



fashion for a
FINITE PLANET
sustainable consumption in the garment industry

Fashion for a Finite Planet:
Sustainable Consumption in the Garment Industry

by Laura Dempsey

A major research project presented to OCAD University
in partial fulfillment of the requirements for the degree of
Master of Design in Strategic Foresight + Innovation

Toronto, Ontario, Canada, April 2015

 Laura Dempsey 2015

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Fashion for a Finite Planet: Sustainable consumption in the garment industry

Author: Laura Dempsey

Degree: Master of Design in Strategic Foresight + Innovation, OCAD University (2015)

Abstract: Fashion and dress have the power to tell deeply human stories about who we are and who we aspire to be, and their intrinsically social natures can facilitate our search for self-expression and belonging. In tandem with larger global paradigms of economic growth and consumer capitalism, however, what we wear has become increasingly commoditized and destructive to both people and the planet. Using Andrew Curry and Anthony Hodgson's Three Horizons model as an analytical framework, this project aims to understand how change might happen in the garment industry. It begins by uncovering the deeper systems structures and narratives that define the status quo. Next, light is shed on the many proposed visions for what the industry could become. Finally, this project imagines potential pathways for pragmatically bridging the gap between the current paradigm and a more hopeful and sustainable future for the garment industry.

ACKNOWLEDGEMENTS

This project would not have been possible without the unending support of my family, the incredible guidance of my advisors, and the encouragement of my talented and inspiring SFI colleagues.

Thank you to my family, Charlotte Holmlund, Rob Dempsey and Erika Reid, for always believing in me. I can't express how lucky I feel to have your support and love in my life.

Thank you to my Principal Advisor Helen Kerr, who single-handedly changed the way I see the world. Helen, it has been a great honour to have your guidance and support throughout this process. You are an inspiration to me, and I know this project would not be what it is without you.

Thank you to Lynda Grose, who made time for a stranger and shared her profound wisdom in ways I may never be able to repay. Your guidance was instrumental in challenging and pushing this project forward, and for that I will be forever grateful.

Thank you to my partner Eric Baczuk, who patiently and lovingly acted as my sounding board, and gave me confidence when I lost my way.

Thank you to my incredible colleagues Amy Satterthwaite, Kelly Kornet, Jill Sharrock and Krittika Sharma for inspiring me on a daily basis, and for always having time to listen.

Finally, thank you to the interviewees who graciously took time to speak with me, and shaped this project with their work and their vision.

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INTRODUCTION

Research Question: In an era of passive over-consumption, how might we shift the garment industry toward a future where fashion is reclaimed as a tool for meaningful self-expression and identity making?

The act (or some may say the art) of dressing is a deeply ingrained element of cultures around the world, and highly symbolic in nature. It has the power to tell deeply human stories about who we are and what we aspire to be, and by way of its intrinsically social nature, clothing and fashion reflects both our desire to express ourselves and to belong - or not.

It has also led to a staggeringly profitable industry. With the aim of democratizing fashion and making high style clothing available to the masses, the emergence of 'fast fashion' retailers like Zara and H&M disrupted the garment industry at the turn of the 21st century. As will be shown, this shift toward low-cost, commoditized clothing has profoundly affected the entire industry, not just those who engage in fast fashion business practices. Euromonitor International has forecast the global apparel and footwear industry to be worth US\$2 Trillion by 2018 (Global Apparel, 2014), but the immense profits accompanying this rise have unfortunately not come without consequences.

This project began as an exploration of one such consequence – waste – and how it could be minimized to move fashion toward more sustainable production. Research quickly made it clear, however, that waste is quite literally a by-product of a much larger issue. In the affluent West, clothing cycles have sped up to such remarkable rates that some retailers now offer new styles on a weekly basis – up to 52 'micro seasons' per year. This has resulted in unprecedented levels of consumption and disposal, as well as myriad negative environmental and human impacts. It's important to note, however, that the

trends occurring within fashion commerce are situated within a larger paradigm of economic growth that has dominated political rhetoric and policy making for the past five decades. During this time the global economy has expanded at unprecedented rates, and has been tied to immense amounts of ecological degradation.

Focusing on the symptoms of fashion commerce, while important, does little to solve the deeply systemic issues impacting the industry. It could also result in missed opportunities for transformation. If the ultimate goal is to catalyze meaningful and lasting change, understanding what's causing the symptoms, and why, is an important first step. The research that follows thus aims to reveal important connections between elements in the garment industry, and the ripple effects they create within the system. These connections are rarely simple, and sometimes counterintuitive. It also aims to understand the deeper systems structures and mental models driving the garment industry, as they are essential to finding impactful leverage points for change (See The Iceberg Model, Fig. 1).

Though it does delve into some problem solving, this project focuses much of its attention on in-depth problem finding and framing through the use of Andrew Curry and Anthony Hodgson's Three Horizons framework as an analytical tool (to be introduced and explained in the Foreword on p. 2). It is hoped that by uncovering the complex and often invisible connections that exist within the system of fashion commerce, this project might contribute to the imagination of new solutions to the truly difficult problems that face the industry.

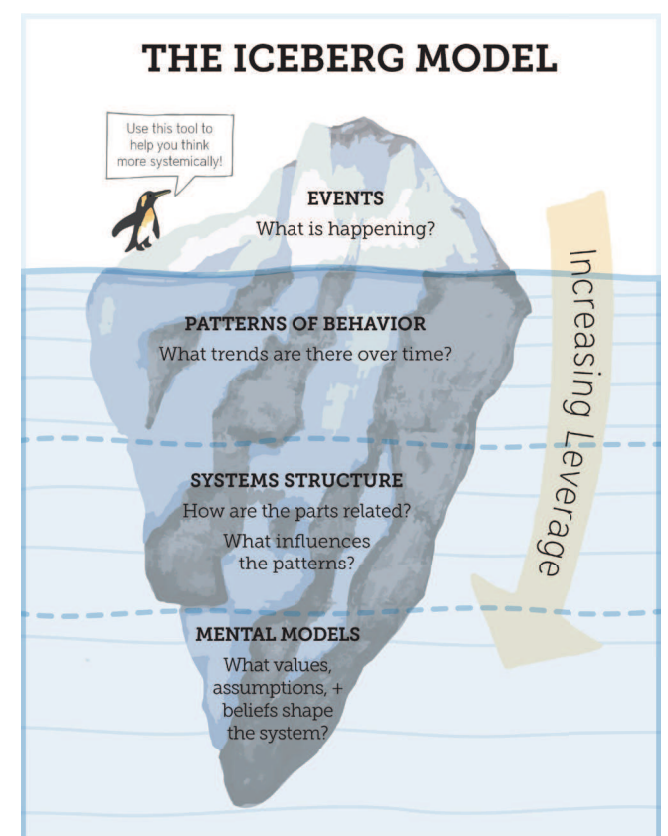


Fig. 1 | The Iceberg model
(Source: <http://www.donellameadows.org>)

FOREWORD

the three horizons

The overall framework for this project uses the Three Horizons model as an analytical tool for examining the state of the garment industry and imagining how we might move to a more preferable future. This section will briefly describe the model, and illustrate how it can be used as a comprehensive, multi-dimensional framework for analyzing change.

THE THREE HORIZONS

The Three Horizons model is a futures-oriented sense-making tool first published in *The Alchemy of Growth* by Merhdad Baghai, Stephen Coley and David White in 1999. Eventually adapted by Andrew Curry and Anthony Hodgson, the diagram models three separate “horizons” of growth, with time along the x-axis, and fit for purpose along the y. Curry & Hodgson explain that, “the [y-axis] can also be assessed in terms of the prevailing degree of acceptance of ideas within society as a whole about the political, economic, organisational and cultural norms embedded in an organisation or network.” (Curry & Hodgson, 2008, p. 7). It is this interpretation of the y-axis that will be used in this research project.

The **First Horizon** (H1) in this model is characterized by the dominant mode of the prevailing system - it is the world of “business as usual”. As time progresses and the external environment evolves, it eventually loses its “fit”, but as Curry & Hodgson note, dominant systems do not vanish, but only fade slowly over time (Curry & Hodgson, 2008, p. 7). This has particular relevance to contexts in which the values of the current system have become so normalized they verge on the hegemonic.

The **Third Horizon** (H3) represents ideas of transformative change that are emergent but marginalized in the present, and hold the potential to displace the current paradigm of the First Horizon, “because they represent a more effective response to the changes in the external environment” (Curry & Hodgson, 2008, p. 2-3). There are many possible Third Horizons, and as each nascent idea

“fumbles toward utopia” (Curry & Hodgson, 2008, p. 8), they are fuelled by the voices and experimentations of their ardent (but often power-deprived) advocates.

The **Second Horizon** (H2) inhabits the collision space between the First and Third Horizons. It is characterized by transition and instability, where the values of the dom-

inant narrative (and its embedded structures) clash with emerging models for the future (Curry & Hodgson, 2008, p. 2-3). It is the bridge - however unstable and uncertain - between the present and the future.

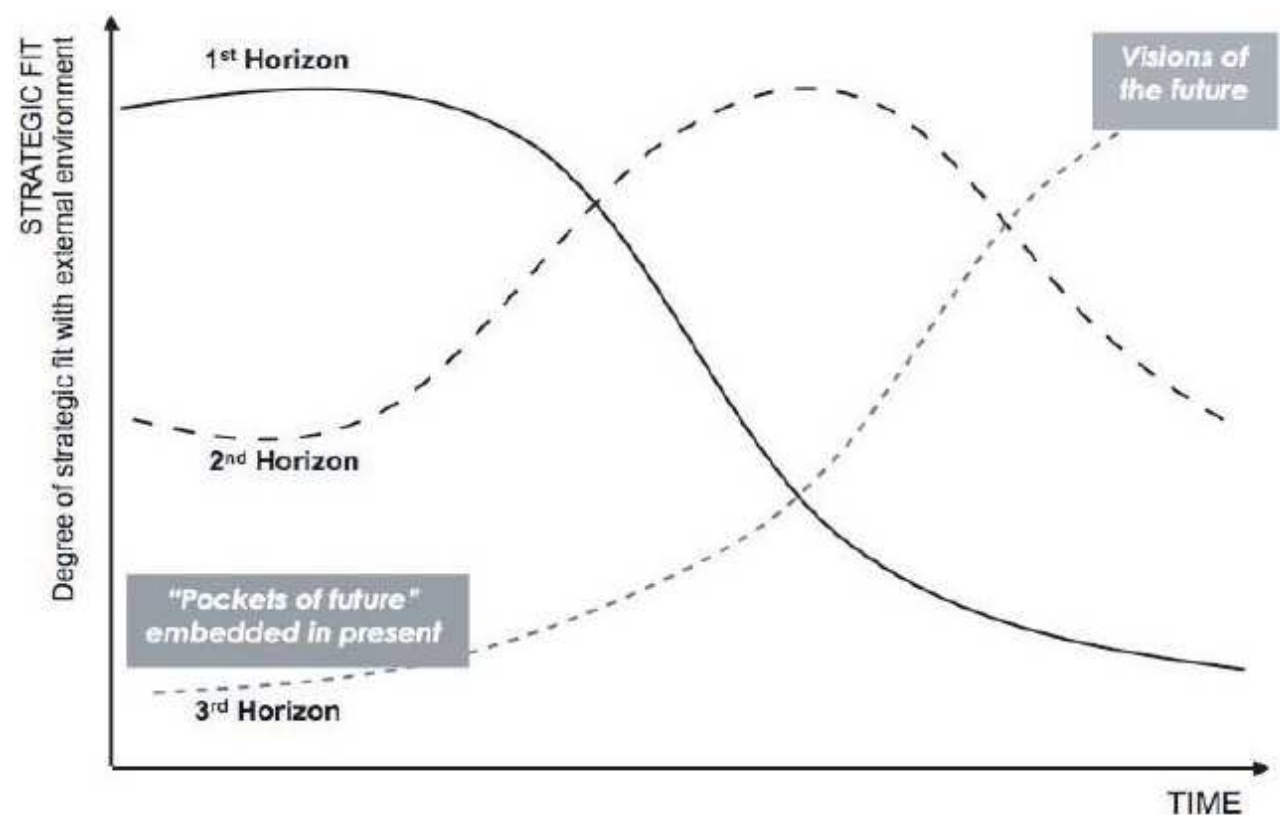


Fig. 2 | Schematic of the futures-oriented Three Horizons model (Curry & Hodgson, 2008, p. 2)

PROJECT FRAMEWORK

Using this framework as an underlying structure for the analysis, this project first examines the resistance to change **(1)** within the current system of fashion commerce to understand not only what and where resistance exists, but why. It should be noted that resistance to change is not a defined element of the Three Horizons Model, but is an important component of the First Horizon that needs to be understood if change is to occur; hence it has been included in this analysis.

Next, the First Horizon is explored to understand what's broken now **(2)**, but also to identify what's worth keeping from the present **(3)**. Attention is then turned to the Third Horizon to uncover evidence of the future in the now **(4)**, which will help elucidate what the Third Horizon – the hopeful future **(5)** - could become.

To conclude the analysis, the collision space between H1 and H3 (the Second Horizon) is contemplated with the goal of understanding how we might bridge between the two paradigms **(6)**. Table 1 and Figure 3 summarize these steps and illustrate how each question relates to the Three Horizons model.

The Three Horizons methodology is often described in management literature as a structure for assessing potential opportunities for growth within an organization, but as explained by Curry and Hodgson, it can also be used to link futures-thinking to processes of change (Curry & Hodgson, 2008). By using the Three Horizons as an analytical tool for understanding how change could happen, the model offers a holistic view of the present moment, the preferred future, and how we might facilitate movement from one to the other.

QUESTION	HORIZON
1) Where does resistance to change exist within the system?	H1
2) What's broken now?	H1
3) What's worth keeping from the present?	H1
4) Where is evidence of the future in the now?	H3
5) What's the hopeful future?	H3
6) How might we bridge between paradigms?	H2

Table 1 | Order of sequence for Three Horizons analysis

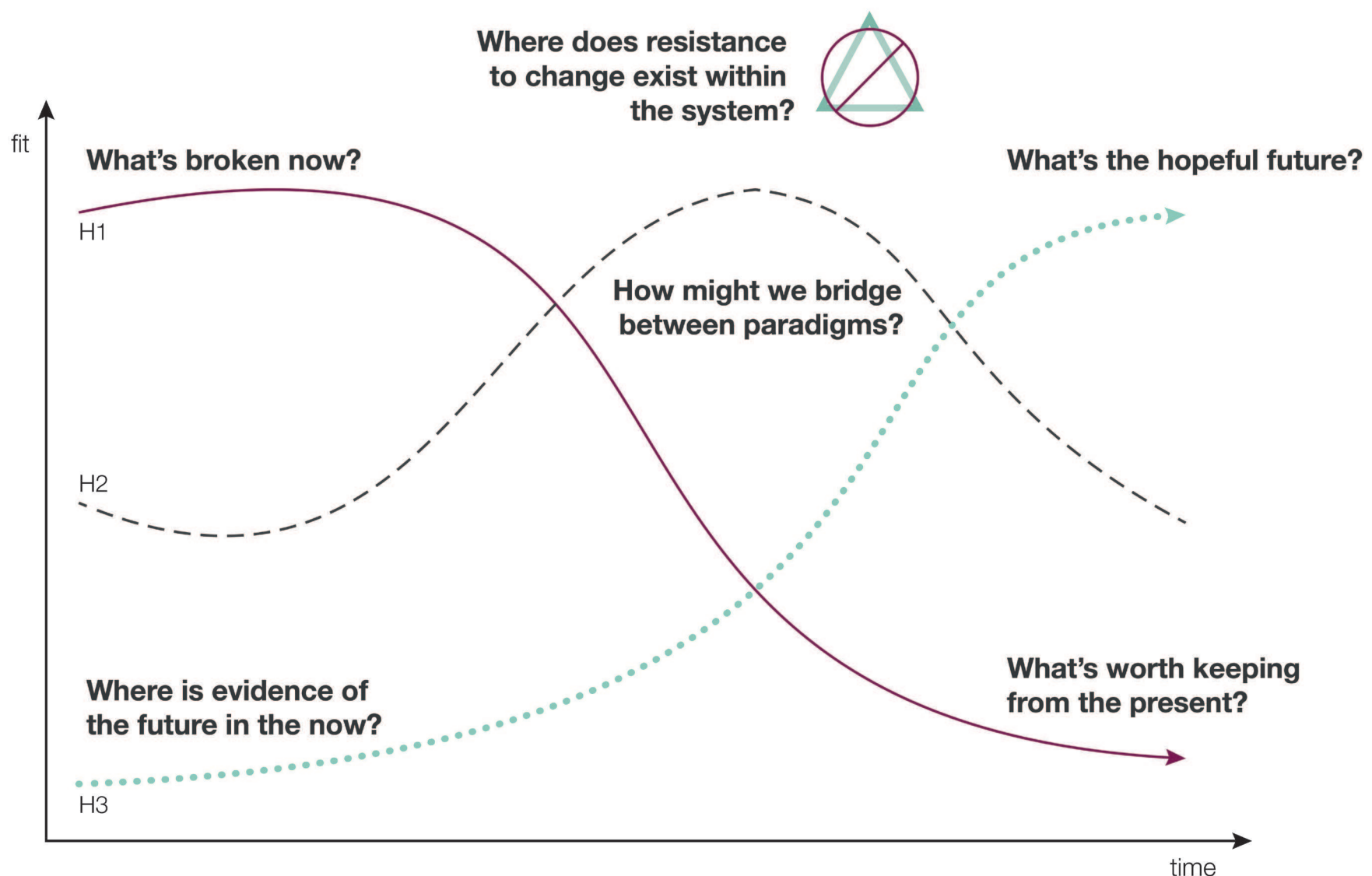


Fig. 3 | Project framework, adapted from Curry and Hodgson (2008)

METHODOLOGY

INFORMATION SOURCES

The methodology for this research project includes documentation and analysis of two main information sources. First, an in-depth literature review was completed, covering a broad range of secondary research topics, from the current paradigm of economic growth, to culture and identity, to the history and psychology of fashion, to sustainable design. Next, semi-structured interviews were conducted with six experts in the fields of fashion, business, sustainable design, consumption and social entrepreneurship. These interviews helped bring clarity to the research, identify important concepts and initiatives (both theoretical and pragmatic), and challenge assumptions.

The experts interviewed for this project include:

1. **Dr. Otto von Busch, Assistant Professor of Integrative Fashion Design, Parsons The New School for Design**

Dr. von Busch's work in the areas of fashion hacktivism, creative resistance and participatory enablement through innovative DIY methodologies provided grounded yet visionary inspiration for what the hopeful future might entail. His expertise and unique perspective on fashion's potential to empower both individuals and the collective helped challenge assumptions about what fashion should – and can – become.

2. **Katie O'Brien, Owner, Plum (Canadian clothing store with retail locations in British Columbia and Alberta)**

Ms. O'Brien's extensive knowledge is based upon decades of work in the world of fashion retail. Her real-world expertise as a business owner in an increasingly competitive global marketplace lent an immensely valuable and pragmatic perspective to the consideration of how change may (or may not) happen in the garment industry.

3. **Kate Black, Founder of Magnifeco.com and the EcoSessions global event platform**

Ms. Black's intimate and comprehensive understanding of sustainable fashion trends was an invaluable resource to this research, especially to the development of the environmental scan (a categorized landscape of emerging fashion initiatives, found in Section 4).

4. **Julie Phillips and Geoffrey Szuszkiewicz, Co-experimenters, Buy Nothing Year**

Buy Nothing Year, Ms. Phillips and Mr. Szuszkiewicz's aptly named life experiment involved a year of increasingly restricted consumption of consumer goods and services. The experience gave them an uncommon understanding of what it is like to live with less, but also a philosophical perspective on how the current paradigm of growth might come to be disrupted.

5. **Rachel Faller, Founder, tonlé (Cambodia-based zero-waste clothing line)**

Ms. Faller's dedication to zero-waste production methods has resulted in an innovative business model and clothing line that are both beautiful and difficult to replicate. Along with her experience as a social entrepreneur, Ms. Faller's insight into garment industry supply chains was of great service to the development of this research project.

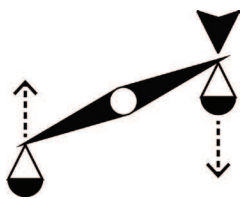
ANALYTICAL TOOLS

Several tools have been used to process and analyze information collected during the course of this research project.

1. Systems Diagrams and Archetypes

Systems diagrams have been used throughout this report in an attempt to make sense of the complex connections that exist within the garment industry. These include causal loops, influence maps, and systems archetypes, many of which are modelled after those presented in William Braun's paper, *The Systems Archetypes*. It is important to note that any "+" or "-" signs within the diagrams refer not to good/bad or beneficial/detrimental relationships between elements, but rather positive and inverse ones. So, in a positive relationship between two elements in a diagram (denoted by a "+" sign near the arrowhead), as one element increases or decreases, so too does the connecting element. In an inverse ("-") relationship, as one element increases, the other decreases, and vice versa.

Where applicable, leverage points identified within the systems diagrams have been denoted with the following symbol:



A description of each leverage point's potential for change can be found in corresponding footnotes.

2. Graphic Timeline

To illustrate the changes that have occurred in the garment industry (and the drivers that have influenced them), a graphic timeline has been used to outline important events and milestones from 1890 – present. It can be found on p. 20-21.

3. Value Proposition and Business Model Canvasses

Analysis of a generalized fast fashion business model and value proposition has been completed using frameworks developed by Alex Osterwalder and Yves Pigneur in their book *Business Model Generation*. These can be found in Appendices A and B.

4. Signals of Change

To gain insight into the possible futures for the garment industry, an analysis of weak signals was conducted. Each signal has been classified using the STEEPV taxonomy (Social, Technological, Economic, Environmental, Political, Values), and includes a description, illustrative examples, and their implications. This analysis can be found on p. 38-39.

5. Environmental Scan

An in-depth environmental scan was conducted to classify emerging initiatives based on their relative scalability and potential to improve, challenge or

transform the system of fashion commerce. A general description of the map and an analysis of its contents can be found on p. 40-41, while a detailed listing and examples of each initiative can be found in Appendix C. An interactive version is available at www.fashionforafiniteplanet.com/environmental-scan.

6. Case Study

To develop understanding of emerging purpose-driven business models, an in-depth case study looks at the business model of tonlé, interviewee Rachel Faller's zero-waste clothing line based in Phnom Penh, Cambodia. The case study, along with implications and lessons for business leaders can be found on p. 42.

7. Speculative Models

In the final section of this report, "How might we bridge between paradigms?," three separate speculative business models have been proposed to illustrate how principles of sustainable consumption might be realized in the near future. They are inspired by many emergent examples (some of which are not fashion-based) already in practice, but applied in new ways. Each speculative model has been tailored to emphasize specific principles for Industry Leaders, Smaller Players, and Individuals (see Project Architecture, below).

PROJECT ARCHITECTURE

As explained in the Foreword on p. 2, the analysis has been categorized and divided into six main areas. Excluding "What's worth keeping from the present?" and "Where is evidence of the future in the now?" where the implications apply to the entire garment industry ecosystem, the structure of each section has been framed to highlight the findings and implications as they relate to three main stakeholders within the garment industry:

1. **Industry Leaders**
2. **Smaller Players** (including independent designers and entrepreneurs)
3. **Individuals** (the wearers of fashion)

DEFINITIONS

The following definitions are used throughout the paper:

Fashion – This term refers to the act of dress and adornment of the body characterized by renewal and change, but not automatically linked to commercial activity.

Fashion Commerce / The Garment Industry – These terms are used interchangeably and refer to the mainstream commercial economic activities currently involved in the global production and sale of clothing.

Though the commerce of men's fashion (and increasingly, children's) are also affected by many of the driving forces discussed in this report, emphasis is placed on how those forces relate to women's fashion / fashion commerce.



01

WHERE DOES RESISTANCE TO CHANGE EXIST WITHIN THE SYSTEM?

There are many reasons change is needed in the garment industry, and yet progress has been painfully slow to achieve. What are the forces of “dynamic conservatism” at play in this particular system? This section will examine the various points of resistance to change that exist, and explain how they serve as powerful linchpins for the status quo.

Like in many industries, resistance to change is mainly exhibited by the players who have the most to gain from business as usual, and who unsurprisingly hold the most power. In the garment industry, this power is highly centralized in the hands of industry leaders. Robert Ross, Director of International Studies at Clark University estimates the ten largest clothing chains to account for as much as 70% of clothing bought at wholesale, giving them tremendous leverage to influence the industry (Harney, 2009, p.40). Due to their size and networks, large multinational firms are also the most well-equipped to take advantage of globalizing forces, free-trade regulations and the subsequent divestment from manufacturing that began to occur at the end of the twentieth century (Klein, 2001, p.196). The resistance exhibited by industry leaders will thus be examined in depth, with specific focus given to “fast fashion” business models - an overview of which will precede the analysis.

Smaller players, including social entrepreneurs and independent designers, may also be reluctant to change despite their desire for a better future for the garment industry. Anja-Lisa Hirscher and Alastair Fuad-Luke have noted that designers are often so embedded in the current commercial system of fashion they can find it difficult to step into different modes of designing; for example, shifting from the role of primary creator to facilitator of the design process (Niinimäki [Ed.], 2013, p.191). Finally, while the power of ‘consumer sovereignty’ is often exaggerated (Princen et al., 2002, p. 325), this section will also discuss the resistance to change exhibited by individual purchasers of fashion. Their resistance could be described as something closer to apathy, but the reasons for and implications of this passive indifference are important to understand.

Much of the resistance to change described above is facilitated, and even encouraged, by larger societal forces and dominant narratives within Western culture. As such, a discussion of these forces will preface this section.

WIDER SYSTEMS AND DRIVERS

“Too much and too long, we seem to have surrendered community excellence and community values in the mere accumulation of material things. Our gross national product counts air pollution and cigarette advertising, and ambulances to clear our highways of carnage. It counts special locks for our doors and the jails for those who break them. It counts napalm and the cost of a nuclear warhead...It counts television programs which glorify violence in order to sell toys to our children... Yet the gross national product... does not include the beauty of our poetry... the intelligence of our public debate... It measures everything, in short, except that which makes life worthwhile...”

- Robert Kennedy, in a speech to the University of Kansas, 1968

ECONOMIC GROWTH ON A FINITE PLANET

The garment industry, though unique in many ways, closely aligns itself to the principles of consumer capitalism and exponential growth that have dominated global economic and political discourse for the past five decades. It has been touted as the best mechanism by which to increase prosperity for all, with Gross Domestic Product (GDP) used as a standard tool to measure well-being and signs of slowing economic growth portrayed by both politicians and the media as something to fear (Lewis, 2013, Chapter 7, Section 4, Para. 5). During this time the global economy has expanded nearly five times its size (Jackson, 2009, p. 487), and at present rates is expected to be eighty times larger by 2100 (Lewis, 2013, Chapter 3, Section 2, Para. 18). This growth has resulted in a doubling of overall material flow through the industrial system every twenty years (Fletcher & Grose, 2012, p. 54).

The implications of relying upon such an economic system on a finite planet are not difficult to imagine, and in fact, have already begun to be quantified: in the past 50 years, for example, we have already seen the degradation of an estimated 60% of the planet's ecosystems (Jackson, 2009, p. 487). This growth has also failed to deliver on its promise of prosperity for all, with one fifth of the world's population earning just two percent of global income (Jackson, 2009, p. 6). Inequality is not limited to developing nations, however - OECD nations are also suffering from rising wealth gaps and the stagnation of middle class incomes, which began far before the latest global recession. In addition, though it has undeniably improved material wealth over the course of its tenure, the paradigm of continuous economic growth has reportedly made us no happier (Black [Ed.], 2013, p. 108).

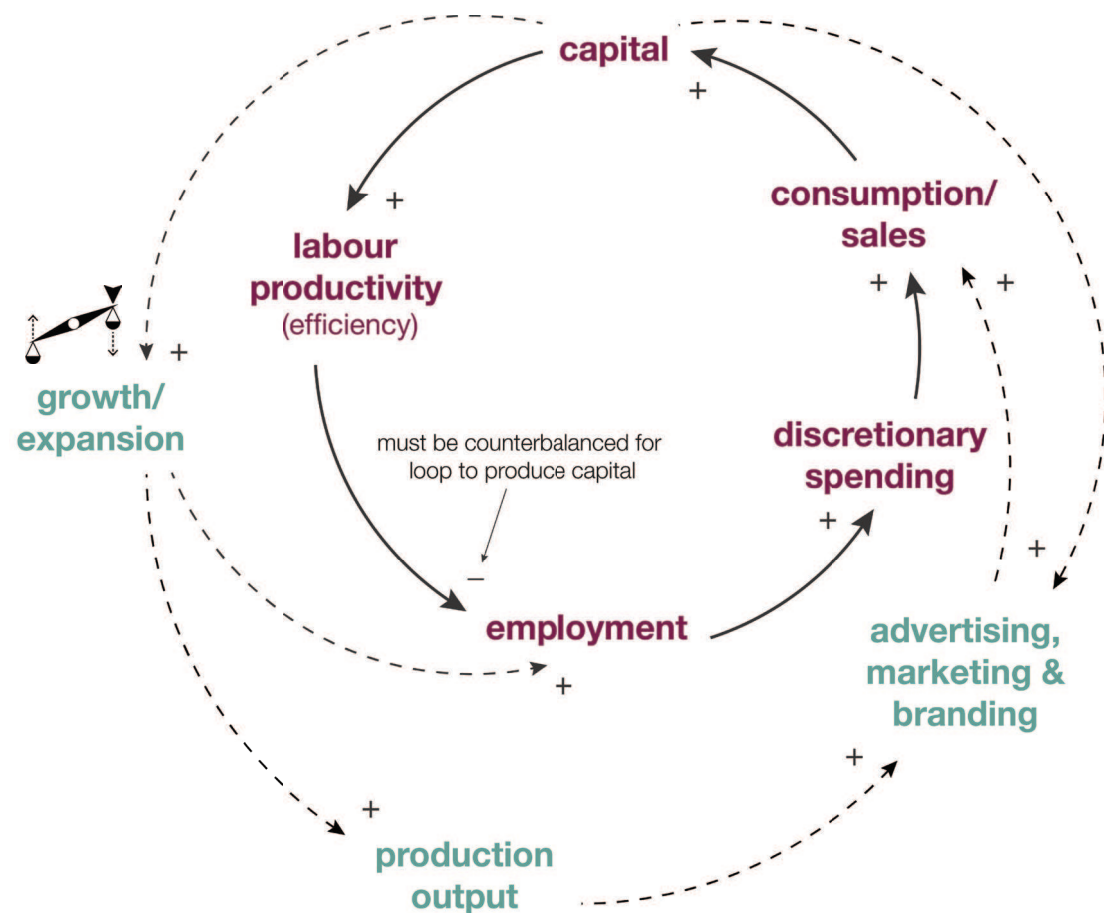


Fig. 4 | Economic growth and its compensatory mechanisms



Many people and organizations like the New Economics Foundation, Prof. Justin Lewis, and sociologist Juliet Schor have argued that instead of perpetual and exponential growth, employee productivity gains could be exchanged for extra leisure time, not money. In this way, reduced working hours could contribute to increasing societal well-being instead of threatening livelihoods.

As ecological economist Tim Jackson explains, the basic premise of growth through productivity is straightforward in nature, but comes with a structural reliance on continual expansion to ensure stability:

“The most important dynamic is the role of labor productivity in capitalism. Continuous improvements in technology mean that more output can be produced for any given input of labor. But, crucially, this also means that fewer people are needed to produce the same goods from one year to the next. As long as the economy expands fast enough to offset labor productivity, there isn’t a problem. But if the economy doesn’t grow, there is a downward pressure on employment. People lose their jobs. With less money in the economy, output falls, public spending is curtailed, and the ability to service public debt is diminished. A spiral of recession looms. Economic growth is necessary within this system just to prevent collapse.”

(Jackson, 2009, p. 488)

Without some means to counterbalance the unemployment caused by productivity gains, discretionary income and sales will inevitably fall. Unemployment thus begets a decrease in consumption, which then limits productivity - creating a fragile situation where growth becomes imperative not only to its success, but also its survival (See Fig. 4). This causes what Jackson refers to as a ‘dilemma of growth’, where the continual expansion of resource consumption to fuel growth is unsustainable, but de-growth under present conditions is unstable (Jackson, 2009, p. 65).

Working within these self-imposed conditions has limited the types of solutions available to deal with the global economy’s environmental and human casualties; namely, to efficiency gains and material improvements. The finite nature of the planet - and indeed ourselves - on the other hand, are rarely seen as anything more than temporary constraints, and the ultimate purpose of our economic systems are rarely questioned. As Thomas Princen, Michael Maniates, and Ken Conca have written, consumption has become a hallowed concept: “If water supplies are tight, one must produce more water, not consume less. If toxics accumulate, one must produce with fewer by-products - or, even better, produce a clean-up technology - rather than forgo the production itself. Goods are good and more goods are better. Wastes may be bad - but when they are, more productive efficiencies, including eco-efficiencies and recycling, are the answer. Production reigns supreme because consumption is beyond scrutiny.” (Princen et al., 2002, p. 5). We tinker in the margins of a narrow path, and yet, efficiency gains have far from proven themselves as a solution. If anything, they have simply served to “grease the distribution system” (Fletcher and Grose, 2012, p. 54), bringing down the cost of goods over time and stimulating demand and inevitably,

further growth (Jackson, 2009, p. 95; Princen et al., 2002, p. 68). Indeed, the commerce of fashion has become deeply embedded in a larger economic paradigm completely dependent on exponential growth for its survival.

