

Fashion and Sustainability 1990–Present

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Deviation from nature is a deviation from happiness

Samuel Johnson, 1709–1784¹

The apparel oft proclaims the man

Shakespeare, *Hamlet*, 1603

Fashion, as a verb, comes from the Latin *facere*,² to make, so fashion at its root means to give shape or form to something. The title of this book and the associated exhibition, *Fashioned from Nature*, presents a simple but profound truth that fashion *is made from* nature. Nature provides the source for each garment that that we choose to wear as our second skin. Fashion is made from nature and is dependent on it. Land, water, air and people form fashion’s supply chain, from growing to manufacturing, transportation and delivery into our hands and lives. Through these interactions, fashion is taking from nature at a rate that cannot be sustained.

The Nature of Fashion

Fashion is much more than static items of clothing. We use clothes to weave a dynamic commentary to express who we are as individuals: our personal world is described, implicitly or explicitly, through our clothes. At a broader level, fashion serves as a barometer of our times.³ From a cursory perspective this is perhaps why fashion is accused of being fickle, transitory or superficial. It is subject to apparently notional ideas: silhouettes shift; colour palettes alter; styles are applauded, then often dismissed with a flick of the pejorative *so last season*. Through fashion, however, we can observe shifts in the environmental, social, political, economic and

¹ ‘A Life according to Nature’ By Samuel Johnson (1709-1784) Henry Craik, ed. English Prose. 1916. Vol. IV. Eighteenth Century- Available at www.bartleby.com/209/773.html (accessed 20 August 2017)

² Schwarz 1993.

³ Lewis 2013.

cultural climates that permeate our lives: at the level of the individual, the local community and on a global scale. Fashion invites us to notice these movements and may offer us alternatives, shaping change itself.

It might be useful at this point to reflect on what we mean by nature in the context of fashion. We humans are, of course, part of nature. We are one of many species living on earth, but our actions imply that we see nature as separate from us because we act on it with apparent impunity. With this in mind, the question now becomes: what is fashion saying about us and the world we live in, right now? We must therefore reflect on what is happening in the world around us and, by extension, what is happening *to* nature.

Pushing Planetary Boundaries

Prior to the mid-twentieth century, the earth experienced approximately 12,000 years of stable climate during which human civilization developed. Since then the effects of the Industrial Revolution, the striking acceleration since the mid-twentieth century of carbon dioxide emissions, rising sea levels, global extinction of species, and the transformation of land by deforestation have led experts to assert that we are now in the age of the ‘Anthropocene’.⁴ This is the era in which human activity has been identified as the main driver of profound environmental changes to the earth. In 1988 the United Nations set up the Intergovernmental Panel on Climate Change (IPCC) to assess the risk of human-induced climate change. At the Paris climate conference (COP21) in 2015, 195 nations committed to act together to ensure the earth remains as hospitable a place to live in the future as it has been in recent centuries past. The withdrawal from this collective agreement by US President Donald Trump in 2017 reduced this number by one.

The Stockholm Resilience Centre and the Australian National University have identified nature’s limits in quantifiable terms. In naming the earth’s nine planetary boundaries, their research shows that we are already moving beyond a safe operating space for humanity in terms of

⁴ Clémenton 2012.

climate change, species extinction, waste pollution, land use and biochemical usage. Having crossed four of the nine boundaries, action is needed on a worldwide scale.⁵

In 2011, the World Economic Forum identified storms and cyclones, flooding, biodiversity loss, and climate change as four of the top five global risks in terms of likelihood.⁶ They had been absent from this list in the previous five years. By 2017, extreme weather conditions and major natural disasters fell within this risk register and also among the top five risks in terms of impact. The future of climate change mitigation and adaptation is also in this highest risk of impact category.⁷ We might surmise from this that the world's economists, like its scientists, are deeply concerned.

But what does all this have to do with fashion, with the clothes in our wardrobe and those that we are wearing right now? Fashion is, in fact, a significant contributor to climate change. The uncomfortable truth is that because fashion is indeed *made from nature* its current industrial practices gobble up staggering quantities of water, chemicals and fossil fuels, degrading the land and the diversity of nature's species while belching out 1.9 billion tonnes of waste per year. Resources are stressed to the extent that if we continue on our current path demand for water by 2030 will outweigh supply.⁸ The question then becomes: should we use available water for growing fashion, or for drinking? Land poses a similar question: should it be for food or fashion? These questions require a radical reconsideration of the making, acquiring, wearing and valuing of our attire.

