

### The Art of Business for Sustainable Fashion



**Conference Proceedings** 

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Day 1: Thursday 5 June 2025

### Track A

Presentation-I 1: A Novel Educational Tool to Advance Current Pattern Construction Practices: A Theory-Based Design Process and Learner-Centric Pilot Evaluation

Authors: Hailah Al Houf, Simeon Gill and Jo Conlon

#### Abstract

Pattern parameterization offers significant efficiency, sustainability, and creativity advantages in fashion product development compared to traditional pattern construction methods. Pattern parameterization is a geometric construction method that generates fashion patterns responsive to individual input data (Gill et al., 2023). The key advantage of this responsiveness lies in its capacity for automatic pattern adjustments and customisation in response to modifications in the input data (Conlon & Al Houf, 2024). This functionality not only enables dynamic and efficient resizing and simplifies alteration processes but also necessitates a deeper understanding of pattern theory and more cohesive structural drafting (Conlon & Al Houf, 2024; Gill et al., 2023). It further fosters stronger body-to-pattern linkages, ultimately improving garment fit (Gill et al., 2023). These advantages demonstrably align not only with the requirements of the customisation model strongly demanded in the fashion industry but also with the growing advocacy within academia and industry for the shift to a more efficient, sustainable, and environmentally responsible paradigm (Ahmad et al., 2019; Alrushaydan et al., 2020; Conlon & Al Houf, 2024; Gill et al., 2023). Despite its presence in fashion CAD systems for several decades, as evident in early body-to-pattern exploration (McCartney et al., 1999), pattern parametrisation's widespread realisation and adoption in fashion academia and industry are still limited (Conlon & Al Houf, 2024; Gill et al., 2023). Only a small number of researchers have recognised its sustainable and efficient advantages and primarily employed it in the development of novel yet largely inaccessible fashion systems, such as simulation (prototyping) technologies, pattern construction automation systems, and digital draping systems (Jin et al., 2023; K. Liu et al., 2016; K. Liu, Zhu, et al., 2019; A. S. M. Sayem et al., 2012; J. Zhang, 2022; J. Zhang et al., 2015). Gill et al. (2023) contributed to addressing this limited adoption problem by establishing conceptual and technical frameworks for pattern parameterization that are independent of specific technologies, thereby providing a unified understanding of its principles as an engineering pattern construction approach not confined to particular tools. These frameworks facilitate its implementation using any accessible parametric CAD systems. Al Houf et al. (2024) further contributed by developing an instructional design model named the OER-PattEdu model, which guides the systematic creation of open Learning Management Systems hosting Open Educational Resources (LMS-based OERs), which have been empirically proven optimal for the widespread dissemination of pattern construction innovations.

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Authors: Giusy Sica, Maria Palazzo, Alessandra Micozzi, Giovanna Lusini and Maria Antonella Ferri

#### Abstract

In a progressively globalised world, societies face a multitude of interconnected challenges, ranging from environmental degradation and economic inequality to preserving cultural heritage and promoting social inclusion. The Cultural and Creative Industries (CCI) have emerged as a crucial sector that can address these challenges by merging creativity and entrepreneurship, fostering economic growth and sustainable development (Lombardi et al., 2020; Fava, 2022). As key players in the global economy, CCIs have the potential to drive social innovation and promote value co-creation, a collaborative process through which local and global actors can work together to generate outcomes that are mutually beneficial (Zhang et al., 2024). This study aims to explore the role of cultural and creative industries in promoting sustainability, economic equity, and the preservation of cultural diversity, particularly in the context of the integration of local crafts into global business networks (Di Simone et al., 2022; Meng et al., 2023). By examining the intersection of these elements, the research seeks to contribute to the growing body of knowledge on how creative industries can act as catalysts for social change and inclusive development (Sica et al., 2025). The main aim of this research is to investigate how cultural and creative industries (CCIs) can contribute to social innovation, with a specific focus on the co-creation of value within global business networks. As businesses and industries evolve, they must adapt to the emerging challenges of global sustainability (Mangialardo & Micelli, 2020). This study explores how collaboration between global market actors and local communities can be leveraged to address contemporary challenges such as environmental sustainability, economic inequality, and cultural preservation (AnthonyJnr, 2024). The research aims to explore how local cultural practices, particularly those related to traditional crafts, can be integrated into global value chains, ensuring that these practices are not only protected but also revitalised through global trade (Gustafsson & Lazzaro, 2021). The study addresses a gap in the literature by proposing a theoretical framework that links global trade, local craft, and value co-creation in the broader context of cultural and creative industries (Gravagnuolo et al., 2021). In exploring these issues, the study identifies several key objectives. First, it aims to map the drivers of social innovation within CCIs, highlighting the mechanisms through which local actors can collaborate with global stakeholders to promote sustainable development (Sica, 2022). The aim is to understand how creative industries can facilitate the transition towards equitable and inclusive business models (Shirvani Dastgerdi & Kheyroddin, 2022). Secondly, the study seeks to investigate how value co-creation emerges from collaboration between global businesses and local communities. It explores how these collaborations can create shared value that benefits both parties, while preserving the cultural identity of local artisans. Thirdly, the research aims to analyse the evolution of cultural innovation within CCI, particularly how the sector is adapting to the pressures of globalisation while maintaining its cultural roots (Snis et al., 2021). By reviewing the existing academic literature, the study seeks to identify critical research gaps and propose new theoretical approaches that offer a more comprehensive understanding of the relationships between CCI, global trade, sustainability, and social innovation (O'Connor, 2022). The novelty of this research lies in the development of a theoretical framework that integrates social innovation and values co-creation in the context of CCI. While existing studies have examined these concepts separately, few have systematically analysed the interaction between global and local actors in the creative industries. This study bridges this gap by offering a new model that highlights how CCIs can act as vehicles for sustainable change and inclusive growth.



The framework focuses on four key dimensions: knowledge sharing between global and local actors, the role of collaboration between public and private institutions, the importance of technology in facilitating the integration of local creativity into global markets, and the empowerment of local communities through entrepreneurial initiatives. By emphasising these elements, the study offers a new perspective on how CCIs can foster sustainability and cultural preservation in the global economy. The methodology used in this study is based on bibliometric analysis, which allows for a comprehensive, data-driven exploration of existing research on the intersection of cultural and creative industries (CCIs), social innovation, and global trade. Bibliometric analysis involves the analysis of academic articles through techniques such as citation analysis, co-authorship analysis, keyword co-occurrence, and clustering (Cuccurullo et al., 2016). This approach allows the research firm to follow the development of key themes and concepts, identifying trends and emerging areas of interest within the academic literature (Obreja et al., 2024). By analysing citation networks and relationships between keywords and topics, the study seeks to map how value co-creation is understood and applied within the creative industries, as well as to identify research gaps that need to be addressed (Martínez-Climent et al., 2018). For example, bibliometric analysis reveals the growing interest in sustainability within the CCIs, as well as the integration of digital technologies that help connect local creative practices with global markets. These findings inform the development of the theoretical framework and help establish a clear direction for future research.

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### Presentation-O 3: Sustainable by Design? Understanding Consumer Expectations for Personalized Fashion

#### Authors: Fabio Shimabukuro Sandes and Gabriella Wulff

#### Abstract

In recent years, the fashion industry has witnessed a growing interest in personalized offerings such as made-to-measure and tailor-made garments. These options promise better fit, uniqueness, and more individualized service, appealing to consumers seeking greater alignment between product and self-image. Beyond the individual benefits, personalized fashion also holds significant sustainability potential: by producing garments on demand, brands can minimize overproduction and unsold inventory, thus reducing material waste and environmental impact. Despite the increasing availability of such services, little is known about how consumers' expectations differ when engaging with personalized fashion options compared to ready-to-wear garments. Understanding these expectations is crucial—not only for improving satisfaction and customer experience but also for supporting a more sustainable shift in the fashion industry through personalization. This article investigates the ways in which consumers adjust their expectations across key attributes—such as price, fit, quality, and service—depending on whether they are purchasing tailor-made, made-to-measure, or ready-to-wear garments. This study builds upon expectation-disconfirmation theory (EDT) (Oliver, 1980) and the broader literature on perceived value and customization in consumer behavior. This theory has been largely used by researchers, including works on customer satisfaction to analyze consumers' satisfaction with services (Ashfaq, Yun, Yu, & Loureiro, 2020). According to EDT, consumers form expectations before consumption and compare them with perceived performance. influencing satisfaction. We, therefore, expect that there are differences amongst the expectations from ready-to-wear and personalized clothings. Personalized products, particularly tailor-made and made-to-measure clothing, involve greater co-creation and consumer agency (Franke, Keinz & Steger, 2009). Previous research suggests that personalization increases perceived product value (Pine & Gilmore, 2013), emotional attachment (Zhan & Sheldrick, 2024), and sometimes



even willingness to pay (Simonson, 2005). However, it also introduces higher expectations regarding product and service delivery, especially when the experience is more involved and emotionally invested (Merle et al., 2010). Our study is novel in that it distinguishes between two types of personalized fashion—tailor-made (a garment that has been specially made for a particular customer including at least two fittings during the process) and made-to-measure (a garment that has been specifically made for you, but a simpler process with fewer measures taken, either in store or online). In some cases, the measuring is replaced by information about the customer (such as weight, height, age, etc.) which is then processed using AI to create a made-to-measure garment. While both fall under the umbrella of personalized fashion, the degree of consumer involvement and level of production complexity differ, which may influence expectations differently. To our knowledge, few empirical studies have directly compared consumer expectations across these three categories (tailor-made, made-to-measure, ready-to-wear), particularly using statistical testing based on real purchase experience. This work also contributes to the fashion and retailing literature, where personalization is often discussed in terms of value creation or user experience, but not as frequently through the lens of expectation formation and attribute prioritization.