Why then, is an economic model that has clearly outlived its fit for purpose still revered as the only way forward? It seems clear that someone - or something - must be significantly benefiting for the system to persist as it has. The rising influence of large and profitable corporate entities in the last few decades is one obvious explanation. Case in point: the Institute for Policy Studies has calculated that by the end of the twentieth century over half the world’s largest economies were not countries, but businesses, with “the world’s top 200 firms generating 27.5% of the world’s economic activity - while, interestingly, only employing 0.78% of the world’s workforce” (Lewis, 2013, Chapter 7, Section 4, Para. 6). This rise has been accompanied, if not buoyed, by the effects of globalization, which is characterized by a “deepening process of growing economic interdependence” and the growth of transnational capital mobility (Princen et al., 2002, p. 137-138). More explicitly, it involves a “growth in the overall volume of transnational investment, the deepening integration of capital markets, and the growing speed with which transnational capital can relocate in response to short-term fluctuations in economic conditions” (Princen et al., 2002, p. 137-138). To complicate matters, these transnational commodity chains slyly resist the reach of national regulation (Princen et al., 2002, p. 146), making it difficult for governments to enforce public policy on environmental and labour regulations.



Fig. 5 | Drivers of change

The garment industry has been far from immune to these forces and drivers; indeed, they help to explain much of what has occurred over the past few decades. Though not all fashion companies are multinational conglomerates, the leverage and influence exerted by the largest brands on both the industry and the spirit of competition is significant - Robert Ross, director of international studies at Clark University estimates that eight to ten of the largest clothing chains account for as much as 70% of clothing bought at wholesale (Harney, 2008, p. 40). Disconcertingly, as priorities shift more and more toward the pursuit of profit maximization, the chances of tackling environmental and ethical issues diminish. As sustainable fashion visionaries Kate Fletcher and Lynda Grose explain,

“The attention the private sector pays to monetary values over all else makes capturing a range of social and environmental values in the design process difficult. For if there is no distinction between money acquired through means that enrich the environment and society and that are created by means that impoverish society, then the cheapest route is always the immediate choice.”

(Fletcher & Grose, 2012, p. 121)

These drivers of change (along with many others not elaborated upon - See Fig. 5) characterize the context in which the garment industry now operates. As will be seen, the implications and subsequent resistance to change are stark, but also unsurprising when looked at from this wider lens.

INDUSTRY LEADERS

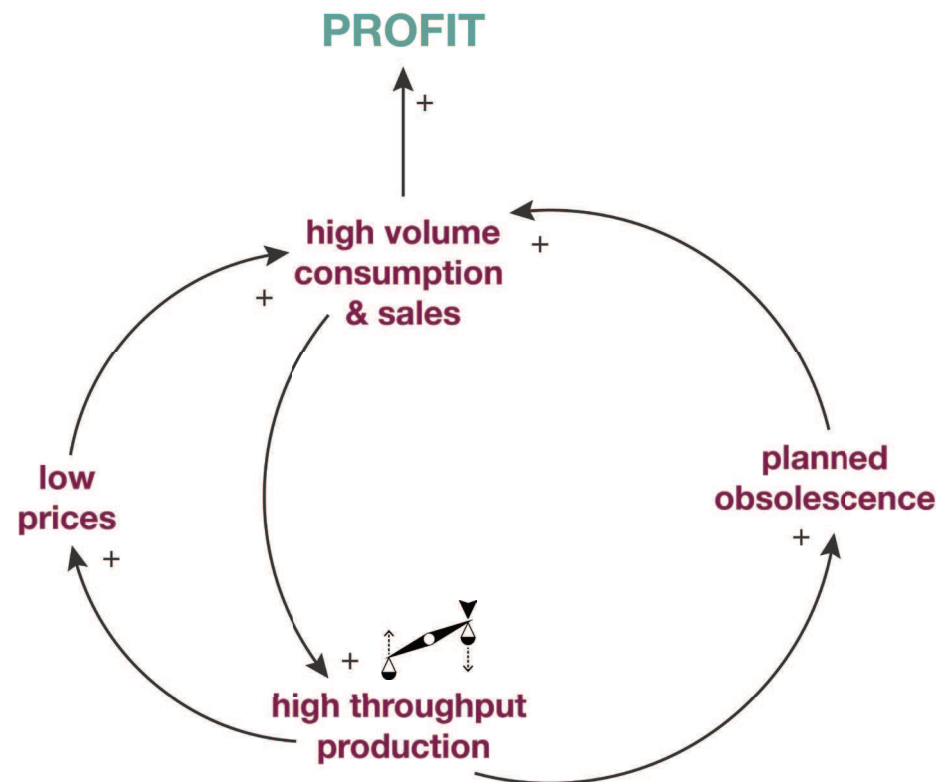
The “fast fashion” business models that have emerged over the past two and a half decades have powerfully influenced the industry and transformed it at an uncommon speed. Zara, H&M and Forever 21 are easily identifiable examples of fast fashion companies, while in Canada, one of the country’s most well recognized brands is the “value” clothing line Joe Fresh, sold in grocery stores across the country. The tenets of high-speed turnover of goods sold at low prices have also exerted influence on more traditional retailers trying to compete for customers. For a generalized analysis of the fast fashion value proposition and business model, see Appendices A and B.

Industry leaders are often chastised for their inaction when it comes to dealing with the very serious impacts caused by the garment industry. This section will explore some of the structural reasons why it appears to be so difficult to effect change.

CORE OF BUSINESS MODEL

One possible explanation for the resistance to change exhibited by companies who have adopted fast fashion principles is that the core of their business model is often based upon intimately connected, yet fundamentally unsustainable practices used for profit generation (Black [Ed.], 2013, p. 209). These principles can be generalized into four main areas: low price, planned obsolescence, high-throughput production and high-volume consumption (See Fig. 6).

By offering low clothing prices, brands capitalize on the “substitution effect” - that is, the tendency for people to buy more of a product when its price is lower (Schor, 2009, p. 88). Along with low prices, the model also relies upon planned obsolescence and the quick turnover of styles to encourage customers to frequently return to the store to purchase more. As Kate Fletcher and Lynda



High throughput production techniques might be re-imagined as loops instead of linear chains to allow for fashion renewal while reducing material throughput.

Fig. 6 | Fast fashion causal loops

Grose explain in their book *Fashion and Sustainability: Design for Change*, “increasing the tempo of fashion activity grows the volume of garments produced and consumed, for converting a design to market faster enables a company to steal a march on its competitors and provides more opportunities to sell” (Fletcher & Grose, 2012, p.124). This requires the implementation of high-throughput production methods, which, through economies of scale, help reduce prices further.

If any one element of the model is significantly altered, however, its effectiveness as a whole would be significantly impacted. For example, were fashion cycles slowed in the existing mode, clothing consumption would fall. Since the business model relies solely on the sale of new clothing and accessories for revenue generation, profits would decrease as well. Similarly, calls to pay garment workers a

living wage and provide safe working conditions would necessitate increases in the cost of production, and likely result in decreased sales since the model currently relies on low prices to fuel customer spending. In short, low prices are essential to maintaining the levels of consumption fast fashion businesses rely upon for financial success. Although this does not excuse unwillingness to tackle the serious issues that exist within the industry, it does help to explain why many industry leaders have been so reticent to address issues of consumption, and why they tend to focus on material efficiencies for their eco-credentials, if at all. Perpetual consumption of new clothing and accessories is a linchpin of these business models.

PROFIT

Business models based on principles of speed, quantity and low prices have translated into significant profits for the companies that adopt them. Leaders of this type of retail model typically achieve 16% profit margins – 9% higher than the “typical specialty-apparel retailer” (Sull & Turconi, 2008, p. 5). They’ve also been able to withstand challenging economic conditions, with some companies dramatically expanding their sales during the most recent global recession (2008) (Sull & Turconi, 2008, p. 5).

It is no wonder, then, that the industry as a whole has begun to adopt similar strategies, and that those who have benefited from such a model are resistant to change. Placing focus solely on speed and quarterly profits tends to encourage a myopic and short-term mindset for decision-makers, however, who pursue growth in a highly competitive environment and are distanced (sometimes profoundly) from the impacts of their choices.

COMPETITION AND THE EXTERNALIZATION OF COSTS & RESPONSIBILITIES

Currently in highly competitive environments like the garment industry, finding competitive advantage is essential to remaining in business. One way of gaining a financial edge is by externalizing costs in the countries where companies source the manufacturing of the clothing they sell. For this reason, Princen, et al., have dubbed developing countries with lenient environmental and labour regulations and eager governments looking for Western investment a form of “frontier economy.” That is, a place in which costs may be exported across jurisdictional boundaries:

“In short, incentives arise for producer and state alike to export costs and to do so as if other jurisdictions are mere frontiers. For the firm, these incentives derive in part from the need to be competitive. For the state, they derive in part from the need to assist domestic industries in international markets which generates revenues and relieves unemployment. But incentives for firms and states also derive from the jurisdictional quandary created by constantly changing technologies and markets. Such economic changes generate institutional demands that few governments are equipped to handle. Pollutants have long time lags between cause and effect and endangered species pit workers against environmentalists. “Going abroad,” especially for short-term gains, becomes a tempting way for business and state alike to escape such demands.”

(Princen et al., 2002, p. 106)

Since the vast majority of companies do operate within these lenient laws (be they minimum wages, water contamination policies, etc.), at present there is little incentive for businesses to stop taking advantage of these

sorts of cost externalizations. Divestment from manufacturing has also made it easy for companies to simply pass blame to their contractors for any infractions that do come to light by issuing statements saying they have been ‘let down’ by their suppliers – referred to as the “Not my problem’ defence by author Lucy Siegle (Siegle, 2011, p.78). Even calls for increased transparency by way of third-party auditing has shown to have limited effect; sadly, two of the factories in the 2013 Rana Plaza collapse that killed over 1100 people had recently passed audits (Surowiecki, 2013, para. 4).

Some look to the governments within developing nations to increase regulations, but as labour rights activists Liz Parker and Sam Maher point out, in countries where the garment industry plays a major role in the economy, the government is often closely tied to manufacturers. This means they can (and do) exert significant influence over labour and environmental policies, but it is rarely to the benefit of those most vulnerable in the industry (Black [Ed.], 2013, p. 145). Inasmuch as developing nations have been encouraged by the Global North to export commodities rather than become self-sufficient, they have also become bound to global capitalism in a way that decreases, rather than increases their power within the economic system (Lewis, 2013, Chapter 7, Section 3, Para. 3). Government officials are often beholden to the desires of powerful and highly agile western importers who can easily move on to the next low-cost destination should prices increase; a core element of the mainstream fashion business model. Importantly, this agility to move from country to country impedes any effort to “level the playing field” among competitors - the only context in which restraint makes competitive sense (Princen et al., 2002, p. 124).

CONTROL OF SYMBOLIC RESOURCES

Over time, corporate brands as a whole have systematically gained control of symbolic resources - that is, the symbolic meanings found in and represented by consumer goods. Tim Jackson notes that,

“Although it is clearly true that some social control over symbolic resources is possible, it remains almost self-evident that in modern consumer culture, much of this control has been handed over to the commercial interests of producers. Marketers, advertisers, designers and retailers not only have a vested interest in controlling symbolic resources, they also have a long and rather sophisticated experience in effecting this control to their own best advantage. To make matters worse, they also have at their disposal considerably more resources than those available to the public sector in its attempt to promote responsible or sustainable behaviour.”

(Jackson, 2006, p. 389)

One mustn't look far to see how normalized the call of clothing brands has become in our everyday lives. From the use of celebrities as vehicles for product placement, to the infiltration of social media by shopping apps such

as LIKEtoKNOW.it (See Fig. 7), to the popularity of the Lifetime television network's American fashion reality show *Project Runway*, brands and the clothing they sell have found myriad ways to never be far from our thoughts, and to reinforce that what we have is never quite enough. This means that not only are brands resistant to change, they also have powerful resources at their disposal to oppose or ignore it, the latter which Curry and Hodgson have noted is an effective tactic used by those who benefit from business as usual to block new paradigmatic thinking from gaining ground (Curry & Hodgson, 2008, p. 15).

Many, including those within fast fashion companies, are unhappy with the negative human and environmental impacts caused by the garment industry, but given current global conditions and their power within the system, industry leaders have little incentive to alter the fundamental nature of their business models. This suggests change could be dependent upon alterations to existing external conditions (like an increase in resource costs or a change in customer values and demands), or the re-balancing of power into the hands of a more diverse body of players where checks and balances are more likely to occur.

SMALLER PLAYERS

Many socially and environmentally conscious entrepreneurs are eager to move the system toward a more hopeful future, but even they may exhibit some resistance to change. Designers, for example, are often so entrenched in 'the way things are done' in the fashion industry that they can sometimes find it difficult to step into new roles where design is reimagined as a more participatory process (Niinimäki [Ed.], 2013, p. 191; Black [Ed.], 2013, p. 142). Handing over the metaphorical reigns of design, especially for those with many years of formal training and experience, could undoubtedly be quite threatening.

Furthermore, as Ann Thorpe explains, "Design is a key cog in the wheel of consumerism, so it is no wonder that most designers have trouble conceiving of their work in

any other form than commerce and consumerism. Many designers fall back on the idea of making consumerism 'better'" (Thorpe, 2010, p. 15). They are also incentivized and rewarded by the industry for perpetuating consumerism, with industry prizes, employee bonuses and even press acclaim almost always based on how many units of product are sold. In this way, design's deep entwinement with consumption can limit the scope of possibilities considered by designers and entrepreneurs. This, coupled with the immense power differential faced by small unconventional voices in an industry dominated by fewer and fewer powerful brands, can impede change for smaller players, be they designers, business owners, entrepreneurs, or the like.

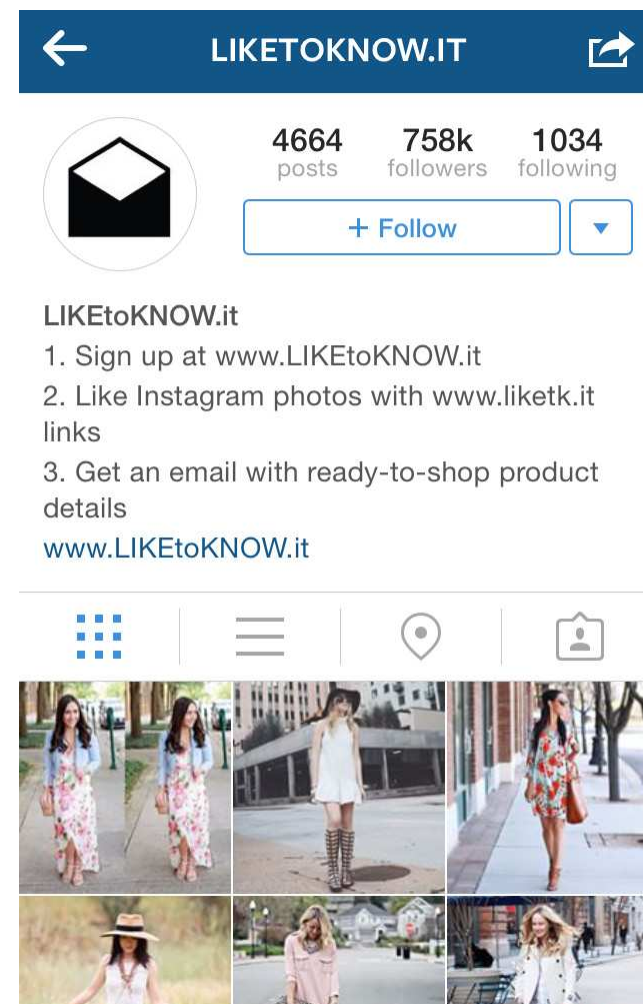


Fig. 7 | LIKEtoKNOW.it shopping app (Source: Instagram)

Research indicates a current passive acceptance of the fashion industry's status quo by the general public, despite concern about environmental sustainability and human welfare in other parts of their lives¹ (Joy, et al., 2012, p.280). What is driving this indifference when it comes to the garment industry?

SYMBOLIC ROLE OF GOODS IN MODERN SOCIETY

In parallel with brands' successful colonization of Western culture through the appropriation of symbolic resources, commercial goods themselves have taken on important emblematic relevance in our lives, regardless of income levels or social status (McRobbie, 1997, p. 83). In the case of clothing, while it has always helped individuals communicate identity, seek belonging and pursue social status, the commercialization of fashion has made the accessibility of such symbolism far easier to obtain.

Ideas of morality often weigh heavily on discussions of consumption and consumerism (Henry David Thoreau comes to mind), but the symbolic role material posses-

sions play in our lives should not be downplayed. Jackson warns against simplistic prescriptions for change that fail to recognize the symbolic importance of material things, noting, "their embeddedness in social conversation, their vital role in negotiating meaning, and the depth of their engagement in cultural myths and narratives suggest that material consumption patterns might represent a sphere of resistance - potentially quite violent resistance - to social change" (Jackson, 2006, p. 388). This goes some way to explain why many environmental campaigns have failed to change behaviour, as overlooking the meaning and sense of self that people create through what they

purchase fails to recognize the deep motivations that drive them (Fletcher & Grose, 2012, p. 139). It is common for pundits (often left-leaning ones) to demonize fashion as frivolous and unnecessary, but these forms of criticism ignore the deep cultural meaning that can be embedded in the art of dressing and the significant role clothing can play in our lives. Part armour, part window, fashion and clothing can hint at materialized stories of our inner worlds. It is no wonder, then, that we hold it so dear.

SOCIETAL PRESSURE TO BE BEAUTIFUL

In contrast to the more positive benefits clothing can provide its wearers, fashion commerce has also produced social anxiety and fear; of judgement, loss of status, and exclusion. (von Busch, et al., 2014, p. 53). The commercially-driven pressure to be attractive and follow societally approved regimes of beauty has thus bound the act of dressing to associations of power and control in complex ways, especially for women (Entwistle, 2000, p. 23). This pressure to maintain one's social status undoubtedly contributes to the cognitive dissonance that can be seen between individuals' values and their purchasing behaviours: disconcertingly, as the public understanding of sustainable clothing: a report to the Department for Environment, Food and Rural Affairs (DEFRA - UK) reveals, "Even amongst the most pro-environmental, clothing choices most often derive from considerations of identity and economy rather than of sustainability impact" (Fisher et. al, 2008, p. 8).

Instead of striving for perfection, perhaps we need to find ways to collectively embrace the "jolie-laide," or beautiful ugly, as the French supermarket *Intermarché* did with their highly successful "Inglorious Fruits and Vegetables" campaign that coincided with the European Union's



Fig. 8 | Backstage at Alexander McQueen's Horn of Plenty show, Fall/Winter 2009-2010 (Source: The Guardian)

¹ Through their research conducted with fashion-conscious shoppers, Joy, et al. revealed interesting contradictions between their values and actions: "Our overarching finding is that consumers from both Hong Kong and Canada, while concerned about the environmental and social impact of their non-fashion purchasing decisions, did not apply such principles to their consumption of fashion. They talked in general terms of saving the environment, were committed to recycling, and expressed dedication to organic food. ... Yet, these very same consumers routinely availed themselves of trend-led fashionable clothing that was cheap: i.e. low cost to them, but high cost in environmental and societal terms. They also exhibited relatively little guilt about fast fashion's disposability, seeing little discrepancy between their attitudes toward sustainability and their fashion choices." (Joy, et al., 2012, p.280)

declaration of 2014 as the Year Against Food Waste. Calling it a “glorious fight against food waste” the chain humorously advocated for the “ugly” produce that would normally not make the shop floor, and sold it at a 30% discount. The initial campaign reportedly saw a boost of 24% in overall store traffic, saved produce from being unnecessarily discarded, and resulted in similar concepts spreading throughout Europe (Godoy, 2014).

With regard to human beauty, author Daphne Merkin ponders the transformative potential of the beautiful ugly: “These days we tend to invoke the word ‘transgressive’ whenever we want to move a given discourse outside the box, but *jolie laide* comes out of a different attitude than mere defiance. In its endorsement of the poetics of irregularity, *jolie laide* hints at alternate possibilities rather than an antithetical universe” (Merkin, 2005). The

late Alexander McQueen’s work is one (albeit avant garde) example of fashion that challenged the notion of beauty and often blurred the lines between the exquisite and the grotesque. This type of artistic commentary is clearly difficult to translate into the mainstream, but it is not impossible to imagine concepts of beauty being challenged in support of a greater good. This concept will be revisited later in this report.

HUMAN DESIRE FOR NOVELTY

Many people are attracted to fashion and dress because of its potential for novelty and renewal - not necessarily its sustainability credentials. These values may initially seem at odds with one another, but one must look only to nature to see renewal and change perfectly supported by sustainable ecosystems. Diversity in our natural world is an asset, and as Fletcher and Grose explain,

“Understanding the context of speed, its mechanisms and appropriateness, offers an alternative lens through which we can explore alternative practices in fashion. The emphasis in nature on both balance and fast speeds in initial phases of development contrasts sharply with the reality of the growth model for fashion, which sees fast speed as a permanent business model option. Perhaps the most important trait of

fast speed in nature is that it is used to further the goal of the entire system, not as an end or goal in itself. Here fast is combined with slow to foster short-term vitality and long-term stability. Slow regulating systems have fast-moving parts within them.”

(Fletcher & Grose, 2012, p.127)

As they have noted, the world of fashion commerce currently regards high-speed as a permanent condition, and deftly capitalizes on what Colin Campbell, Emeritus Professor in the Department of Sociology at the University of York calls our “almost magical ability to produce new wants immediately after old ones are satisfied” (Jackson [Ed.], 2006, p. 280). Indeed, human nature’s inherent inclination for the new is a perfect complement to brands’

continual production of novelty for financial gain, and as Jackson explains: “Taken together these two self-reinforcing processes are exactly what is needed to drive growth forwards” (Jackson, 2009, p. 101).

Our desire for novelty is further fuelled by the extreme affordability customers have come to expect, with clothing prices in the U.S. falling for thirteen of the past seventeen years (Hilsenrath, et al., 2011). According to Professor Mathilda Tham, H&M alone handles over half a billion goods per year (Black [Ed.], 2013, p. 216); an undeniable testament to the tremendous public appeal fast fashion has generated. Is it possible to redirect the pleasure of speed and novelty in the pursuit of a more balanced and sustainable system?

DISTANCING EFFECTS AND THE EXTERNALIZATION OF RESPONSIBILITY

Were the true costs of the garment industry understandable to the average individual in a tangible way, its lustre might fade, but at it stands, we are far from such a reality. At present, the complex and byzantine-like supply chains from which items of clothing emerge remove any chance for rational decision-making about the clothing we purchase. As Princen, et al. note, “...commercial patterns that separate consumers from the consequences of their behaviour are likely to weigh consumption decisions toward narrowly self-interested consumption and away from long-term, intergenerational, and non-human concerns” (Princen, et al., 2002, p. 116). They further explain that:

“Cultural distance - that is, cross-cultural barriers that inhibit the flow of information, understanding, or sympathetic identification - is clearly increased by globalization; only the most naive variants of “global village” idealism would argue otherwise. As commodity chains grow longer and more complex, and

production systems more dynamic, it becomes harder to contextualize production in terms of its social and ecological ramifications. The feedback-distorting effects of multiple agency are also deepened, given the extra layer of intermediaries that typically accompanies transnational transactions.”

(Princen et al., 2002, p. 145)

We are often told - especially by those in power - to “vote with our dollars,” and yet the distancing effects that accompany our global economy mean we are never provided with perfect information, and we are not insulated from the powerful influence of marketing. In many ways the idea of consumer sovereignty is a convenient myth for those who wish to relocate their responsibility for negative human and environmental impacts, which “pushes individuals to bear the brunt of ‘environmental bads’” (Hobson, 2002, p. 102).

Our choices may appear broad, but they are in fact tightly constrained, as illustrated in Princen’s example of choosing a mode of transportation: “one chooses, in today’s marketplace, between a red car and a blue one, not between an automobile-based transport system and a mass-transit based one, and this is no accident” (Princen et al., 2002, p. 325). The garment industry in today’s context may be viewed in a similar light: we have seemingly endless choices of colours and styles, but if we wish to engage in - metaphorically speaking - mass-transit based fashionable pursuits instead of single-occupancy ones, our options are far more limited. To complicate matters, unlike food, where choices can impact one’s personal health, there are few personal consequences for clothing choices, be they purchasing or disposal. This is not to say that more information will make our decisions more rational, or even altruistic, but it does suggest that a lack of feedback is partly to blame for the current apathy felt by individuals toward change.

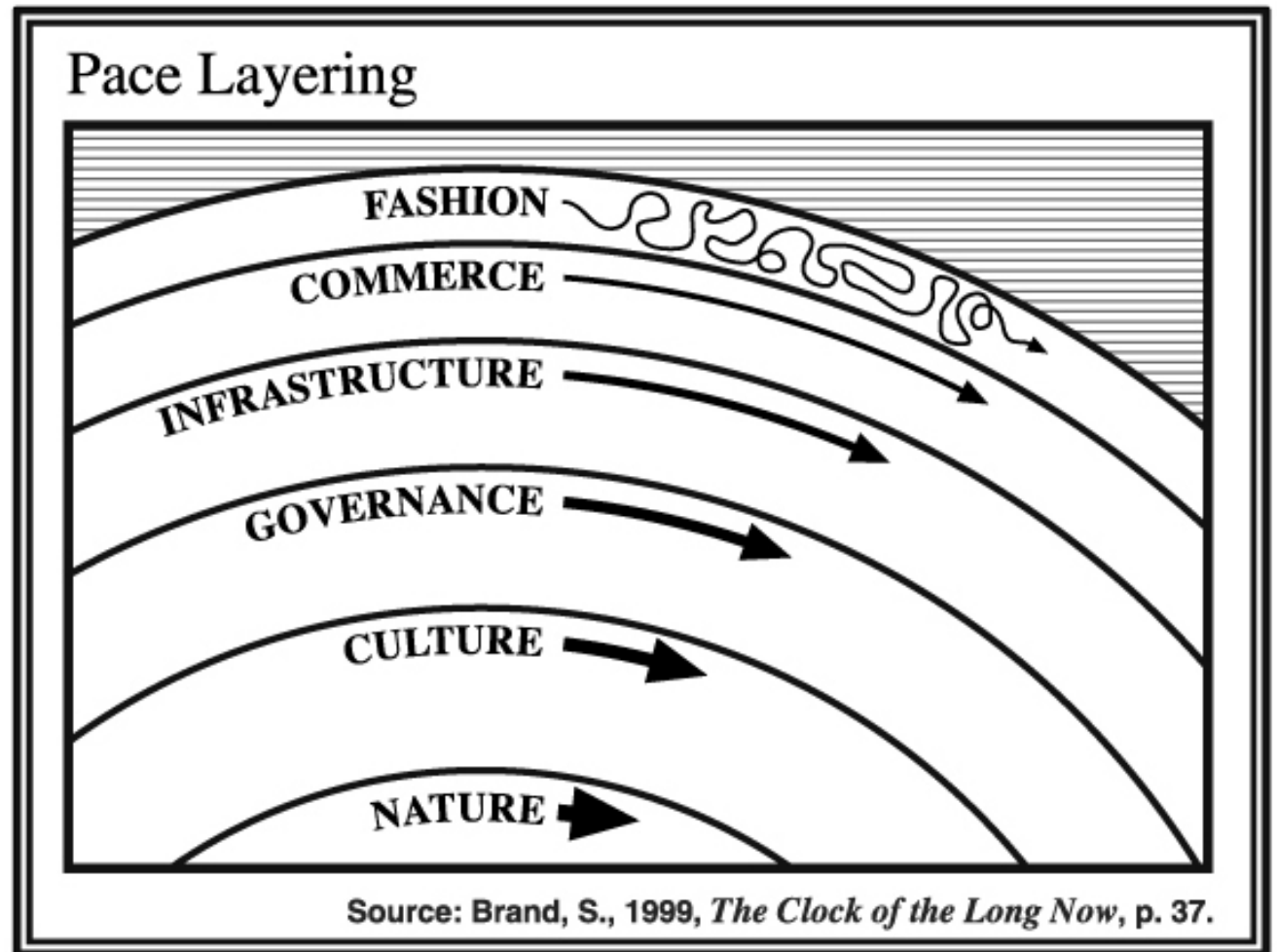


Fig. 9 | Pace layering (Brand, 1999, p.37)

SPEED OF THE SYSTEM

When astronauts return from space, they often speak of a shift in their awareness that occurs when they see the entirety of the Earth for the first time - an experience that has been coined “the Overview Effect” by space philosopher Frank White. It refers to the feeling of “seeing firsthand the reality of the Earth in space, which is immediately understood to be a tiny, fragile ball of life, hanging in the void, shielded and nourished by a paper-thin atmosphere. From space ...national boundaries vanish, the conflicts that divide us become less important and the need to create a planetary society with the united will to protect this ‘pale blue dot’ becomes both obvious and imperative” (Declaration, n.d.). If only more people had this experience, the prospects of achieving a sustainable future for our planet could become a reality.

How does this relate to fashion? It’s clear that a similarly enlightened perspective is nearly impossible to achieve within the current system, even for those who hold the most power. Be it through our culture of instant gratification or in the anxiety embedded in constantly

achieving quarterly results, the pace at which fashion unfolds unsurprisingly makes it difficult to see the wider implications of our actions and choices. Von Busch, et al. for example, refer to the “synchronized slavery” of trends amplified through social media, noting that: “With a continuous flow of new styles and cheaply accessible just-in-time-fashion, we are stuck in the contemporary affect, and it is hard to get an overview, to take time to see the bigger picture. It is even harder to ask the tough questions and build other values other than the easily accessible ones” (von Busch, et al., 2014, p. 56).

Though not directly related to the Overview Effect, Stewart Brand’s Pace Layering diagram (Fig. 9) also pushes us toward a broader worldview by highlighting the pace of various elements of our societies and world. In this diagram Brand suggests that fashion moves at a much faster pace than any other “layer” of our world, and while this may seem intuitively true, it could also easily be argued it is the goals of commerce that drive the current speed of fashion. Anthropologist Karen Tranberg Hansen conversely points to the inherent duality of dressing,

explaining that “the underlying sensibility in the preoccupation with clothing is a visual aesthetic that on first sight cultivates endless variation yet on closer analysis is also in the service of continuity.” She continues, “The two dimensions do not cancel each other out. What is more, their simultaneity keeps the options open and it is also... at the core of what fashion is about” (Hansen, 2003, p.306). Fashion in its most positive incarnation is never exclusively new nor old, fast nor slow, but both simultaneously.

The endless newness produced by the garment industry undoubtedly provides excitement, but it can also make it difficult to develop longer-term thinking about the effects of fashion commerce. Can we create a “gap” - a space for mindfulness within this frenetic pace of trend-setting - to cultivate the overview effect and reconnect to the continuity that makes fashion such an important part of our cultural lives?

FEELINGS OF POWERLESSNESS TO OPPOSE DOMINANT STRUCTURES

“Every society clings to a myth by which it lives. Ours is the myth of economic growth. For the last five decades the pursuit of growth has been the single most important policy goal across the world. The global economy is almost five times the size it was half a century ago. If it continues to grow at the same rate the economy will be 80 times that size by the year 2100. This extraordinary ramping up of global economic activity has no historical precedent. It’s totally at odds with our scientific knowledge of the finite resource base and the fragile ecology on which we depend for survival.”

(Jackson, 2009, p. 5)

Individual resistance to change may, in some cases, be more accurately described as a feeling of powerlessness to change in the face of the dominant structures (and myths) that define contemporary society; myths that have only recently begun to be questioned. Princen, et al. make the important observation that,

“...many in the affluent world do care, and are concerned; they know about global inequality, they intimately understand the invasiveness of modern advertising, they experience daily the enervating effects of the rat race. They just have little idea, given the daily options and constraints they face, about how to meaningfully oppose such forces and structures. Rooted as they so often are in assumptions about the immorality or callousness of the affluent, well-intentioned homilies like [theologian Ronald] Sider’s that urge “dramatic, concrete moves to escape materialism” too often overemphasize individual culpability for materialism at the costs of frank talk about the political and economic structures that manufacture desire and lock us into patterns of over-consumption. Ultimately, such preaching does little to help people of conscience bridge the gap between their morals and their practices.”

(Princen, et al., 2002, p. 209)

As Professor Mihaly Csikszentmihaly explains, many affluent societies currently celebrate consumption as an act of patriotism, because “unless people buy more houses, more cars, more sporting equipment and clothes, the economy will falter” (Jackson [Ed.], 2006, p.363 - 364). Instead of consumption driving production (Adam Smith’s classic economic assertion), he argues the opposite is now true – our economy’s imperative to produce now dictates the need to consume. To refrain from consumption, on the other hand, is seen as antisocial and a threat to the community, because the livelihoods of many are dependent upon the continual consumption of material goods (Jackson [Ed.], 2006, p.363 - 364).