⁵ Rockstrom et al. 2009.

⁶ *Global Risks 2011: 6th Edition*, World Economic Forum (2011), <http://reports.weforum.org/wp-content/blogs.dir/1/mp/uploads/pages/files/global-risks-2011.pdf> (accessed 1 May 2017).

⁷ *Global Risks 2017: 12th Edition*, World Economic Forum (2017), http://www3.weforum.org/docs/GRR17_Report_web.pdf (accessed 1 May 2017).

⁸ *High and Dry: Climate Change, Water, and the Economy*, Executive Summary, World Bank, Washington, DC (2016), <https://openknowledge.worldbank.org/bitstream/handle/10986/23665/K8517%20Executive%20Summary.pdf> (accessed 17 July 2017).

The Consequences of ‘Fashioned from Nature’

It is important to map out the principal ways in which today’s fashion system impacts on the world. In establishing Centre for Sustainable Fashion (CSF) in 2008, we did just that, as a call to all who value fashion and nature and to begin to understand how fashion, which can be such a magnificent manifestation of being human has deviated from the fundamental human goal of thriving.

Biodiversity loss and the loss of ecosystems, is an even bigger risk than terrorism according to the World Economic Forum (2010). Fashion contributes to this risk in several ways. To take one example, approximately 120 million trees are cut down annually to make cellulosic fabric, approximately one third of this figure being ancient and endangered trees and forests.⁹

Water is essential to life and integral to fashion. Fashion draws on water for cotton growing, fabric dyeing and garment production in places that are already in water crisis. The shrinking of the Aral Sea is a stark reminder of this fact (FFN008 and FFN009). At garment level, an average of 8,183 litres of water are needed to grow enough cotton to create one pair of jeans and 6 trillion litres are employed in dyeing textiles annually (FFN121). One cotton mill can use 200 tons of water for every ton of fabric during the dyeing process, which can release up to 72 chemicals into local water supplies.¹⁰

⁹ *A Snapshot of Change: One Year of Fashion Loved by Forests*, Canopy, http://canopyplanet.org/wp-content/uploads/2015/03/Canopy_Snapshot_Nov2014.pdf (accessed 4 April 2017).

¹⁰ *Threading Natural Capital Into Cotton: Doing Business with Nature*, Report by the Natural Capital Leaders Platform, University of Cambridge Institute for Sustainability Leadership (CISL) (Cambridge, 2016), <http://www.cisl.cam.ac.uk/publications/publication-pdfs/threading-natural-capital-into-cotton-doing.pdf> (accessed 1 May 2017).

Domestic water use, while not always in places of water crisis, is a cultural problem in western habits of ‘over washing’. Concerns have been heightened by growing evidence of microfibre pollution in oceans, caused by fibres shed by synthetic clothing while being laundered.¹¹

Toxic chemicals and pesticides are employed in creating both raw and finished materials in contemporary fashion. More chemicals are deployed in the growing of cotton than in any other crop,¹² and the disastrous effects of this on communities and environments are well documented. It might sound quite unlikely, but there are, in fact, up to 8,000 chemicals in a single piece of clothing.¹³

Oil-based synthetic fibres such as polyester, from which approximately 60 per cent of all garments are made, add significantly to fashion’s environmental tab. Polyester emits almost three times more carbon dioxide in its life cycle than most other materials. The energy used in manufacturing, transport and retail is also predominantly from fossil fuel, rather than from renewable resources.

In broadcaster and naturalist Sir David Attenborough’s (b.1926) words, ‘anyone who believes in indefinite growth on a physically finite planet is either mad, or an economist’.¹⁴ Between 2000 and 2014, clothing production doubled. The average western customer now buys 60 per cent more clothes a year and keeps them for about half as long as 15 years ago.¹⁵ With the world’s population expected to reach nearly 9 billion people by 2030 (from 5 billion in 1990),¹⁶ fashion

¹¹ Bruce et al. 2017.

