustainability in the fashion industry (Goworek, 2011) reveal the views of People Tree’s founder and the company’s sustainability and transparency in its working methods, providing a model of good practice for NPD and production which could be adopted by less sustainable organisations. NPD issues within the clothing industry have also been assessed in other publications within this body of work (Goworek, 2006; Goworek, 2007; Goworek, 2010; Goworek, 2014a), explaining the processes and framework within which sustainability can be embedded.

2. Clothing maintenance – laundry and repair

The majority of research attention has been directed at textiles and clothing production and distribution up to the stage where it is purchased by consumers. However, the usage phase has the highest environmental sustainability impact, although environmental and social sustainability during the manufacture of clothing have attracted more media interest and discussion, (Allwood et al, 2006). For example, Fletcher (2008) reports that domestic laundering accounts for up to 82% of the energy used during the garment lifecycle. Washing garments also inevitably uses water and chemicals in detergents pollute water (McDonough and Braungart, 2008; Dombek-Keith and Loker, 2011). Dry cleaning processes also cause carbon emissions and pollution through using energy and toxic chemicals (Slater, 2003). Despite these issues, research in relation to consumers’ maintenance of garments is scarce. My research has investigated this aspect of clothing consumption, since it is of significant concern, revealing that consumers are prepared to change their behaviour in this respect, when provided with appropriate information (Goworek, 2012; Goworek, 2013). Indeed, the longest stage of a garment’s purposeful
lifecycle is its usage and the two key aspects are the laundering and repair of clothes. Shove (2002) investigates the habitual nature of laundering, and suggests that consumers could find it difficult to break regular habits such as washing clothes at high temperatures and tumble-drying. Additionally, many consumers wash clothing more frequently than is necessary for hygiene purposes (Slater, 2003). However, it is possible that consumers may be persuaded to reduce washing temperatures and frequency of laundering, if given sufficient motivation. The sustainability impact of laundering could potentially be lowered by the introduction of wash care symbols to encourage consumers to repair clothes and to wash them in full loads (Dombek-Keith, 2009).

Consumers often avoid repairing clothing due to lack of time and skills and the relatively low cost of new clothing (Gibson and Stanes, 2011), although garments can be purposely designed to facilitate repairs and alterations (Rissanen, 2011). Another approach to minimising sustainability impacts is to purchase durable clothing with a longer lifecycle to reduce waste (Gibson and Stanes, 2011; Blanchard, 2007). Cooper (2010:28) supports this approach, arguing that: “sustainability will only be achieved if the prevailing throwaway culture in industrial countries is transformed and there is a shift towards longer lasting products”. Repurposing, adapting and re-using (‘upcycling’) are all methods of increasing the useful life of clothing (Ulasewicz, 2008). Exchanging and hiring clothing are particularly economical ways of reducing sustainability impacts.

3. Clothing divestment

A trend towards ‘throwaway fashion’ has been established in the 21st century, since many consumers tend to overconsume clothes and to keep them for a short time before disposal (Barnes and Lea-Greenwood, 2010), encouraged by deflation in clothing prices (Birtwistle and Moore, 2007; Gibson and Stanes, 2011). Consumers, retailers and manufacturers can take responsibility for extending the usable life of clothing and it is therefore important that consumers are informed about sustainable methods of disposal (Domina and Koch, 1999). However, there are economic incentives for retailers and manufacturers to disregard sustainability, since the predominant economic growth model encourages organisations to aim for year-on-year increases in turnover. Additionally, consumers generally lack awareness of the sustainability impacts of clothing and many discard it with refuse, whilst a minority sell it or give it to charity,
friends or family (Birtwistle and Moore, 2007; Bianchi and Birtwistle, 2010). This is reflected by the fact that in the UK consumers recycle a maximum of only 4% of clothing (Waste Online, 2012).