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### Track B

Presentation-O 5: W.E.A.V.E: Women's Empowerment through Apparel Value Extension — A Scalable CSR Model for School Uniform Waste

Authors: Kundlata Mishra and Shweta Joshi Rangnekar

#### Abstract

The fashion industry's fast-paced cycles have led to significant post-consumer textile waste (PCTW), much of which goes unaddressed by existing sustainability frameworks. In India, where over 250 million children wear school uniforms (UNESCO, 2021), discarded garments present a predictable and underutilized waste stream. These uniforms, often made from cotton-polyester blends and carrying institutional insignias, are unsuitable for resale and thus bypass conventional reuse markets. Yet, they present a unique opportunity for integrating circular fashion practices with grassroots empowerment. This paper introduces W.E.A.V.E — Women's Empowerment through Apparel Value Extension — a model that transforms uniform waste into livelihood opportunities for women from low socio-economic backgrounds. Drawing inspiration from NGOs such as SilaiWali, which employs refugee women to craft home décor from waste fabric, and Goonj, which repurposes urban discard for rural development, this study proposes an integrated, closed-loop model that combines textile diversion, skill training, and product development. Unlike these NGOs that work in silos or on partial circularity models, W.E.A.V.E. seeks to formalize the waste-to-wealth process into a replicable and CSR-friendly system. The study aims to quantify the scale and nature of school uniform waste in urban schools and assess the suitability of uniform textiles for upcycling. Based on the analysis design training modules for women in textile reuse techniques were developed and functional and market-relevant products were prototyped. The study looks at establishing institutional partnerships for collection, production, and redistribution within a closed-loop CSR ecosystem. A survey was conducted across six schools in Mumbai and Navi Mumbai, where textile waste audits showed an average discard of 1.3 kg per student annually. Semi-structured interviews and focus groups were carried out with 28 women from marginalized urban communities in Mumbai and Navi Mumbai region, mapping skill levels, willingness to learn, and economic need. Training modules were co-developed with fashion educators and based on low-tech upcycling techniques such as patchwork, fabric coiling, and basic tailoring. NGOs like Aarohana EcoSocial (working with tribal women on waste weaving) and Goonj provided insights into value chain gaps and the potential for product standardization. However, at present these organizations are currently limited and not institutionalised to create a system approach. To align with the need, the authors propose the W.E.A.V.E. Framework. The model includes five strategic stages:

- 1) W Waste Sourcing: Partnering with schools to set up year-end uniform collection drives,
- 2) E Empowerment through Training: Creating skill-building modules for low-income women, customized to material properties and end-use products,
- 3) A Apparel Diversion: Sorting and categorizing uniforms for appropriate reuse patchwork, bag making, weaving, or stuffing,
- 4) V Value Creation: Designing products for school reuse (e.g., craft kits), community gifting, NGO procurement, or ethical retail,



5) E – Enterprise Linkage: Facilitating SHG formation, funding through CSR programs, and capacity-building for sustained production.

This structured, circular model not only diverts textile waste but also embeds economic opportunities in the local community. It aligns with SDG 5 (Gender Equality), SDG 8 (Decent Work), and SDG 12 (Responsible Consumption).

W.E.A.V.E. responds to an urgent need for socially responsible and circular fashion systems. Unlike existing efforts by NGOs like SilaiWali, Goonj, and Aarohana EcoSocial, which address parts of the textile waste value chain, this study proposes an end-to-end, closed-loop system built on predictable waste (school uniforms), localized skill development, and institution-backed recovery and resale. The model proves that uniform waste can be repurposed through accessible techniques into economically viable goods, empowering women and reducing environmental impact. Its formal structure and scalability make it an ideal CSR intervention for corporates and schools alike. The future of sustainable fashion must be inclusive—and circular models like W.E.A.V.E. offer a viable path forward.

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Presentation-O 6: Reducing Waste in the Fashion Industry through Generative AI Powered Consumer Behavior Simulation

**Authors: Emily Chen and Ashwini Agrawal** 

#### Abstract

This research addresses the fashion industry's waste crisis by introducing a novel approach that combines Generative Agent-Based Modeling (GABM) with Vision Transformer (ViT) models. Using consumer survey data, where participants evaluated different clothing options, combined with ViT-generated standardized descriptions of clothing features, AI agents were created that simulated the preferences and decision-making patterns for each participant. Model validation demonstrated accurate alignment with consumer choices. These agents are an immediate and scalable solution to simulate consumer responses to new clothing items, maintaining accuracy in predictions while eliminating the need for physical prototypes in testing. The research provides a framework for understanding consumer preferences through a fully predictive approach, offering fashion brands a way to streamline production planning while reducing environmental impact. The fashion industry faces a significant waste crisis, with up to 40% of manufactured clothing remaining unsold every year (Tonti, 2024). Brands overproduce to avoid missing potential sales, leading to manufacturing complexities and a substantial negative environmental impact (Rajvanshi, 2023). Currently, fashion companies attempt to minimize this waste through historical sales data forecasting. While this approach provides basic insights into past performance, it fails to capture the nuanced features and design elements that drive consumer preferences. Additionally, traditional market testing requires physical production of samples, contributing to material waste and extending production timelines (Koren & Shnaiderman, 2023). This research presents a predictive model combining Generative Agent-Based Modeling (GABM) (Ghaffarzadegan et al., 2023) with a vision transformer model (ViT) (Dosovitskiy et al., 2021) to improve demand forecasting accuracy. By simulating human purchasing decisions using AI based agents, brands can align production more closely with consumer demand and reduce waste.

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### Track C

### Presentation-I 7: Cause Related Marketing, Brand Love & Authenticity

**Authors: Anna Ivanova and Sol Jung** 

#### Abstract

This research explores the impact of cause-related marketing (CRM) appeals on brand love and authenticity. The study aims to investigate whether CRM advertising fosters higher brand love for cause-engaged brands in comparison to brands that do not engage in cause-related marketing activities. The study employed a quantitative approach with scenario-based experimental design, exposing treatment groups to CRM campaigns and control groups to non-CRM visuals. The findings indicate that CRM treatment did not significantly affect brand love, suggesting brand love stability irrespective of CRM appeals. Yet, brand love positively influences perceptions of authenticity irrespective of the CRM appeals. ESG (environment, social, and corporate governance) has gained momentum in recent years (Kim et al., 2022; Lee et al., 2022). Since consumers demand companies to be socially responsible, cause-related marketing (CRM), through which companies demonstrate their ethical behaviour, has become popular (Robinson et al., 2012). While organisations are increasingly using cause-related marketing as a strategic tool, academic research is silent on whether cause-related marketing can impact brand love. According to Latterty et al. (2016) whether consumers feel a special connection to the cause or simply feel the cause is an important one, the desired outcome of the CRM campaign is increased brand sales. As Lee et al. (2022) state, consumers are more likely to support firms that engage in ESG initiatives as a business model, particularly if the firm and the ESG initiative are well aligned. Robinson et al. (2012) also found that companies that engage in social responsibility programs such as CRM campaigns receive more positive reactions from consumers. Moreover, a number of studies have shown that consumers reward ESG brands with loyalty and advocacy over their competitors because quality and value may be influenced more favourably when ESG is part of what a brand represents (Lee et al., 2022). In this research, particular emphasis is placed on environmental causes within the fashion industry for two key reasons. The fashion industry's increasing commitment to sustainability and authenticity makes it an ideal context to explore the alignment of green causes with brand missions, following Drumwright's insights (1996) on authenticity. Secondly, the tangible and emotionally resonant nature of fashion products, as emphasised by Thorne McAlister and Ferrell (2002), makes fashion brands an ideal CRM context. These factors underscore the potential for successful cause-related marketing initiatives in the fashion industry. Batra et al. (2012) suggested several factors that foster brand love. Among these factors, yet, not explored authenticity emerged which might be a missing element that directly ties into both cause-related marketing (CRM) and



consumers' love for brands. Authenticity is a critical concept affecting consumers' judgments of brands, as well as CSR programs (Joo et al., 2019). In the context of CRM, the authenticity of a brand's commitment to a cause greatly influences consumer perceptions and responses. When consumers perceive a brand's involvement in social or environmental causes as authentic, it fosters a deeper emotional connection (Robinson et al., 2012). This authenticity is also intertwined with CSR initiatives, where genuine commitment to social or environmental responsibility is increasingly valued by consumers (Brown and Dacin, 1997). The main objective of the study is to examine the relationship between CRM advertising appeals and brand love, exploring whether CRM initiatives contribute to fostering stronger feelings of brand love among consumers. By addressing this objective, this research seeks to enhance the understanding of the long-term effects of CRM on brand-consumer relationships and provides practical implications for brand managers aiming to strengthen consumer attachment and loyalty through CRM initiatives.