Swimming against such a tide has unsurprisingly become a difficult feat, even for the highly motivated. How might we challenge deeply rooted societal narratives of growth, consumption and individualization that permeate the fashion system? To do so, we need viable, inspiring, diverse and beautiful alternatives championed by people who are able to focus on more than just the bottom line. Csikszentmihaly suggests the answer may lie with creative individuals such as musicians, dancers, and poets, who exemplify the “processing of ideas, symbols and emotional experiences rather than the break down of matter” (Jackson [Ed.], 2006, p. 364). To be sure, dematerialization is no easy feat and comes with its own limitations (discussed on p. 22), but looking to the world of art could shed some light onto what shape such “emotional experiences” could take in fashion. This will be explored in later sections of this report.

MOVING AWAY FROM PASSIVE CONSUMPTION: WHAT ARE WE UP AGAINST?
• the normalization of low clothing prices
• distancing of impacts and cost externalizations
• extreme accessibility of clothing
• shopping “obsessions” equated with helping the economy
• appropriation of culture by brands
• invisibility of waste
• speed of trends, culture of instant gratification
• design homogenization of commercial fashion reduces perceived value of clothing

Table 2 | What are we up against?

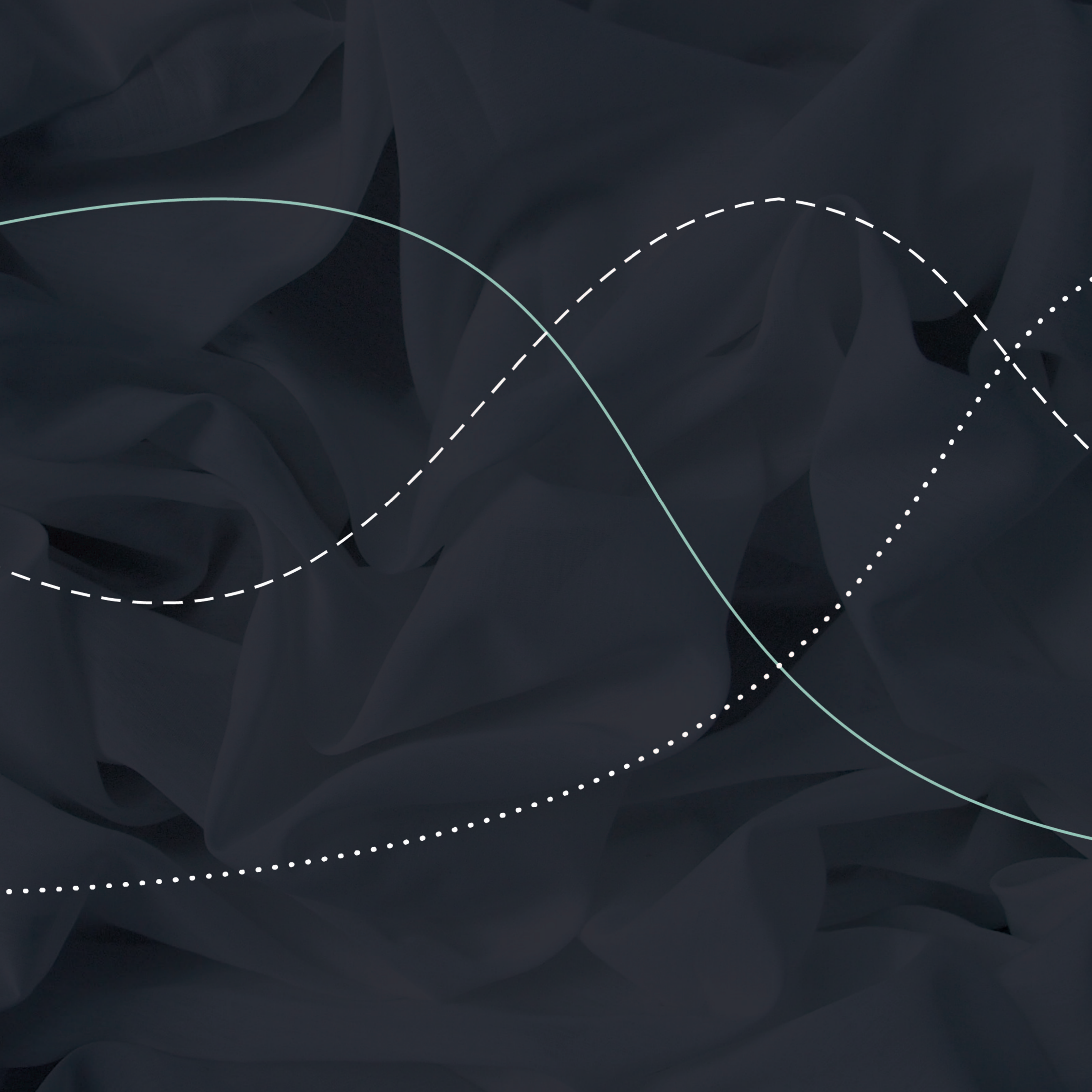




Fig. 10 | Rana Plaza Collapse, Dhaka, Bangladesh (Source: Rijans - <https://www.flickr.com/photos/rijans/8731789941/>)

02

WHAT'S BROKEN NOW?

The problems and harm created by the garment industry are not new, nor are they particularly surprising when its system is examined closely. In many ways in fact, it achieves exactly what it is meant to: sizable and growing profits. Herein lies the true problem, because a system that successfully achieves its ultimate purpose for those in power - regardless of its consequences - can be extremely difficult to shift, especially when those consequences have been hidden or are easy to overlook, as is certainly the case in the garment industry.

Sadly what this means is that the broken elements of the industry do not necessarily translate into a vocal dissatisfaction with the status quo. That being said, it also does not imply that those in power are intrinsically cruel. This section will attempt to show it is the system itself that is broken. How can a system be broken but still achieve its ultimate goal? Perhaps it is simply a matter of perspective. Referring back to the Three Horizons model, one might also suggest that what was once an appropriate fit for purpose is now operating on borrowed resources and borrowed time.

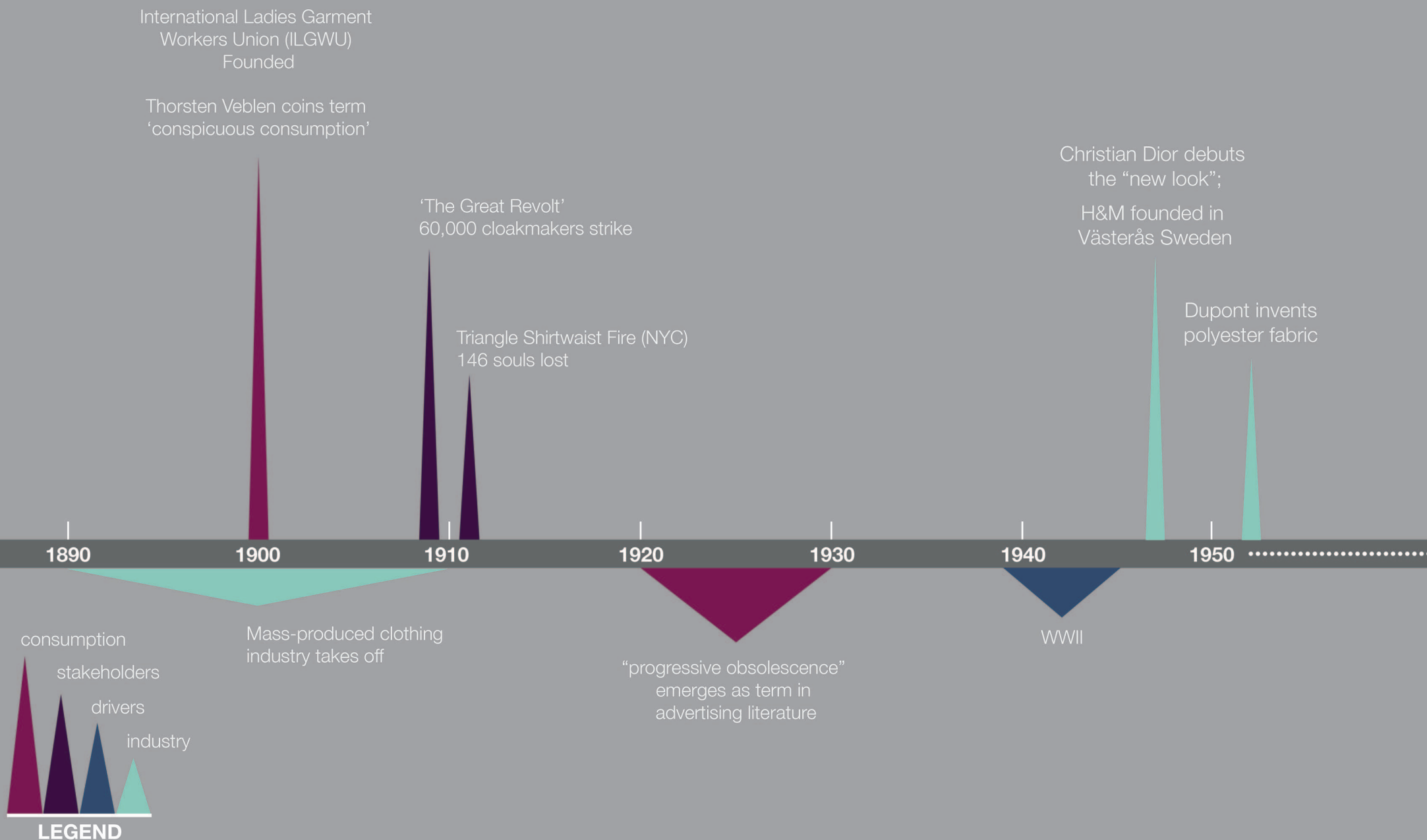
THE SYSTEM OF FASHION COMMERCE

Before discussing what's broken in the garment industry, it is useful to examine how it arrived at where it is today.

The timeline of the past century (Fig. 11) reveals that despite structural transformations to fashion business models, many of the worst abuses of the system have remained remarkably unchanged. The 2013 fires that killed over one thousand people in Dhaka, Bangladesh are eerily familiar to the Triangle Shirtwaist fire of 1911 in New York City, while the industry continues to employ - and exploit - its most vulnerable workers, still mainly women and children (Entwistle, 2000, p. 219). What hasn't changed has simply relocated, creating greater and greater distances - both physically

and psychologically - between the people who make up the supply chain, the companies for whom the work is contracted, and those who wear what's produced. Also of note is the sharp decline of domestic production and brands' divestment from manufacturing that coincided with the introduction of Free Trade and Export Processing Zones (EPZs)¹ in developing nations, which have provided greater freedoms to produce overseas in areas unburdened by the environmental and labour constraints enacted in the developed world.

¹ Export processing zones (EPZs) are areas within developing countries that offer incentives and a barrier-free environment to promote economic growth by attracting foreign investment for export-oriented production (Papadopoulos, & Malhotra, 2007, p.148).



10.4% of American household budget spent on clothing - 95% made in U.S.

6% of American household budget spent on clothing - 70% made in U.S.

4.2% of American household budget spent on clothing - 29% made in U.S.

3.5% of American household budget spent on clothing - 2% made in U.S.

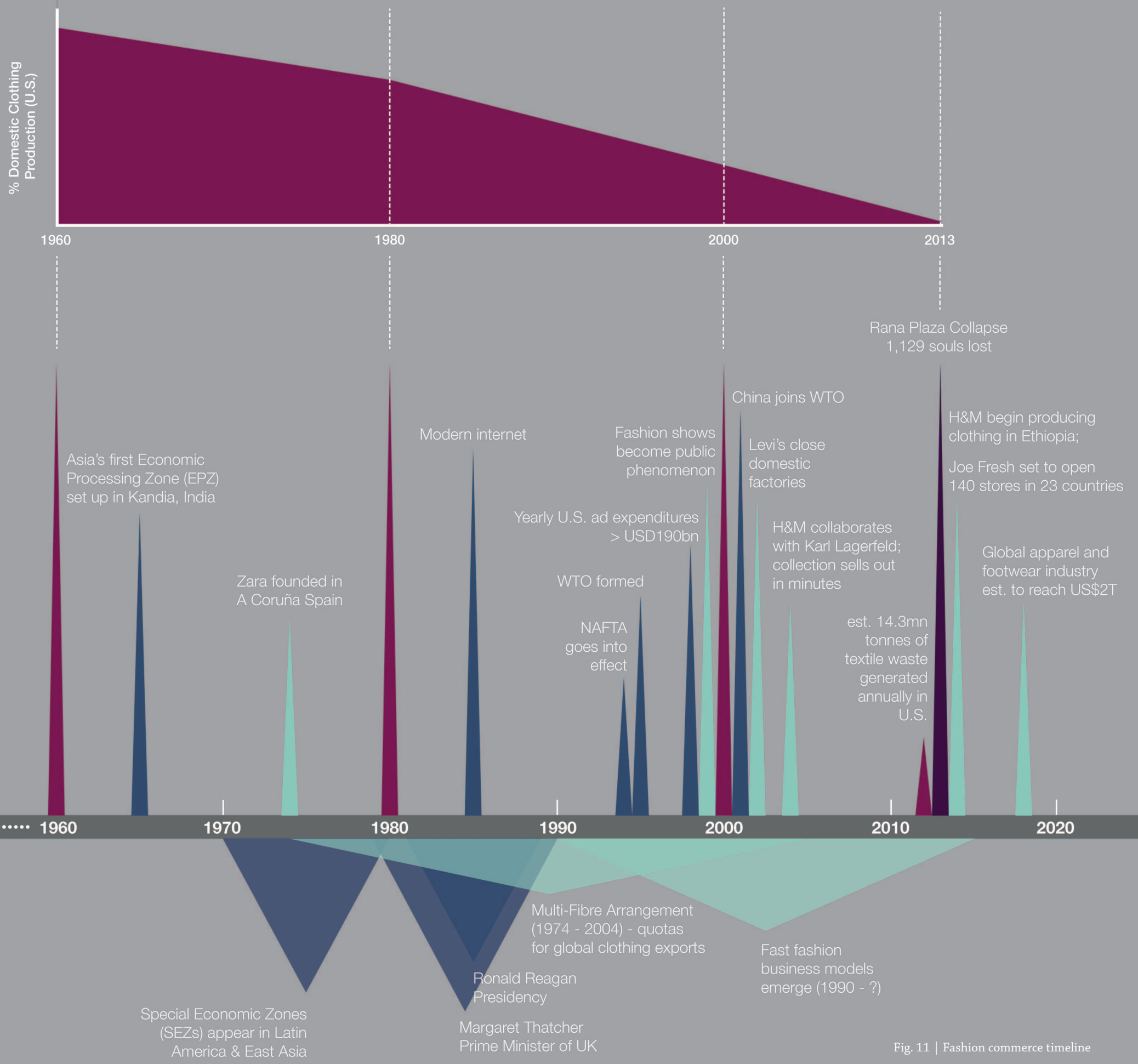


Fig. 11 | Fashion commerce timeline

INDUSTRY LEADERS

Industry leaders in the garment industry take the brunt of criticism for the problems caused by its system, and for good reason. They have exerted a powerful influence in shaping the industry as it exists today, and have reaped large financial benefits from it (See p.23). That being said, this research paper will attempt to reveal how the abuses of the garment industry are strongly influenced by the forces of the system itself. The causes and consequences of these forces will be explored next.

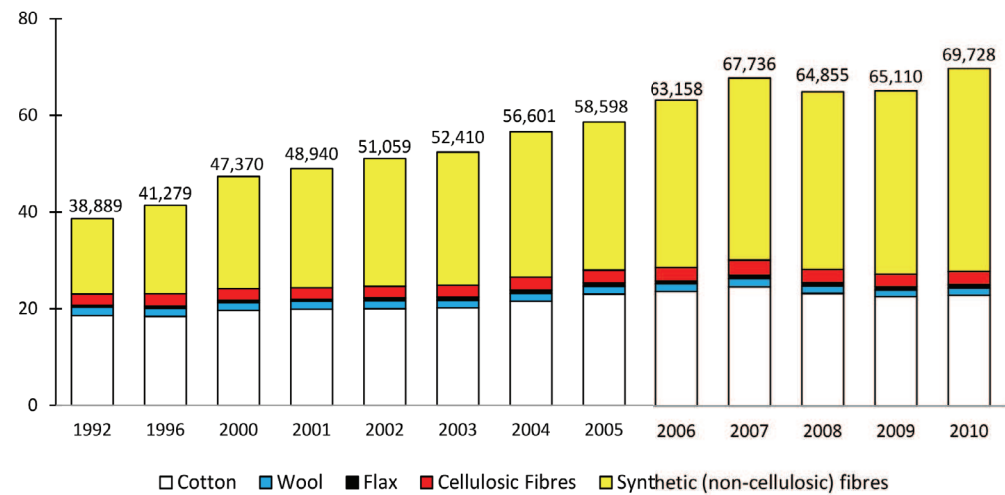
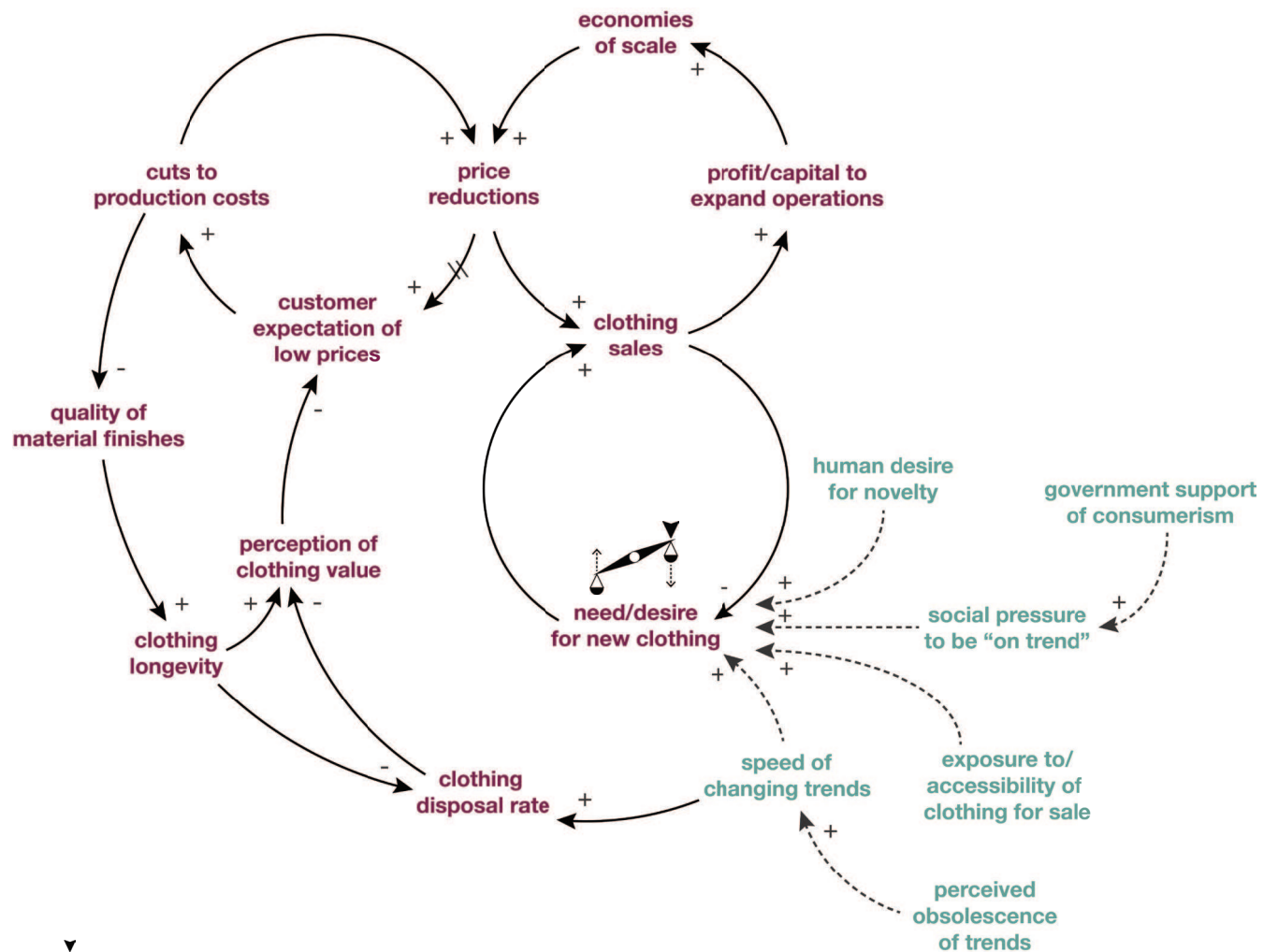


Fig. 12 | Evolution of world apparel fibre consumption, in million tons (Source: FAO, ICAC, 2013, p. 4)

CONSUMPTION

The speed at which clothing is consumed in the West has dramatically increased over the past two decades, fuelled by business models that rely on low prices and continuously changing styles to spur ever-quickening cycles of demand and sales. Indeed, one representative statistic shows that between 2001 and 2005 sales of women's clothing grew by 21% in the UK, despite a price drop of 14% in real terms. This effectively means clothing purchased per person increased by over one third in four years (Allwood, et al., 2006, p. 11-12). In America, an average of 68 pieces of clothing are bought per person, per year – equivalent to more than one garment per week (Cline, 2012). As can be seen in Fig. 12, the drop in global fibre consumption between 2008 and 2009 (coinciding with the global recession) soon recovered to record levels in 2010, with synthetic fibres making up most of the recovery.

The “race to the bottom” pricing structure currently dominating the garment industry has produced considerable profits for major fast fashion brands, but as outlined in Fig. 13, its reliance on low prices (and subsequent low production costs) reduces both the tangible and emotional value of clothing while simultaneously increasing the desire for more. How can this be so? Sociologist Juliet Schor's theory of the ‘materiality paradox’ may shed some light. This theory hypothesizes that as we accumulate more and more goods, the symbolic and social value attached to a product become far more significant than its material worth, but also far easier to manipulate and render obsolete. As Schor writes, “...in opposition to theorists of dematerialization, the materiality paradox suggests the rising importance of the symbolic increases, rather than reduces, pressure on the planet. That's because sign economies are vulnerable to the dynamics of rapidly changing symbolic value, through the fashion cycle” (Schor, 2010, p. 41).



The idea of what's “new” could be disassociated from the use virgin materials - new could involve the new experience of shared or second-hand clothing, embellishment of worn garments, etc. to channel sales revenues toward a more diverse marketplace of activities and reduce the need for low prices alone to fuel sales.

Fig. 13 | Escalation archetype: race to the bottom for speed and price

The idea that clothing could become ‘unstylish’ is documented to have emerged some time in the sixteenth century² (Wilson, 2003, p. 20), but deliberately planned obsolescence is a relatively new concept, even for fashion. In his book *Beyond Consumer Capitalism: Media and the Limits to Imagination* (2013), Professor Justin Lewis of Cardiff University explains that the concept emerged, quite appropriately, from the advertising literature of the 1920s (Lewis, 2013, Chapter 8, Section 2, Para. 10), confirming the inherent irony of the advertiser’s message “that it tells us what they want” (Black [Ed.], quoting Neuberg, 2013, p. 24). As companies began the process of “transcending the need to identify with their earthbound products” through the outsourcing of manufacturing to focus both time and money on branding (Klein, 2001, p. 195), this message has only gotten louder.

The endless quest for the new forms the crux of the consumer capitalist business model, and it isn’t difficult to see how the artificially created goal of obsolescence plays out in the commerce of fashion. With many stores now releasing new garment ranges every week (Black [Ed.], 2013, p. 216), the cycle demands we never be satisfied with what we have (or who we are), and remain constantly in search of products that will bridge the gap between our realities and our daydreams. As Colin Campbell explains, it is a practical way to manipulate the inherent human desire for novelty and perpetuate consumerism indefinitely:

“Viewed in this way, the emphasis upon novelty becomes comprehensible, as modern consumers reproduce the cycle of desire-acquisition-use-disillusionment-renewed desire in their continuing attempts to close the gap between an imperfect present and a perfectly imagined future; the practical effect of such activity being the creation of a permanent disposition to seek out the strange, novel or unfamiliar.”

(González & Bovone [Eds.], 2012, p. 11)

The result? Fast fashion brands have openly admitted to designing clothing meant to be worn less than ten times (Joy, et al., 2012, p. 283; Morgan & Birtwistle, referencing McAfee [2004], 2009, p. 191). So, even if we wanted to keep our clothing for longer, the quality of fabrics and finishings have been slowly whittled away and replaced with poorer quality substitutions and less labour-intensive (but also less secure) sewing techniques. This has been done both to reduce costs and to speed up the cycle of consumption; the consequences of such a system, combined with our perceived lack of personal ability (or will) to repair clothing (Fisher et.al, 2008, p. 19) are stark.

² The rise of books, the expansion of trade and the increasing power of European kingdoms drove fashion in the sixteenth century, with fashion icons like Queen Elizabeth I of England influencing the dress of even the poorest classes. It is reported that upon her death she had collected three thousand gowns. (Sixteenth-century clothing, [n.d.]

January



MUST HAVE
HARVEY NICHOLS
www.harveynichols.com

Fig. 14 | Harvey Nichols ad campaign (2005)

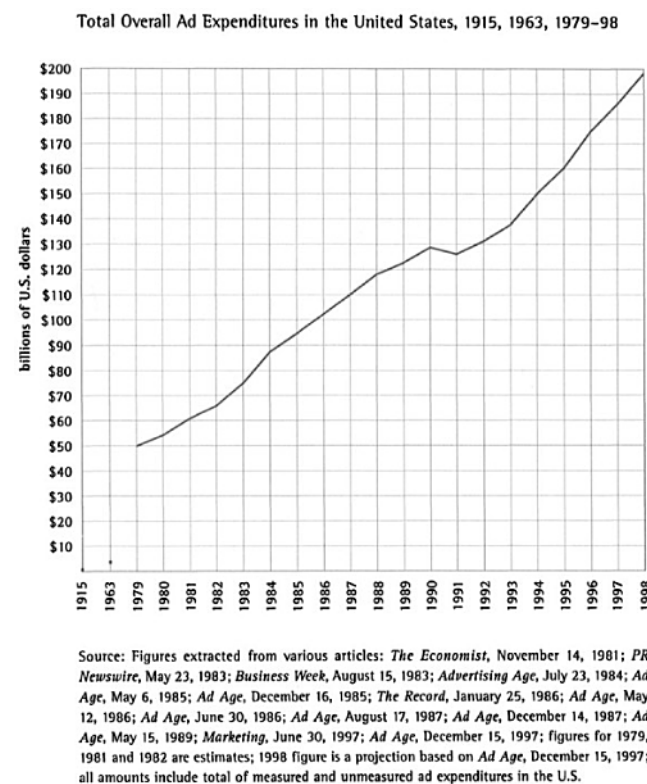


Fig. 15 | U.S. advertising expenditures, 1915-1998
 (Source: Klein, 2001, p.11)



Fig. 16 | Degrading quality of clothing finishes (Researcher's personal closet)

POLLUTION & WASTE

Growing closet sizes and the rise of self-storage facilities may have legitimized the retention of more things than ever before, and even so the U.S. Environmental Protection agency reported in 2012 that yearly textile waste exceeds 13.1 million tons in the U.S. alone, with 85% reaching the landfill prematurely (Niinimäki & Armstrong, 2013, p. 190). In the UK, a study by the Environment Select Committee revealed that textile waste increased from 7% to 30% by weight in the span of five years (Morgan & Birtwistle, quoting Poulter, 2009, p. 191). Taken in conjunction with the finding that the volume of waste produced by OECD countries has more than doubled since 1980 (Lewis, 2013, Chapter 3, Section 2, Para. 6), it is obvious why the West has increasingly become known as a 'throwaway society.'

Due to the rapidly declining quality and durability of clothing made by fast fashion and "value" brands and their low-cost pricing strategies, even clothing passed on to charities and second-hand markets are not guaranteed second lives. The value proposition of buying second-hand when new but lower-quality pieces are available for the same price - especially when clothing won't be worn more than a handful of times - is hardly an appealing one. Coupled with the sheer volume of castoffs donated or thrifted, it is no wonder only about one fifth of clothing donated to charity thrift shops gets resold in the country in which it was donated (Claudio, 2007, p. 2).

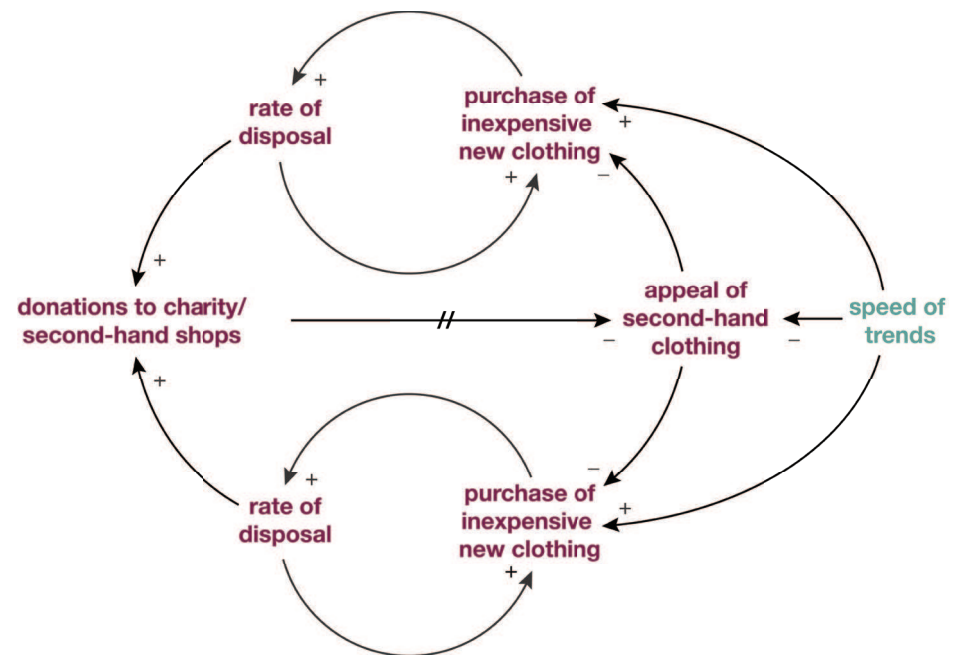


Fig. 17 | Tragedy of the commons archetype: the appeal of second-hand clothing in a fast fashion world

This quandary could be compared to the ‘tragedy of the commons’ system archetype proposed by theorist William Braun that posits, “as each person or team increases their demands and expectations of the commons in the name of their own goals, the commons itself finds itself under steadily increasing pressure to perform while simultaneously feeling that its control over its own destiny steadily erodes toward collapse” (Braun, 2002, p. 12). With regard to second-hand markets (the commons), as the purchase of cheap new clothing increases, rates of discard and donation to charity also rise, subsequently impacting the appeal and viability of second-hand clothing drops due to the poor quality of donations and the high speed of changing trends (See Fig. 17).

According to figures from the Trans-America Trading Company, a post-consumer textile processor in Brooklyn, NY, the clothing not resold in the U.S. make its way to

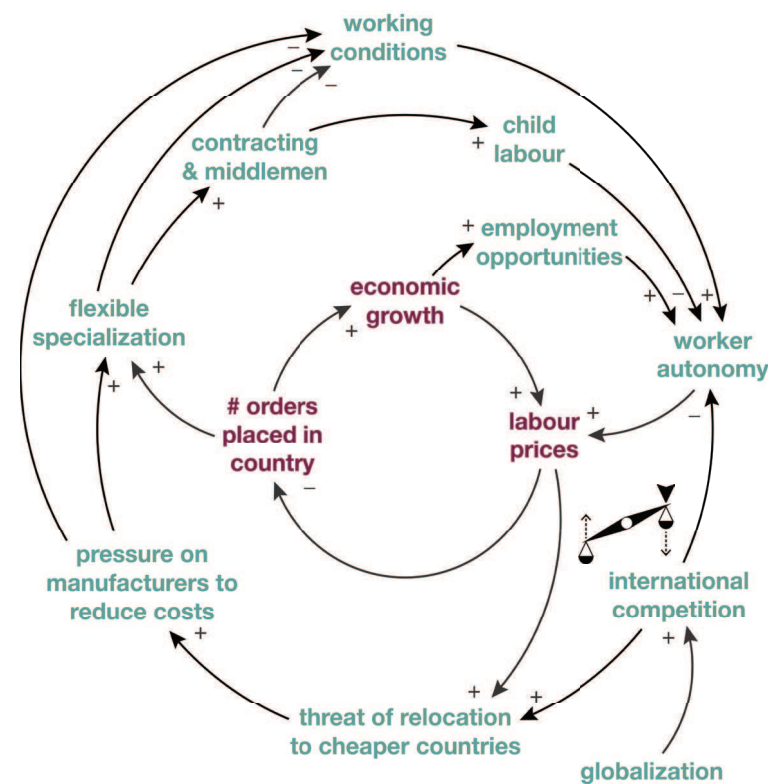
post-consumer waste streams, textile recyclers (approximately 25-30%), the rag trade (approximately 30%), and second-hand markets overseas (approximately 45%) (Claudio, 2007, p. 3). High quality vintage is generally shipped to Japan, while the rest goes to developing regions in Africa, Latin America, Eastern Europe and India where they are bought in one hundred pound bales by small entrepreneurs (Claudio, 2007, p. 3). Though these second-hand markets provide viable business opportunities in countries where Western clothing is in high demand, it is believed by some to be threatening the livelihood of some local designers and manufacturers. In Ghana, for example, textile and clothing employment has fallen by 80% between 1975 and 2000 (Rodgers, 2015). To make matters worse, the decreasing quality of clothing received also risks turning the venture into another way for affluent countries to outsource their waste to poorer ones.