A US study found that young consumers are reluctant to recycle clothes, largely due to inconvenience, and it was recommended that recycling should become more accessible, with financial incentives (Joung and Park-Poaps, 2011). Similarly, UK consumers frequently take a ‘cradle to grave’ approach with the lifespan of clothing (McDonough and Braungart, 2008), by discarding an average 30kg of clothing and textile waste to landfill per year (Allwood et al., 2006), despite there being a limited capacity for landfill. Yet Morgan and Birtwistle (2009) suggest that the provision of information on the environmental consequences of clothing disposal would encourage consumers to consider changing their behaviour, as reinforced by the findings in my chapter about consumers’ attitudes towards sustainable fashion (Goworek et al, 2013). In some cases, clothing is not even used before disposal, as impulse buys may never be worn and clothing brands have been known to dispose of overstocked clothes to deter them from being sold cheaply and devaluing the brand image (BBC, 2010). A range of barriers and enablers to sustainable behaviour, from availability and price of sustainable products through to recycling opportunities have been identified in previous studies and in the research for this PhD (Goworek et al, 2012; Goworek et al, 2013). In summary, literature on sustainable clothing consumption focuses largely on the manufacture and purchase of clothing, whilst research relating to the sustainability impacts of clothing maintenance and its disposal is more limited, resulting in a gap that has begun to be filled by my publications in this specific field.
This PhD by Published Work has explored two key themes: practices in clothing product development, and their impact upon sustainable consumption. In closing, I outline my key contributions to these two under-researched areas. Firstly, I have contributed to the literature by developing stronger links between practice and theory in relation to buying and product development in the context of the clothing industry. Key to this contribution has been my extensive use of qualitative methods, which have brought much-needed insight to under-examined actors and processes within the technical and developmental aspects of fashion products.

Secondly, I have corrected the uni-cultural bias in the existing research by drawing attention not only to the UK context, but also highlighting how retail buying differs between the US and UK. I have achieved this through investigating collaboration between buyers, technologists and merchandisers, developing a body of research that provides a more adequate account of the diversity of actors involved, and their relative positions.

Thirdly, my research encourages change in sustainable behaviour towards clothing beyond academic research circles by presenting practitioners and students with knowledge that can enable them to implement sustainable practices in industry. This is not only a matter of bridging theory and practice, but also about bringing new concepts to bear on dominant modes of thinking about design, such as Life Cycle thinking (Life Cycle Initiative, 2016).

Fourthly, I have made a demonstrable impact on my field. My outputs have featured in marketing, fashion/textiles and sustainability publications, becoming key sources in these disciplines and encouraging product development that minimises social and environmental aspects throughout a garment’s lifespan, in line with Life Cycle thinking.

My final contribution is a pragmatic definition of sustainable fashion, as a means of facilitating the transition towards a more sustainable future. From a consumer perspective, the limited availability of sustainable clothing which meets Joergens’s (2006) definition of garments that are environmentally and socially sustainable, reduces the viability of purchasing garments that meet both of these criteria and can thus be a deterrent to sustainable behaviour. Consequently, my definition of sustainable clothing
as ‘garments that incorporate either environmentally or socially sustainable aspects during their product development or production stages’, could contribute to enabling producers and consumers to engage more widely with products that incorporate sustainable features based on Life Cycle thinking. My research has supplied insights into the complexity of buyer decision-making in the clothing sector at individual and organisational scales, factoring in considerations of sustainability, whilst recognising the shared responsibilities and impacts of consumers, producers and distributors on the environment and society.
Future Developments in My Research

Having been initiated from the same source (Goworek, 2007) the two strands of my research have re-converged more recently, since both investigate buyer decision-making, by organisational buyers and by consumers, culminating in work on a research project that will result in publications assessing the impact of retail buyers’ sustainability-related decisions on consumers and vice versa. The research for the publications in my PhD led to my invitation to contribute to a Defra-funded study on Developing and Trialling New, More Resource-Efficient, Product Offerings with a team from Nottingham Trent University’s Business School and School of Art and Design from 2014-16, for which I conducted interviews with retailers and manufacturers, as well as focus groups with consumers and contributions to a ‘toolkit’ for fashion product development teams. The aims of the study were to identify the barriers and enablers to designing products for longevity to meet consumers’ needs, and to establish the knowledge, skills and processes required to support wider adoption of design of longer-lasting clothing. This report will be disseminated to organisations in the clothing industry, in order to influence product development practice and it will also result in academic papers from the team, in both business and design literature.