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### Presentation-O 8: Fashioning Responsibility: Empowering Artisans through Skills, Voice, and Equity

#### Authors: Kundlata Mishra and Shweta Joshi Rangnekar

#### Abstract

As the global fashion industry evolves, there is increasing emphasis on embedding sustainability beyond environmental metrics to encompass ethical labor practices. While top-down corporate social responsibility (CSR) initiatives have institutionalized compliance norms, they frequently fail to engage with the lived experiences of workers embedded within export supply chains.



Sustainable change in labor conditions requires a shift from performative compliance to substantive empowerment, emerging from the grassroots level. This study presents insights from the Utthan Project, initiated by Impactt Ltd, which implemented a skill enhancement and capacity-building intervention across three export houses in Mumbai Region. The project aimed to elevate artisans' technical and socio-economic capacities by contextualizing training within their daily work environments. The initiative seeks to redefine the meaning of social responsibility in fashion, positioning artisans as active agents of change rather than passive recipients of development. The objective of the study was to assess the personal and professional outcomes of skill-based interventions on workers in embroidery export houses and evaluate improvements in embroidery techniques and production efficiency through targeted technical training. Through the project, the study aimed to examine the influence of soft skills and financial literacy on communication, decision-making, and financial autonomy. A total of 150 artisans participated in a three-month intervention at three export houses in the Mumbai region. Training modules were collaboratively designed with subject experts and delivered by facilitators equipped with pedagogical and domain-specific knowledge. Quantitative tools included pre- and post-training surveys that assessed changes in technical proficiency, self-confidence, and financial behaviors. Qualitative data were collected through semi-structured interviews and focus group discussions with artisans, floor supervisors, and management to capture nuanced perspectives and workplace dynamics. Emerging from field observations and participant feedback, the authors propose the RAISE framework—an integrated, human-centric model for empowering workers within export supply chains: 1) R – Respect & Recognition: Fostering inclusive work environments that validate artisans' contributions and amplify their voices. 2) A – Access to Learning: Providing training that merges technical skills with life competencies relevant to the workers' socio-cultural contexts. 3) I – Inclusive Engagement: Encouraging workers to participate actively in learning and workplace improvements, cultivating a sense of ownership and agency. 4) S – Skills Enhancement: Enhancing productivity and quality through targeted upskilling in craft-specific competencies. 5) E – Equitable Work Environment: Promoting dignity, fairness, and non-discrimination in everyday interactions and institutional structures. The RAISE framework functions as both a practice-oriented tool and a strategic guideline for embedding sustainability through human development in global supply chains. The intervention generated measurable and qualitative improvements across several domains. A 25% increase in individual productivity and a notable reduction in embroidery defects. 60% of participants-initiated savings or opened formal bank accounts post-training, indicating shifts toward financial autonomy. Enhanced confidence and communication led to improved relationships between artisans and supervisors. Most significantly, the intervention contributed to the artisans looking at themselves as co-designers in the process of creating exquisite work. The artisans started perceiving themselves as valued professionals with technical and cognitive capabilities. The Utthan Project illustrates that sustainable fashion must be grounded in the empowerment of those who produce it. Holistic, contextually relevant training programs can catalyze changes that extend beyond individual skill enhancement to influence organizational culture and supply chain resilience. The RAISE framework offers a scalable model for stakeholders aiming to operationalize the SDGs through labor-centered interventions. As the industry faces the dual imperatives of growth and accountability, this study underscores the strategic value of a bottom-up approach. True sustainability must prioritize human dignity, capability, and voice—not merely as ethical imperatives, but as drivers of long-term industry



transformation. Skills development is the foundation for inclusive and sustainable growth—for dignity, and for decent work. (International Labour Organisation)

Presentation-O 9: 'RE-TAKE – A study on the practice of recycling costume in the Indian film and television industry

### **Authors: Patricia Sumod and Vanessa Rodrigues**

#### Abstract

Costumes and accessories used in film productions tend to create excessive unused items, generally treated as dead stock or waste. Using the same items in new films or shows deters the very reason and process of character realization. Nonetheless, there are many possibilities of reusing costumes and accessories from completed film projects through creative innovation. This paper endeavors to increase awareness and set good practices for the realization of re-use of costumes from the film and television industry while reviewing past practices to build a futuristic workable concept that can be used in newer performance narratives. The objective of this study is to understand present industry perceptions with regards to designers, production houses, and stylists around the concept of costume reuse while exploring the current costume production and post-production practices in the Bollywood film industry. This paper attempts to exhibit the many possibilities of reusing costumes and accessories from completed film projects. It also shows cases of increasing awareness of the practice of recycling, upcycling, and resetting costumes in the film and television industry. This research will also review past practices that were successful to shape a workable concept of the re-use of film costumes. This study employs qualitative research methods-including interviews, observations, focus groups, and case studies—to explore sustainable practices within the Bollywood costume design industry. In recent years, there has been a significant influx of costume designers, stylists, and apparel manufacturers in Bollywood, driven by production houses seeking novelty and freshness in visual storytelling. While this trend fosters innovation, it also raises oncerns about the excessive consumption of resources under the pretext of creating " new styles" for each project. Dealing with the traditional concepts of creating every piece of costume, this research highlights the potential of re-using and repurposing costumes from past production projects, with the idea of being both sustainable and saving resources. A core focus will be on the life cycle of costumes—from design and production to their use in films, and finally, to post-production management. The idea of implementing organized storage systems, such as AI-assisted warehouses, to catalog and manage costume inventories efficiently would not only promote a more circular production model but also introduce a systematic approach to costume reuse in the Indian film industry. Costumes created for a specific film are often intended for reuse across theater and other productions, gradually accumulating layers of meaning and history with each use. This process mirrors the way parchment—once a standard writing surface—was repeatedly written over, creating what is known as a Palimpsest. History shows us that this practice made the earlier text scribbled on the parchment faintly visible, at the same time providing a different context and texture to the Palimpsest. In the same thread of understanding, there are possibilities that one can visualize a new concept every time costumes are reused on a different character in a different narrative. Just like the Palimpsest, the costume retains traces of its own past while adding new dimensions and perspective to the character, thereby adding value to the performers



and mentally archives the stance of the character for the audience. This article maintains reasons to believe that just like the new Palimpsest, re-generated costumes can also present a new narrative when used in a variety of performances. There will be arguments and investigation on the reasons, the character/s the costume was originally made for and the re-cycled use of the costumes such as, what happens when a costume is taken out of one narrative and placed into another? If a costume holds a narrative like a palimpsest, does the initial story persist, embedded in the fabric like ink that still clings to old parchment?