¹² *The Deadly Chemicals in Cotton*, Environmental Justice Foundation in collaboration with Pesticide Action Network UK (London 2007), https://ejfoundation.org/resources/downloads/the_deadly_chemicals_in_cotton.pdf (accessed 1 February 2017).

¹³ Hailes 2007.

¹⁴ RSA President’s Lecture 2011: People and Planet with Sir David Attenborough. Held on Tuesday 10 March, 2011

¹⁵ Remy et al. 2016.

¹⁶ *World Population Prospects: The 2017 Revision*, United Nations, Department of Economic and Social Affairs, Population Division (New York 2017), <https://www.compassion.com/multimedia/world-population-prospects.pdf> (accessed 4 April 2017).

consumption is projected to increase a further 63 per cent by 2030 unless we change our habits.¹⁷ At a European level 8.4 million tonnes of textile waste is being landfilled or incinerated each year, which equates to 18 kilograms of clothes per person, per year.¹⁸ Elsewhere almost half of Chinese customers buy more than they can afford, with around 40 per cent qualifying as excessive shoppers.¹⁹

Around 60 million people work in fashion's industries worldwide. In some cases this offers fulfilling and creative livelihoods, yet within fashion's manufacturing, which is usually performed by female workers, many are paid less than half the amount considered to be a living wage.²⁰ Gender-based pay inequality is prevalent in many fashion-manufacturing countries.²¹ The extent to which modern-day slavery is endemic in the fashion industry is well documented, with over 70 per cent of fashion businesses saying that they think modern slavery might be taking place in their supply chains.²² Human inequality is not limited to fashion. An estimated 21 million people live in modern slavery worldwide.²³ Fashion businesses are however culpable of stimulating the industrialized world's craving for an endless supply of ever-cheaper clothes, seeking out rock-bottom cheap places on earth to make them. Corners are cut with, at times, catastrophic human consequences. As one of nature's species, conversations about 'fashioned from nature' involve all of fashion's social, cultural and nature related activities.

¹⁷ BCG Retail Value Projection 2015-2030: Euromonitor International (2017).

¹⁸ Hollins 2016.

¹⁹ *After the Binge, the Hangover: Insights into the Minds of Clothing Consumers*, Greenpeace, 2017.

<http://www.greenpeace.org/international/Global/international/publications/detox/2017/After-the-Binge-the-Hangover.pdf> (Accessed May 01, 2017).

²⁰ Clean Clothes Campaign 2014.

²¹ Huynh 2016.

²² Lake et al. *Corporate approaches to addressing modern slavery in supply chains: A snapshot of current practice*, Ethical Trading Initiative (ETI) (2015) http://s3-eu-west-1.amazonaws.com/www.ethicaltrade.org/files/shared_resources/corporate_approaches_to_addressing_modern_slavery.pdf (accessed April 04, 2017)

²³ *Global Estimate of Forced Labour Report 2012*, International Labour Organisation (ILO) (2012), http://www.ilo.org/wcmsp5/groups/public/---ed_norm/---declaration/documents/publication/wcms_182004.pdf (accessed 3 March 2017). pg.13

Taken together these facts and statistics show how many of fashion's practices are contributing to the destabilizing of the planet. It is no wonder that marching against climate change involves highlighting fashion's business and cultural practices.

Fashion and Mindsets for Change

If fashion is both a barometer of change and a commentary on the way we live, echoing the words of Samuel Johnson, then the industry has deviated from nature and in so doing brought much unhappiness to the planet and many of its most vulnerable people. If, as Shakespeare wrote, apparel often proclaims the man, what exactly do our clothes proclaim about us?

Fashion, and its industry, responds swiftly and, at times, boldly to reflect and respond to cultural, economic, environmental, technological and political dynamics. In reviewing the last three decades of fashion, a picture begins to emerge of artistic, business and social practices that have altered in some places for better and in others for worse. In the words of Herbert Simon (1916–2001), an American scientist and recipient of a Nobel Prize in Economics, 'to design is to devise courses of action aimed at changing existing situations into preferred ones'.²⁴ This speaks to the core intent of thoughtful and thought-provoking design – to create better than that which currently exists – and captures succinctly the design intent that drives the work of many fashion practitioners. Some recognize that necessity is indeed the mother of all invention, and that the need to innovate around how fashion is designed and made is reaching a critical point. These fashion practitioners are notable for the keen creative pragmatism they apply to their work with the intention of honouring nature and people. Their design practices reveal diverse approaches to creativity and how it can be fashioned with nature in mind.