In recent years, my publications have led to requests for my opinion on sustainable fashion issues in the media, from both mainstream (BBC Radio 4) and more focused publications (Ethical Consumer magazine). Having established myself as a researcher in the field of buyer behaviour within a fashion context, I collaborated on Retail Marketing Management (Goworek and McGoldrick, 2015), in which I wrote chapters including ‘Retail Buying’ and ‘Ethics and Legislation’, thereby enabling my research to explore other product sectors. Additionally, I am interested in investigating ways in which sustainability can be embedded into teaching in business schools, having co-written a chapter on this theme in an edited book on CSR in business education (Goworek and Molthan-Hill, 2013, in Ahmad and Crowther, 2013) and I contributed a chapter to The Business Student’s Guide to Sustainable Management which offers methods and contents for lecturing in sustainable marketing (Goworek, 2014b). This strand of my publications has not been incorporated within the PhD, since they are much more collaborative in nature. These collaborations have culminated in an article
on embedding sustainability in business schools on an international scale (Painter-Morland, Sabet, Molthan-Hill, Goworek and de Leeuw, 2015) in the *Journal of Business Ethics*, a publication which has provided the foundations of much of the literature that was integrated into my publications on the theme of sustainable consumption. In 2014, I also began to collaborate on a series of ESRC-funded research seminars and, more recently, a journal article with Deirdre Shaw and Michal Carrington, two of the main researchers into ethical consumption who directly influenced my publications in this field.
References


7 Synopses of Publications Submitted for PhD by Published Work


The aim of this book is to expand upon the area of the industry explored in *Fashion Buying* to create an awareness of the extensive range of jobs that are available within fashion and textiles, and to outline the responsibilities involved in many of these roles. The book reveals that there are many roles behind the scenes in the fashion business which do not receive the acclaim received by fashion designers, yet without these crucial supporting roles the fashion and textiles industry would not exist. The relationship between key components of the fashion industry (manufacturing, retailing, brands, the media and Higher Education) is explored, covering responsibilities within design, technical, marketing and media roles, from ready-to-wear to High Street level. I interviewed 19 practitioners in the fashion industry to compile cases illustrating different job roles. The book demonstrates how globalisation of garment production has resulted in a tendency to split elements of the product development and production processes between different organisations and countries. The case studies show that communication skills have become increasingly significant to enable effective collaboration during fashion product development design roles are becoming more fluid in the scope of their responsibilities. The chapter on *Fashion Buying* has been selected as the most relevant sample of this book in the publications for this PhD.


The first edition of Fashion Buying was the only UK-based textbook on this topic at the time it was published and has become a set text for Fashion Buying courses. This book
explains retail fashion buyers’ responsibilities involved in overseeing the selection of a range of products aimed at a specific type of customer and price bracket. It explores how buyers of ready-to-wear or branded merchandise select garments from finalised product ranges which contain the label of the designer or brand, in contrast to buyers of own label ranges, who develop products in collaboration with their suppliers, usually sold under the retailer’s label. The role of the fashion buyer is constantly developing to reflect changes in consumer tastes and the introduction of technology. Interviews with practising buyers reveal that in small companies buyers may be responsible for a wide range product types but in larger, multiple retailers, responsibility for buying is usually subdivided into smaller areas. The book explores the concept of the buying cycle and illustrates its implementation via retail case studies, investigating how the different stages link together, through liaison with internal and external practitioners. Environmental and social sustainability were raised as emerging issues in the chapter on *Garment Sourcing* in the 2nd edition, which has been selected as a sample of this book in the publications for this PhD.


The purpose of this paper is to investigate contemporary practice in product development for clothing sold by UK fashion retailers, focusing on three essential types of participant: textile designers, fashion designers, and fashion buyers. Interviews were conducted with practitioners working in textile design, fashion design and fashion buying in clothing suppliers, a design agency and fashion retailers, from which case studies were compiled. The case studies help to identify an increasing need for interconnectivity between personnel involved in the development and selection of fashion products, examining the overlapping aspects of their roles and articulating the visual and verbal methods through which they collaborate. The three roles discussed in the paper have a high degree of congruence in their responsibilities, particularly in terms of awareness of fashion trends and market. There is an overlap between textile design, fashion design, fashion buying and other roles in the fashion business, evidenced by the case studies in the paper. Therefore the congruence between various roles and processes within the fashion business could potentially be analysed. The paper
has concentrated on the mass market fashion business in the UK and the same roles mentioned here could be investigated in other countries or at different market levels.