Contribution: Referring to Dillon and Colwell's study - "the costume's life cycle is a palimpsestic process through which the costume becomes layered as a material object and as a carrier of narrative meaning. These layers can be seen through the survival of the memory attached to the costume." The multi-use styles of costumes can also be demonstrated by using theoretical frameworks proposed by Sampson and Pearce for analyzing objects connected with meaning through photographic memory. By exploring how the past survives through memory in the form of material culture, associated narratives, or individual memory, this article reveals how the palimpsest layers of costume can be taken as a real-time practice for the film and television industry for re-use of costumes. It can be understood that costumes, though continue to accumulate as post- production stock, can be meaningfully applied to future projects even after they cease to hold the character's concept for which it was originally created. It is also studies that "tweaking" costumes to be reused for different projects, is one of the many popular practices beneficial to this purpose. Strategies such as upcycling, rental systems and integrating digital technologies is one such way forward as proposed by J. Narayanan. This paper's exploration of costumes as Palimpsests reveals the remarkable dynamic ability of costumes to transform physically and metaphorically to reflect multiple narratives. The research revolves around understanding and applying circular economy principles into costume production, to create a balance between creativity and environmental responsibility, for an eco-conscious film industry. Keywords: Costume design, Collection systems, Sustainability Practice, Fashion Environment

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Day 2: Friday 6 June 2025

### Track D

Presentation-I 10: Un – Make & Re - Clothe: Critically Making a Modular Pattern Cutting System

**Authors: Heather Martin** 

#### Abstract

The fashion industry is under scrutiny for its wastefulness. This paper argues that in order to condition a redirective shift (Fry. 2007) a confluence of strategies, including creative problem solving, (Niinimaki, 2013) a deeper questioning of the current practices within industry and brave new redirective design thinking (Fry, 2011; Norman, 2013) generated through critical making (Ratto, 2009; Hertz, 2016; Somerson et al. 2013), can begin to unpack the complexities of its issues. Alternatives based upon different core values and end goals (Fletcher, 2010; Nissenbaum, 2011) can emerge as a conscious effort towards sustainability gains momentum (Gwilt & Rissanen, 2011) but only when those provocations become more tangible and practiced (Andersen & Earley, 2014) will those actions begin to shape new outcomes.15-25% of the 400 billion square metres of textiles produced every year are wasted on the cutting room floor. The vast majority is not recycled or reused, ending up incinerating or in landfills. Conventional Zero Waste Pattern Cutting or Design methods tackle this issue by designing garments that do not create waste in their production. This is done through the use of creative pattern cutting and design methods to enable the careful placement of pattern pieces in a jigsaw-like arrangement. Innovative approaches through waste reduction in pattern cutting and construction begin to surface with the introduction of zero and negative-waste design constructs but currently the research is limited and does not clearly consider the scalability of production. Holistically connecting the designer back towards the processes of manufacturing can open up a much-needed critical dialogue between designing and making where generative and constructive design-led insights can begin to unpack the complexities for the mobilisation of change within fashion's systems. Through the process of critical making the propositional, 1 + 1 pattern cutting system is brought forward to evidence and demonstrate how critical making can address gaps in knowledge and in practice to extend the limited body of research in sustainable fashion design innovation. The 1 + 1 Modular Pattern Cutting System is a design iteration of the conventional Zero Waste Pattern Cutting methods; it is a zero-waste, negative-waste and additive pattern cutting and clothing design system that scales a single block shape into a variety of silhouettes by repeating and assembling that block shape to create the complete garment. The system can be used with regular lengths of new cloth, end rolls of fabric and textile waste materials. The aim of this practice-based research is to catalyse a critical turn in the sustainable fashion design field through the proposal of an inventive method for dealing with textile waste. This research inquiry asks 'How can critical making contribute to more sustainable pattern cutting methods within fashion design?' and is framed by asking a series of generic but iterative questions: 'What? Why? How? So what? (Gray, C. and Malins, J. 2004, p 12)' and lastly: 'What now? (Figure 1)' The process in which the study is undertaken is first through the primacy of the studio practice and then through design iteration with a series of co-design workshops. The study claims that critical making is a constructive and generative method where visual, experienced and embodied links can be made that might otherwise be overlooked or unrealized through language-based



approaches leading towards possible new developments in sustainable design. An investigation of practice as research will be highlighted through an exploration case study. It will be analysed and further reflected upon to realise the contribution to practice-based research and to sustainable design.

### Presentation-O 11: Traditional Circularity and Second-Hand Fashion: Informing Sustainable Business Models in India

### Authors: Kriti Srivastava and Anuhya Sai Katta Adiseshaiah

#### **Abstract**

India has a long history of sustainable fashion practices embedded within its socio-cultural fabric, where the ethos of resourcefulness has dictated clothing consumption patterns. While second-hand clothing was traditionally circulated within familial and social circles, its modern resurgence through thrift stores, resale platforms, and upcycled fashion brands has introduced new challenges, particularly around hygiene, authenticity and social status. These barriers create friction for the success and scalability of circular fashion ventures in India. To understand how businesses can overcome these challenges, this paper explores how India's historical practices of circular fashion inspire the design of contemporary Circular Business Models (CBMs), while critically analyzing the current players in the second-hand fashion space. Using a mixed-method approach—combining quantitative data from consumer surveys with qualitative insights from interviews and case studies—the study evaluates online, offline, and hybrid second-hand fashion models operating across the Indian market. The paper identifies key parameters required to build successful second-hand fashion businesses in the Indian context and proposes a replicable framework: the C.A.R.E Framework (Curation, Accessibility, Reliability, Engagement), along with a context-specific pricing formula tailored to affordability and profitability. Together, these tools offer practical, grounded strategies for enabling the growth of culturally relevant, scalable, and sustainable fashion businesses in India. India has long practiced circularity in clothing through systems of repair, reuse, and redistribution, rooted in cultural values of thrift, care, and continuity. Garments were historically treated as assets—altered, embroidered, and passed down within families—forming a vernacular model of sustainable consumption. These traditions, while deeply embedded, have been disrupted by the rise of fast fashion and aspirational consumerism, particularly in post-liberalization urban India, where newness became a symbol of upward mobility (Banerjee & Duflo, 2019). Today, while second-hand fashion is gradually gaining visibility, barriers such as hygiene concerns, size, inclusivity, and perceptions of social status continue to challenge its broader acceptance (Niinimäki et al., 2020). This paper examines how traditional Indian clothing practices can inform the design of culturally rooted Circular Business Models (CBMs) in the contemporary second-hand and upcycled fashion sector. Drawing on interviews with founders of Indian thrift platforms, resale collectives, and circular fashion brands, it explores how these enterprises balance storytelling, retail innovation, and user-centered design to make circularity aspirational and scalable. By reframing heritage-based reuse practices as valuable design interventions rather than economic necessity, these businesses are reimagining circularity for modern consumers—particularly India's emerging middle class. The study situates these efforts within the wider discourse of sustainable innovation and slow fashion for circularity. It identifies hybrid retail models, collaborations with craft clusters, and consumer engagement strategies as key pathways toward inclusive, resilient circular ecosystems.



Ultimately, this research aims to highlight how India's cultural intelligence and fashion traditions can be leveraged to build CBMs that are economically viable, socially relevant, and environmentally urgent.

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Presentation-O 12: Redefining waste: Building resilient circular value systems in India's Textile Sector

Authors: Mohini Jaywant Walke, Naveenkumar R, Mihir Padave, Bhawna Chandra, Sakshi Bankoti, Srijita Sadhukhan, Anshita Srivastava, Pratyay Ganguly and Tejal Liladhar Bhole

#### Abstract

The global textile industry generates significant environmental challenges, contributing approximately 2-8% of global greenhouse gas (GHG) emissions and producing over 92 million tons of waste annually. With 215 trillion liters of water consumption annually and contributing 9% of microplastic pollution in oceans, the industry's environmental impact is immense. Additionally, it accounts for 20% of global wastewater, 10% of total carbon emissions and 18.6 million tons of textile waste ends up in landfills annually, making it a leading contributor to water pollution and climate change. India, processing an estimated 7793ktones of textile waste annually—8.5% of the global total—stands at the forefront of tackling these challenges. Despite its position as a leader in mechanical recycling and home to over 45 million textile workers and contributing 2% to GDP and 12% to exports, India's recycling ecosystem remains fragmented, with limited traceability, inconsistent processes, and high waste leakage. This initiative positions India as the pilot for establishing a scalable and resilient circular value system in textile waste management. Through the integration of innovative policies, advanced technologies, and comprehensive frameworks for collection, sorting, and recycling, the endeavor aims to address systemic inefficiencies and create a replicable model for global applications. The deliverables of this initiative include a detailed project report, which will provide an in-depth analysis of the current state of textile waste management, propose actionable strategies for system optimization, and outline a roadmap for scaling the initiative to other regions. A technical paper will analyze existing technologies and materials at regional and global levels, assess the application of Industry 4.0 technologies for transparency and traceability, and evaluate technological advancements to propose actionable recommendations. Furthermore, a policy brief will offer policy recommendations aimed at fostering sustainable practices in the textile sector, emphasizing governance frameworks, regulatory measures, and incentives to support a circular economy. By leveraging India as a case study, the initiative seeks to develop adaptive strategies that align with global sustainability standards and circular economy principles. Its objectives include enhancing process efficiencies, promoting product innovation to reduce environmental footprints, and empowering stakeholders through strengthened governance structures. These



efforts aim to set the stage for broader implementation across developing economies, addressing urgent environmental, economic, and social imperatives while contributing to the sustainable transformation of the global textile industry.

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### Track E

Presentation-I 13: Balancing Act: Navigating Digital Capabilities and Strategic Adaptation in the Fashion Sustainability Innovation Ecosystem.