Sadly, pollution from textiles is already a considerable harm to developing countries. According to Greenpeace International, as much as 70% of water sources in China - the world’s largest manufacturer of clothing - are considered polluted, often with hormone-disrupting chemicals like the Alkylphenols and perfluorinated chemicals (PFCs) used in the fabric dyeing process. These chemicals are hazardous even at low levels (Greenpeace International, 2011, p. 6). A similar story plays out in Hazaribagh, Bangladesh, where workers in the many leather tanneries are exposed to toxic chemicals like arsenic and chromium sulphate with no protective clothing (Al Jazeera, 2013). According to an Al Jazeera report on these tanneries, in a country where the overall life expectancy is seventy, 90% of tannery workers in this region die before the age of fifty (Al Jazeera, 2013). Many of these same substances are highly regulated in the Global North.

SUPPLY CHAINS & EXPLOITATION

In her 2001 critically acclaimed book *No Logo*, author and activist Naomi Klein carefully traces the rise of brands in North America that began in the mid-1980s, and the ensuing shift of corporate priorities from production to promotion (Klein, 2001, p. 196). Fuelled by pro-globalization policies, vast supply chains of overseas contracting, subcontracting and home-working quickly proliferated to meet the new manufacturing demands, but since building up symbolic capital is such a costly endeavour, lowering the cost of production also became a top priority (Klein, 2001, p. 196). Combined with the current goals of fast fashion business models, this goes some way to explain why the race to the bottom has been so rapid, and why “flexible workforces” have become more and more common.

The garment industry has always “fed off the labour of [its] most vulnerable workers” (Entwistle, 2000, p. 209), but the poor working conditions, poverty-wages and increasingly unstable employment endured by garment workers in developing nations are fuelled by increasing demand for supply chain flexibility by clothing brands and retailers. Parker and Maher explain that it has led to a large percentage of workers being placed on short-term or temporary contracts that offer no entitlements to the benefits provided to permanent workers - as limited as those may be. “It has also massively increased the role of labour agents and agencies”, they explain, “allowing labour supply chains to develop and pushing the responsibilities for employment conditions even further away from the brands and from factory owners themselves” (Black [Ed.], 2013, p. 142). Sadly, it is in these hidden subcontracting and home-work environments where the worst abuses tend to occur (Black [Ed.], 2013, p. 140).



Finding ways to “level the playing field” so that all competitors in the garment industry are motivated to operate in less exploitative ways could create significant knock-on effects for the entire system. These might include legislation, industry-wide binding agreements, or even collaborative R&D endeavours.

Fig. 18 | Rule beating archetype: globalization, economic growth and worker autonomy

Along with fuelling sales, tightly developing and controlling the means of consumption has given companies significant power in their relationship with supply chain contractors, allowing them to exert strong downward pressure on prices and easily substitute alternative suppliers at short notice (Princen et al., 2002, p. 148). In his analysis of the Rana Plaza collapse for The New Yorker, James Surowiecki writes that, “flexible supply chains are great for multinationals and consumers. But they erode already thin profit margins in developing-world factories and foster a pell-mell work environment in which getting the order out the door is the only thing that matters” (Surowiecki, 2013, para. 3). To make matters even more precarious for the supply chain, contracts in the garment industry rarely last longer than a few seasons (Surowiecki, 2013, para. 3), leaving contractors in a constant state of uncertainty.

This decentralization of supply chain networks also allows those higher up in the consecution to reduce their risk potential in a highly unpredictable industry. As sociologist Joanne Entwistle explains, this unpredictability has historically been dealt with by pushing risk and the effects of eroded profit margins down through the chain - “from retailer to manufacturer to contractor and subcontractor and ultimately into the worker’s home” (Entwistle, quoting Howard [1997], 2000, p. 211). It is no wonder, then, that Simone Cipriani, head and founder of the ITC’s Ethical Fashion Initiative has referred to garment workers as the “shock absorbers” of the fashion system (Ecouterre, n.d.). In an environment where low-cost, affordable products are primarily sourced from small operators in low cost regions, supply chain risk increase for everyone (Chakravorti, 2015).

Flexible workforces are in many ways, however, the last resort to meeting the demands of unreliable brands that regularly shift production between countries in search of lower prices³. Higher prices do not guarantee ethical practices, but the public’s increasing unwillingness to pay more for clothing has not aided this situation; as prices drop lower and lower, all retailers are forced to drop their prices and perpetuate the downward cycle. The more prices are lowered, the more we come to expect low prices, and the more brands push for them to be lower still through the use of cost cutting measures that distance us from the effects of the low prices (See Fig. 18).

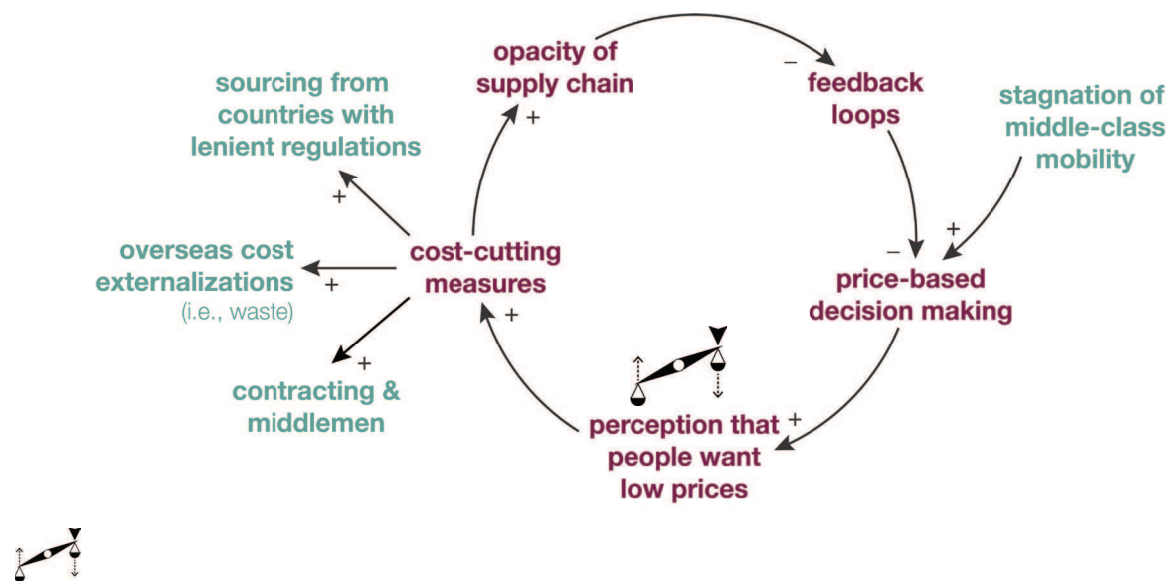
³ Africa appears to be next in the list of developing regions to join the garment trade, with H&M already setting up experimental factory contracts in Addis Ababa, Ethiopia (“Manufacturing in Africa”, 2014). This has surely been influenced by China’s increasing wealth, and subsequently, its factory wages (Hilsenrath, et al., 2011).

DISTANCING & COST EXTERNALIZATION

In today’s globalized and medialized world, we would think we live in a “global village”, yet, as the distance between production and consumption grows so does the gap of empathy. The global village may just as well be a desert of endless emotional distance.”

(von Busch, et al., 2014, p. 21)

Be it across oceans, cultures, or psychological boundaries, the current fashion system separates us from both the means of production and the impacts of consumption, and severs our links to the visceral feedback needed to make informed decisions. Without these feedback loops, we can only abstractly comprehend the consequences of our decisions. The same could be said for those operating within the middlemen-laden fashion supply chains where accountability becomes nearly impossible to achieve or enforce. To make matters worse, Princen, et al. remark that, “Not only do agents have little ability to assume resource responsibility, they have strong incentives not to. Intermediaries in a commodity chain aim to maximize the difference between their selling price and their purchase price.” (Princen et al., 2002, p. 124). This is not to say that actors or agents within the garment industry are inherently ignorant or cruel - rather, it is a problem of where decision makers sit within the system: “When critical resource decisions are made by those who will not or can not incur the costs of their decisions, accountability will be low and what gets counted is likely to be financial capital, not social and natural capital” (Princen et al., 2002, p. 129).



Affordable clothing does not need to be abolished entirely, but perpetuating the belief that customers will only buy what’s cheapest causes negative implications for the system, the supply chain and the planet. Collaborative consumption practices, for example, could reduce prices without requiring production costs to be lowered and chains to be ever distanced from customers.

Fig. 19 | Eroding goals archetype: ‘We’re just giving people what they want’

Another way to look at the problem of distancing is to analyze the ways in which cruelty has been systematized. In *The Fashion Condition* (2014), a report released by Parson's Fashion Praxis Collective, the authors explore parallels between the current "fashion-industrial complex" and the theories of philosopher Hannah Arendt. Her book, *Eichmann in Jerusalem: A Report on the Banality of Evil* (1963), presented a controversial but ground-breaking analysis of the heinous acts that resulted from following the laws of a system within which ordinary men found themselves. As von Busch, et al. explain:

"Hannah Arendt's book Eichmann in Jerusalem: A Report on the Banality of Evil (1963) expounds on how ordinary people turn into "desk murderers", without being inherently evil or inhuman demons. Rather, for Arendt it is in its domesticity the administration of evil becomes so vicious, as the mechanisms administration and abstraction remove the leverage of individual thinking. Arendt's concept of "the banality of evil" aims for a critical understanding of these abstract mechanisms. Arendt meant that Eichmann was not exceptionally sinister, but part of a terrible normality, a mode of being that became quotidian within a scenario of total absence of critical thought."

(von Busch, et al., 2014, p. 24)

The word "evil" is perhaps an overly provocative descriptor for the oversight of harms inflicted by the garment industry, but the idea of unintended, normalized cruelty does seem to have some relevance. How do we perpetuate the suffering of those far removed from us through the banal acceptance of the status quo?

This mindset of unquestioning compliance has also led to the externalization of costs at an immense scale. It can take the shape of waste displacement from rich to poor, be it through the siting of waste disposal sites in the poorest communities of the developed world, or as previously discussed, exporting harm to the developing world by taking advantage of weak environmental regulations to produce in ways no longer acceptable in the countries who receive the finished goods (Princen et al., 2002, p. 160). Countries dependent upon global exports for their livelihoods do not accept this damage with open arms, but rather, because they have no other choice.

How is it that we have allowed these injustices to occur? We seem to have grown what *Emotional Intelligence* (1995) author Daniel Goleman calls a "collective blind spot" to the suffering of others, even in the midst of widespread media coverage documenting injustice after injustice. Though we as individuals must take ownership for our apathetic unwillingness to pay more for clothing

(Global Apparel, 2014), individualizing the problem as many corporations and governments do by promoting concepts of consumer sovereignty ignores the deeper systemic problems that are at once highly profitable and highly exploitative, and the uncomfortable truth that a system that denies us the ability to be human is a system that is truly broken.

SMALLER PLAYERS

COMMODITIZATION AND DESIGN INTEGRITY

Despite the increasingly individualistic society in which we find ourselves (especially in North America), and the regular touting of the "democratization" of fashion, clothing has become more homogenized, not less. Even Mickey Drexler, CEO of J.Crew and former GAP chief executive has lamented the homogenization of clothing around the world. Speaking at a Makers of American Fashion event in New York City, Drexler remarked on continually seeing "the same look, the same goods and the same brands all over the place — nothing's all that special anymore" (Bhasin, 2012).

Likewise, Professor Simonetta Carbonaro writes that the resulting reality facing the industry is one in which, "fashion has just become fashion and repetitively refers to itself instead of nourishing our cultures and contributing to the evolution of our civilizations. Fashion has been losing its strong symbolism, its systems of signs and signifiers, its meaning and its messages. Miles of cloth are getting swallowed up by the rhetoric of fashion emptiness" (Carbonaro & Votava, 2009, p. 44). When consid-

ered within the larger context of consumer capitalism this drop in diversity makes sense, for as Lewis explains, the paradigm of growth has no interest in distinctness or originality:

"The more consumer capitalism pushes towards large units of mass production and consumption, the less sympathetic it is to diversity or idiosyncrasy. For all the rhetoric about individual freedom made by some of its protagonists, consumer capitalism has become a deeply collectivist enterprise. The power of industry lies in its ability to override what distinguishes us as individuals and appeal to – or construct – commonality (otherwise known as 'markets', as in the 'youth market')."

(Lewis, 2013, Chapter 2, Section 3, Para. 14)

Though the sheer quantity of clothing offered up by brands may seem to be providing us with a wealth of options, what this rapid turnover provides is more akin

to a contradictory form of "mass exclusivity" produced by the rapid but (perceived to be) limited introduction of globally available garments (Joy, et al., quoting Schrank [2004], 2012, p. 275).

Brands like Zara have risen to the top of the garment industry based on their ability to "interpret" designs presented at ready-to-wear and haute couture shows (who themselves have often copied vintage, heritage, or culturally traditional garments) and use mass amounts of trend-based data to predict what will sell best (Sull & Turconi, 2008, p. 7). The design teams are undeniably successful at what they have been tasked to do, but reducing fashion design to data analysis is a clear expression of how commoditized the commerce of fashion has become. Fashion at its highest expression can be, after all, a form of wearable art, not wearable aggregate data.

One possible reaction to this global homogenization is the “normcore” trend. Embraced mainly by digital natives and Western Millennials, normcore involves a style of dress described by designer Andre Walker as “exhaustingly plain.” Similarly, Garmento editor Jeremy Lewis explains his normcore “look of nothing” as an attitude of “absolving oneself from fashion, lest it mark you as a mindless sheep” (Duncan, 2014). Rather than fighting to be recognized an individual in the face of globalization, the Internet and the world’s fellow 7 billion humans, this trend embraces the idea of being comfortably recognizable (Duncan, 2014). As Emily Segal of K-HOLE remarks, normcore emphasizes looking like other people “as an opportunity for connection, instead of as evidence that your identity has dissolved” (Duncan, 2014).

While some may be embracing the emerging “sameness” of mainstream fashion as a way to connect with one another, commoditization and homogenization tend to contradict the deep motivations of many designers who search for connection through creativity. London College of Fashion Professor Dilys Williams points out that, “in conversing with many practicing and aspiring designers, I am reminded that fashion, as a discipline, is a way of satisfying the designer’s yearning to create, to communicate through making, bringing energy and excitement to a given situation. It heralds a desire to both challenge and reflect contemporary social needs. We seek a connection to others and to ourselves through what we make and do” (Black [Ed.], 2013, p. 96). These motivations are in stark contrast to how Princen, et al. define commodities - that is, alienable, standardizable, autonomous, convenient and mobile. The commoditization process engenders a similar loss of pride for traditional garment workers, distanced as they are from the final product they’ve helped to create. The industry also rarely provides opportunity to advance as employees or grow their skills.

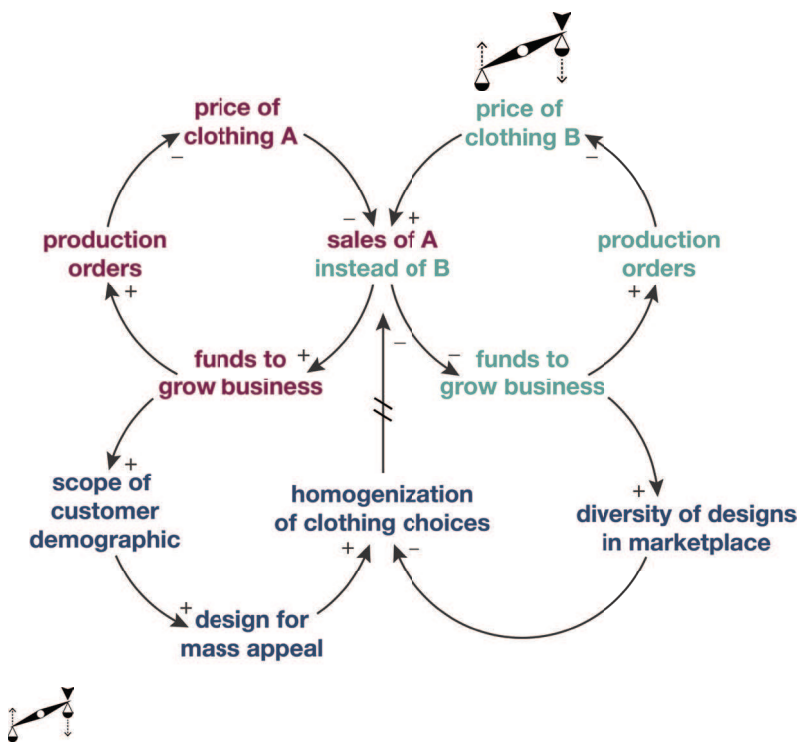
Princen, et al.’s description of a non-commodity, on the other hand (See Table 3), is far more aligned with the desire for communication and connectedness described by Williams. Yet what increasingly receives attention, research and promotion are those goods with “high commodity potential” (HCP), leaving those options with a lower potential for commoditization (LCP) to appear less modern, developed or progressive (Princen et al., 2002, p. 82). It also produces a feedback loop in which those most successful at generating capital beget more success for themselves. For example, clothing companies that are able to capture sales from their competitors (in the current mode, often by reducing prices) generate more capital to grow their business, meaning production orders increase further, and through economies of scale, reduce their prices even further. Smaller companies that are unable to compete on price thus have a much harder time



Fig. 20 | ‘Normcore’ style (Source: <http://nymag.com/thecut/2014/02/normcore-fashion-trend.html>)

COMMODITY	NON-COMMODITY
Alienable; the ease with which ownership can be asserted, assigned, and transferred	More communal
Standardizable; independence from the particularity of geography or culture	Attached to local ecosystems or local culture
Autonomous; the ability to be used independently, outside the constraints of social relationships	Goods and services that rely on a web of relationships
Convenient; the ease with which it can be used	Involving a complex set of relationships
Mobile; the ease with which something can be packaged and transported	Less mobile; tied to place

Table 3 | Commodities vs. Non-Commodities (Adapted from Princen, et al., 2002, p. 71-72)



New techniques and technologies currently in development (i.e., computational fashion, metadesign, online digital platforms that support independent design talent), might help level the playing field by reducing costs of production and facilitate a more diverse fashion commerce ecosystem.

Fig. 21 | Success to the successful archetype: industry leaders vs. smaller players



Fig 22 | Members of the Samburu Tribe in Northern Kenya
(Source: Jimmy Nelson, Before They Pass Away - <http://www.beforethey.com/tribe/samburu>)

reaching economies of scale, and subsequently staying in business. The diversity of the marketplace eventually suffers, leaving smaller numbers of larger brands in control, and smaller independent players increasingly shut out of the marketplace (See Fig. 21).

In tandem with increasing commoditization and efficiency comes more ease and accessibility, but what is lost in the pursuit of convenience? In an interview with Professor Otto von Busch of Parsons New School for Design, he argued that this lack of friction is ultimately detrimental because it funnels us toward what is easiest rather than what is most meaningful. This commodification of fashion has also depersonalized a part of our lives that has the potential to imbue our world with expression and a sense of belonging. Fletcher and Grose explain how this commoditization has contributed to the ultimate unsustainability of fashion commerce:

“We no longer know the makers, or the source of the materials; they no longer speak of our myths, communities or societies. Our garments have become inanimate objects, mainly providing a means for delivering on commercial goals. Poetic meaning has been reduced in importance in favour of efficiencies

of production, and a garment’s aesthetic reflects a bare minimum appeal, developed primarily to secure the initial sale. They are, as Jonathan Chapman calls them, ‘aesthetically impoverished’. The limited presence of meaning and empathy in so many commodity fashion products, combined with their low cost and ease of purchase, is a key factor in their being discarded long before they are worn out.”

(Fletcher & Grose, 2012, p. 85)

At a more profound level, many are becoming increasingly concerned with the loss of cultural diversity that has accompanied the modernization (and subsequent homogenization) of global societies. In his 2003 TED Talk *Dreams from Endangered Cultures*, anthropologist Wade Davis explained that our most apocalyptic scenario for the loss of biological diversity “scarcely approaches what we know to be the most optimistic scenario in the realm of cultural diversity” (Davis, 2003, 2:41 [video file]). The ethnosphere, he continues, can be defined by “the sum total of all thoughts and dreams, myths, ideas, inspirations, intuitions brought into being by the human imagination since the dawn of consciousness” (Davis, 2003, 2:41 [video file]).

To Davis, the ethnosphere is humanity’s greatest legacy – one we are at risk of losing forever. The implications of such a fate are hauntingly described in his explanation of the choice we as a collective humanity now face:

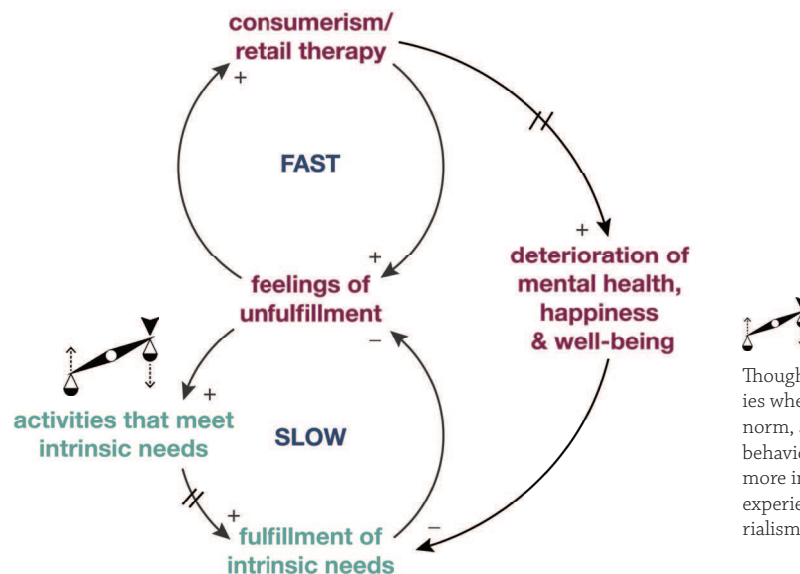
“And in the end, then, it really comes down to a choice: do we want to live in a monochromatic world of monotony or do we want to embrace a polychromatic world of diversity? Margaret Mead, the great anthropologist, said, before she died, that her greatest fear was that as we drifted towards this blandly amorphous generic world view not only would we see the entire range of the human imagination reduced to a more narrow modality of thought, but that we would wake from a dream one day having forgotten there were even other possibilities.”

(Davis, 2003, 17:34 [Video File])

Dress may be but one of many important elements that make up a culture, but it is a signifier of the many ways of being human, that diversity is still alive, and that it has not yet vanished from our memories and consciousness.



Fig. 23 | Town Shoes advertisement (2014)



Though certainly difficult to cultivate in societies where instant gratification has become the norm, a focus on re-directing the goal-seeking behaviour of retail therapy toward healthier, more intrinsically satisfying activities (perhaps experience-based services) could reduce materialism while maintaining profitability.

Fig. 24 | Shifting the burden archetype: materialism and unfulfillment

MATERIALISM, ANXIETY & WELL-BEING

The devaluing and speeding up of clothing and its cycles is not only harmful to the planet and its workers - it can also be harmful to the people who wear it.

Rather than bringing us closer to joy, kinship and beauty, as fashion in its most vital forms can do, fashion commerce often deftly manipulates our anxieties and insecurities to incite purchasing behaviour. Referencing Bauman's *Liquid Fear* (2006), von Busch, et al., explain that in many ways anxiety has become an essential part of the commodification process - from its pre-programmed, short lifespan to its unstable desirability that (as Schor explained earlier) can change at any time. The ultimate incarnation of this permeation of consumerism into our lives, Bauman says, is the commodification of ourselves: we no longer just have brands to purchase - we also have "personal brands" to maintain, ones that require "constant updating, remaking, marketing and promotion" (von Busch, et al., 2014, p. 54-55).

Perhaps ironically, many of us turn to retail therapy to soothe the anxieties we feel in our daily lives, searching for something, anything, as long as it is new. These therapy sessions may provide temporary relief by inflating our egos and sense of status, but are ultimately detrimental to our long-term sense of wellbeing (Thorpe, 2010, p. 8-9). Tim Kasser, researcher and author of *The High Price of Materialism* (2002) explains that people who are highly materialistic (regardless of their age, race, or wealth) tend to have lower personal well-being and psychological health than those who are not. In addition, "the studies document that strong materialistic values are associated with a pervasive undermining of people's well-being, from low life satisfaction and happiness, to depression

and anxiety, to physical problems such as headaches, and to personality disorders, narcissism, and antisocial behaviour" (Kasser, 2002, p. 22). Far from helping us reach our idealized selves, by using clothing consumption as a relief from what ails us, we risk undermining our long-term health and happiness.

Research has also uncovered a link between high personal instances of materialistic values and negatives attitudes toward non-human nature. Schultz, et al. conducted surveys with over 1000 university students from six different countries (Brazil, the Czech Republic, Germany, India, New Zealand, and Russia) and found an un-moderated negative relationship between self-enhancement behaviour and biospheric concerns (Schultz, et al., 2005, p. 470). So, not only do materialism and egotistic concerns negatively impact our long-term personal well-being, they have also been connected to decreased concern for the greater well-being of the natural world (Crompton & Kasser, 2009, p.9). Crompton and Kasser reiterate these findings, but expand it by noting that empirical research "clearly shows that self-enhancing, materialistic values are not only associated with more negative environmental attitudes and behaviours, but also with less concern for social justice, equality, and a world at peace, less pro-social behaviour, and more manipulative, competitive behaviour" (Crompton & Kasser, 2009, p.64).

Conversely, however, Schultz et al.'s research found that instances of self-transcendence (valuing beyond the self) to be positively correlated with measures of biospheric environmental concerns (Schultz, et al., 2005, p. 470), while Zelenski and Nisbet point out that people who feel connected to nature tend to want to protect it

(Zelenski & Nisbet, 2014, p.4). They've also begun to uncover positive connections between nature-relatedness (or connection to nature) and both well-being and happiness, suggesting that increasing the opportunities individuals have to connect with nature could simultaneously boost well-being and encourage more self-transcendent behaviour. Zelenski and Nisbet further posit that instead of using notions of guilt or sacrifice to motivate sustainable behaviours, focusing on ways to deepen our connection to nature could intrinsically engender a "happy path to sustainability" (Zelenski & Nisbet, 2014, p. 6).

Cultural anthropologist Sherri Ortner has argued that culture asserts itself to be "not only distinct from but superior to nature, and that sense of distinctiveness and superiority rests precisely on the ability to transform - to 'socialize' and 'culturalize' - nature." (Ortner, 1972, p.72-73), but what if culture could be "naturalized"? Fashion may seem to exist wholly in the realm of culture, but at its literal roots, much of it is deeply connected to the land. Finding ways to allow individuals to experience and understand that connection - be it to the land, animals, or people with intimate wisdom and connection to them - could thus potentially help to encourage more self-transcendent values (on a more pragmatic level, perhaps it could also break the cognitive dissonance that often exists between customer values and their purchasing decisions) and help to increase individuals' well-being in the process.

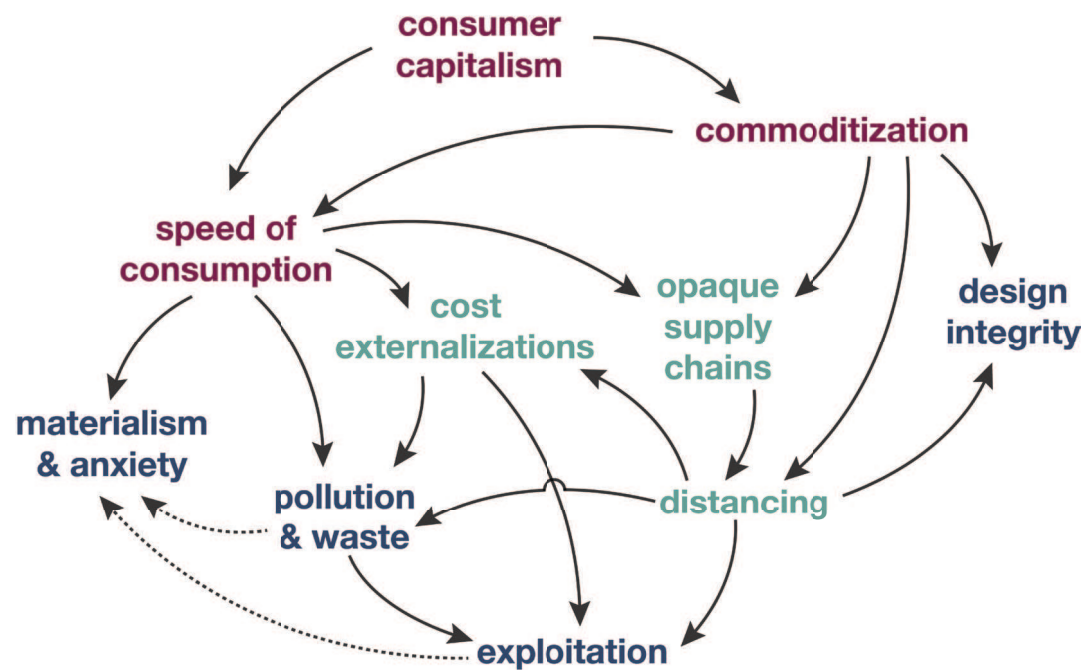
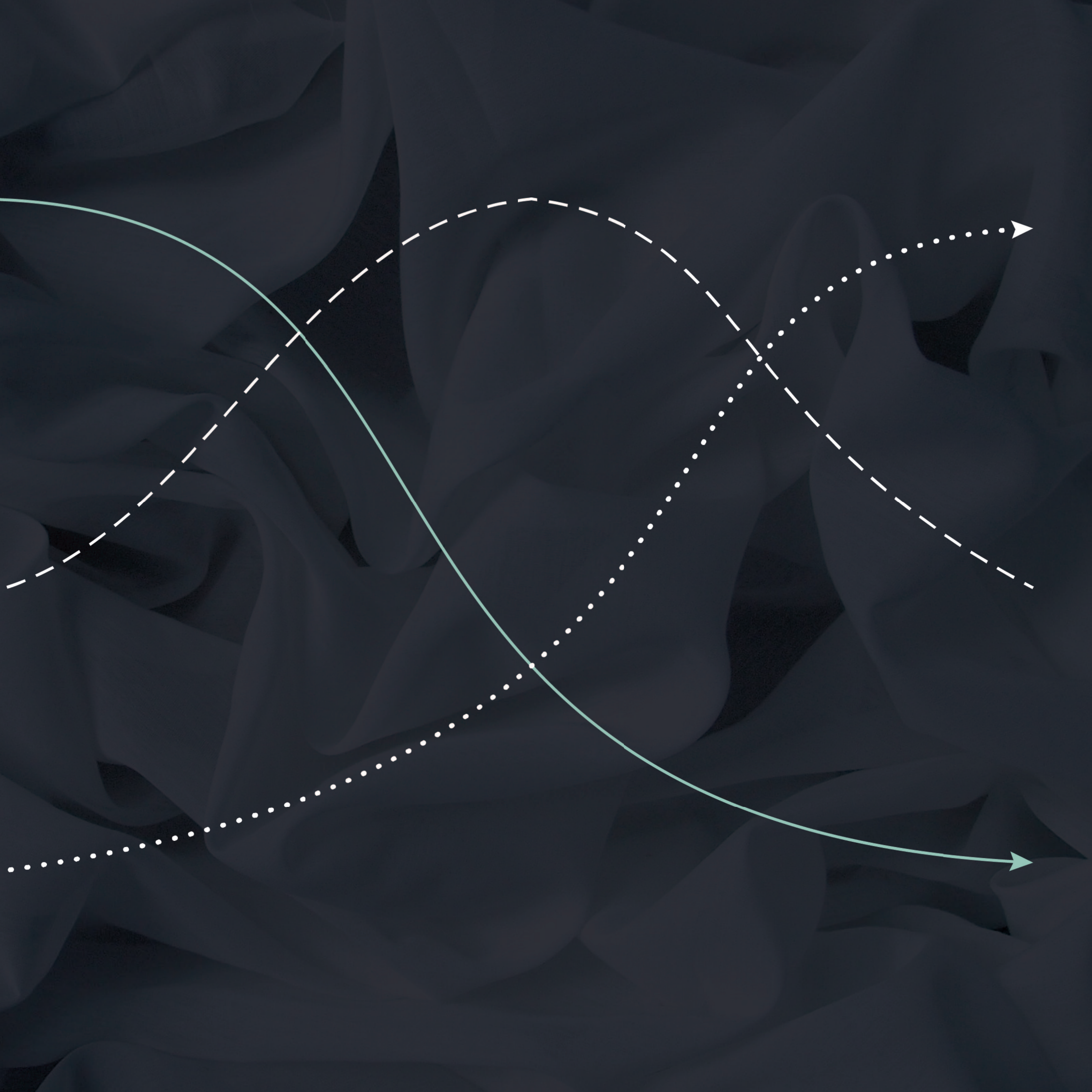


Fig. 25 | Influence map

In many ways, the system that currently defines the garment industry is broken. Its abuses may be strategically hidden in layers of middlemen and across oceans, and justified by consumerist culture, but as this analysis shows, record profits do not ensure a healthy system. Much of “what’s broken now” is hidden or distanced, and those who are most dissatisfied with the status quo are those with the least power to change it. The system is also intimately connected, with each element influencing others within it: consumer capitalism speeds up the rate of consumption and increases commoditization, which then impact supply chains, cost externalization, pollution, anxiety, and so forth (See Fig. 25).