The purpose of this paper is to assess the issues currently involved in social and environmental sustainability in the clothing industry. The paper adopts a case study approach to investigate a business that operates successfully in this challenging market. As a consequence of increasing demand for ethical clothing, it has become standard practice for UK clothing retailers to develop CSR policies which impact upon their methods of garment sourcing and partnerships with suppliers. There is also a significant trend for retailers to offer ethical clothing ranges made from organic cotton or produced by Fair Trade manufacturers. The paper includes a case study on People Tree, which sells Fair Trade clothing sourced from developing countries. People Tree is rare amongst clothing companies in that it provides customers with a transparent view of its production sources via the internet. The company provides an example of how socially responsible and environmentally sustainable global sourcing can be applied in practice.

Research limitations/implications – The study focuses on aspects of sustainability in an individual retailer. This could be extended to other ethical retailers in different countries, and a longitudinal study of such companies could be conducted.


This paper aims to investigate consumers’ perspectives on sustainable clothing consumption and to examine ways in which this information could influence retailers’ policies. Qualitative research was conducted using focus groups, home tasks and workshops with 99 participants, representing different groups of consumers in relation to their sustainability behaviour. Focus group participants had a limited awareness of
the sustainability impacts of clothing and their pro-environmental behaviour was not necessarily intentional. The respondents’ maintenance and disposal of clothes were found to be influenced mainly by existing habits and routines, which usually take precedence over awareness of sustainable practice. The research indicated that consumers could be persuaded to change their behaviour in relation to sustainability by being encouraged to reflect more on their behaviour. Future research in this field could incorporate quantitative methods or in-depth interviews. Retailers can develop and implement more sustainable policies and practices in relation to clothing production and consumption. There are wider implications for society and the environment, in that retailers’ practices can impact greatly on the sustainability of the planet’s resources. This paper’s originality lies in its assessment of the implications for retailers of consumers’ views on the sustainable consumption of clothing.


After submitting an abstract for peer review, this chapter was selected to represent a business viewpoint on sustainable fashion, alongside design and technical perspectives in this book edited by the co-ordinators of the Centro Textil Sustentable, Argentina. The chapter is based on the outcomes of the study into Public Understanding of Sustainable Clothing (commissioned by Defra). The chapter’s objectives are to explore consumers’ views in relation to the sustainability of clothing, focusing on maintenance and divestment, and to consider the potential impact on the clothing and textiles industry. The key issues explored are the usage phase (washing; drying; repair and product life extension) and disposal (process; charity donation; recycling; donation and selling). The chapter discusses ways in which consumers can be encouraged to behave more sustainably towards use, maintenance and disposal of clothing, concluding with recommendations for companies, particularly in relation to design, manufacturing and marketing. The findings show that there are various methods of improving sustainability in the fashion market that certain groups of consumers will respond positively towards. However, the need to change behaviour might demand intervention by the government.
and industry, and there is a need for reliable information as a prerequisite to bring about pro-environmental behaviour.


The purpose of this research is to investigate own-label buyers’ roles and responsibilities within the context of fashion retailing in the UK, as distinct from the roles of buyers who purchase branded merchandise labelled with the name of the supplier. A case study approach is employed, incorporating semi-structured interviews to identify contemporary retail buying processes, establishing and comparing the responsibilities of buyers within selected retailers, as well as investigating interaction between buying and other retail functions. The study offers academics and retailers insights into the ways in which theories on buying processes relate to practice in the development of own-label product ranges. Additionally, the findings are relevant to textiles or clothing companies which manufacture and supply products to retailers, by offering a detailed appreciation of the diversity of the retail buyer’s role, to support suppliers in conducting their business interactions and marketing their products more effectively. The article concludes that buying own-label fashion products is largely similar to buying branded merchandise, with a major exception being the area of new product development. Retail merchandisers were found to play a significant role within the buying function, yet there was a relative lack of collaboration between buyers and marketers within the sample.
APPENDIX

Publications