**Authors: Nana Musa** 

#### Abstract

As the fashion industry grapples with intensifying sustainability demands, shifting regulatory landscapes, and changing consumer expectations, the imperative for systemic innovation has become urgent (Todeschini et al., 2020; Niinimaki et al., 2020). However, deep transformation remains elusive. Many firms are locked into resource-intensive models and legacy structures that resist sustainable change (Pedersen et al., 2018). In response, advanced digital technologies are increasingly deployed to drive innovation, improve decision-making, and foster new forms of inter-organisational collaboration (Bertola & Teunissen, 2018). From digital design tools to supply chain analytics, simulation modelling, data-driven R&D, and collaborative platforms, digitalisation is reshaping how sustainability is conceived, coordinated, and enacted in the fashion ecosystem (Pouri & Hilty, 2021). This doctoral research aims to investigate how sustainability innovation emerges, evolves, and scales within the fashion industry through a complex interplay of actors, technologies, values, and institutional frameworks. It places particular emphasis on how digital technologies such as blockchain, traceability tools, and the emerging Digital Product Passport (DPP) are driving efforts towards transparency, circular business models, and ecosystem-wide collaboration (Choi & Cheng, 2021). The research will conduct critical examination of the role of digital transformation in sustainability innovation across the fashion ecosystem. It will explore how fashion organisations and ecosystem actors develop and deploy the strategic capabilities needed to adapt and innovate in response to sustainability challenges, and how digital technologies mediate this process. In doing so, the study will examine the opportunities and tensions presented by digitalisation, including new forms of collaboration, shifts in power and coordination, and challenges related to scalability, alignment, and institutional adaptation (Nambisan et al., 2019). Despite growing scholarly attention to both sustainability and digitalisation in fashion, significant gaps persist in our understanding of how these phenomena interact.

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### Presentation-O 14: Driving Sustainability: AI Adoption Framework for the Fast Fashion Industry

#### **Authors: Selcen Ozturkcan**

#### Abstract

The fast fashion industry, known for its rapid production cycles and cost-efficiency, faces mounting pressure to align with global sustainability goals. This research explores the transformative potential of Artificial Intelligence (AI) in the sector, proposing a comprehensive framework for its responsible adoption. The study introduces six interconnected pillars: Environmental Performance and Sustainability, Supply Chain Optimization, Design and Production Innovation, Consumer Engagement and Personalization, Ethical and Social Considerations, and Economic Implications. These pillars collectively address key challenges such as resource efficiency, transparency, ethical accountability, and financial barriers to AI implementation. The research adopts a conceptual design grounded in a multidisciplinary literature review, synthesizing insights from sustainability science, AI ethics, and business innovation. By offering actionable strategies tailored to the fast fashion value chain, the framework aims to balance technological advancement with ecological and social responsibility. This work provides a roadmap for industry stakeholders, policymakers, and researchers to 1 Corresponding author. Authors who contributed equally to the manuscript navigated the complexities of AI integration, ensuring equitable access to innovative technologies while promoting environmental stewardship and economic growth.

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Presentation-O 15: AI-Driven Insights into Sustainability: A Predictive Framework for Consumer Purchasing Behaviour in the Fashion Industry

#### **Authors: Yue Guan and Misha Xu**

#### Abstract

The growing demand for sustainable fashion necessitates advanced predictive models to support strategic decision-making. This study introduces a framework combining Attention-based Convolutional Neural Networks (Attention-CNN) for behavioural feature extraction and Bayesian Neural Networks (BNN) for probabilistic purchase predictions. Using H&M datasets, the framework achieves 85% accuracy, offering actionable insights into consumer preferences for sustainable products. This integrated approach bridges critical gaps in understanding consumer engagement with sustainability, providing a scalable tool for precision marketing and promoting sustainable practices in the fashion industry through digital technology. The fashion industry is undergoing a transformative shift driven by growing sustainability awareness (Yadav et al., 2024). Businesses face increasing pressure to adopt environmentally responsible operations, yet understanding the factors driving sustainability-friendly (SFP) adoption remains challenging (Khan et al., 2023). Existing studies have identified key motivators but fall short in leveraging these insights for predictive modelling (Giri et al., 2019; Busalim et al., 2022). Artificial Intelligence (AI) presents a promising avenue for bridging this gap by enabling prediction of consumer behaviour and optimising marketing strategies (Syam and Sharma, 2018). Within the sustainability context, AI models can identify high-potential consumers and implement tailored interventions (Rupik, 2015). However, consumer decision-making is complex and uncertain, necessitating advanced methodologies capable of addressing behavioural intricacies. This study proposes a framework combining Attention-CNN and BNN. The Attention-CNN extracts behavioural features from transactional data, while the BNN quantifies purchase probabilities and their uncertainties (Gal and Ghahramani, 2016; Liu et al., 2020;



Jospin et al., 2022). Together, these methods provide nuanced insights into consumer engagement with SFPs, offering actionable strategies for digital fashion marketing and sustainability initiatives. The primary goal of this research is to predict consumer purchasing behaviour toward SFPs, addressing gaps in understanding the purchasing motivators and barriers. Existing studies emphasize the importance of consumer insights in green apparel adoption (Khan et al., 2023; Yadav et al., 2024), while AI techniques show promise in enhancing marketing and engagement strategies (Syam and Sharma, 2018; Giri et al., 2019; Li et al., 2019; Surendro. K, 2019). However, their application in predicting SFP-related purchasing behaviours in the fashion industry remains underexplored.

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### Track F

Presentation-I 17: Slowing Down Fashion: How Webrooming Supports Thoughtful Consumption in the Age of Circularity

Authors: Sampath Kumar and Nalini Palaniswamy

#### Abstract

The purpose of this research is to investigate webrooming behaviour in the context of the fashion and apparel industry and its implications for sustainable consumption. Webrooming—searching online before buying offline—has emerged as a behavioural pattern that aligns with the principles of slow fashion and circularity. This study aims to understand the psychological and situational factors influencing webrooming behaviour, such as perceived online risks, anticipated regret, and product involvement. It further explores how these factors contribute to conscious consumer decision-making and support reduced overconsumption in the fashion domain. This study contributes to the relatively underexplored area of webrooming by positioning it within the paradigm of sustainable and slow fashion. Unlike prior research that frames webrooming as a commercial challenge or a cross-channel phenomenon, this paper emphasizes its role in reducing impulsive consumption, enhancing product awareness, and enabling thoughtful purchasing decisions. It offers a fresh perspective by linking behavioural insights with broader goals of sustainability and circular retailing practices. The research employs a quantitative approach, using data collected through selective and convenience sampling from consumers engaged in apparel shopping. The survey was designed to examine variables such as perceived ease of online search, perceived usefulness of the webrooming sequence, perceived search and offline purchase benefits, and online risk perceptions. The model was analysed using multiple linear regression and independent samples t-tests to identify the determinants of webrooming behaviour and assess the influence of control variables such as age, gender, income, and occupation. The study found that perceived online search benefits and perceived offline purchase advantages both significantly influence consumers' webrooming tendencies. Notably, webrooming allows consumers to mitigate purchase regret by enabling deeper pre-purchase exploration. Consumers also perceive greater control and confidence through online information gathering, especially when tactile evaluation in-store is important. Perceived risks associated with online shopping, including financial insecurity and lack of product tangibility, act as deterrents to e-commerce and motivate consumers to finalize purchases offline. Furthermore, product involvement moderates these relationships by amplifying the consumer's need for extensive product evaluation and risk The data reveal that higher levels of anticipated regret, especially in product categories involving experiential goods such as apparel, enhance the propensity for webrooming. Moreover, online reviews, social validation, and virtual community feedback serve as vital tools



for uncertainty reduction, reinforcing the positive attitude towards this dual-channel behaviour. The study confirms that consumers' intentions toward webrooming are significantly shaped by their perceived risks and benefits, which, in turn, predict actual webrooming behaviour. This research makes a strong case for recognizing webrooming as a behaviour that supports circularity by reducing the frequency of product returns, enhancing consumer satisfaction, and decreasing unnecessary consumption. By investigating behavioural patterns that lean toward slow fashion principles, it contributes to the growing discourse on sustainable innovation in retail. The research integrates psychological theories such as the theory of planned behaviour (Ajzen, 1991), uncertainty reduction theory (Berger & Calabrese, 1975), and the need-for-touch scale (Peck & Childers, 2003) to provide a comprehensive framework that connects consumer behaviour with sustainable outcomes. The inclusion of sociodemographic control variables further adds to the robustness of the findings, suggesting targeted strategies for retailers across different consumer segments. The study proposes that fashion retailers and e-commerce platforms can use these insights to design seamless and sustainable omnichannel experiences—such as offering tactile experiences, reliable online reviews, and fast in-store pickup—to convert webrooming tendencies into meaningful, low-waste fashion consumption.