There are those who approach their fashion practice with an eminently resourceful mindset: working only with what is already available or can be found in abundance. Given the amount of

²⁴ Herbert A. Simon, *The Sciences of the Artificial*, 3rd ed. (Cambridge, MA: MIT Press, 1996): 111.

fabric waste generated by the fashion industry in production and from discarded purchases, some practitioners choose to work with these existing materials, bypassing the need to take more from nature. A radically resourceful student at the Centre for Sustainable Fashion, Shibin Vasudevan, has taken fluff found in washing machines and cotton threads swept up from the workroom floor to exemplify this approach, creating beautiful and striking pieces in the process.

Others strive for equity for everyone related to the fashion industry. Individuals and organizations are actively working towards fairness for all involved. Baroness Lola Young (b.1951), a member of the UK House of Lords, is shining a light on fashion-industry practices in championing an amendment to enhance the Modern Slavery Act 2015.

In an industry known for its competitiveness, we are beginning to see a marked change in practice. By sharing sources of materials and production, costs and margins, direct competitors such as Nike, Puma and Adidas are working together towards a collective goal of ensuring that their business does not contribute to the degradation of nature (FFN123). Collaboration and cooperation are at the heart of social enterprises and collectives such as Here Today Here Tomorrow, which exemplify wonderfully the idea of mutual benefit.²⁵

The call for fashion companies to share the history and origins of their products with customers is getting louder. Openness in relationships and practice requires ‘transparency’, and to verify the provenance of a piece, ‘traceability’. Legislation has a place here also, in demanding that such data is available. A number of emerging applications of technology offer to trace each element in a garment’s often global journey through production. Others make long-term commitments to localities and to people in non-technical ways. Authenticity in this case is about an honest intent in relationships, which cannot be measured as easily as the auditing of geographic location or production methods.

²⁵ Here Today Here Tomorrow is a collective of three designers with backgrounds in the field of sustainable fashion.

Some are taking a bold stance to bring fashion's unpalatable realities to our attention and to activate reform. In these instances, fashion is a platform for exposing normalized and accepted practices as neither normal nor acceptable, thus stimulating cultural and business response. The Pink Pussy Hat evidences such activism, seen recently in marches across the world, connecting related causes for concern: climate change, gender inequality, racism and social injustice.

Still others choose to create fashion that has resilience. This means not only designing pieces able to withstand the test of time and stress, but also building social resilience, connecting communities and encouraging conversations where divisions are rife. Recent events in Europe, the USA and elsewhere show a need to find ways to re-connect a growing disconnection being felt. Fashion's social practices are personal and professional: its sharing economies exchange skills, garments and knowledge, connecting through making, as Amy Twigger Holroyd's (b.1979) 'Keep & Share', the Craftivists and Prick Your Finger all do to great effect.

Alexander McQueen stated, 'there is no better designer than nature'.²⁶ These words chime with the approach of designers who are weaving ecological thinking into their design practice, whether through drawing on biomimicry to find nature-designed solutions to our complex problems or through taking a place-based perspective to create fashion grounded in the assets, both human and natural, that thrive within a particular location.

Fashion is about change and about challenging the status quo, which, at present, is about 'more stuff'. In asking how much is enough²⁷ and looking at the elements of fashion that offer greatest delight, citizens and fashion professionals alike are questioning the quantitative approach to fashion and exploring ways in which its qualitative aspects can be foregrounded.

Fashion Movements

²⁶ Alexander McQueen in *Vogue* (UK), <https://www.facebook.com/BritishVogue/posts/608652089165675> (accessed 25 August 2017)

²⁷ Skidelsky and Skidelsky 2012.

Two distinct, but not mutually exclusive, fashion movements have evolved over the past three decades. One reflects on and reacts to increasingly urgent concerns about environmental change and the precarious welfare of some of the world's most vulnerable people. The other responds to and capitalizes on market forces, swiftly acting on and contributing to an economic, technological and political landscape.