The system’s complexity and interconnectedness is daunting, but it is still possible to see where leverage points for change might exist. If pushed in the right direction, perhaps these points could instigate inverse cascades of positive change in the future.





03

WHAT'S WORTH KEEPING FROM THE PRESENT?

What's worth keeping from the present? Some would argue we would be better off without any concern for clothing at all.

Fashion's association with surface and ornament has often made it suspect to scholars - viewed as an unserious subject not worthy of attention, let alone research (Parkins, 2014, Para. 5). The most hostile critics, such as the French philosopher Jean Baudrillard, view fashion as a form of societal oppression and enslavement, while others like Roland Barthes dismiss it as an unnecessary affliction of false consciousness; an aberration of truth. Yet this disregard of fashion for its supposed triviality and superficial nature ignores the deep cultural meaning found in the universal act of dressing, and as historian Elizabeth Wilson notes,

"...to banish fashion from the realm of truth in this way is to imply that there exists a wholly other world, a world in which, contrary to [Barthes'] theory, meaning is not created and recreated culturally, but is transparent and immediately obvious. But not only would this be a world without fashion, it would be a world without discourses, a world, that is, without culture or communication. Such a world cannot, of course, exist, or if it did it would be a world without human beings in it."

(Wilson, 2003, p. 58)

THE ORIGINS OF ADORNMENT: MAGIC AND RITUAL

No culture on earth leaves the body completely unadorned (Entwistle, 2000, p. 6). From an anthropological perspective, and especially prior to its eventual entwinement with the goals of capitalism and consumption, dress was descendant from ancient realms of ritual, worship and magic (Wilson, 2003, p. 56). At its best, dress can allow us to transcend our bodies to become both an idea and an ideal (Jackson, 2006, p. 286-287), and shield us (if only for a moment) from our inevitable mortality (Wilson, 2003, p. 59-60; Hansen, 2003, p. 302). Fashion, as do many arts, draws upon “the unconscious unfulfillable,” (Wilson, 2003, p. 246), allowing us to manifest and express our fantasies and inner worlds in the outer - the performance art of everyday life.

IDENTITY & SOCIAL SIGNIFICANCE

More practically, it can also provide us a form of social armour with which to face the world. “Dress is the frontier between the self and the non-self,” Wilson has argued (Wilson, 2003, p. 2-3), and is a powerful tool for communicating identity. Professor Laura Bovone has made the important distinction that, “the problem of identity is not a problem of appearance,” (González & Bovone, 2012, p. 71) but that the appearance of our bodies - through our words, actions, and dress - is an important mediator between our inner and outer selves. Clothing’s potential, therefore, lies in its ability to act as a conduit.

What we wear can simultaneously facilitate the distinction of ourselves among our peers and further our search for belonging and relatedness. Ana Marta González describes this paradoxical duality as follows:

“Indeed while the impulse to create fashion follows from a desire to distinguish oneself from others, the impulse to follow fashion derives from a desire for belonging and social recognition. Since fashion involves both aspects, it represents the confluence of opposing human tendencies.”

(González & Bovone, 2012, p. 29)



Fig. 26 | Traditional dress, Ladakh, India
(Source: Dietmar Temps, flickr.com)

Ardent followers of commercialized fashion are often criticized and discounted as slaves to conformity, but perhaps a more constructive view would be to recognize the great potential of clothing to connect us. Deci & Ryan, in their discussion of Self Determination Theory, describe the need for relatedness common to all human cultures, and emphasize its important role in the building of cohesive societies (Deci & Ryan, 2000, p. 253).

For an example of how dress can contribute to the building of modern human tribes, we must look no farther than the “Gulabi Gang,” a women’s movement formed in 2006 by Sampat Pal Devi in the Banda District of Uttar Pradesh in Northern India. Self-described as a “gang for justice” (Gulabi Gang, n.d.), the women of the Gulabi Gang fight against abuse and female oppression in one of the poorest regions of India, marking their affiliation by donning bright pink saris. The gang’s mission quite obviously extends far beyond what they wear, but this uniform creates an unmistakable symbol of connectedness between the women, and communicates a powerful message to those who behold them.



Fig. 27 | Gulabi Gang, Uttar Pradesh, India (Source: Sanjit Das - <https://maptia.com/sanjitdas/stories/the-pink-vigilantes>)

PLEASURE

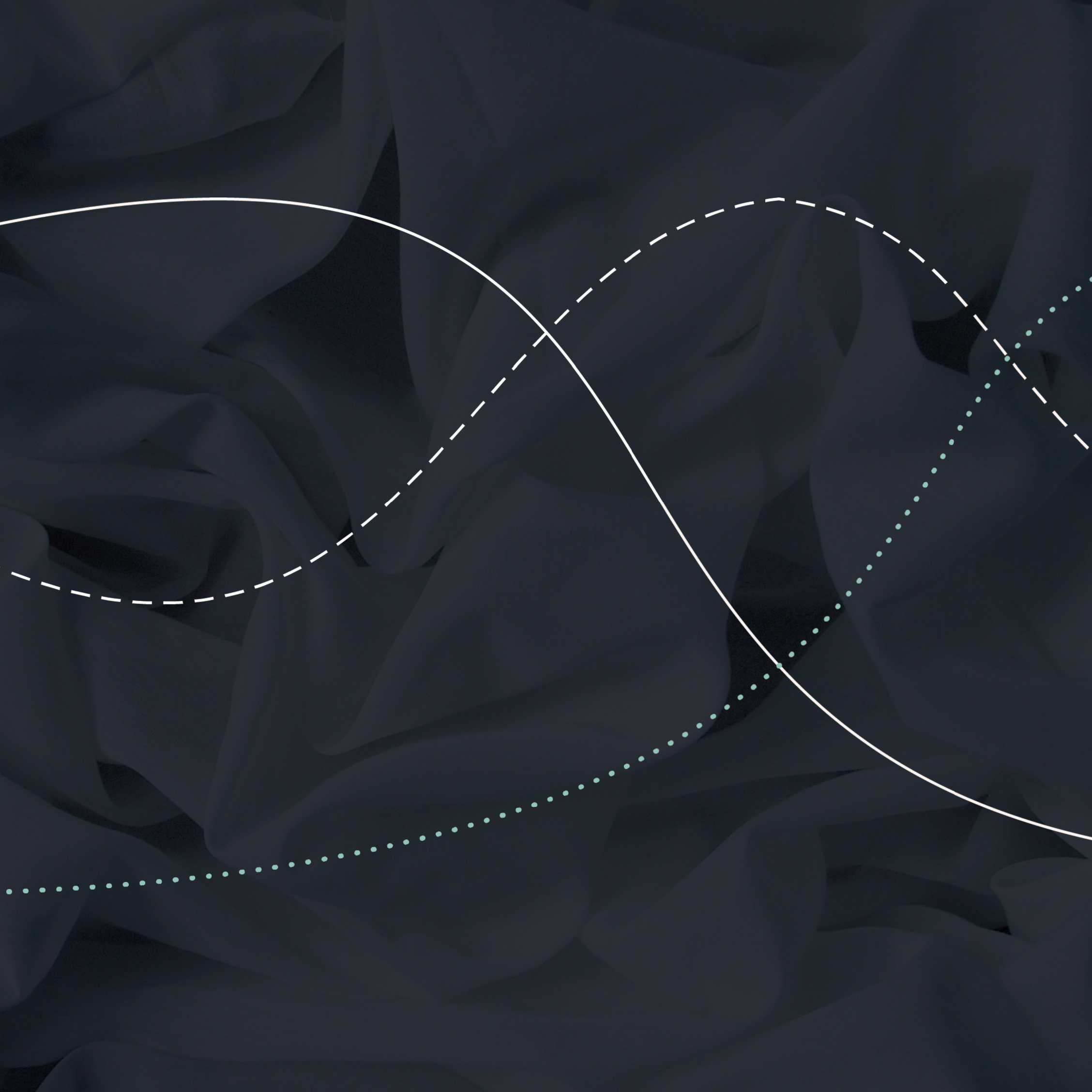
The act of dressing is one mode by which we share ourselves with others, and thus inherently requires people’s active collaboration (Hansen, 2003, p. 308). This makes the experience of clothing highly context-dependent - a woman wearing a ball gown through the halls of a black tie affair will undoubtedly be interpreted differently than if the same gown were worn paired with low-slung boots while walking down a busy city street. In the same way that clothing can simultaneously create distinctions and find commonalities, it also plays on ideas of variation and continuity (Hansen, 2003, p. 306). Sleights-of-hand can transform an old garment into something renewed and worthy of our attention, and as Hansen suggests, “one ensemble is succeeded by another and so on, leaving the impression of infinite novelty and indeed of ephemerality as one outfit leaves space for another” (Hansen, 2003, p. 306-307).

Wilson believes that although we may be strongly influenced by the societies within which we exist, it is also in our nature to seek out “moments of freedom” in the crevices of our culture (Wilson, 2003, p. 244), and that fashion is one vibrant manifestation of this freedom we are sometimes able to carve out for ourselves. Indeed, whether through the creativity of designers or the artful manipulation of an existing wardrobe, the playful and transformative nature of fashion is one of its greatest pleasures. Though it is more than just a game, Professor von Busch has affectionately outlined the rules for those who wish to play:


“If it was skinny jeans last season, now it is flares. If it was white last season, now it is black. It might not always be that simple, but at least we all know the rules: it should neither be too original nor too popular. Fire up the neurons, here we go! What a lovely game to play.”

(Black [Ed.], 2013, p. 19)

Attunement to fashion can awaken our desires for renewal, growth and change, but its modernist incarnation as commoditized clothing also presents one of the greatest challenges to sustainability. How can we bring out the best in fashion - its magic, its ability to communicate our inner selves and connect us to others - while simultaneously repairing (in truth, revolutionizing) the very broken system that much of fashion now finds itself defined by? Do we change the rules of the game itself, or find openings for change within its boundaries? Fire up the neurons, here we go.



04



WHERE IS EVIDENCE OF THE FUTURE IN THE NOW?

The fast fashion business model (See p. 10 and Appendices B-C), though highly profitable, is not without its weak points. For one, the model's reliance on only one source of revenue - the sale of new clothing and accessories - is hardly diversified. This also means that to grow, businesses must convince individuals to purchase and discard even more than before (given that birth rates in the developed world have slowed significantly), or diversify into emerging markets where disposable incomes are currently far less than in the West. The model's reliance on low costs to spur sales is also set to become more difficult, with raw material costs for natural fibres like cotton, silk and cashmere having increased significantly (doubling in price for cotton) over the span of a few years (Black [Ed.], 2013, p. 220). Michael Flanagan elaborates on the predicament facing producers in the long-term as growing demand places strain on global agricultural resources:

“The unsustainability of the present-day clothing industry has little to do with the caprices of fashion. On average a European or American buys about 90m² of clothing per year. The average Chinese citizen buys 8m² - but China's clothing market has been growing at 20% a year for the past three years. The average Bangladeshi buys less than a single square meter. When - not if - the world's twenty most populous poor countries buy as many clothes each year as the rich world's most frugal country (New Zealand) does today, the world will need three times as much fabric as it does now, and it will use three times as much energy to make and transport those clothes. This will be the case even if today's rich-country markets remain static. The world just hasn't got the land or minerals to provide three times as much fabric.”

(Black [Ed.], 2013, p. 213)

The unexpected drop in oil prices that occurred at the end of 2014 could result in brands relying even more heavily on synthetic oil-based fibres to keep prices down (not to mention allowing them to keep shipping merchandise by air over long distances), but it is a risky long-term strategy given the unpredictability of the energy market.

Journalist Lucy Siegle believes there will soon be a time when the fast fashion business model will simply no longer be viable, citing the combination of fast and cheap as unsustainable (Siegle, 2008, Para. 13-14). This may be true as the system exists today (that is, reliant upon the frequent high-volume sales of new, cheap clothing), but perhaps it's more useful to consider contexts in which fast and cheap could be part of a healthy and sustainable system of fashion commerce. Systems of leasing, for example, allow individuals to gain quick access to clothing at prices lower than retail while simultaneously reducing material throughput. In this case, it is the concept of ownership that is questioned, not speed or price. Alternatively, clothing with modular or convertible elements could be frequently and quickly modified, shared among friends, or even borrowed and returned. A truly closed loop system could similarly reduce the need for natural resource consumption while satiating our desire for novelty and renewal. Fast and slow may be at opposite ends of a spectrum, but activities that fall into these categories are not automatically good or bad; it is their ultimate purpose that is most important to determining its sustainability.

SIGNALS OF CHANGE

In addition to global resource issues, there have been many signals that change is necessary, desired, and perhaps most encouragingly, possible. The following table outlines several emerging trends that, although not all directly related, could suggest possible alternative future(s) for sustainable fashion. From open criticism of passive consumption, to the desire to live a more mindful, value-driven life, to the blurring of roles between creator and user, signals of a change to the status quo hint at what the new normal could become.

TITLE	STEEPV	DESCRIPTION
Celebrities Show Fatigue at Red Carpet Pageantry	Social	Celebrities have become product placement clotheshorses for fashion designers and brands, but some are growing weary of the parade.
Community Spaces for Learning and Creativity Emerge to Fill the Need to Make	Social	A growing interest in DIY and craft has led to the emergence of hands-on communal spaces for learning and self-production.
Rise of Chinese Middle Class Means Rising Labour Prices for Clothing Production	Social, Economic	As China's middle class grows, the supply of cheap labour in the world's largest exporter of clothing is expected to drop.
Haute Couture for the Masses	Technological	Haute Couture houses like Elsa Schiaparelli and Chanel have begun to release videos that document the painstaking process of making their garments, but also give a glimpse into the techniques used, perhaps signalling a more open attitude toward sharing information may be emerging in fashion. Other sites like The Cutting Class deconstruct designs to share the valuable techniques with a wider audience.
Slow Television	Technological, Values	In Norway, watching 'slow TV' programs that document real-time experiences like travel by boat have become surprisingly popular.
Millennials Forego Clothing for Starbucks	Economic	Fast fashion retailers like Forever 21 remain favorites among young shoppers, but a new survey has revealed they teens are now spending as much on food as they are on clothing (21%).
Resale Goes Upscale	Economic	Cheaply made clothing flooding secondhand shops may be negatively affecting the resale market, but high end resale stores like Komehyo in Japan and Rewind in Toronto are popping up around the globe.
Consumption Fasts as a Quietly Political Statement	Economic, Political	Individuals have begun to question their consumption patterns by choosing to embark on 'consumption fasts' and openly discuss the materialistic attitudes that currently pervade society and inform policy decisions.
Trading in Money for Time	Economic, Values	While not a new idea, discourse about alternative economies has begun to emerge, with some suggesting we trade in productivity gains for increased leisure time rather than monetary raises.
Culture as the Gateway to Sustainability	Environmental, Social	Researchers and academics have begun to explore sustainability beyond material efficiencies by making connections between culture, values and pro-environmental behaviours.
Fighting Opacity with Openness	Political, Technological	Artists and activists have begun to use open-knowledge technologies to make political statements about the garment industry and its abuses.
Pope Francis Believes Consumption Is Closely Tied to Morality	Values	Pope Francis uses his 2015 New Year's address to comment on the blight of modern-day slavery and call on his followers to consider how their purchasing decisions could be engendering the hardship and suffering of others.
Body Modification, Implantable Technologies and CrossFit Obsessions	Values	We live in a time of instant gratification and nano trends, but a growing number of people are turning to far more permanent forms of adornment and body modification to express themselves.
"Buy Goods, Not Bads": Whole Foods Targets Intrinsic Values	Values, Economic	Whole Foods' 'Values Matter' campaign showcases their purpose-driven business model and banks on attracting shoppers based on their intrinsic values.

EXAMPLES / LINKS	IMPLICATIONS
On the Red Carpet, A Revolt Builds Over the Pageantry - http://goo.gl/d90ygq	A-list' celebrities could drive a trend toward less ostentatious celebrity endorsements, preferring to be recognized for their accomplishments, not what they're wearing.
The Shop (Toronto) - http://www.theshoptoronto.ca/ Contemporary Textile Studio (Toronto) - http://www.textilestudio.ca/	Lines are blurring between user and maker - will designer shift to a more facilitative role in creation and production?
Change in China Hits U.S. Purse - http://goo.gl/76Z8uL	China could transition to production that requires more skilled, expensive labour, meaning fast fashion brands will have to pay more or look elsewhere. The end of an era for cheap clothing prices?
Schiaparelli Haute Couture Spring/Summer 2014 - The Making Of (Video) - https://youtu.be/y3MymBuXQR0 The Cutting Class (Blog) - http://thecuttingclass.com/	Unlike the hidden or opaque practices of fast fashion, these videos and blogs bring a sense of openness and accessibility to some of the most exclusive brands on earth.
Slow TV is Here - http://www.newyorker.com/culture/cultural-comment/slow-tv	A signal of a desire for more mindfulness in our everyday lives.
Piper Jaffray Taking Stock With Teens Report 2014 - http://goo.gl/Mw9MFk	Does this trend suggest teens are beginning to choose experiences over material possessions - that is, buying lattes with friends rather than clothing at the mall?
Komehyo Co. (Japan) - http://www.en.komehyo.co.jp/ Rewind Toronto - https://www.facebook.com/rewindcouturerevisited	Suggest a shifting mindset toward the benefits of purchasing higher quality used clothing? Conversely, this could lead to a faster cycling of goods, though less would be needed within the cycle.
A Bunch of Pretty Things I Did Not Buy - http://issuu.com/sarahlazarovic/docs/notshopping/1 Buy Nothing Year - http://goo.gl/OEcKH5	People are resorting to extreme measures to rid themselves of their addictions to consumption; perhaps implying the time is right for a strong public campaign to slow consumption.
21 Hours - New Economics Foundation White Paper - http://goo.gl/R6dDpl	Perpetual economic growth is impossible on a finite planet, but are we willing to sacrifice the desire for new things for more free time?
Local Wisdom Project - http://www.localwisdom.info/use-practices	Clothing could become far more tailored to one's personality, behaviours and lifestyle, rather than reflecting the whims of a moment in time.
KnitPro / microRevolt - http://www.microrevolt.org/knitPro.htm	Fashion could become more political, more aligned with art in its criticism of the status quo; a canvas upon which to communicate ideologies and challenge paradigms.
2015 World Day of Peace Message - http://goo.gl/ftBG9x	Will spiritual leaders champion a consumer-led rebellion to do less harm?
Venezuela Expo Tattoo 2015 - http://goo.gl/Dg0Lua Can a Computer Change the Essence of Who You Are? - http://goo.gl/A9rjxj Why are Americans So Fascinated With Extreme Fitness? - http://goo.gl/6FxJdi	Hyper-trend following may become unfashionable; conversely, it could be seen as an extreme manifestation of personal branding.
Whole Foods Asks Shoppers to Consider a Value Proposition - http://goo.gl/knSlCp	If successful, this campaign may suggest that people are longing to align their values with their purchasing behaviours.

Table 4 | Signals of Change

ENVIRONMENTAL SCAN

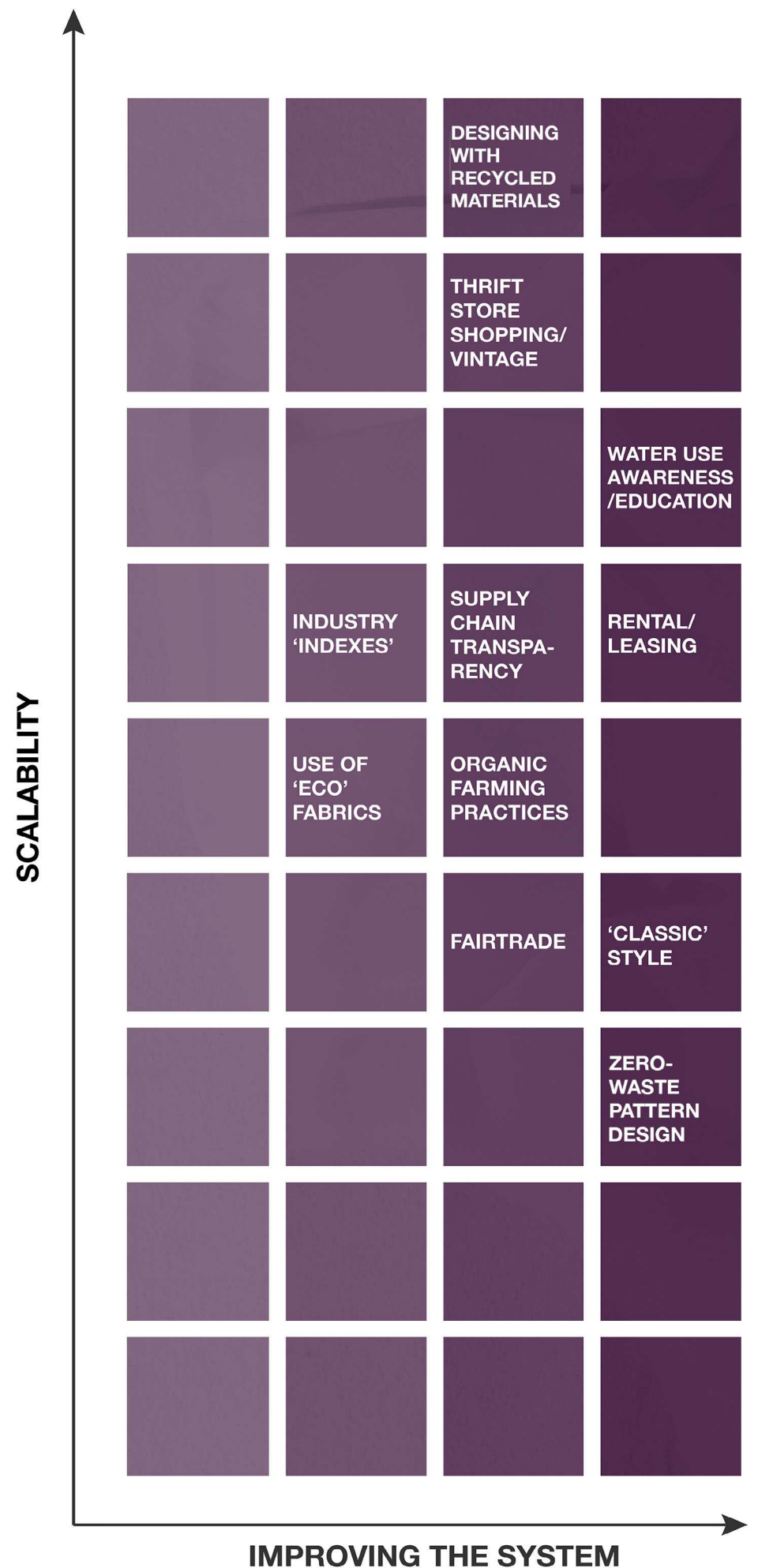
In addition to the signals mentioned above, many ideas have emerged about how to tackle the issues facing the garment industry - ranging from models that improve the system to ones that exist entirely outside of it. They also range in scalability. As an attempt to make sense of the information, initiatives have been mapped into a two-axis matrix (Fig. 28). It is important to note that the classification is relative, not absolute, and the location of the initiatives relative to either axis (and to each other) does not imply a judgement of better or worse.

Some ideas have already been put in practice, while others are highly experimental. Examples of improvements to the system include supply chain transparency efforts undertaken by companies like Everlane, Patagonia and Honest by, as well as material efficiencies gains like the development of technological advancements in the use of recycled materials and textiles. Though these improvements are important starting points and help minimize some of the adverse symptoms that exist within the system, they generally do not address the deeper causal issues of overconsumption, commoditization and distancing.

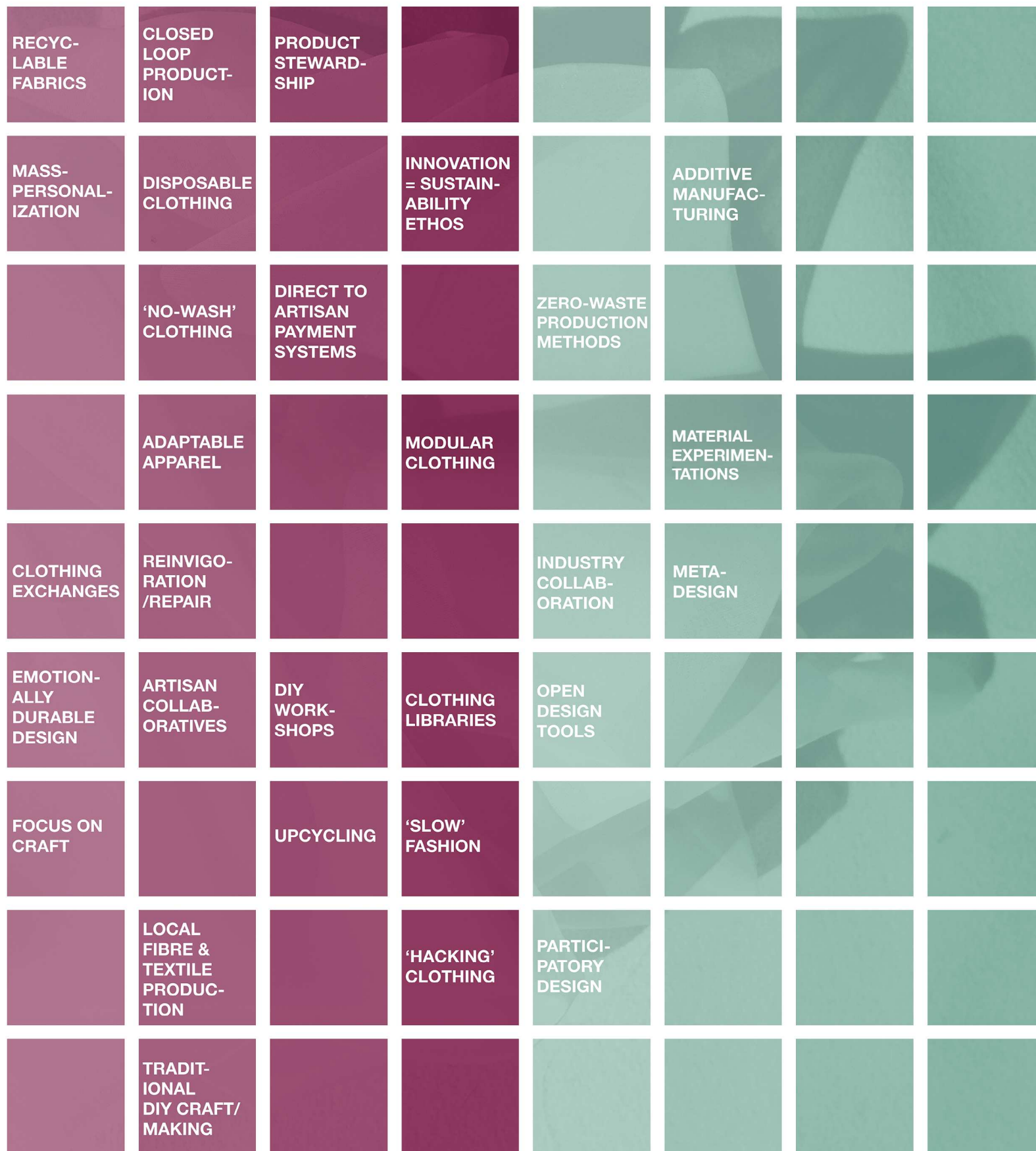
Other concepts and models challenge the system by questioning its speed and disposability, as well as the need for the private ownership of clothing. These ideas span a broad range, from clothing libraries in places like Sweden and Australia, to the “slow fashion” movement, to “hacking” boot camps that teach people how to deconstruct and re-imagine their existing wardrobes. Unlike the initiatives concerned with improving the system, many of these ideas are far smaller in scale, and are run by individuals or groups rather than corporate entities with large research budgets. Many of them appear to be driven by an ethos of activism and deep concern for the current system’s abuses.

Media theorist Douglas Rushkoff believes the Internet has permanently transformed the way we experience the world by changing our feedback mechanisms and the role of narrative, shifting emphasis from product to process, and blurring the boundaries between makers and users (Rushkoff, 2013). These concepts can be seen in various efforts to transform the garment industry: while some embrace technology to completely eliminate waste and create spaces for industry collaboration, others are attempting to open up the system and truly democratize it - allowing more people to be involved in the design process. Finally, several initiatives focus on a return to more traditional techniques and the pure joy of creating, and the community that can form around these common interests. They most closely resemble Princen, et al.’s definition of low-commodity potential ideas, and embrace their sometimes eccentric and imperfect form as a mark of our humanity rather than as something to be corrected.

What soon became clear from this scan is that regardless of the initiative, the purpose and goal behind it matters just as much - if not more - than the features of the innovation or practice. See Appendix C on p. 77 for a complete listing and descriptions of each initiative.



An interactive version of this map can be found at <http://www.fashionforafiniteplanet.com/environmental-scan>



CHALLENGING THE SYSTEM

TRANSFORMING THE SYSTEM

Fig. 28 | Environmental Scan

CASE STUDY: TONLÉ

The following case study looks in-depth at tonlé, a small clothing producer based in Phnom Penh, Cambodia that uses remnant fabric in its production and has completely eliminated textile waste from their business operations while providing meaningful, fairly-paid work for its small team of employees. It is based on a personal interview with the company's founder.

For tonlé's founder Rachel Faller, a fateful trip to Cambodia and the Fulbright research grant that followed planted the seed of an idea for a new way to produce clothing; one that grew from a belief that social enterprise could present a viable alternative to the mainstream fashion industry. Today, tonlé's business model is a living example of how embracing the boundaries of our finite planet can result in beautiful clothing that respects both people and the environment. Faller and her team in Cambodia operate on a zero-waste production policy, but in fact it is more of a negative-waste policy. By carefully sourcing remnant fabrics from traditional garment factories (the wasted fabric from pattern cutting), tonlé's designs actually reclaim waste and give it new life as handcrafted garments or accessories. What makes tonlé's business model unique - and entirely unreplicable under traditional garment manufacturing conditions - is the labour-intensive nature of their process. "It's something that can only be done by hand," Faller explains.

Faller estimates that up to 40% of materials that pass through traditional Cambodian garment factories are being wasted, including through the production of textiles (growing, milling, spinning, and weaving/knitting), fabric quality control (that is, fabric found to have holes, twisting, dye bleeding, etc.), excess stock that is discarded when orders are changed or cancelled, cut waste from the pattern cutting process, and quality control rejection of finished garments. These quality control issues can be particularly high in Cambodian factories, but since time efficiency is paramount to the system, garments are often discarded instead of being repaired. "Failure rates" stem from many sources, including a lack of emphasis on training, high employee turnover rates, and little chance for personal or career growth.

In contrast to the assembly-line production of traditional factories, tonlé's fabrication process requires team-based working structures where employees have the opportunity to learn how to make entire garments, take pride in their work, and work collaboratively to problem solve when issues arise. This requires a completely new vision of what it means to be a garment worker: "To do what we do, you need to have more highly skilled workers, and you need to pay them more, and you need to treat them better," says Faller. "They have to be able to make judgement calls." These judgement calls result in much lower failure rates, and when mistakes do happen, they are fixed



Fig. 29 | tonlé SS 2014 Collection (Source: <http://www.tonleedesign.com/>)

whenever possible. Fig. 30 outlines the general process flow of tonlé's business model, from sourcing fabrics to the sale of final products online and in their boutiques.

Tonlé's business model would be extremely difficult for larger brands to replicate (at least as they operate today), but Faller believes her initiative, and the initiatives of other small, passionate social enterprises can have a positive effect on the future of an industry in desperate need of change. They do so by setting an example of what is possible for the industry as purpose-driven enterprises, and by widening the public's awareness of alternatives to mainstream fashion. As Faller explains, "I think if smaller brands can come up and become advocates, and prove these things are possible on the small scale, that will help show consumers there's an alternative way, and encour-

age them to eventually demand that brands also get their act together." In this way, social ventures like tonlé play an important role as mediator between customers and the industry, illustrating what the future of sustainable fashion might look like, and placing pressure on the industry to get there.