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Presentation-O 18: Fashion's Digital Pull: An Analysis of Social Media Influencers' Voices on Over consumption and Sustainable Fashion

### **Authors: Kayleigh Walton**

#### Abstract

In the past decade, social media has become a driving force in shaping communication, culture, behaviour, and commerce (Dwivedi et al., 2021, p. 971). By 2020, publications which referenced the term 'social media' surged to around 17,500, demonstrating the growing popularity of social media studies (Page et al., 2022, p. 10). Its rapid integration into daily life and industries, including fashion, has prompted critical inquiry into its broader social implications (McCay-Peet and Quan-Haase, 2022, p. 14, 23; Page et al., 2022, p. 10). In the fashion industry, this shift has redefined marketing strategies and trend-making (Dwivedi et al., 2021, p. 971), empowering influencers to shape consumer perceptions (Bendoni, 2018, p. 28). Since the early 2000s, the rise of social media and fast fashion has created a tight link between online platforms and overconsumption. Yet despite growing awareness of sustainability issues (Vladimirova et al., 2023, p. 182), there is a noticeable gap in research on how influencers impact overconsumption and sustainability. Much of the existing research adopts a marketing perspective, examining



strategies to boost brand awareness (Bhattacharjee and Chanda, 2022) or shift approaches for maximum return for influencers and fashion brands (Le and Aydin, 2022). While recent studies, (Cayaban et al., 2023; Le and Aydin, 2022), demonstrate the growing need to better understand the impacts influencers may have on consumption habits. This study explores the tripartite relationship among overconsumption, sustainable fashion, and social media by examining the voices of social media fashion influencers on these topics. It asks: how do social media influencers encourage overconsumption of clothing, and how do they advocate for sustainable fashion? The goal of this exploratory study is to provide a foundation for further research to be conducted on the impact of social media fashion influencers on both overconsumption and sustainable fashion practices. To conduct this research, a qualitative content analysis was conducted of eight social media fashion influencers—four from Instagram and four from TikTok. Influencer posts were collected over the course of three months and analyzed using deductive coding to identify key terms. This method was selected for its ability to offer a deeper understanding and comprehensive interpretation of the content's meaning (Selvi, 2020, p. 442). A systematic approach was applied to the data collected from each influencer. Rather than focusing on frequency, the analysis emphasized the contextual significance of each keyword and phrase, providing a richer understanding of how influencers communicate these ideas. To further support the research, preceding chapters provide definitions, historical context, and conceptual frameworks for overconsumption, sustainable fashion, and social media, drawing on the work of scholars such as Kate Fletcher, Amy Twigger Holroyd, and Wendy Bendoni. Ultimately this study demonstrates that social media plays an important role in disseminating information about sustainable fashion and overconsumption, as it shapes public awareness and amplifies influencer voices who engage with these topics. The findings reveal that social media fashion influencers incentivise overconsumption through the use of urgency-tactics, community engagement, branded content, and emotionally driven language. The different strategies used by social media influencers deemed 'unsustainable' in this study, are seamlessly integrated into their feeds making consumption habits seem relatable and natural. The goal of 'unsustainable' fashion influencers was to create a community through emotionally driven language and relatable content where followers could feel a sense of belonging and exclusivity around overconsumption. Sustainable fashion influencers focused on slower-paced visuals, advocacy driven language and more educational captions that framed sustainable fashion as attainable and inclusive. By highlighting ethical brands, critiquing fast fashion, and educating on sustainable practices, sustainable fashion influencers play a role in supporting sustainability in spaces where unsustainable practices dominate. This study highlights the specific strategies used by 'unsustainable' influencers, revealing the potential effects of social media to promote overconsumption. This paper sheds light on areas of social media where intervention or education may be most impactful for sustainable fashion advocates, policymakers, and marketers. It also provides a framework for identifying and encouraging more mindful strategies towards content creation that supports sustainability goals. This study offers a strong foundation for future research on the impact of social media on sustainable fashion. To fully understand the influence of social media influencers on overconsumption and sustainability, future studies should investigate the direct correlation between influencer messaging and consumer behavior. By integrating shopping data with the content shared by influencers, shopping links, brand tagging, etc., researchers would gain valuable insights into how their messaging affects purchasing patterns, wardrobe updates and overall consumption habits. This study exhibits social media influencers voices, understanding how they frame overconsumption through their content



and revealing the devastating conversations they are creating. While sustainable fashion influencers offer hopeful counter-narratives, by advocating for sustainable practices through educational and encouraging content, their effort is often weakened by the stronger dialogue of fast fashion promotion. However, this research shows that meaningful change must come from "unsustainable" fashion influencers recognizing the impact of their messaging and working to reverse its possible effects. Keywords: sustainable fashion, overconsumption, social media, influencers, digital discourse, critical sustainability

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### Track G

Presentation-I 19: Circular Business Models and the Role of Stakeholders in Driving Circularity in the Fashion Industry

**Authors: Abhishek Kumar** 

#### Abstract

The environmental and social impacts of fast fashion have prompted a global call for systemic change within the fashion industry. This study examines the integration of circular economy principles within the slow fashion movement as a strategic response to these challenges. The study explores the relevance of circularity in fashion by employing a qualitative methodology. A comprehensive literature review was conducted focusing on innovative circular business models and the roles of stakeholders in promoting sustainable transformation. Findings reveal that slow fashion, when aligned with circular practices such as design for longevity, product- as-a-service, repair and refurbishment, and digital-enabled resale systems, can reduce textile waste and resource consumption. Moreover, successful implementation of circularity depends on the active participation of stakeholders, including designers, brands, manufacturers, retailers, consumers, policymakers, NGOs, and academia. The study concludes by highlighting the systemic enablers and barriers to circular adoption and offers insights for future research and practical application in the transition towards a more sustainable and circular fashion ecosystem. The fashion industry stands at a critical juncture, grappling with the environmental and social consequences of fast-fashion models characterized by rapid production cycles, low prices, and high disposable rates of garments (D'Itria & Aus, 2023). This approach, while seemingly meeting consumer demands for affordable and trendy clothing, has positioned the fashion industry as a major polluter, posing significant challenges to sustainability (Bonelli et al., 2024). The fashion industry's impact on society and the environment has become increasingly clear, from the carbon footprint inherent in global supply chains to the reliance on enormous quantities of natural resources (Brewer, 2019). Moreover, the social implications of the fast fashion industry include poor working conditions, low wages, and human rights concerns, highlighting the urgent need for a more equitable and responsible approach to fashion production and consumption. Consumer awareness of these issues is growing, leading to increased demand for sustainable and ethical fashion choices (Liu et al., 2023). The fashion industry's intricate web of global supply chains, resource-intensive production processes, and evolving consumer preferences further complicate sustainability efforts (Daukantienė, 2022). The rise of fast fashion has led to severe environmental consequences, including natural resource depletion, pollution, and waste generation. There is a growing consensus among researchers and practitioners that a transition to slow fashion principles is necessary to mitigate the detrimental impacts of the fashion industry.



Slow fashion prioritizes quality, durability, ethical production, and mindful consumption, promoting a more sustainable approach to clothing (Niinimäki et al., 2020; Kumar & Manshahia, 2024). A critical aspect of slow fashion is the adoption of circularity principles, which aim to minimize waste and maximize resource utilization by designing products for longevity, repairability, and recyclability (D'Itria & Aus, 2023). The aim of this study is to examine the integration of circular economy (CE) principles within the slow fashion movement, with a specific focus on emerging circular business models (CBM) and the roles of stakeholders in enabling sustainable transformation. By synthesizing current literature, the study aims to explore the relevance of circularity in the fashion industry, identify innovative business models that promote longevity, reuse, and closed-loop systems, and analyze the contributions of stakeholders. Additionally, the study seeks to highlight the challenges and opportunities influencing the adoption of circular approaches in slow fashion while providing insights and recommendations for future research and industry practice. This study adopts a qualitative research approach based on an extensive review of secondary literature to explore circularity approaches within the slow fashion movement. The literature for this review was collected from Google Scholar and ScienceDirect. These databases were chosen for their extensive coverage of scholarly articles in the fields of fashion, sustainability, and CE.