1990–2000: A Quickening

The 1992 Rio Earth Summit and the formation of the United Nations Framework Convention on Climate Change (UNFCCC) evidenced an urgent rallying cry to stabilize greenhouse gas concentrations at a level that would prevent us humans from endangering the earth's climate. Simultaneously, the global fashion industry was developing rapidly, responding to economic, political and technological change. Export-led growth became a key strategy of China's economic reforms initiated by Deng Xiaoping, opening China to foreign investment and entrepreneurship.

Less proclaimed, but a hugely significant influence on globalisation is the modern shipping container. Possibly a bigger contributor to globalization than all free-trade agreements put together, with 94 per cent of countries having ports that could receive them by the late 1980s, a rise from 1 per cent in the late 1950s when they were first introduced. By 2015 the cost to ship cargo had dropped by 90 per cent in 60 years; around 90 per cent of every purchased item was shipped inside a container; and a simple sweater could travel 3,000 miles by sea for a few pence.²⁸

²⁸ 'The Container History. The World in a Box', *The Economist* 2006, <http://www.economist.com/node/5624791> (accessed 24 April 2017).

and:

A Complete History of The Shipping Container, Container Home Plans 2015, <http://www.containerhomeplans.org/2015/03/a-complete-history-of-the-shipping-container/> (accessed 24 April 2017)

In 1990 the *New York Times* coined the term ‘fast fashion’ to describe Zara’s ‘Quick Response’ model.²⁹ This model was initially introduced in Japan for car manufacturing, the US clothing industry adopting it in the late 1980s to improve efficiencies in manufacturing and supply-chains. Quick Response coincided with outsourcing being formally identified as a fashion business strategy, spurred on by free-trade agreements facilitating easy movement of fashion’s raw materials from one place to another.

The pace of fashion also accelerated via the internet. The nascent e-brands of eBay, Amazon and Zappos collectively primed us for future-comfort online, one-click shopping. By the close of the millennium, a perfect storm was brewing for the fashion industry to become a huge contributor to the environmental crisis that currently swells around us.

A different ethos prevailed elsewhere, led by a group of established and emerging designers. By the early 1990s, the Paris-based artist and fashion designer, Lucy Orta (b.1966), was already known for creating ‘symbolic clothing’ that dealt with poverty, exclusion, dislocation and homelessness in contemporary urban life. Responding to fashion’s blatant consumerism and apparent inattention to what was going on in the world, Orta created *Refuge Wear*, a range of distinctive, multifunctional prototype clothes that could be reconfigured according to an individual’s immediate needs (FFN113). Presented outside the Musée du Louvre during Paris Fashion Week in 1994 Orta’s collection stood in stark contrast to the spectacle of other shows taking place.

Katharine Hamnett (b.1947) is known for her attention to social and environmental injustice. Since the early 1980s, she has been translating her remarks onto the catwalk, actively questioning the fashion industry status quo. Her standing in the industry means that she has spoken directly to industry luminaries and press, taking her messages to an audience of cultural shapers and responders. Hamnett’s iconic shows give fashion meaning both to and beyond the clothes themselves. An early collection, to the accompaniment of the ‘acid rain rap’, included billowing and sculpted white, khaki, navy and black silk and cotton dresses, before voluminous parkas blazed out a finale in bright yellow, blue and red. While stunning in themselves, the most

²⁹ Christopher and Towill 2001.

memorable pieces were the provocative SAVE THE WORLD t-shirts and those emblazoned with the words WORLD WIDE NUCLEAR BAN NOW.

By the 1990s, Hamnett was focusing her sights on the multinational companies selling pesticides and, by the early 2000s, GMO (Genetically Modified Organism) seeds to Indian cotton farmers on credit. The stark facts that she highlighted were not only of the environmental degradation caused by fashion, but also the 270,000 farmer suicides between 1995 and 2013, caused by desperation due to the spiraling repayment costs of pesticides and seeds sold on credit.¹ ³⁰ Knowing that conventional cotton production was polluting rivers, killing wildlife, harming communities that relied on these natural resources and leading to mass suicide, the Katharine Hamnett collection committed to using only organic cotton. Incensed by the direct impacts of her own industry and the lack of widespread knowledge about what was going on, Hamnett's *Clean Up or Die* collection (FFN009) called out these companies and raised awareness of the true victims of fashion.