<http://www.tonleedesign.com/>

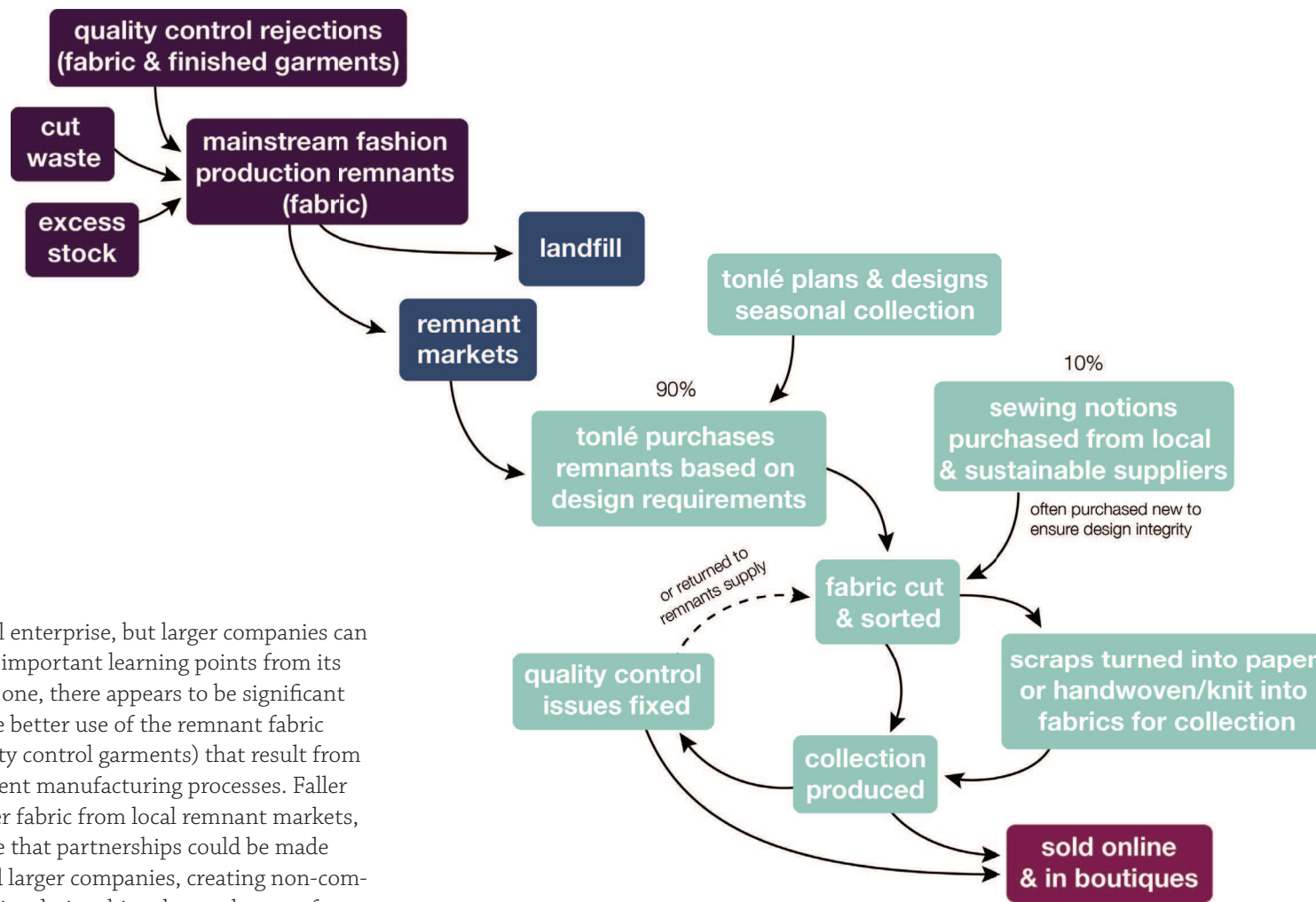


Fig. 30 | tonlé's zero-waste production process

Tonlé may be a small enterprise, but larger companies can still take away some important learning points from its business model. For one, there appears to be significant opportunity to make better use of the remnant fabric (and discarded quality control garments) that result from the traditional garment manufacturing processes. Faller chooses to source her fabric from local remnant markets, but it seems possible that partnerships could be made between smaller and larger companies, creating non-competitive but symbiotic relationships that make use of waste in a form of creative parasitism.

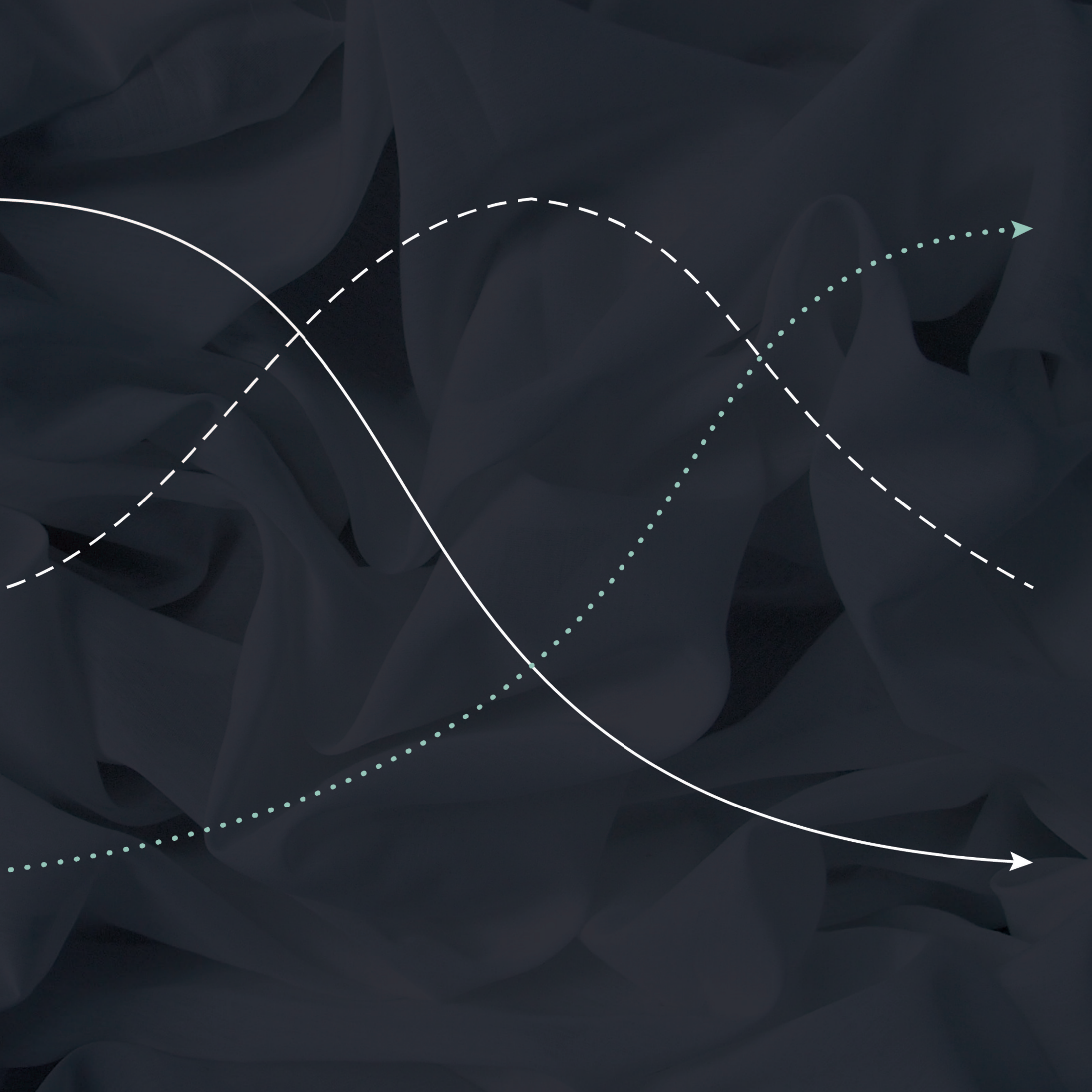
As Faller explained during her interview for this project, there are logistic challenges to such a partnership due to larger companies' use of multiple factories in disparate locations, but these issues could potentially be facilitated through pattern-cutting technology (to accurately track the amount of remnant fabric expected), data collection and matchmaking database between companies to facilitate the local re-use of the fabrics. Collaborative industry partnerships (likely managed by a third-party) that handle multiple companies' remnants in one location for redistribution, recycled yarn production, etc. could also help to redirect waste on a larger scale. In such an environment, smaller brands like tonlé would benefit from a more systematic and predictable process for sourcing remnant fabric, while larger companies would benefit from the positive publicity and goodwill such partnerships could generate. In this way, larger companies could become B2B suppliers to smaller ones (even those outside the garment industry, tapping into the "value loops"¹ advocated for by futurist and industrial ecologist

Hardin Tibbs, among many others) diversifying their business in a productive, sustainable, and profitable way.

Faller's vision for reducing waste is a driving force that guides both the design process and the development of her business, and has resulted in a unique offering that sets tonlé apart from its competitors. Despite the unfeasibility of replicating her business model by larger mainstream fashion companies (a competitive advantage in itself), the concept of using a purpose-driven vision to build a unique aesthetic and perspective is a business practice that could also be translated into a more broad range of scalable endeavours. This concept will be explored further in the final section of this report (How Might We Bridge Between Paradigms?).

Due to many powerful forces impacting the industry, the fashion system has been slow to address the litany of negative effects it causes for people and the planet. This section demonstrates, however, that there are many passionate people working to change it for the better, both from inside and outside the industry. These initiatives signal that change is both desired and possible, and help form a new vision for what fashion might become in the future.

¹ Industrial ecology is a vast area of research that will not be touched upon in this report but involves, among many other systemic principles, the creation of circular "value loops" instead of the linear "value chains" that make up the current mainstream global economic systems.





WHAT'S THE HOPEFUL FUTURE?

Though the hurdles to realizing a more sustainable future for fashion can often seem insurmountable, the vision for what it could become has been quite clearly articulated by academics, activists, and those working from within the current system. In many ways, it involves fixing what's broken now while maintaining or enhancing what is most vital about fashion. The paths to achieving the vision are numerous, but while some target the symptoms of the broken system, others attempt to address the deeper systemic roots of the problem. For now, this section will focus on outlining where the hopeful future might lead us.

Below are several quotes from leading experts in the field of sustainability that build a broad but coherent vision of what this future could look like:

“Sustainable pleasure will flow from strong, coherent fashion politics. It will emerge from different business models that disassociate profit from material throughput. It will be glimpsed in robust critiques of globalization. It will necessitate drastic reductions in consumption. It will reconceive the role of individuals as citizens and not just as consumers in the fashion process. It will add up to profound changes in power relations in the sector and revolutions in attitudes towards resource use, modes of production and ways of making. For sustainability gives us both the incentive and the opportunity to make the fashion sector meet our true needs.”

- Prof. Kate Fletcher, London College of Fashion, University of the Arts London (Black [Ed.], 2013, p. 210)

“Innovating to bring change in the form of a new engagement with fashion is highly politically charged. It challenges the dominance of the growth model - large-scale, globalized production, non-transparent supply chains, the flow of large volumes of similar garments, and the mystique of the fashion creation process. Yet the benefits it promises are linked to the possibility of recreating counter-flows where consumers do not just follow but can perhaps also lead, and thereby participate in fashion in a more co-operative, healthy, active relationship with the whole.”

- Prof. Lynda Grose, California College of the Arts and Prof. Kate Fletcher, London College of Fashion, University of the Arts London (Fletcher & Grose, 2012, p.144)

“My own stance in terms of the implementation of sustainability by fashion is by no means to try to abolish its celebration of the new, or its visual manifestation of change. I do not advocate making all fashion slow, or for that matter safe. Yet, I believe it is possible to have a fashion industry that thrives, and a fashion moment that exhilarates AND looks to the present and future prosperity of people and planet. In fact I believe this is the only way of ensuring fashion’s survival. I think the answer lies not in going against what fashion represents, but instead in searching deeper into its culture, exploring its capacity for change at more profound levels.”

- Prof. Mathilda Tham, Goldsmiths, University of London (Tham, 2011, Para. 20)

“Fashion must find tools to foster self-reflection, cultivate a sense of responsibility, build courage and encourage action for change towards justice. We must learn to perceive and engage with the politics of fashion and not be seduced into ignorance by the, sometimes banal, glamour of fashion.”

- The Fashion Praxis Collective, Parsons The New School for Design (von Busch, et al., 2014, p. 26)

“The ultimate task of the next generations – starting now, with our present generations – is to break the economy out of this petrifying mold of interminable, unlimited material growth and senseless wealth accumulation and turn its vital force to the pursuit of a responsible and sober happiness based on quality: real quality that truly counts toward better life and impels the growth of culture, education, the arts, science, knowledge craftsmanship, experience, and last but not least wisdom. By transcending itself, capitalism could most probably count on centuries and centuries more, because it will enter the last growth phase of the consumer economy, the one of an economy of culture, which is the only economy that allows for unlimited growth.”

- Prof. Simonetta Carbonaro, University of Borås (Carbonaro & Votava, 2009, p. 44)

What does the hopeful future mean for industry leaders, smaller players and individuals? For it to come to fruition, this vision for the future must balance the specific needs of each group with the goals for a more just, responsible, diverse, creative and vital industry.

From their powerful position within the fashion system, industry leaders could play a major role in transforming the industry for the better, but as has been previously highlighted, their resistance to change is high for many reasons. Were this resistance overcome, however, they could forge new routes toward a responsible system that, for example, eliminates the exploitation and suffering of its vulnerable workers (paying a living wage, creating work environments safe from physical and emotional harm, providing job security and meaningful work, etc.), by working to eliminate the forces that push risk and cost externalizations down the supply chain. They could also minimize waste and environmental damage by championing a new norm for corporate responsibility, and finding ways to align their higher purpose with the need to be profitable.

For this to occur, a balance must be struck between the business imperative of making money and responsible business practices that respect the limits of the planet, the dignity of those making up the garment manufacturing supply chain, and the preferences of their customers. Given the current conditions of the industry, this could likely be a difficult transition, but especially so for those whose business models are in constant pursuit of lowering the bottom line. In these business models, there is simply not much room to manoeuvre. Euromonitor International believes, however, that one of the main challenges facing clothing companies in the future will be breaking the cycle of discounting and the resultant decreasing perception of value by customers, who have been trained to expect discounts (Global Apparel, 2014).

If the industry (and perhaps more importantly, the desires of society) were to shift away from commoditization and high material throughput toward, as Carbonaro envisions, an “economy of culture,” the hopeful future might also offer smaller players a more diverse environment in which to thrive. In fact, many are already finding ways to take advantage of their nimbleness as niche creators and suppliers of fashion (as well as expert exploiters of digital technologies and media) to push boundaries, reach their audiences and break open new avenues for post-industrial, sustainable futures (Carbonaro & Votava, 2009, p. 39). These initiatives, like many of those documented in the Environmental Scan on p. 40-41, signal a potential landscape where power has been redistributed through a shift

Once a point of competitive advantage, they believe the decreasing cost of clothing, along with “fast fashion fatigue” is now negatively impacting the profitability of some companies.

At a deeper level, Nobel laureate Daniel Kahneman has also found that western societies have begun to see a shift of aspirations from the pursuit of material wealth to an economy that strives to cultivate well-being and happiness (Carbonaro & Votava, 2009, p. 35). According to Professor Simonetta Carbonaro of the University of Borås, in an such an economy, “those goods that are valued most highly only have a significance within communities and are not exchangeable, cannot be reproduced or cannot be replaced by others, like for example security, peace, friendship, time, culture, knowledge or simply truthfulness and honesty” (Carbonaro & Votava, 2009, p. 35).

If the pursuit of low prices and unfettered consumption are losing their effectiveness, perhaps now is an opportunity to re-evaluate and begin shifting focus toward maximizing the qualitative values of both companies and customers instead of continuing to pursue monetary “value” at all costs. Some companies have already begun to make this transition. While not perfect, athletic-wear company Nike has successfully transformed from “a perceived pariah of child-labour violations to a model for corporate responsibility” (Black [Ed.], 2013, p.112). Over a decade on, they have positioned themselves to profit through diversified innovation (and data collection), and are more equipped to fund sustainability and social responsibility endeavours. As Hannah Jones, Nike’s VP of Corporate Responsibility explains, “we’re really beginning

in focus from economies of scale to economies of quality – characterized by Carbonaro as “quality that truly counts toward better life and impels the growth of culture, education, the arts, science, knowledge craftsmanship, experience, and last bit not least wisdom” (Carbonaro & Votava, 2009, p. 44).

Reversing expectation of low prices developed over decades may prove difficult (and an increase in clothing prices does not automatically equate to sustainability), but a more diversified landscape of players could help break the single-minded outlook that currently dominates the industry and foster divergent views and ideas about what it means to be fashionable. Like a natural wildfire that burns to create a hospitable environment for

to see what the business case for corporate responsibility is when we see it as a source for innovation and growth (Black [Ed.], 2013, p.112). The shape that growth takes is important to understand (i.e., material-intensive vs. non materially-intensive), but this statement suggests a significant shift in mentality.

Nike has also begun to experiment with collaborative environments that aim to establish a more level playing field for sustainable business practices. The GreenXchange was created as an online platform for “open innovation” where technologies and intellectual property not core to companies’ business practices could be shared via Creative Commons (CC) licensing. As noted by John Wilbanks, VP for Science at Creative Commons, “There is so much duplication of effort and wasted resources when it comes to sustainability. We need to make it easier for individuals, companies, academia, and researchers to collaborate and share best practices” (Tapscott, 2010). Nike personally shared over 400 of their patents through the platform.

Shifting the collective mindset from a competitive environment based on economic constraints to one based on ecological ones is quite obviously an enormous challenge, but efforts to level the playing field as the GreenXchange has attempted to do could help bring such a scenario closer to reality. As previously referenced on p. 11, Princen, et al. believe it is the only context in which abiding by such rules makes competitive sense.

regeneration and new life, so too do the ideas of the “new guard” act as proverbial matches for catalyzing the new paradigm into being.

Finally, as envisioned by Professors Kate Fletcher and Lynda Grose, design could be reimaged as a tool for shaping not just what is bought, but also “the policies and mechanisms that shape the very cultural logic of society” (Fletcher & Grose, 2012, p.173) – a role that arguably should be held by a wider range of people. Instead of being relegated to the narrow realm of material things, designers of the hopeful future could become active change-makers, empowered by their training and unique perspectives to imagine the world as those too tied to the status quo cannot.

INDIVIDUALS

Along with allowing individuals to play a more participatory role in the creative process of fashion, the hopeful future could also place more control (and therefore responsibility) for sustainability in their hands. The current system touts “consumer choice” as the main tool for individuals to influence its outcome, but as previously explained on p. 38, the impact they can actually achieve within existing parameters is minimal. What if this weren’t the case? What if the use of clothing had just as much impact on sustainability – if not more – than its production?

This is a question currently being asked by the Local Wisdom project headed by Kate Fletcher, a preeminent researcher and sustainability advocate referenced frequently in this report. Sustainability efforts are often limited by companies’ predisposition to limit responsible behaviour to activities that bring benefit (and profit) to themselves; Fletcher believes that instead of looking solely to producers to solve fashion’s myriad problems, the ingenious “craft of use” exhibited by individuals has great potential to shape its future as well:

“The Local Wisdom project aims to tease out sustainability supporting user-related activities, as distinct to producer-related ones. That is, to uncover the ingenuity and improvisation that goes on with and to clothes after the point of purchase. These are not necessarily done within the rubric of intellectualized concerns or commercial opportunities for sustainability, but instead emerge from the culturally embedded ‘wisdoms’ of thrift, domestic provisioning, care of community, freedom of creative expression and connectedness to nature, among other things.”

(Fletcher, 2010, p.1411)

The Local Wisdom project’s Nine Categories of Use GARMENTS THAT:	
1	Are shared between people;
2	Have never been washed – and aren’t leather;
3	Have the character of a particular place in them;
4	Link you with the natural world;
5	Catch your attention each time you wear them;
6	Tell the story of how they’ve been used;
7	Are made up of separate pieces that can be interchanged;
8	Make you feel part of a community (but not a uniform);
9	Are enjoying a third, fourth or fifth life.

Table 5 | Local Wisdom project categories (Fletcher, 2010, p.1412)

She continues to say that these kinds of culturally embedded practices “privilege sensitivity to people’s lived experience rather than industrial or commercial ideas about what sustainability is or should be” (Fletcher, 2010, p.1412). Table 5 outlines the nine categories explored in this project, the stories behind which are highly personal, and often difficult to replicate. These practices clearly embrace culture and its variable, unpredictable nature over technology and efficiency-based solutions to sustainability, which Fletcher argues is a more realistic reflection of what it means to act sustainably as an individual (Fletcher, 2010, p.1413). It could also be argued that such practices have the potential to foster even more sustainable lifestyle practices by encouraging individual agency, instead of limiting sustainability to technological and purchasing decisions alone.

The Local Wisdom project suggests that one part of the hopeful future might involve communities of practice that embrace clothing’s “craft of use” – groups that are still connected to, but less dependent upon the mainstream garment industry for guidance. Individuals could form new bonds based on the ways in which they manipulate, care for, improvise with, and find newness in the process of reinvention inherent to both their personal experiences and the clothing itself. Far from the passive role played today, they could begin to reclaim fashion as a meaningful and authentic form of self-expression, and embody sustainability in ways that are deeply personal and long lasting.

There are also many business models that could be inspired by the categories listed in Table 5. For example, 4 | *Link you with the natural world* could result in a clothing line designed with specific experiences in mind, like a jacket perfect for lying beneath the stars on a cool crisp night (made of material that’s water resistant, with warm, plush lining along the back of the jacket, fleecy pockets, and a padded “pillow” hood). 6 | *Tell the story of how they’ve been used* might take inspiration from Simon Heijdens *Broken White* ceramics, designed to appear plain at first, but grow deeper in character as time passes:

“Through using the object, small crack lines appear in the skin of the ceramic. The cracks slowly begin to form a floral decoration that grows like a real flower would. The family starts white and virgin-like, and after time the cups or dishes you love most will stand out, as they become increasingly decorated. The nature of craquelé is that it is not a state, but a never-ending process. By opening up the static characteristics of ceramics and manipulating the start of this craquelé process, space is made for a nature to reveal itself, and trace the story of cup and user.”

(Broken White, n.d.)

In a similar way, techniques might be developed to reveal a garment's details slowly over time, be it through low-energy wash techniques that catalyze dye to emerge, the slow but deliberate disintegration of worn areas to reveal new patterns underneath, or even the gradual build-up of dirt as a catalyst for new details.

Finally, an idea for a location-based, curated swapping service could help clothing to enjoy a third, fourth or fifth life (9) by matching people with similar aesthetic preferences (and dress sizes) and facilitate the sharing and swapping of garments, creating curated "collective closets" that allows for change and renewal while limiting material resource requirements.

Can fashion simultaneously be new and beautiful, celebrate culture, reduce harm, support diverse livelihoods, and remain profitable? Many researchers, advocates and practitioners believe it can, but to achieve it we must broaden our understanding of what fashion and sustainability are, and more importantly, our vision for what they could become.

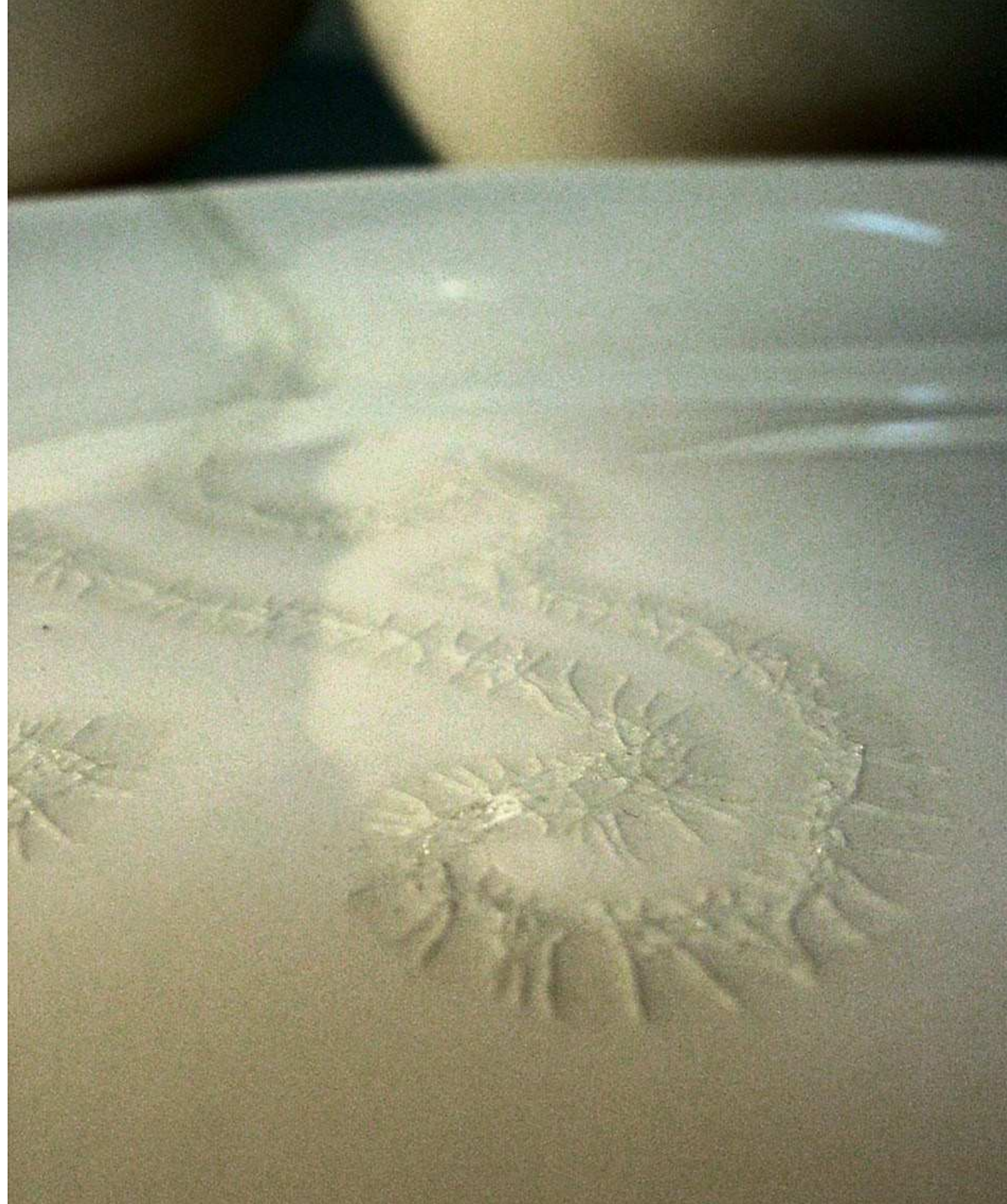
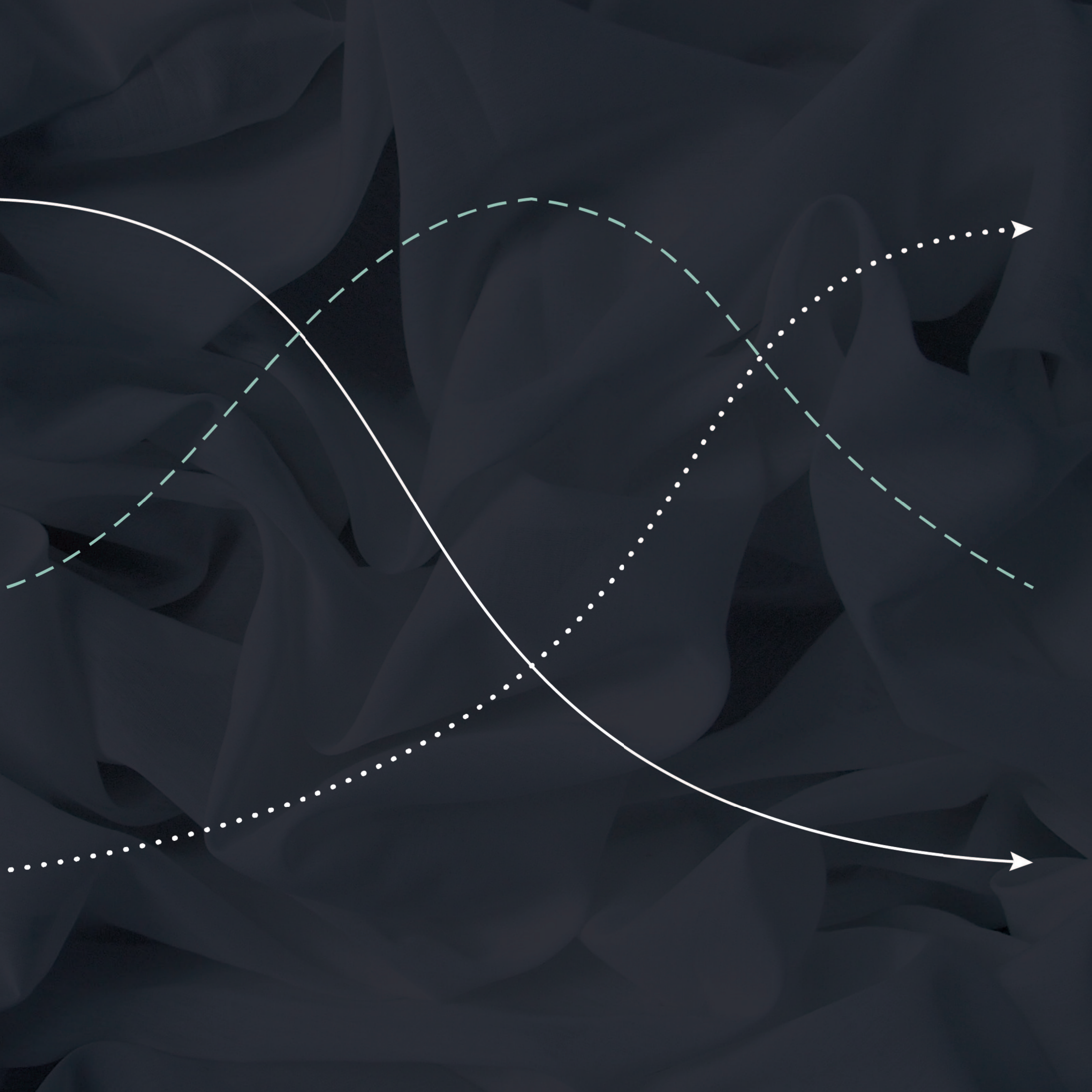


Fig. 31 | Broken White by Simon Heijdens (Source: <http://www.simonheijdens.com>)





HOW MIGHT WE BRIDGE BETWEEN PARADIGMS?

Looking back to the elements of the Three Horizons discussed thus far, a few things have been made apparent:

- **Resistance to Change** - especially by those in power - is high, not least because “business as usual” models of consumerist growth have been highly profitable for its major players. Although many are uncomfortable with the abuses of the industry, the system’s configuration has made them easy to ignore or forget. A general public apathy toward change is another significant hurdle that also must not be overlooked.
- Examining the **First Horizon** to find what is broken clearly shows a system in need of change, though the intrinsic elements that make fashion most vital - its creativity, magic, and potential to express what it means to be human - are worth keeping, for without them, fashion ceases to be.
- To better understand the vision for the future, evidence of its existence in the now revealed many small but encouraging signs of what the **Third Horizon** might look like, with efforts ranging from improving the system to transforming it. Finally, there are many visions giving life to what the hopeful future could become, with many emphasizing a shift toward an economy of culture and values over consumption and profit. Such a future, however intuitively obvious it may seem, could nonetheless prove difficult for businesses operating under mainstream fashion principles to achieve.

The final element of the Three Horizons methodology - the **Second Horizon** - exists in the tumultuous transition space between the First and Third Horizons. Though it is clear what is broken in our current reality and also what the hopeful future entails, a huge gap exists between the two. This final section will pragmatically consider the potential alternative strategies to begin scaffolding between the Horizons, and what the implications of this transition might be for industry leaders, small players, and individuals. It is speculative in nature, but based upon the analysis that precedes it. Each subsection concludes with a speculative business model that highlights possible avenues to reach the hopeful future.

THE ROAD AHEAD

Before beginning, it's important to reiterate how difficult it is to change such a deeply intertwined and complex system. As has been demonstrated, there are many forces at play that are not under the specific control of one particular person or group. Power may be unevenly distributed, but it does not necessarily make the system easy to manipulate for those who hold it. To add to the complexity, the International Labour Organization estimates there are more than 60 million people around the world employed by the garment industry as it exists to-

day (Textiles, n.d.); many with few other options for their livelihood. Altering the status quo could have serious implications for many people, and as will be explained, the points at which change can be leveraged in a system are not always intuitive.

That being said, the Environmental Scan (p. 40-41) has already hinted at multiple approaches that could lead to more profound systemic change for the industry, spanning a range of possibilities and solutions. While industry leaders must find ways to balance corporate responsibility

with the business imperative to make money, smaller players have the flexibility to experiment with more radical ideas, albeit likely with less financial resources and/or infrastructure to scale them. Those at either end of the spectrum who cannot accomplish both may find themselves unable to jump from one paradigm to the next. Finally, the role individuals play in shifting toward a more just and sustainable future is undeniably essential, but it will likely require them to have a far broader understanding of what it means to do so.

INDUSTRY LEADERS

One major barrier to the current fashion system shifting between paradigms appears to be the difficulty in imagining alternatives, especially for those most deeply embedded within the system. This lack of perceived alternatives could explain why, as innovator Guy Kawasaki has pointed out, many players (even the major ones) do not make the leap from one paradigm to the next, even when their very survival depends on it (Kawasaki, 2014, 6:00-6:47 [Video file]).

Coupled with their significant resistance to change and the lack of flexibility within fast fashion business models, industry leaders may have an imperative to change, but often lack the impetus. This section will explore why it can be so difficult to imagine alternatives, but also what could bring about change for those who wish to remain (or become) leaders in the new paradigm.