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Presentation-I 20: A Systematic Literature Review of Parametrisation to Establish Its Theoretical and Technical Frameworks in Fashion Pattern Construction

Authors: Hailah Al Houf, Simeon Gill, Jo Conlon and Steve Hayes

#### Abstract

Pattern parameterization enables fashion product personalisation, sustainability, and efficiency, addressing traditional pattern construction's inefficiencies and environmental concerns. Despite its decades-long existence in fashion systems, its realisation and adoption in fashion academia and industry are limited due to the absence of technology-agnostic frameworks. This has kept the knowledge largely tacit, hindering its potential to transform the fashion industry and academia towards a more efficient and sustainable paradigm. This paper makes this knowledge explicit, applicable to various parametric technologies by establishing its technology-agnostic frameworks from multidisciplinary literature. It addresses existing research contributions and limitations, proposing ways to fully develop them. The paper synthesises its scattered methods, visualises their methodologies, and examines their scientific underpinnings, advantages, and limitations. It discusses their unexplored aspects, considering their role in scientific discoveries in other fields. It also introduces parameterization as a thinking paradigm optimal for pattern engineering, increasingly demanded to address traditional pattern limitations. As the economy and fashion technology advance, consumers in the apparel industry become highly selective, and their expectations for styles, comfort, and fit have become increasingly demanding (Tao et al., 2018; Zhou et al., 2021; Jin et al., 2023). Consequently, the production model has shifted from mass production to customised production (Zhou et al., 2021). Customisation is a manufacturing model aiming to deliver personalised and high-quality apparel products (Baran & Galka, 2016; Moore, 2020). While customisation benefits apparel businesses by enhancing consumer satisfaction and reducing ill-fitting returns, meeting consumers' increasing demands for well-fitting clothing remains a challenge (Gu et al., 2018). This is because creating patterns customised to individual requirements and preferences poses difficulties in terms of time costs, labour costs, and resource wastage if done manually or using the traditional approach (Jin et al., 2023). The traditional approach includes both paper-based manual and traditional digital, which simulates manual construction in a CAD environment (Conlon & Al Houf, 2024; Gill et al., 2023; Suryani et al., 2018). Both traditional methods deliver static pattern outputs comparable to manual methods (Gill et al., 2023; Suryani et al., 2018). The traditional dress pattern provides a static outline of the 2D fabric shapes to be cut, often with traditional shaping features to form the 3D block (Figure 1). These static patterns lack flexibility for easy customisation, often necessitating redrafting of the pattern, rendering them time-consuming, labour-intensive, and contributing to unsustainable practices (Gill et al., 2023; Ye et al., 2023). It is imperative to replace these inefficient approaches with alternatives that streamline the customised apparel industry by providing speed and accuracy, saving effort, and optimising resource use. Embracing innovative approaches enables the limitations of static patterns to be overcome, propelling the pattern development process forward and achieving efficient garment customisation. Pattern parameterization is an advanced geometric digital approach that allows the construction of dynamic, geometrically associative 2D or 3D patterns responsive to individual input data (Gill et al., 2023). This approach's theoretical and technical fundamentals differ from those of traditional pattern drafting. 3D and 2D parametric dress patterns (Figure 2) highlight these distinctions and contrast them with traditional digital construction (Figure 1). Figure 2 illustrates a 2D and 3D parametric dress pattern displayed with



numbered points, representing the parameters governing the body-to-pattern relationship. Each parameter details all the geometric data and rules used to place it within the draft. These parameters establish linkages between the pattern and its geometric inputs, such as measurements, ease allowances, and style requirements (Gill et al., 2023). The key advantage of this linkage lies in its automatic adjustment of pattern elements associated with changes in input data, enabling dynamic resizing and more streamlined adjustments. This allows for better links to exist, requires greater structure and theory, enhances efficiency, and facilitates fit improvement. It also promotes the reusability of existing patterns by enabling the creation of adaptable base patterns for a product family (Chang, 2015), reducing paper and energy consumption (Gill et al., 2023). These benefits align not only with customisation needs but also with the increasing demand for an efficient, sustainable, and environmentally friendly industry.

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### Presentation-I 21:The Eco-Conscious Fashion Model: Sustainable Practices and Brand Development

Authors: Zoi Zoupanou and Arnab Banerjee

#### Abstract

The study aims to empirically test the impact of mandated changes in sustainable packaging, such as certification logos and labels, on consumer attention and actual consumption behavior. It seeks to address the suggestion that packaging recycling policy interventions or brand certification labels that enhance the visibility of packaging elements can significantly influence consumer attention and purchasing decisions. By focusing on visual cues and communication strategies, the research aims to bridge the gap between consumer interest in sustainability and actual purchasing behavior, thereby contributing to the development of environmentally responsible fashion brands. A holistic approach to sustainable packaging is essential to connect visual attention, consumer choice, and perceptions of environmental brand integrity. A significant challenge is the "attitude-behavior gap," where consumer interest in sustainable products often does not translate into purchases due to price sensitivity (Blas Riesgo et al., 2022, 2023; Ceylan, 2019; Kim et al., 2020; Mishraa et al., 2023; Singh et al., 2024). Subconscious influences of sustainable packaging remain largely unexplored, as consumers often make "mindless" visual judgments (Clement, 2007). Identifying specific visual cues that subconsciously foster positive associations and purchase intent is critical. Packaging design plays a crucial role in driving attention, with larger and centrally located elements being more likely to be fixated upon (Orquin et al., 2020). However, sustainability labels often receive less attention due to design challenges, highlighting the need for effective communication strategies. Additionally, the long-term performance, scalability, and environmental impact of new materials like bioplastics remain unestablished, as does consumer understanding of their correct disposal (Blas Riesgo et al., 2022). Research should focus on integrating social sustainability attributes with environmental cues to influence consumer choice. Effective communication strategies can bridge knowledge gaps and accelerate the adoption of sustainable packaging. By addressing these challenges, brands can enhance their environmental integrity and foster consumer trust, ultimately promoting sustainable consumption behaviors (Clement, 2007; Orquin et al., 2020; Blas Riesgo et al., 2022). The research employs a mixed-method approach, combining eye-tracking experiments, questionnaires, and interviews. Eye-tracking technology will be used to measure fixation likelihood, fixation duration, and pupil diameter, providing insights into how consumers visually engage with sustainable packaging. A simulated environment will present consistent visual stimuli, including sustainable certification labels and logos, ensuring controlled presentation of packaging elements. Participants will rate logos on environmental friendliness, sustainability, and responsible sourcing, classifying them as "targets" (strong sustainability) or "distractors." Metrics such as time to first fixation and heatmaps will be used to analyze visual Ouestionnaires and interviews will further explore salience and emotional responses. participants' perceptions, motivations, and decision-making processes, providing qualitative



insights to complement the quantitative data. The study contributes to the field of sustainable fashion by offering actionable insights for brands and policymakers. It highlights the importance of visual design in sustainable packaging and provides evidence-based recommendations for enhancing the visibility and effectiveness of certification logos and labels. By demonstrating how sustainable packaging certifications can improve durability, resource efficiency, and waste reduction, the research incentivizes brands to adopt reusable, recyclable, and compostable materials. Additionally, the study addresses the scalability and environmental impact of new materials, offering a roadmap for brands to integrate sustainable practices into their operations. The findings will guide decision-making by showcasing how external factors, such as certifications and policies, and internal considerations, such as brand reputation and packaging expertise, can be strategically aligned to promote sustainability. The research emphasizes inclusivity by considering diverse consumer perspectives and motivations. By employing a mixed-method approach, the study captures both quantitative and qualitative data, ensuring a comprehensive understanding of consumer behavior. The use of eye-tracking technology allows for objective measurement of visual attention, while questionnaires and interviews provide insights into subjective perceptions and motivations. The study also addresses the scalability and environmental impact of new materials, ensuring that the findings are applicable to a wide range of brands and industries. By promoting certifications and highlighting incentives for adopting sustainable practices, the research fosters collaboration between brands, consumers, and policymakers, creating a shared vision for environmentally responsible fashion. This research is novel in its focus on the subconscious influence of sustainable packaging on consumer behaviour, an area that remains largely underexplored. While previous studies have highlighted the "attitude-behavior gap," this study delves deeper into the visual and emotional factors that drive consumer attention and decision-making. By employing eye-tracking technology, the research provides a unique perspective on how visual elements of packaging, such as certification logos and labels, capture attention and influence perceptions. Additionally, the study addresses the scalability and environmental impact of new materials like bioplastics, offering a comprehensive approach to sustainable packaging that combines visual, emotional, and practical considerations.

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### Track H

Presentation-I 22: The influence of social media advertising on brand awareness within the cosmetic and fashion industry.

Authors: Padmi Nagirikandalage, P., Obadimu, T. 1 and Abeysinghe, E.