Across the Atlantic, on the west coast of America, Lynda Grose (b.1959) and her team at Esprit were applying ecological thinking in the making of fashion at scale. The *ecollection* was a bold first move by a high street retailer. It showed – through the creation of an organic cotton collection – that focus on environmental alongside financial prosperity is possible.

In Japan, Safia Minney (b.1964), through her company People Tree, was pioneering the first model for fair trade fashion, developing an integrated supply chain from farm to final fashion product. People Tree, now a well-known British brand, was launched in Japan with the intent of championing equity and dignity for all involved in fashion's making. While Minney began to pave a road towards a fair fashion system for others to follow, that road is as yet incomplete.

In London, Sarah Ratty's (b. 1964) first collection, *Conscious Earthwear*, created a new fashion aesthetic, implementing a strong belief in eco-consciousness. Lucille Lewin,(b.1948) the eagle-eyed owner of Whistles, spotted *Conscious Earthwear* and bought it to sit alongside the Whistles

³⁰ Stephenson 2013

label. Lewin was not alone in identifying Ratty's visionary first collection. The V&A also showcased pieces in its 1994–5 *Streetstyle* exhibition (FN148).

Moving from London to Tokyo, where Christopher Nemeth set up a studio in 1986, the principle of resourcefulness became manifest in a unique aesthetic, which he developed over the following decade. An artist by training, Nemeth (1959–2010) taught himself pattern cutting and sewing in order to create a collection using mailbags and canvas from his paintings as his fabric of choice. He and fellow collaborators, Judy Blame (b.1960), Mark Lebon (b.1957) and John Moore, in establishing The House of Beauty & Culture in 1986, were at the forefront of a design technique that has been developed by others into a now recognized field of fashion upcycling. This is a subject for research at Textiles, Environment, Design (TED) at Chelsea, part of University of the Arts, London.

2000–2010: Momentum

By the start of the new century, these two distinct, and distinctly different, fashion movements were each making strides. ASOS and Net-a-Porter both opened their virtual doors in 2000, evidencing the gold-rush effect of fashion's rapid-response model and the rise of online shopping.

In September 2006, Estethica, a showcase of sustainability led designers was launched by Orsola de Castro (b.1966), Filippo Ricci (b.1966) and Anna Orsini (b.1953) as part of London Fashion Week. The first fashion capital to house such designers within its fashion week, it built on the pioneering efforts of The Paris Ethical Fashion Show launched in 1993, sitting outside Paris Fashion Week.

Galahad Clark (b.1975) featured in Estethica in February 2008, showing a collection based on his Eco Design Matrix, which combined efficiency, aesthetics, functionality, environmental consideration and recyclability. One of the distinctive qualities of his early footwear collections was a vibrant style achieved by using colourful Saami quilts, sourced from a co-operative in Pakistan, for the upper material, while recycled leather and recycled rice husks formed the sole.

Christopher Raeburn (b.1982), drawing on a design code of resourcefulness, started his *Re-Made in the UK* label including carefully cut patterns for garments using repurposed maps from the Second World War printed onto silk, transforming them into exquisite and collectible items (FFN116). Raeburn went on to win the British Fashion Award for Emerging Designer in 2011 and the GQ Breakthrough Designer of the Year Award in 2015.

Designers such as William Kroll (b.1983) of Tender Co. named his company with a dual purpose: after the coal truck of a steam engine, and in the hope that owners of his pieces might treat them with tender thought and hand (FFN147). Kroll's woad-dyed denim collection was designed for resilience. His intention is for the garments to document the life and times of the people wearing them as denim shows the patina of daily life and his designs and materials are selected for longevity.

Change was afoot on a mass scale too. Marks & Spencer (M&S), one of the UK's most well-known retailers, set out 100 bold, measurable commitments in 2007 in its 'Plan A', so named because, in the words of then CEO Stuart Rose, 'there is no Plan B'. Heralded as the most progressive project of its kind by a mainstream retailer,³¹ fashion actions covered: limiting the impact of climate change through the use of renewable energy and more efficient production processes; extending a commitment to fair trade cotton; supporting farmers; and encouraging energy conservation in the care of clothes by customers through the introduction of a 'wash at 30 degrees' label.³² This responsibility for post-purchase energy reduction began to recognize our critical role as wearers in achieving sustainability habits through the way we buy, look after and discard our clothes (FFN120).