DIFFICULTY IN IMAGINING ALTERNATIVES

Lewis argues that we have become so embedded in the current paradigm of consumer capitalism that we view it as a natural consequence of human progress, despite evidence that it is both contrived and distinct. In doing so, we risk suffering from a collective blindness that renders us unable to recognize credible alternatives to the status quo, which is "...in part, because consumer capitalism embraces new ideas only within its own constraints. It thereby saps our creative energy away from more profound, original ideas about the human condition. Its undoubted vitality masks a stubborn refusal to think beyond its own limits" (Lewis, 2013, Chapter 9, Section 2, Para. 7-9). Fletcher and Grose have similarly likened this inability to imagine alternative futures to the limiting gauge of train tracks: they keep us bounded within the current ideology of the commercial fashion system, when in reality, "it is the infrastructure itself that has to be rethought" (Fletcher & Grose, 2012, p. 125).

Why has it become so difficult to imagine alternatives? Thomas Kuhn, the American physicist and scientific philosopher who coined the term "paradigm shift" believed that, "an important part of the conflict between paradigms is, nonetheless, the lack of a common language, shared references, or a single taxonomy" which results in a sort of "untranslatability" between paradigms (Curry & Hodgson, 2008, p. 14-15). This is certainly true of the garment industry, which must transition from a system that profits almost exclusively from the sale of new clothing to one that finds ways to dissociate profit from material throughput. Within the current paradigmatic mindset, such a future seems difficult to imagine, as those fighting for change both inside and outside the system will attest. That being said, if the resource constraints beginning to be faced by the industry (see p.37) are any indication, change, however difficult, will be necessary for survival, let alone transformation.

RATIONAL VS. CULTURAL

Another challenge with regard to the transition from the status quo to the hopeful future is the narrow understanding currently held by the public (and to a certain extent, the industry) about what the term sustainable fashion means. Though there are many ways to achieve sustainability, what tends to receive the most attention - and what appears to be most readily promoted by brands that wish to appear “green” - are material in nature (i.e., the promotion of natural textiles like organic cotton or bamboo, and the pursuit of material efficiencies). While important, these efforts only touch the surface of a much deeper set of solutions, and in the case of material efficiencies, they can sometimes produce a paradoxical effect. In his book *Making the Modern World: Materials and Dematerialization* (2013), author and scientist Vaclav Smil points out that despite a drastic drop in material and energy intensity across all industries, our per capita levels of consumption have skyrocketed (Stuff, 2015). Even a seemingly straightforward solution to the problem of high levels of consumer waste - increasing the physical and/or emotional durability of garments - does not guarantee a parallel decrease in consumption, as demonstrated by the now \$50 billion self-storage industry in the U.S. (Fletcher & Grose, 2012, p. 86-87).

Though these “eco design” efforts are by no means futile, they tend to tinker in the margins of the status quo if not accompanied by further actions to address deeper issues - “green” consumption is, after all, still consumption. Crompton and Kasser have expressed concern that these small individual changes can lead to equally small overall environmental impacts, and to make matters worse, “it also seems likely that communications which exaggerate the environmental impact of simple and painless steps might actually serve to encourage individuals to deploy such strategies for diversion... thereby leaving them less inclined to adopt other, more difficult and perhaps environmentally significant, behavioural changes.” (Crompton & Kasser, 2009, p. 53).

In a similar vein, Dr. Kersty Hobson, Lecturer at the University of Oxford believes that even the United Nations’ definition of sustainable consumption places too much emphasis on the “rationalisation of lifestyle practices” - that is, “making them more efficient and shaping them according to the logic of instrumental rationality, as part of a prevailing ecological modernisation paradigm” (Hobson, 2002, p. 96). Rationalising lifestyles into a series of efficient practices certainly appears to be a common-sense approach to addressing the problem of overconsumption on a finite planet, but focusing on the

“facts” can miss an opportunity to address the complex cultural values, beliefs and meanings that also drive our purchasing and lifestyle behaviours (Thorpe, 2010, p. 13), and connect people to the story of sustainable changes through intrinsic values like equity, community building, social justice, or beauty. It’s also missing an opportunity to find methods in which to tap into such behaviours and values in ways that are both sustainable and profitable.

For example, much focus is currently being placed on creating “transparent” supply chains as a means to solve the human rights abuses and ecological degradation caused by the garment industry - more information, this solution argues, will lead both to more informed supply chains and more informed customers, who can then make informed decisions. And yet von Busch, et al. highlight the irony that “...in a time with ubiquitous media coverage, and endless reports of worker abuse, we still keep ourselves blind to how our fashion is enfolded by suffering” (von Busch, et al., 2014, p. 22). More information is, sometimes, simply more information - unless it can be harnessed in a transformative way to influence future actions and decisions. What if efficiency gains were not the end goal, but instead were a catalyst to spur deeper transformative changes, as some companies have already begun to do?

WHY CHANGE?

What is the business imperative for industry leaders to change? Why don’t fast and mainstream fashion businesses simply reimagine themselves as sustainable fashion empires? As previously mentioned, business models that rely upon low prices to fuel consumption are often less equipped to increase costs to their production. This is because increases to the price paid by customers lead to a decrease in sales volume - the two work in tandem to fuel (or stymie) growth. To complicate matters, the more clothing people purchase, the harder sellers must work to entice them to buy more (Lewis, 2013, Chapter 4, Section 1, para. 2), which is often accomplished by offering clothing with price tags requiring little deliberation to justify purchasing. Contemplating the viability of more expensive sustainable and/or ethical initiatives can thus be difficult for companies in the business of rapidly producing and selling “perishable” clothing.

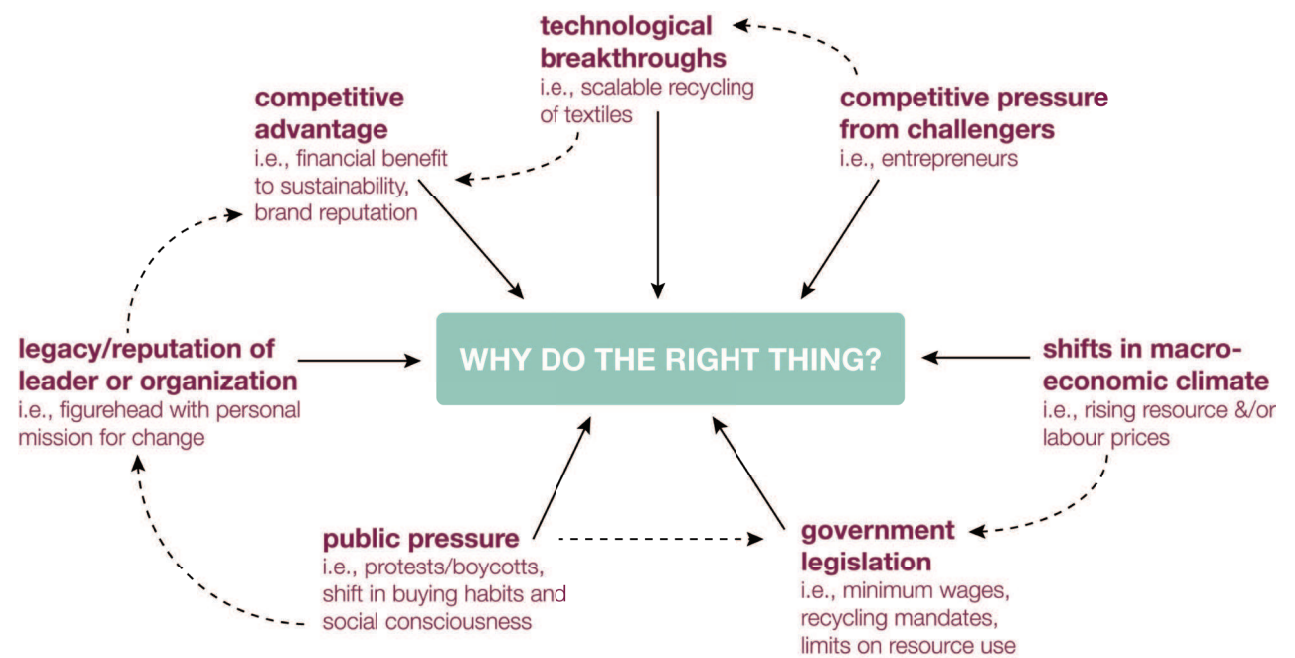


Fig. 32 | Why do the right thing?

Despite the challenges, there are several prominent mainstream companies making purposeful strides toward both environmental and ethical responsibility. They may not be fast fashion companies, but their success does suggest that change is possible. Nike, Inc., as mentioned previously, has shed its reputation for past supply chain abuses to become a leader in progressive change. Their now decade-old “sustainable innovation” philosophy has resulted in clear improvements to their supply chains, while savings accrued through waste reduction fuel further sustainable practices like closed loop production and zero-waste designs (Black [Ed.], 2013, p. 112). They have also begun to reduce their dependency on the sale of new clothing and footwear by diversifying into wearable technology and data harvesting.

Similarly, the women’s clothing company Eileen Fisher, Inc. launched “Vision 2020” (2015), the first in a series of five-year plans to move the company toward 100% sustainability in all their operations (Vision2020, n.d.). What it means to be 100% sustainable is up for debate, but according to their website, for Eileen Fisher

it involves work in six main areas: 1) fibres (textiles), 2) colour (dyes), 3) resources (water, energy), 4) people (wages, working conditions, empowerment), 5) mapping (supply chains), and 6) reuse (design longevity, fabric recycling, upcycling) (Vision 2020, n.d.). These areas create a spectrum of initiatives from material improvements (1 & 2), to deeper systemic considerations about resource dependencies and the exploration of alternative business models (6). Responsible business practice appears to be a long-standing core element of Eileen Fisher’s corporate ethos, but the public nature of this recent commitment to change suggests a confidence in their ability to achieve these goals, some of which could set important precedents for the future.

It is difficult to find similarly comprehensive initiatives being pursued by fast fashion or discount retailers, in the same way it is difficult to imagine either of the above business cases for corporate responsibility remaining viable were they competing with today’s low-cost brands. Indeed, both companies operate at a significantly higher price point than many of their mainstream competitors.

Sustainable innovations can create financial savings, but at best they generally balance the added expenses of operating as a responsible company, at least for now (Black [Ed.], 2013, p. 114). They also often require significant resource commitments to undertake in the first place. This is not to say that only expensive solutions exist to the problems facing the industry, but that the permutations that currently result in low-cost fashion make them ill-equipped to handle the sustainable initiatives being explored by leaders like Nike and Eileen Fisher.

As labour and material expenses increase - and if the Millennial generation’s reverence for the environment, concern for social welfare and increasing distaste for the glorification of consumerism remains high¹ - the low-cost pricing strategies relied upon by fast fashion and mainstream companies could become increasingly inoperable. Rather than waiting to be forced to change (or risk being left behind by the new paradigm), perhaps there is something to be learned from those companies forging more sustainable pathways in the present.

¹ “Young & Rubicam’s brand attribute survey in 2009 of 2,300 adults found that a majority of Millennials belonged to a segment labelled ‘Spend Shifters.’ Not only did three-fourths of the ‘Spend-Shifters’ say they ‘made it a point to buy brands from companies whose values are similar to my own,’ almost all (87.5%) disagreed with the statement that ‘money is the best measure of success.’” (Winograd & Hais, 2014, p. 6).

HOW CHANGE COULD HAPPEN

The following recommendations outline four potential strategies industry leaders might use to transition into more sustainable and responsible business models. The system is far too complex for directives, so rather than precise steps, they consist of guiding principles based on the analysis found within this report.

1. Build Diversity Back Into the Business Model

As previously discussed, many fashion business models generally rely on only one source of revenue generation – the sale of new clothing and accessories. There are certainly reasons for this, but thoughtfully diversifying a company’s offering could open up new sources of revenue without the need for material throughput. As already mentioned, Nike has diversified into technology and data collection (some would say these specific areas are not free of controversy, but they give an idea of what’s possible), while Eileen Fisher has launched a “Lab” store in New York City that offers everything from drop-in sewing lessons, to knitting circles, to Shibori dyeing classes and sweater repair. The company has also fully integrated a clothing take-back program into their business model (Green Eileen, est. 2009), operating two stand-alone stores that sell gently used Eileen Fisher merchandise. Clothing is accepted by mail or in-person, and all profits from their sale go toward programs that support women and girls like the Eleanor Roosevelt Center, Planned Parenthood and Girls Inc.

These examples relate to the exploitation of core strengths within both the above companies (i.e., Nike’s intimate relationship with athletic performance, and Eileen Fisher’s design ethos of clothing longevity). Fast fashion companies could similarly look to their own strengths – the logistical ability to navigate complex supply chain networks, for example – to diversify into business-to-business (B2B) activities that make full use of fabric remnants; a potential new revenue source that reduces waste in the process.

2. Focus on the Experience of Fashion

A cursory online search of “experience vs. stuff” brings up a wealth of articles, reports, and blog posts about how experiences matter more than physical things. Fashion obviously exists squarely in the physical and material world, but it also holds a unique position in the world of symbols and memories. Expanding on the prior recommendation, it seems feasible that companies could further diversify their offerings by tapping into the non-material (or at least less material intensive) experience of fashion.

Chanel, for example, has begun to release detailed “making-of” videos documenting the painstakingly beautiful techniques that go into the couture garments. Pinterest, meanwhile, is filled with examples not only of garments to be purchased, but also images concerned primarily with the details that can turn fashion into an artform – textures, embroidery, methods of construction, etc. Providing customers with the experience of fashion – by diversifying into accessible fashion education, for example, or classes that focus on personal styling, composition, branding, etc. could open up new avenues for less materially intensive profit generation.

“Fashion tourism” that connects people to the people, land and animals at the heart of a company’s clothing could provide another way to diversify a brand’s offerings without the need for increased consumption. Such intimate exposure is quite obviously not possible for many companies in their present state, but could be considered by those on the leading edge of sustainable business practices, especially ones who focus on local manufacturing (Levi’s being one such example) or those like Chanel who support the work of traditional craftspeople through their acquisitions of eleven *savoir-faire* maisons under the umbrella subsidiary Paraffection, meaning “for love” (Mellery-Pratt, 2015).

3. Use Efficiency as a Catalyst for Sustainable Initiatives & Innovation

Touched on previously, this recommendation is based on actual examples of business models that have adopted such strategies. The Case Study in Section 4 described clothing company tonlé’s use of remnant fabrics to build a negative-waste business model that fuels meaningful employment compensated with a living wage. Nike also uses waste reduction savings to fund its sustainable initiatives, while California-based clothing companies like Everlane and Reformation both choose to sell almost exclusively online in order to reduce costs and finance the use of, for example, high quality materials and/or responsible local manufacturing. By combining efficiency gains with a higher purpose, companies can make strides toward deeper levels of sustainability while maintaining financial viability.

It can also inspire new ways of viewing things like waste in the production process. As discussed on p. 43, shifting from a perspective where waste is viewed as “bad” to one in which it is viewed as “fuel” or provocation for new activities could result in interesting new business model loops that work symbiotically to make use of all resources.

4. Seek Out Opportunities to be Open and Collaborative

Intellectual property licensing in fashion design has limited scope due to its classification as a utilitarian object (Blakely, 2010). Some see this as a problem to be fixed, but it might also hint at an effective way to develop industry-wide sustainable practices. If it’s not possible to copyright, why not copyleft?

The GreenXchange (See p. 47) is one concrete example of collaborative open innovation in practice, as are conferences like the Copenhagen Fashion Summit, where industry leaders and emerging practitioners meet to share research, best practices, and visions for the future. Levelling the playing field is essential to shifting the industry toward responsible resource management (this is because unless everyone complies, competitors have little incentive to “play by the rules”), and those who wish to see change happen have the most incentive to make it so. Joining forces could reduce the barriers to innovation, expedite the process of change, and perhaps even build important leverage for lobbying governments to enact binding legislation.

On a smaller scale, a spirit of openness could also create untapped opportunities for new revenue sources. One example of a strong copyleft attitude in the world of design can be found on the popular website DesignLoveFest.com, created and maintained by blogger Bri Emery. Instead of holding her design “secrets” close to her chest, Emery has catalyzed on others’ love for her personal style and aesthetic by hosting design workshops for fellow bloggers where she teaches the basics of Photoshop image manipulation, composition, etc. In an environment where competing blogs can emerge literally overnight, she chooses to embrace and support the blogging community, and by doing so has found a viable revenue source. The courses regularly sell out, and have been hosted in over 20 cities in 6 different countries and 4 continents.

Industry leaders too might begin to explore how their core strengths could be in service of the greater whole – perhaps collaboratively developing new systems or technologies that support the innovative work of smaller players. Examples of what this might entail will be explored further on p. 58.

Speculative Model 1: Wildfire

Description

Inspired by the regenerative growth caused by the seemingly destructive force of wildfire, this speculative model envisions a venture where the fabric remnants of one season's collection act as the foundation (and metaphorical "spark") for regenerative designs, simultaneously reducing waste and creating meaningful work in the process. In this model, a "sister" organization to the original producer of the remnants would be created to make use of the fabric, up-cycling it into smaller items like accessories, home-ware, or even public art.

Remarkable organizations like Fine Cell Work in the UK support the rehabilitation and care of inmates at prisons by offering them training in, and remuneration for the production of fine needlepoint cushions and quilts. This model's smaller sister venture could likewise make use of the remnant fabric (ostensibly a free resource) by partnering with inmates as a way to provide them with meaningful training, financial support for their family members, and productive activities to fill the many hours of idle time that characterize prison life. Inmates could be shown intricate techniques like hand weaving, quilting, etc. by local artisans, and create pieces from the recycled remnants based on patterns designed by the sister company, or even visiting artists. All proceeds of the sale of the produced pieces could go toward a fund that supports inmates upon their release from prison.

Rationale

By making use of an untapped resource for community-based activities, waste is given new life as a meaningful catalyst for learning, creative release and rehabilitation.

Principles

- Overlapping seasons - one season's remnants become the building blocks of further designs/activities
- Use efficiency gains (waste reduction) to fuel sustainable practices

Emergent Examples

- Fine Cell Work - a social enterprise based in the UK that "trains prisoners in paid, skilled, creative needlework undertaken in the long hours spent in their cells to foster hope, discipline and self-esteem."
- Textile designer and artist Dana Barnes – see Fig. 33. Note: image has been included as inspiration for the types of projects that could be pursued by Wildfire. Unspun is Barnes' personal work and is not affiliated with any form of rehabilitation program.
- Tonlé – see Case Study on p. 42.
- Maison Martin Margiela's recycled fashion

Fig. 33 | UNSPUN: Tangled and Fused exhibition by artist Dana Barnes (Source: <http://www.souledobjects.com/>)



Smaller ethical and sustainable players may not be equipped to immediately compete on the same scale as industry leaders, but their size often comes as a distinct advantage while pursuing more radical forms of sustainable innovation that experiment on the edges of what a post-industrial future might look like. This section will examine how their experimentation – and resistance to the status quo – could spur greater change in the long term.

RESISTANCE TO THE STATUS QUO

“We live in capitalism, its power seems inescapable – but then, so did the divine right of kings. Any human power can be resisted and changed by human beings. Resistance and change often begin in art.”

- Author Ursula K Le Guin in her acceptance speech at the 2014 National Book Awards

As noted in Section 1, resistance to change is clearly a large hurdle to transitioning into a more hopeful future, but as many of the small, beautiful and poetic ideas (such as those mentioned in the Environmental Scan) have shown, there is already a growing resistance to the status quo. Smaller players with more adaptable infrastructures, purpose-driven business models and strong digital literacy have begun to leverage their unique perspectives to shift the commercial fashion landscape toward a more diverse ecosystem of players, embracing accessible and affordable technologies to scale their production and connect with buyers (Carbonaro & Votava, 2009, p. 39).

Small-scale projects and businesses - be they start-ups, forms of critical artistic commentary, or academic research - play an important role in challenging the dominant system. These types of initiatives can not only put pressure on larger brands to change by increasing the

scope of available alternatives (and attracting customers along the way), but also by threatening the certainty of current leaders' roles in the new paradigm. Von Busch, et al. look to the principles of Tai Chi to inform how resistance to the “fashion industrial complex” might proceed:

“In this strategy you take the (fashion) ‘world as it is’, as a starting point... You don’t exclude yourself from ‘the system’, or the system from you. You admit its power, you examine and research it also in yourself (the intrapsychic/internalization level). As in Tai Chi, you take the movements of the dominant power as a starting point. First you give in, then by receiving and examining its energy you start working with it, to get to know and feel the force and energy of the movement. Then you use this to go to another direction, or to transform the movement.”

(von Busch, et al., 2014, p. 85)

By leveraging their strengths as nimble, adaptable enterprises and initiatives, smaller players could be in a better position to influence the system, moving it in a more sustainable and responsible direction.

HCP VS. LCP

Princen, et al. explain that modern industrial forces, as well as technical innovations and institutional mechanisms have distorted economic development in the increasingly narrow direction of increased consumption, leading to markets primarily dominated by commodities (Princen et al., 2002, p. 69). Such a myopic view of what's possible has in turn limited the development of low commodity potential (LCP) goods and services - that is, those involving direct or cooperative social and ecological relations - that could meet our needs in less resource-intensive ways. With enough resistance, perhaps a new ecosystem of alternatives could emerge - one with a more rich and diverse range of possibilities and alternatives, not just those with high commodity potential .

Such an economic ecosystem of high, medium and low commodity potential activities might also represent fast, medium and slow speed systems that work in concert with one another to serve the greater whole of a sustainable system. Instead of operating as separate layers as is shown in Brand's Pace Layering diagram (p. 27), perhaps the different layers and speeds of such a system could work in more interconnected ways, with a network of industry leaders, smaller players and individuals contributing their specific strengths in ways that allow fashion to be what it is meant to be – a deep expression of the diverse human experience.

Table 6 is an attempt to imagine what these high, medium and low commodity potential goods and services might look like in a post-industrial fashion ecosystem.

High Commodity Potential (FAST SYSTEMS)
Products involving distant or abstract relations between producer & consumer
Closed loop textile production systems
Additive manufacturing of clothing (i.e., at-home closed loop 3D printing system)
Zero-waste artificially intelligent (A.I.) garment manufacturing (i.e., robots)
Material innovation research (i.e., lab-grown textiles)
Medium Commodity Potential (MEDIUM-SPEED SYSTEMS)
Products involving direct relations between producer & consumer
Hyper-local fibre cultivation (i.e., urban vertical farming) & textile production
Digital facilitation of mass-bespoke design services/tailoring
Haute couture as artistic commentary (i.e., Iris Van Herpen)
True democratization of fashion design (i.e., <i>Squarespace</i> for clothing)
'Planet Earth'-style fashion documentaries
Low Commodity Potential (SLOW SYSTEMS)
Products involving direct or cooperative social & ecological relations
Hyper-local fashion trends
Membership-based fashion collectives/cooperatives (farm to closet)
Wearer-driven design and style exploration groups (i.e., book clubs for fashion)
Curated 'collective closet' services for sharing/swapping fashion (see p. 61)
Inter-generational knowledge transfer groups (traditional techniques preserved while embracing/incorporating new technologies)

Table 6 | Fashion's high, medium and low commodity potentials, Adapted from Princen, et al., 2002

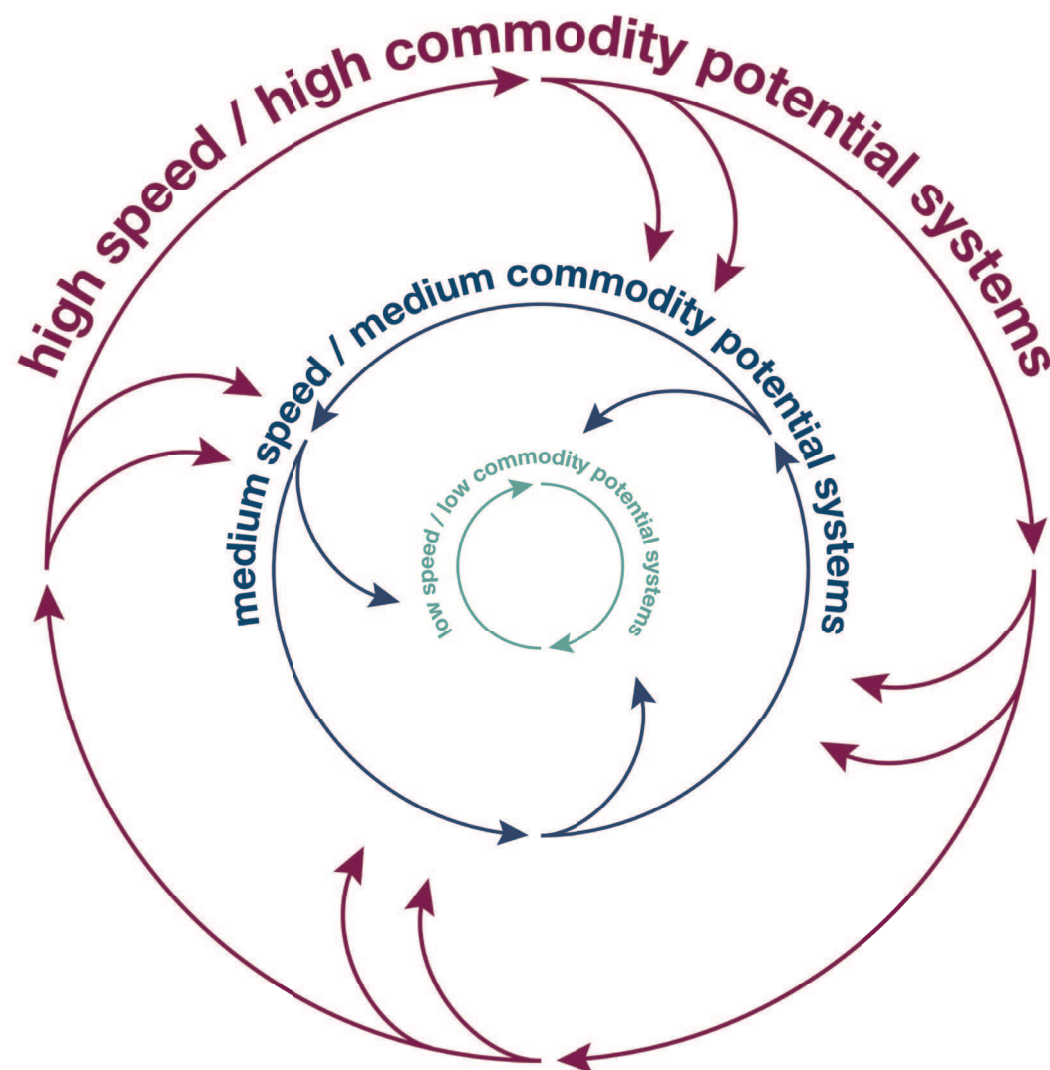


Fig 34 | An economic ecosystem with high, medium and low speed elements

As shown above, each “level” of speed could potentially support the activities of another – for example, HCP services like closed loop textile production systems might feed mass-bespoke design services (MCP), which could then be purchased and shared via a location-based LCP “collective closet” sharing system. Similarly, material innovation researchers might work collaboratively with haute couturiers, who then inspire ideas that manifest in hyper-local fashion trends (or vice versa).

The mainstream system currently dominating mass-market fashion may not be “disrupted” overnight, but fuelled by the innovative resistance of experimental and agile smaller players, a new, more interdependent and symbiotic network could emerge – one that embraces multiple speeds of activities in support of a diverse range of sustainable enterprises.

Speculative Model 2: Democratia

Description

In the field of architecture, a careful attention to boundaries and context often results in the best, most beautiful and beloved designs. Architects who take cues from the physical constraints of a site to inform their design innovations (rather than designing in a metaphorical vacuum) tend to find inspiration from its edges, producing work better able to withstand the tests of time. This scenario imagines a business model where designers, regardless of their background or training, are encouraged to take inspiration from what Jackson calls the “bounded capabilities” of our finite planet (Jackson, 2011, p. 45) to collaboratively produce garments for an annual set of limited release collections available for purchase.

This model takes inspiration from the popular *Quirky* platform, which aims to democratize the invention process by allowing aspiring inventors and designers to submit their ideas and, if successful, have them produced and sold exclusively online. Each collection in this scenario would effectively be crowd-sourced from around the world, but produced altogether in a local factory wherever possible. Instead of designing based on data, trend forecasts and artificially invented seasons, each collection could challenge designers to submit beautiful designs that address a specific theme or issue, i.e., making an ensemble perfect for stargazing, creating clothing never meant to be washed, designing a collection for introverts, etc. Instead of asking designers, “what will sell?” this proposition asks them to consider, “What’s possible within these boundaries?”

In addition to traditional clothing design, designers might also contribute “making of” videos that explain their process, allowing potential buyers to connect to the artistic process of fashion design and increase the perceived value of the garments produced. The limited-edition collections could be released on an as-ready basis, taking seasons into consideration but eliminating the pressure to follow the gruelling mainstream fashion calendar.

This model could also broaden the boundaries of what “fashion” means by allowing designers to also submit ideas for experiences, services, etc. Buyers could similarly have multiple options for how to “own” pieces from the collection. For example, they might buy the ready-made garment, purchase a pattern and instructions for self-construction, or even a high-quality print of the designer’s sketch of the garment. A membership system could also be established to allow individuals to pay a small fee to have first access to the limited-release collection and suggest themes for upcoming collections.

Rationale

Crowdsourcing designs for a themed collection gives unknown designers the chance to gain a wider audience for their work, while reducing the significant costs associated with running a full-service design studio. By choosing themes that embrace purpose-driven concepts, it also invites designers to spend time contemplating the story and memories that could be created through their work.



Fig. 35 | Thematic mood board (Source: Nicola Holtkamp, www.flickr.com/)

Principles

- Collect fashion, don't consume it
- Support young design innovation
- Explore broad definitions of sustainable fashion

Emergent Examples

- Quirky - online design firm making invention more accessible
- Herriott Grace - father-daughter studio producing one-off handmade design pieces sold in extremely limited quantities
- The Local Wisdom Project – see p. 48
- Architect Glenn Murcutt - 2002 Pritzker Prize winner for his environmentally sensitive design practice
- Not Just A Label – online marketplace supporting independent fashion designers

INDIVIDUALS

What about a bottom-up revolution? Though we may never return to sewing our own clothes as the technology exists today, individuals might begin to demand a system that does less harm while fulfilling their desire for authentic forms of expression. Material efficiency improvements are important, but they tend to further mechanize fashion rather than humanize it. This next section will explore the counterintuitive nature of efficiency as a leverage point for change within the fashion system.

LEVERAGE POINTS

How might we move toward a more hopeful future, if not through logic and efficiency? In her influential paper *Leverage Points: Places to Intervene in a System*, scientist and preeminent systems thinker Donella Meadows explains that within complex systems exist leverage points - that is, the places “where a small shift in one thing can produce big changes in everything” (Meadows, 1999, p. 1). Leverage points, she explains, are points of power. As Meadows’ colleague, systems scientist Jay Forrester explains however, once we find them we tend to push with all our might - in the wrong direction. This is because complex systems and their leverage points are often not intuitive. Or if they are, “we intuitively use them backward, systematically worsening whatever problems we are trying to solve” (Meadows, 1999, p. 2). Growth is Forrester’s classic example of this counter intuition: pushing our economies to expand at all costs has ended up causing many of the problems they were meant to solve (Meadows, 1999, p. 1).

What if efforts in the garment industry to improve sustainability were making the same mistake - pushing on the correct leverage point, but in the exact wrong direction? What if, instead of a more efficient system, what we need is one that also supports activities that are less so? That is, activities that embrace the messy, the irrational and the eccentric, the “resolute inefficiency” (Malamud Smith, 2013) of the creative process - the human? Perhaps such a system, despite its inefficiencies, could tap into the consciousness and empathy we have lost but desperately need.

IN PRAISE OF WHAT’S HARD

Fashion is by nature a reflection of our humanness, but as clothing becomes more and more commoditized, that humanity is displaced by goals of mass consumption. In an interview with Professor von Busch, he expressed his concern about the effect readily accessible and ever-cheaper products have on our ability to imagine alternative futures: “We seek the least friction, and consumer society offers it to us, especially in the so-called democratic consumer societies. Things are getting cheaper and cheaper, which also means that we’re funnelling so much more of our energy into these cheaper and more accessible ways, and things that have friction now seem so much harder to us.” The system is effectively “greased” by efficiency, but what if we were to embrace what is hard? von Busch believes fashion has a unique role as a social mediator, and the potential to communicate our highest values and desires, should we let it:

“I think fashion is unique in the sense that it speaks about the time. It speaks about me in a certain time, but it’s also something I wear all the time. It’s something I need to have socially. It’s also this social interface or social skin, which is different from the other stuff we communicate with or the other stuff we consume. It’s tangible, but also an image – intangible. A lot of things merge into our clothes. I think that’s why I am so challenged and also so dedicated, because I feel this is an interface that could be used in a much wider sense, and it could speak so much more about society and about the political issues and what it means to be a human in a social setting.”