#### **Abstract**

In today's digitally connected society, social media has become an integral platform for both communication and commerce. With millions of users engaging daily, social media advertising has emerged as a strategic tool for businesses seeking to enhance brand visibility and consumer engagement. This research explores the influence of social media advertising on brand awareness and equity within the cosmetic and fashion industries, focusing specifically on two prominent brands: MadebyMitchell and Gymshark. The study aims to evaluate how social media interactions such as 'likes', 'comments', 'reviews and content sharing affect consumer perceptions, brand recall, and purchasing decisions. By employing secondary research method Netnography, the study examines various advertising formats used across platforms and their effectiveness in driving brand recognition and loyalty. The findings contribute to a deeper understanding of digital consumer behaviour and the strategic role of social media in shaping brand identity within competitive lifestyle markets.

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Presentation-I 23: ESG advertising on Corporate Financial Performance: An investigation of International Luxury Fashion Firms

### **Authors: Misha Xu and Lan Wang**

#### **Abstract**

A number of researchers have already investigated how corporate social responsibility (CSR) affected the company's financial performance (CFP) in the past decades, and recently the concept of environmental, social, and governance (ESG) has its roots in awareness of CSR (Chen et al, 2023). Tackling sustainable development goals has become a key strategic marketing objective in the fashion industry to build up a brand's reputation and image (Lee et al, 2023); however, few studies exploring the ESG-CFP relationship in the fashion industry isolate luxury fashion brands, due to the luxury fashion industry characterization, i.e., ostentation, hedonism, and rarity (Kapferer & Michaut, 2015). Advertising, in practice, plays a critical role in communicating a firm's ESG messages and building up images among consumers and organizations in sustainability (Moraes et al., 2017). When consumers see advertisements on different channels of social media, it can lead to memory reinforcement effects and positive effects on purchases (Shrihari et al., 2016), as a result, may affect the company's financial performance. Therefore, to best inform the marketing strategies of luxury brands, a study exploring how ESG advertising would influence CFP should account for the nuances of the luxury fashion industry. The literature that is evidenced from the US-listed companies shows that outstanding corporate ESG can generate financial profits (Gillan et al, 2021), and ESG advertising as a branding tool benefits firms by building stronger connections with consumers (Tsai et al., 2012). In the fashion industry, many companies adopted green practices in pollution



prevention, green supply chain management, and green product innovation as the major drivers of positive financial performance (Miroshnychenko et al., 2017). Recent evidence has also shown that ESG advertising has grown exponentially in the last two decades in global luxury firms via online channels on social media such as Instagram, Twitter, or web pages (Baumann-Pault et al., 2013). More ESG exposures in advertising can build up a strong relationship with consumers, then result with a better sale. Therefore, we hypothesize that the frequency of ESG advertising has a positive effect on the financial performance of luxury fashion companies (H1). Luxury comes in different forms (Vigneron and Johnson, 2004). Heritage and prestige have always been the hallmarks of many luxury brands. Because some luxury brands are hundreds of years old, the enduring quality of a particular luxury goods can be part of its appeal, and this is especially true for the traditional view of luxury (Brun and Castelli, 2013). Consumers expect luxury fashion brands to implement ESG concepts in the business, however, customers do not significantly consider sustainability in purchasing (Dhaliwal et al., 2020; Broccardo et al., 2022) because of the luxury fashion industry characterization, i.e., ostentation, hedonism, and rarity (Kapferer & Michaut, 2015). Such conflicting results are often attributed to the sustainable luxury paradox (Krishnan, 2024). However, there is another type of luxury emerging as opposed to traditional luxury, namely new or accessible luxury, which produces large quantities (Chevalier et al., 2012) to attract consumers with the brand image focused on a label, a logo, or a symbol – is crucial. Different from traditional luxury which targets elite consumers and relies on product authenticity based on precious materials, heritage, craftsmanship, and natural rarity; instead, new luxury targets the upper middle market and is positioned at a lower price (Silverstein and Fiske, 2003), particularly target those who are young and fashion-conscious - prefer a product with a fresh and unusual look and an exclusive aura rather than actual rarity (Hanna, 2004), which made it possible for ESG advertising to influence consumers purchasing in this new form of luxury category, then affect the corporate financial performance. Therefore, we hypothesize the positive impact of ESG advertising on CFP is more pronounced in the new luxury typed brands (H2). Consumers who live in a particular culture become accustomed to that societal culture's beliefs, values, and perceptions process, and these specific cultural values and norms will lead consumers to generate different responses to the messages in advertising. One of the most basic and widely used cultural dimensions is individualism-collectivism (Keegan, 1989). Compared, collectivist consumers have more emphasis on sharing, cooperation, and group harmony; and they value group welfare more than individualistic consumers; and are more likely to be influenced by external information. Therefore, we hypothesize that the positive impact of ESG advertising on CFP is more significant for collectivism for consumers (H3). Environmental, social, and governance (ESG) issues are a topic of growing focus in the fashion business world and academia (Ko and Murgia, 2024). Luxury fashion brands invest significant sums in developing brand features in quality, and styling but also consider the degree to which they incorporate ESG to fit their businesses. Study has shown that organizations with higher resilience levels exhibit greater profitability and competitiveness, even amid environmental turbulence (Prayag et al., 2018). A high level of brand resilience enables companies to resist environmental turbulence, recover from damage, and reinvent themselves to capitalize on opportunities, thereby positively influencing financial outcomes by increasing market value (Rego et al., 2022). ESG advertising has offered some benefits, but luxury fashion groups have run into their own ESG problems, i.e., the BBC reported that Burberry burned unsold bags, clothes, and perfume worth millions of pounds in 2018 (BBC, 2018). Social media allows ESG scandals to spread quickly to society including both consumers



and stakeholders, and consumers are becoming concerned about luxury brands' ESG credibility after green criticism (Davies et al., 2012). The failure to uphold pre-crisis commitments to corporate social responsibility can quickly lead to a loss of consumer trust, which hinders post-crisis efforts to rebuild brand resilience (Kang et al, 2023). Therefore, we hypothesize that differences in the frequency of ESG incidents affecting brand resilience have an impact on corporate financial performance (H4). Based on market capitalization data from the FAME database in 2024, the top 40 publicly listed luxury firms worldwide have been selected as samples for this research, totaling 51,270 data. The collected data includes each brand's ESG-related advertising information and changes in revenue across global markets. Specifically, ESG-related advertising data comprises the frequency with which luxury fashion companies promoted their ESG activities on social media from 2014 to 2024. For example, advertisements include environmental claims and messages related to products or operational practices, such as Burberry's "The Earth is Ours" marketing campaign during Spring/Summer 2022, which is recorded as one instance for that year (Burberry, 2022). Considering the dependent variable, corporate financial performance is related to the scale and capital structure of the company (Fernandez de Guevara et al., 2021), we measured it by the natural logarithms of returns between two days, with four control variables: total values of assets, leverage ratio, growth rate and return on assets, to rule out the endogeneity reasons. We collected firm-level negative ESG incidents from social media on a daily basis with a focus on the period from 2014 to 2024. This resulted in capturing a total of around 178 negative ESG incidents. These luxury brands have been categorized into traditional luxury and new luxury by looking into the product characters. The traditional luxury fashion brands include fine jewellery and watches, like Cartier or Omega; and the new luxury fashion brands include Burberry, Tom Ford, etc. For the culture variable, we measured the firm's main revenues by region and used the consumers' cultural background as a cultural indicator. For example, the mainland Chinese market was the biggest revenue contributor (79%) for Chou Tai Fook in 2023 (Chou Tai Fook, 2003), we identified it as collectivism in culture. We tested the relationship of ESG advertising applications with financial performance along with four control variables examining differences across the product type, social culture beliefs, and brand resilience. (H1, H2, H3, and H4). The hypothesis tests were assessed by multivariate regression and ANOVA in MATLAB. The results indicate there is a positive relationship between the frequencies of ESG advertising and corporate financial performance with a correlation coefficient of 0.305 (p = 0.000, H1 is accepted). Furthermore, the findings confirm that luxury type (F = 17.31, p = 0.000; H2 is accepted), culture (F = 21.67, p =0.000; H3 is accepted), and brand resilience measured by the frequency of negative ESG incidents (F = 46.86, p = 0.000; H4 is accepted) have significant main effects on corporate financial performance. New luxury vs. traditional: 0.291 > 0.180 (F = 4.985, p < 0.01; Collectivism vs. Individualism: 0.833 > 0.800 (F = 5.365, p < 0.01; High level of resilience vs. Low level of resilience: 0.682 > 0.253 (F = 3.154, p < 0.01). The findings indicate that luxury fashion brands can differentiate themselves and gain competitive advantages by emphasizing their ESG commitment to their advertising. The ESG incidents influence the new luxury brands' financial performance in the collectivist market the most, which suggests the importance of consistency practices with the luxury fashion brand's ESG goals, which could proactively mitigate risks and address any potential issues that may arise swiftly to protect their market standing, consumer's purchasing and profit obtaining.

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