M&S formed strategic alliances with Non-Governmental Organizations (NGOs), including the World Wildlife Fund (WWF), which provided the company with expertise to help it achieve its goals. The UK government, meanwhile, understood the value of the fashion industry to the UK and the growing environmental and social implications of some of its practices. The Department

³¹ Bowers 2007

³² *Your M&S: How We Do Business, 2007 Report*, Marks & Spencer, <https://images-na.ssl-images-amazon.com/images/G/02/00/00/00/32/17/82/32178202.pdf> (accessed 5 March 2017).

of Environment, Food and Rural Affairs (Defra) convened businesses, research institutions and NGOs to create an agreed roadmap of actions towards more environmentally and socially positive business practices.³³

The Dow Jones Sustainability Index was first published in 1999 and in 2009 something astounding happened: Walmart, the biggest retailer in the USA, and Patagonia, a particularly progressive brand, collaborated on a radical mission. They connected peers and competitors from across the clothing, footwear and textile sectors to collectively develop a universal approach to measuring sustainability performance. This groundbreaking collaboration became the Sustainable Apparel Coalition (SAC), which has grown into a global consortium of brands, retailers, manufacturers, academia and NGOs. Through the SAC, environmental and social impacts can now be measured and areas for improvement highlighted as part of an iterative development process.

The problems endemic in unsustainable consumption were also exposed. A report published in 2015 by the United Nations Environment Programme (UNEP) made this crystal clear. The report outlines how the continued poverty of the majority of the planet's inhabitants and excessive consumption by the minority, are the two major causes of environmental degradation. Our present course is unsustainable and postponing action is no longer an option'.³⁴ This foreshadowed the growing interrogation of the social and environmental credentials of brands. A potential market need and opportunity for sustainability was identified, linking the goals of business to the goals of sustaining nature. In the words of François-Henri Pinault, 'sustainable business is good business'.³⁵

³³ 'Sustainable Clothing Roadmap', *Textiles*, Issue 4 (2009), http://www.thesustainablebusinessgroup.com/js/plugins/filemanager/files/Reuse_and_Recycling_of_Clothing_And_Textiles.pdf (accessed 1 May 2017).

³⁴ Sustainable Consumption and Production: A Handbook for Policymakers, Global Edition, UNEP (2015) <https://sustainabledevelopment.un.org/content/documents/1951Sustainable%20Consumption.pdf> (accessed 16 May 2017)

³⁵ François-Henri Pinault during the inaugural Kering Talk at London College of Fashion, UAL, October 2014.

While the pace was quickening to address the urgent need for a sustainability approach to fashion, ever-cheaper fashion was also accelerating, feeding an apparently insatiable western appetite. This was hastened by rapid developments in technology and through outsourcing to economically poor countries with weak government regulation. A vivid example of the fast-fashion model was seen during the launch of Primark UK stores in 2007, when shoppers were seen trampling each other to get in.

Each fashion movement, market and ethically led, increased their momentum. The early 2000s saw the US Environmental Protection Agency confirming a link between global warming and waste. Awareness of the global environmental challenges we face arguably reached a pivotal point in the collective consciousness in 2006 when Al Gore (b.1948) released his critically acclaimed documentary, *An Inconvenient Truth*, communicating his deeply held concerns about climate change and its consequences for nature and, by extension, for humankind.

2010 Onwards: What Has Really Changed?

By 2010, the call for the fashion industry to address sustainability was rising in volume. Increasing numbers of mainstream fashion businesses were taking action to address their damaging practices.

Echoing Katharine Hamnett's iconic collections, the 2011 Greenpeace 'Detox Campaign' challenged some of the world's most popular fashion companies to eliminate the release of all hazardous chemicals from their production processes (FFN146).³⁶ Many brands responded, making commitments that they had to meet verifiably. Detoxing fashion continues to be problematic for companies whose outsourced rapid-response model has great customer appeal and financial profitability. The dialogue for them is more about maintaining the model while decoupling growth from the degradation of nature. But how far can we go with existing models of fashion business?

³⁶ *Detox My Fashion*, Greenpeace, 2011, <http://www.greenpeace.org/international/en/campaigns/detox/fashion> (accessed 1 May 2017).