- Personal interview with Dr. Otto von Busch

Along with becoming a more powerful tool for social expression and connection, by engaging with fashion from an active mindset, von Busch believes we could also cultivate a sense of mindfulness that extends beyond the realm of cloth and adornment: “I think the way we engage with clothes – it can teach us things, too. If I train to care about my stuff, I may also acquire a perspective on the world – a general consciousness of being that also takes care of other people, and takes care of society at large” (Personal Interview). In a similar vein, author Kate Black, founder of the popular eco-fashion blog Magnifeco, believes this heightened consciousness could positively impact the industry’s consumption problem because, “Ethical consumers, or conscious consumers, buy less. We just do, because we don’t mind spending a little bit more money, and we start to get a little nervous about the discard and the afterlife of products, because we’re tied into the whole lifecycle” (Personal Interview).

COMPETENCE, RELATEDNESS AND AUTONOMY

How might we make fashion more human again? To do so, it is worth examining the foundational needs driving our most intrinsically motivated behaviours. Edward L. Deci and Richard M. Ryan, co-developers of the Self-Determination Theory (SDT), maintain that humans are intrinsically motivated by three innate needs: competence, relatedness and autonomy. More specifically, Deci and Ryan define competence as the need to “engage optimal challenges and experience mastery or effectance in the physical and social worlds,” relatedness as the need to “seek attachments and experience feelings of security, belongingness, and intimacy with others,” and autonomy as the need to “self-organize and regulate one’s own behavior (and avoid heteronomous control), which includes the tendency to work toward inner coherence and integration among regulatory demands and goals” (Deci & Ryan, 2000, p. 252). Under appropriate conditions, they argue, these three basic psychological needs serve “to guide people toward more competent, vital, and socially integrated forms of behavior” (Deci & Ryan, 2000, p. 252). Deci and Ryan believe these fundamental needs span cultural, geographical, and demographical boundaries (Deci & Ryan, 2000, p. 252), and that they are essential to fostering long-term psychological health and well-being. All three needs must be met, however - one or two are not sufficient to achieve these benefits (Deci & Ryan, 2000, p. 229).

When looked at through the lens of SDT, it would be difficult to say that mainstream fashion commerce is effectively meeting these intrinsic needs, but there are many possibilities for how it might occur. For example, it seems possible that the avid interest of those who most closely ascribe to commercialized fashion cycles could be channelled into healthier, more sustainable forms of goal-seeking behaviour - behaviour that more sufficiently meets their intrinsic needs for competence, relatedness and autonomy. Challenging activities that promote personal growth are, after all, characterized by novelty (Deci & Ryan, 2000, p. 233) - fashion’s partner in crime!

One important final note about SDT relates to our need for autonomy, and its ability to help internalize cultural values. As Deci and Ryan note, autonomy does not imply a need for separation or independence from others. Rather, it involves “being volitional, acting from one’s integrated sense of self, and endorsing one’s actions” (Deci & Ryan, 2000, p. 242). Through their research, Deci and Ryan have uncovered an important link between an individual’s evolved capacity for autonomy and their ability to both regulate their actions in accordance with their needs and capacities, and avoid maladaptive behaviours that do not serve their intrinsic needs (Deci & Ryan, 2000, p. 254).

According to design consultant David Shah, “...fashion can never be sustainable unless the public demands it, and not enough consumers are doing so. This is the fashion world, and whatever the public wants, the stores give. Unfortunately fashion retailing is not about education but about driving a bandwagon” (Black [Ed.], 2013, p.219). Perhaps projects that engender a deeper sense of autonomy could push the bandwagon in a new direction by helping people resist the extrinsic motivations and pressures that currently perpetuate the status quo (i.e., advertising, celebrity endorsements, social media, etc.). That is, a strong sense of autonomy could create more space for thoughtful reflection and decision-making, and help push us toward the more hopeful future.

In the speculative model that follows, the concepts of SDT are put to action through a hands-on DIY platform.

Speculative Model 3: The Self Assembly

Description

Sewing and construction techniques used by the “petites-mains” of haute couture houses, though delicate and time-consuming, are fairly simple to master (Schaeffer, 2011, p. 2). This scenario imagines an online open-knowledge platform where people can purchase “kits” for creating haute couture-style embroidered clothing, but also contribute their own ideas for designs that can be shared freely with other community members.

Varying levels of constructions would be made available, in a range of complexities and time commitments. For example, the offerings could include:

1. Garments to be constructed “from scratch” - kit includes patterns, fabric, thread, instructions, online support and community groups, etc. Meant for garment to be embroidered upon, slowly building up layers of meaning over time (High complexity, high time commitment)
2. Appliqué-style embroidery meant to be completed using an embroidery hoop and added to existing clothing like a tattoo that grows over time (Varying complexity and time commitment, depending on style chosen) - meant to increase the longevity of and give new life to older garments
3. “Open Design” digitized patterns submitted by users to be shared with others; available as a free download with instructions; materials to be purchased separately (Varying complexity and time commitment)

The “open design” patterns in particular have the potential to support bottom-up led innovations, experimentations and trends free from the pressures of consumption and profit, where new forms of “beauty” (jolie-laide or otherwise) could emerge. Like the ‘stitch-n-bitch’ knitting circles that already exist, the model could also facilitate user-led clubs and “laboratories” where individuals can ask for help, share their progress and even experimental techniques, perhaps in tandem with the many local “makerspaces” being established in cities and communities.

Rationale

Rather than producing fully completed garments, The Self-Assembly gives significantly more of the decision-making power over to the people who will be crafting and wearing the clothing. It also views clothing and design as a work in progress rather than something that must never be modified - living instead of stagnant. By completing the time-consuming work themselves, individuals are able to create garments they normally might not be able to afford, but also to give additional life to beloved but worn pieces or experiment on clothing that has never felt quite right (in both cases, saving garments from disposal).

It also has the potential to build a community of fashion enthusiasts who are just as concerned with the process of creation as the final products themselves – lengthening and enhancing the experience of fashion for those who partake in it, and fostering a spirit of innovation and experimentation. More pragmatically, research has revealed that people are willing to pay more for products they have had a hand in making - dubbed the “IKEA effect” (Norton, et al., 2012) - lending credence to the model’s financial viability.

Principles

- Couture-It-Yourself - engage people in the design process through the act of making, or by allowing them to share their own designs with others
- “Living Fashion” - clothing that evolves over time
- Increasing clothing attachment and longevity through doing

Emergent Examples

- Couture How-To Videos - designers from Elsa Schiaparelli to the House of Chanel have begun to document and share the techniques of the “petites-mains” who construct their collections
- The Cutting Class blog - run by an anonymous author, this blog deconstructs the pattern-making techniques from the runway photos of high-fashion design houses
- Knit Pro - a rebellious project that uses open-knowledge software to translate digital images into knit, crochet, needlepoint and cross-stitch patterns
- Wool and the Gang – online “community of makers” that sell knit clothing in both ready-made and DIY kit-based formats



Fig. 41 | Hand embroidery work by Anna Jane Searle (Source: <https://www.flickr.com>)

There is no one grand solution to move us from the First to the Third Horizon. It took many small steps to get us to the current situation, and it will take many more hopeful gestures to move us to the preferable future. Many of the industry leaders that rely on fast fashion principles are bound by the symbiotic elements of low price, high speed and quick turnover could find it difficult to make more than small material improvements and efficiency gains toward more sustainable business practices, but there are still potential pathways toward transformation if undertaken with purpose and earnestness. Increasing labour and resource prices may force business models to change, it could also result in a more diverse ecosystem of businesses and initiatives that do less harm while re-instilling the pleasure and potential for magic latent within this age-old expression of what makes us human.

CONCLUSION & NEXT STEPS

This research project set out to answer the question, “In an era of passive over-consumption, how might we shift the garment industry toward a future where fashion is reclaimed as a tool for meaningful self-expression and identity making?” To do so, Curry & Hodgson’s version of the Three Horizons model was used as an analytical framework to closely examine the First, Third and then Second Horizons of the garment industry and its system of fashion commerce. It was also used to understand the psychology and social significance of fashion and dress, which existed far before the advent of its most commoditized modern incarnation.

Driven in large part by the wider global narratives of consumer capitalism and exponential growth, the tremendous complexity of the global garment industry is daunting to consider. When defined by the rules of the status quo, the challenges facing the industry can seem insurmountable, and transformation to a new way of being nearly impossible. And yet, for some the hopeful future seems not only plausible but possible, with many artists, activists, designers, entrepreneurs, and even some industry leaders already striving toward it in diverse and ingenious ways.

Through the systematic analysis of the garment industry’s Three Horizons, light was shed on the events, patterns of behaviour, systems structures, and mental models that drive the current status quo, but also what could come to define the hopeful future. A brief summary of these can be found in Table 7.

How might we move from our current reality to a more hopeful future? One potential pathway might involve reimagining the industry into fast, medium and slow systems that work symbiotically in support of a greater sustainable whole and cultivates that which makes fashion a vital part of our collective human identity – a tool for meaningful and authentic self-expression

	STATUS QUO	HOPEFUL FUTURE
Events What is happening?	Exploitation, pollution & waste, overconsumption, anxiety, loss of design diversity	Meaningful employment, healthy ecosystems, agency and participation
Patterns of Behaviour What trends are there over time?	Opaque supply chains, cost externalizations, distancing, commoditization	waste as catalyst (value loops), diverse ecosystem of players
Systems Structure How are the parts related? What influences the patterns?	Growth paradigm, consumer capitalism, individualistic societies	Economies of culture, growth of ideas not material throughput, care for the collective
Mental Models What values, assumptions and beliefs shape the system?	Domination and control over natural world, frontier economies	Harmony with the natural world, bounded capabilities, “overview effect” as societal narrative

Table 7 | Levels of thinking, based on The Iceberg Model of inquiry (See p. 1)

and identity making. It could involve looking at what companies, designers and individuals do best, and channeling them in different directions.

Fast fashion leaders, for example, might reimagine themselves as experts in creating value loops – finding ways to ensure the system is as efficient and waste-less as possible (Fast systems). In doing so these leaders could support smaller players to use their flexibility and social consciousness to foster authentic expressions of creativity, experimentation and novelty to bring out the best in fashion (medium-speed systems, supported by industry leaders’ value loops). Through the work and ventures of smaller players, individuals could be given vital roles in the process of fashion creation, giving them agency to create meaningful reflections of themselves and the world. This is not to say the above scenario is the only possible future, but instead just one permutation of a system where mul-

tiple speeds work in service of a larger sustainable whole. It might be possible for a larger enterprise to combine all three speeds into one symbiotic business model, creating its own sustainable “ecosystem” of activities.

Instead of exponential economic growth, we might begin to strive for economic equilibrium – that is, economic systems that respect the “bounded capabilities of our planet. Instead of material throughput in the name of commodification, we might focus on cultural throughput in support of art, culture, social connection, beauty and nature. In this type of future, fashion could transform into the high expression of humanity it is meant to be.

NEXT STEPS

To make this research project more palatable to a general audience, it will be synthesized into shorter summaries that highlight implications, and direct readers to more in-depth analysis when desired. The url <http://www.fashionforafiniteplanet.com> has been reserved for this purpose, and is anticipated to be completed by June 2015. In addition, further research funding could be sought to expand each section, either as a series of peer-reviewed research papers, or as a book.

There are also many possible avenues for extending and advancing this research. Based on the report's analysis and identification of leverage points for change within the current system of fashion commerce, further systems diagrams could be developed to represent emerging and speculative counter movements to the status quo. For example, in contrast to the paradigm of exponential growth (See p. 8), what could fuel a paradigm of economic equilibrium or non-material growth? Instead of the escalation archetype currently driving low-cost, high turnover fashion, what sort of system could support renewal while reducing the need for continuous consumption of material resources?

More in-depth speculative business models could also be developed to delineate their practical, financial and logistical viabilities. These models could expand the idea of a sustainable fashion "ecosystem" with symbiotic high, medium and low speed/commodity potential systems, which could be projected and mapped, perhaps alongside speculative design installations that tangibly illustrate what those futures might entail.

It is the sincere hope of the author that this research might be used a foundation for further explorations by students and researchers, and is shared under Creative Commons (CC) licensing to facilitate this possibility.

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APPENDIX A: FAST FASHION VALUE PROPOSITION

For an in-depth explanation of the Value Proposition Canvas, refer to *Business Model Generation* by Alexander Osterwalder and Yves Pigneur.

CUSTOMER			BRAND VALUE PROPOSITION
Customer Jobs			
public “armor” / confidence	---	>	the dream of achieving one’s ideal self
expressing/communicating identity	---	>	impression of choice; new styles every few weeks
being viewed as ‘on trend’	---	>	“interpretations” of popular designers’ creations
fit in with peers	---	>	affordable & accessible clothing
Pains			
limited disposable income	---	>	affordable - very low prices; buy many rather than just a few
fear of social judgement / loss of status	---	>	high accessibility (i.e., malls, grocery stores, online); ease of following trends
Gains			
desire to feel beautiful/attractive	---	>	opportunity to wear fashionable, “designer” styles
status among peers (being perceived as fashionable)	---	>	styles on runway/celebrities are almost immediately available to regular people
desire for novelty	---	>	“update” wardrobe on a regular basis; thrill of the hunt/bargain
communicate identity	---	>	buy self-expression, identity, conformity
love of adornment, style	---	>	myriad styles available at all times
fun; enjoyable experience	---	>	accessible “retail therapy”

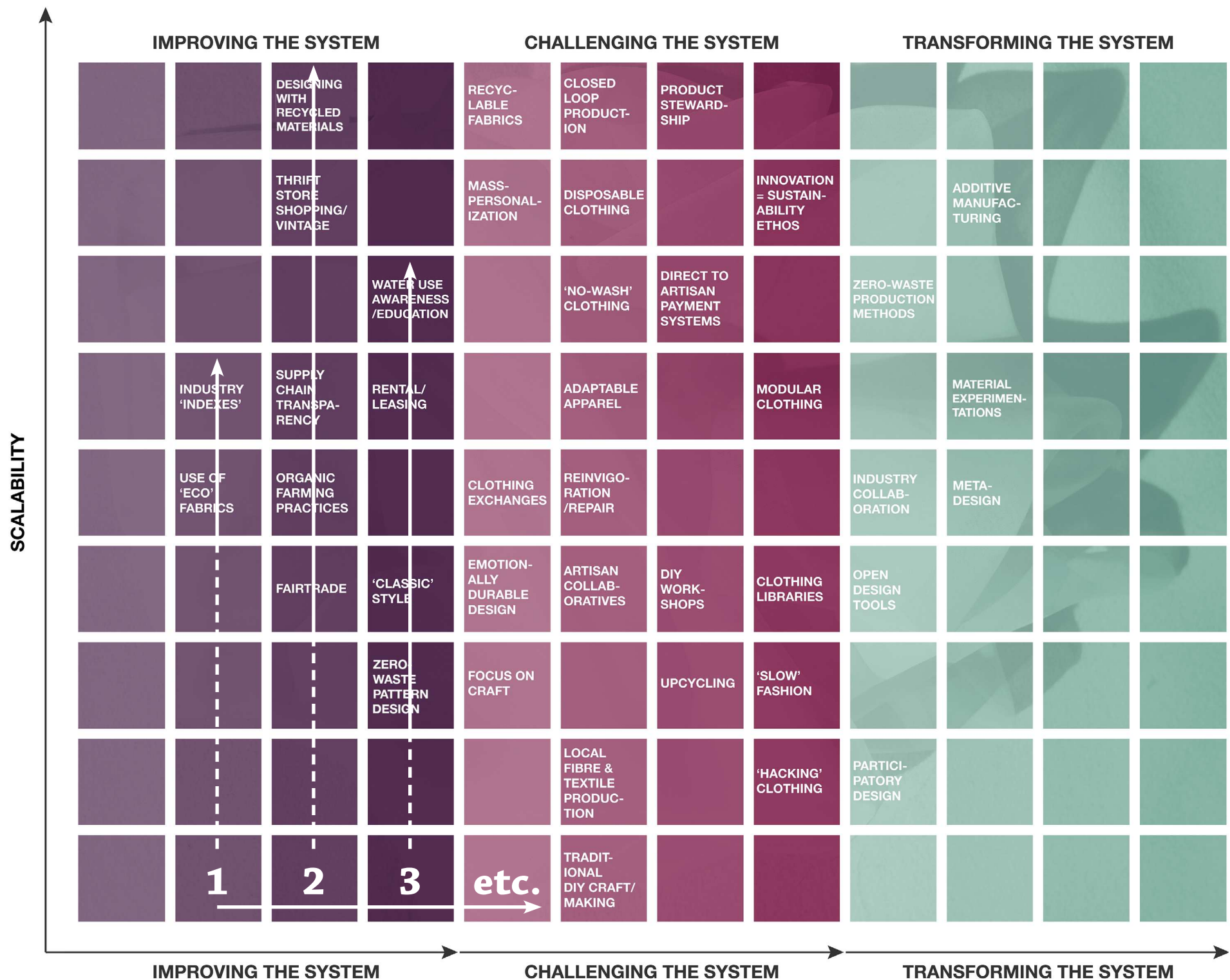
APPENDIX B: BUSINESS MODEL CANVAS: FAST FASHION (GENERIC)

For an in-depth explanation of the Business Model Canvas, refer to *Business Model Generation* by Alexander Osterwalder and Yves Pigneur.

Key Partnerships		Key Activities	Value Proposition	Customer Relationships	Customer Segments
celebrity designers celebrities wearing brand bloggers & haulers editors (magazine product placement)		high-speed design turnover sourcing lowest cost for manufacturing branding data-based trend analysis photoshoots & image building planned obsolescence	affordable clothing (low prices) designer “interpretations” / fashionable styles new styles every few weeks (always something new to covet) dream of achieving idealized self thrill of the ‘hunt’/ bargain impression of choice easily buy self-expression, identity, conformity high accessibility	FOMO as customer retention strategy traditional retail seller-buyer relationship (limited interaction) customer acquisition: brand social media pages	women (mainly young) who follow fashion trends price conscious (limited disposable income) willing to sacrifice quality for quantity novelty-seeking motivated by fear of social judgement; status conscious anxiety/insecurity about appearance (image conscious)
		Key Resources		Channels	
		lowest cost overseas contractors (supply chain) under-regulated environmental & labour laws in contractor nations design team & analysts		bricks & mortar stores (shopping malls & grocery stores) product placement in magazines & blogs print + online ads celebrity partnerships (always picked up by media) social media online e-commerce overseas dist./shipping	
			Cost Structure		
manufacturing costs labour, agents, contractors/factory, materials & finishing, shipping/dist./insurance & duties retail stores staff salaries (corporate + retail) branding (marketing, sponsorships, promotions, etc.) e-commerce celebrity designer fees					Revenue Structure
			new clothing & accessory sales (16% profit margin)		

APPENDIX C: ENVIRONMENTAL SCAN – LIST OF INITIATIVES

The following initiatives make up the environmental scan described on p. 40, and found in an interactive map format at <http://www.fashionforafiniteplanet.com/environmental-scan>. It is an attempt to classify different initiatives based on their potential to transform the fashion system and their scalability. The placement of the initiatives are relative, not absolute. They are listed in order of scalability, starting with Improving the System, as indicated below:



IMPROVING THE SYSTEM

Use of 'Eco' Fabrics

Type of Initiative: Material

Example: Use of Tencel, Organic Cotton, Hemp, Bamboo, etc.

PROS	CONS
can decrease amount of chemicals use in fibre production	only considers one aspect of clothing lifecycle
doesn't question system or patterns of consumption	

Industry Indexes

Type of Initiative: Supply Chain Improvement; Tracking/Accountability

Example: Nike's Considered Design Index
- <http://www.nikebiz.com/crreport/content/environment/4-1-1-product-design.php?cat=product-design>
Higg Index - <http://www.apparelcoalition.org/higgindex/>

PROS	CONS
increases accountability	mainly concerned with improvements; doesn't question system itself
companies collectively held to a higher standard	voluntary; little incentive for worst offenders to join
could result in improvements to labour and environmental conditions	

Fairtrade

Type of Initiative: Ethics; Empowering Workers

Example: People Tree - <http://www.peopletree.co.uk/about-us>

PROS	CONS
increases transparency; creates external standards to follow	voluntary
workers fairly compensated and treated; supports artisans	

Organic/Environmental Farming Practices

Type of Initiative: Lowering Impacts; Traditional Techniques

Example: Sustainable Cotton Project (Uses Cleaner Cotton™, not organic) - <http://www.sustainablecotton.org/>

PROS	CONS
decreases impact on environment	can be expensive
better for health of farm workers and surrounding community	still must compete against conventional growers

Supply Chain Transparency

Type of Initiative: Supply Chain Improvement; Tracking/Accountability

Example: Everlane – <http://www.everlane.com>
Patagonia's Traceable Down Initiative - <http://www.patagonia.com/ca/traceable-down>
Honest by - <http://www.honestby.com/>

PROS	CONS
increases accountability for ethics and responsible practices	doesn't (necessarily) question the system or consumption habits
potential for further material improvements	people don't make rational choices on symbolic purchases like clothing (could potentially fall on deaf ears)

Thrift-store Shopping / Vintage

Type of Initiative: Clothing Longevity

Example: Kind Exchange, Toronto - <http://kindexchange.ca/>
Rewind Vintage, Toronto - <https://www.facebook.com/rewindcouture revisited>

PROS	CONS
decreases material consumption	affected by/tied to current system (i.e., value decreases if fed by low-quality clothing)
decreases impact on waste stream	

Designing with Recycled Materials

Type of Initiative: Material Innovation; Technological Advancements

Example: PET fleece (recycled polyester from plastic bottles) - <http://www.patagonia.com/us/patagonia.go?assetid=2791>

PROS	CONS
decreases impact on waste stream	does not question why plastic bottles are used in the first place
moves closer to closed loop production	can have unintended consequences (i.e., micro plastics in water from washing)

Zero Waste Pattern-Cutting

Type of Initiative: Material Efficiencies

Example: Zero-Waste Kimono Pattern by Holly McQuillan
- <http://hollymcquillan.com/2014/12/07/zero-waste-kimono-pattern-for-download/>
Interview with zero waste designers Titania Inglis and Tara St. James
- <http://ecosalon.com/zero-waste-fashion-touts-an-overabundance-of-style/>

PROS	CONS
decreases waste in production process	designs are limited by boundaries of 2D pattern cutting; could be difficult to achieve wide adoption of techniques
can result in unique design aesthetic	
potential to drive deeper ethos of sustainability	

'Classic' Style

Type of Initiative: Clothing Longevity; Quality

Example: Eileen Fisher design ethos
- http://www.eileenfisher.com/EileenFisher/company/brand/Intersection_of_Timeless.jsp

PROS	CONS
potential to decrease material consumption	limited appeal?
slows cycle of consumption	hard to define
	ignores desire for fashion renewal

Rental / Leasing

Type of Initiative: Product Service System

Example: Rent the Runway - <https://www.renttherunway.com/>

PROS	CONS
potential to decrease consumption of unnecessary clothing	requires critical mass to ensure maximal use
	doesn't guarantee responsible practices in business model (could encourage further race to the bottom in price)

Water Use Awareness / Education

Type of Initiative: Energy Use; Education Campaigns

Example: 3X1 Jeans detailed care instructions - <http://3x1.us/care-instructions>
Water Use it Wisely campaigns - <http://wateruseitwisely.com/100-ways-to-conserve/>

PROS	CONS
reduces energy and water consumption in clothing use phase	doesn't question consumption

CHALLENGING THE SYSTEM

Focus on Craft

Type of Initiative: Quality; Traditional Techniques

Example: Alabama Chanin - <http://alabamachanin.com/>

PROS	CONS
creates narrative behind clothing	often expensive
handcrafting necessarily slows consumption cycles	limited availability; difficult to scale

Emotionally Durable Design

Type of Initiative: Clothing Longevity; Emotional Attachment

Example: People's Design Lab
- <http://www.thepeoplesdesignlab.org.uk/its-about-behaviour-we-need-emotionally-durable-design/>

PROS	CONS
human centered design	debatable if emotional attachment decreases consumption (or does it simply increase personal storage?)
focuses on longevity	

Clothing Exchanges

Type of Initiative: Clothing Longevity; Community

Example: The Clothing Exchange (Aus) - <http://clothingexchange.com.au/index.php#>

PROS	CONS
decreases material consumption	doesn't question modes of production
satiates novelty seeking	hard to guarantee exchange satisfaction
affordable	potentially difficult to compete with fast fashion prices
exists outside mainstream commerce	
decreases impact on waste streams	

Mass Personalization

Type of Initiative: Design Innovation / Technology

Example: MTailor - <https://www.mtailor.com/>

PROS	CONS
potential to establish emotional bond between wearer and garment through perfect fit	technology could easily be co-opted to sell better fitting clothing more quickly

Recyclable Fabrics

Type of Initiative: Material Innovation

Example: Worn Again's chemical textile to textile recycling technology - <http://wornagain.info/>

PROS	CONS
important step toward closed loop production	could result in more consumption (efficiency paradox)
decreases impact on waste stream	

Traditional DIY Craft / Making

Type of Initiative: Traditional Techniques; Wearer Engagement

Example: Wool & the Gang - <http://www.woolandthegang.com/>

PROS	CONS
meaningful engagement in process of making	limited appeal (not everyone wants to sew/knit/etc.) and/or viability
learning and development of skills (intrinsic value fulfillment)	

Local Fibre & Textile Production

Type of Initiative: Local Production; Traditional Techniques

Example: Fibershed, San Geronimo CA - <http://www.fibershed.com/>

PROS	CONS
lowered impact on environment	expensive
reduces distancing effects	requires local knowledge of land
	niche audience?

Artisan Collaboratives

Type of Initiative: Ethics; Empowering Workers; Traditional Techniques

Example: United Nations (UN) Ethical Fashion Initiative - <http://www.ethicalfashioninitiative.org/>

PROS	CONS
empowers artisans	difficult to scale
develops connections between people and groups	

Reinvigoration / Repair

Type of Initiative: Clothing Longevity

Example: Painted's Golden Joinery project - <http://www.paintedseries.com/index.html?section=whatsNew>

PROS	CONS
decreases material consumption	tailors/seamstresses can be hard to find
saves money for wearer	hard to justify repairing fast fashion garments
gives life back to worn clothing	

Adaptable Apparel

Type of Initiative: Design Innovation

Example: Seamly's Versalette - <http://www.seamly.co/pages/the-versalette>

PROS	CONS
potential to decrease material consumption	difficult to guarantee versatility will be used and replace future consumption

'No Wash' Clothing

Type of Initiative: Material Innovation; Education

Example: Wool & Prince's Better Button Down shirt
- <https://www.kickstarter.com/projects/1868906/woolandprince-the-better-button-down-guaranteed?ref=live>

PROS	CONS
reduces energy and water use (a significant post-consumer environmental impact)	does not address issues of consumption

Disposable Clothing

Type of Initiative: Material Innovation; System Innovation

Example: Freitag's F-ABRIC compostable clothing - <http://www.freitag.ch/fabric>

PROS	CONS
less impact on waste streams	biodegradable properties could unintentionally encourage throwaway mentality

Closed-Loop Production

Type of Initiative: System Innovation

Example: Patagonia's Common Threads Recycling Program
- <http://www.thecleanestline.com/2009/03/closing-the-loop-a-report-on-patagonias-common-threads-garment-recycling-program.html>

PROS	CONS
considers entire lifecycle; comprehensive strategy	expensive; hard to justify for some companies when not mandatory
requires commitment by producers	could feed consumption rather than slow it

Upcycling

Type of Initiative: Clothing Longevity

Example: From Somewhere - <http://fromsomewhere.co.uk/>

PROS	CONS
decreases impact on waste streams	time-consuming & labour-intensive; hard to scale
gives life back to worn clothing	

DIY Workshops

Type of Initiative: Agency/Education

Example: The Workroom, Toronto - <http://www.theworkroom.ca/>

PROS	CONS
provides sense of accomplishment	time-consuming
potential to bond with others/build community	will not appeal to everyone

Direct to Artisan Payment Systems

Type of Initiative: Financial Innovation

Example: SOKO - <http://shopsoko.com/pages/about-us>

PROS	CONS
reduces distancing effects between makers and wearers	difficult to scale artisanal production
supports artisan livelihoods	

Product Stewardship

Type of Initiative: System Innovation

Example: Currently theoretical in nature for fashion, although companies like H&M and Eileen Fisher do operate take-back programs

PROS	CONS
if legislated, could force system-wide changes	R&D and legislative organization could take a long time
leaders could gain significant benefits to reputation	could limit parameters of clothing design in the future
	better to re-use than recycle?

'Hacking' Clothing

Type of Initiative: Activism & Education

Example: Hacking Couture - <http://www.hackingcouture.com/>

PROS	CONS
shifts some power back to wearers	difficult to scale
potential to instill sense of accomplishment and agency	limited appeal?
challenges status quo	

'Slow' Fashion

Type of Initiative: Human Centered; Ethos of Consciousness

Example: Not Just a Label - <https://www.notjustalabel.com/editorial/slow-fashion-movement>
Study-NY's Anti-Fashion Calendar - <http://studyny.com/blog/2013/4/5/the-anti-fashion-calendar>

PROS	CONS
reconnects designers and wearers	often more expensive
builds narrative and community	difficult to scale/compete with mainstream fashion commerce
slows cycle of consumption	

Clothing Libraries

Type of Initiative: Clothing Longevity; Community

Example: Klädteket Clothing Library, Sweden - <http://kladoteket.se/>;
<http://artrebels.com/blog/kl%C3%A4dotekets-clothing-library>

PROS	CONS
increases clothing lifespan	limited appeal, especially in individualistic societies; is clothing too intimate to share?
questions idea of clothing as private property	difficult to organize logistics of loans

Modular Clothing

Type of Initiative: Design Innovation; Wearer Engagement

Example: Refinity's Fragmented Textiles project
- <http://www.ecouterre.com/dutch-designers-modular-refinity-clothing-is-like-legos-for-fashion/refinity-click-fold04-2/>
Tanya Heath Convertible Shoes - <http://tanyaheathcanada.com/collections/shoes>

PROS	CONS
potential to satiate desire for novelty	requires wearers to have certain skills (aesthetics, construction, etc.)
potential to decrease material consumption	potentially difficult to scale for some designs

Innovation = Sustainability Ethos

Type of Initiative: System Innovation

Example: Nike's Sustainable Innovation department
- <http://www.nikeresponsibility.com/report/content/chapter/our-sustainability-strategy>

PROS	CONS
potential to create competitive advantage	difficult to implement when competing on price
can work in self-interest of organization	time-intensive; requires company-wide buy-in
comprehensive, purpose-driven	R&D is costly

TRANSFORMING THE SYSTEM

Participatory Design

Type of Initiative: System Innovation; Wearer Engagement

Example: Anja Hirscher's Make{able} Halfway Clothing project - <https://makeable4u.wordpress.com/>
Openwear - <http://openwear.org/>

PROS	CONS
reconnects designer and wearer	limited appeal
wearer can meaningfully engage in the design and construction process	clothing made could be less durable
	difficult for designers to transition to role as facilitator

Open Design Tools

Type of Initiative: Design Innovation; Wearer Engagement

Example: Knit Pro - <http://www.microrevolt.org/knitPro.htm>

PROS	CONS
empowering users to design within a set	limited appeal; not everyone wants to design

Industry Collaboration

Type of Initiative: System Innovation

Example: Nike Green XChange - <http://www.nikebiz.com/crreport/content/environment/4-4-0-case-study-greenxchange.php>

PROS	CONS
mutual benefit of collaboration	difficult to implement in highly competitive environment
collaborative effort to solve issues	

Zero-Waste Production Method

Type of Initiative: System Innovation; Material Efficiencies

Example: Natalia Allen - <http://www.nataliaallen.com/>
tonlé - <http://www.tonledesign.com/>

PROS	CONS
decreases material used in production and/or makes use of remnant fabrics	in some cases, could robots replace garment workers? In others, process is so labour-intensive, it can be difficult to scale
rethinks the system	
uses innovative practices to fuel sustainability	

Meta-Design

Type of Initiative: Design Innovation

Example: Mathilda Tham's call for metadesign - <http://blog.daremag.de/2011/11/fashion-and-sustainability/>
Constrvct - <http://constrvct.com/>

PROS	CONS
facilitates deep user participation and agency	mainly theoretical at present

Material Experimentation

Type of Initiative: Material Innovation

Example: Bio Couture - <http://www.biocouture.co.uk/>

PROS	CONS
ethical alternative to leather	gross factor
challenges assumptions of system	

Additive Manufacturing

Type of Initiative: Design Innovation; System Innovation

Example: Francis Bitonti Studio - <http://www.francisbitonti.com/>

PROS	CONS
reduces need for surplus stock; can be produced on-demand	could fuel culture of instant gratification
gives users control over production	debatable if practice will decrease consumption (depends on how it is used)
could be combined with closed-loop technologies to produce infinitely recyclable clothing	

THANK YOU

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Fashion for a Finite Planet: Sustainable consumption in the garment industry

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Abstract: Fashion and dress have the power to tell deeply human stories about who we are and who we aspire to be, and their intrinsically social natures can facilitate our search for self-expression and belonging. In tandem with larger global paradigms of economic growth and consumer capitalism, however, what we wear has become increasingly commoditized and destructive to both people and the planet. Using Andrew Curry and Anthony Hodgson's Three Horizons model as an analytical framework, this project aims to understand how change might happen in the garment industry. It begins by uncovering the deeper systems structures and narratives that define the status quo. Next, light is shed on the many proposed visions for what the industry could become. Finally, this project imagines potential pathways for pragmatically bridging the gap between the current paradigm and a more hopeful and sustainable future for the garment industry.