Businesses are looking at transparency and traceability from two angles. Some are doing so with the intention of reducing risk and ensuring reputation; others are opening up their business to public scrutiny to learn from what they see and others say, to create sustainability in their business practice. An early and beautiful conceptualization of traceability for sustainability, *Mirror Africa*, by the artist Nicole Hahn (b.1972), brought Radio-Frequency Identification (RFID) data to life through film, connecting fashion customers to real stories and people behind their purchase.³⁷ Other iterations of this model are currently being explored. The recent collaboration between Provenance technology, CSF graduate Neliana Fuenmayor's (b.1986) Transparent Company consultancy and designer Martine Jarlgaard uses blockchain technology³⁸ to tell the story of a product's journey from raw material through the supply chain to the finished garment creating a detailed digital history.

Bruno Pieters (b.1975) is a designer who has created his own *honest by* label, openly sharing information about his collection's sources, costs, and environmental impacts. This demonstrates that openness and commercial success in fashion is not an impossible task. It may, as yet, lack perfection and will develop and improve over time, but its intent is clear. (FFN129).

Brilliant in its profound simplicity, Fashion Revolution's 'Who Made My Clothes?' campaign is a response to the catastrophic and fatal collapse of the Rana Plaza factory, in Bangladesh, in 2013. Not the first, or last, work-related death of a garment worker, the negligence exposed by the atrocity and its scale created a groundswell of shocked concern. The simple question behind Fashion Revolution's now worldwide campaign is one that nobody in fashion can continue to ignore (FFN126).

Stella McCartney's (b.1971) ethos of integrity and stewardship combines a unique sense of culture, knowledge and personal values (FFN122). She is also a member of a group of fashion businesses, under the helm of Kering, whose stance includes sharing knowledge and findings and also investing in creating open-source tools. Kering's Environmental Profit and Loss (E, P&L)

³⁷ Hahn 2010.

³⁸ An open, distributed digital ledger that can record transactions between two parties efficiently and in a verifiable and permanent way.

tool costs garments, revealing ways to reduce cost-to-nature in financial terms and devising nature-positive solutions for business. Through CSF's partnership with Kering, it has been able to introduce student designers to this new way of knowing, encouraging them to innovate creatively around fashion and sustainability. Collaborating with Kering's team, new iterations of the tool, including socially positive measures, are being developed. The E, P&L has democratic intent: it can be downloaded as an app to inform decision-making across the fashion industry.

In 2012 CSF students explored the idea of better decision-making through collaborating with Nike to create 'Making', a tool designed to collate a vast amount of data relating to the environmental impacts of a range of materials. In effect designing a way to design, the Nike 'Making' app is being used by other designers and is available on open source.

Some fashion businesses are looking towards co-creating pieces by opening up dialogues between the public, designers and manufacturers. *Unmade*, showcased in Selfridges, which has itself created 'Better Buying' practices with all of its teams, vividly exemplifies co-creation (FFN140). Its model enables customers to co-design a piece, then watch it being made, using 3D printing, before their eyes. The IOU Project³⁹ was established in 2010 to enable potential customers to decide what they would like to buy based on dialogues with fabric and garment makers across the world. Everybody's World and Away to Mars, both set up more recently, develop collections born out of their potential customers' ideas and values, using social media to gather and vote for designs before they are put into production.

Reclaiming and reusing discarded fashion has likewise been evolving in aesthetics, innovation and technique. Since 2010, Michelle-Lowe Holder (b.1959) has been making exquisite pieces from found materials with a creative resourcefulness far closer to Robert Rauschenberg (1925–2008) and his life-affirming creative ethos of 'work with what you have',⁴⁰ than to the 'make do and mend' code of austerity (FFN117). Meanwhile, H&M has been working with some CSF students to explore ideas of resourcefulness, such as wabi-sabi, creating collections sourced solely from its take-back recycling scheme. A range of dynamic repurposing ideas are taking

³⁹ *IOU Project* (2010), <http://iouproject.com/stories/> (accessed 4 April 2017).

⁴⁰ Dickerman, 2016

hold: outliers include Eileen Fisher and Filippa K, building on work of From Somewhere, Re-Made in Leeds, Goodone and others.

Designers and students are taking radical approaches to resourcefulness, from turning orange peel or pineapple leaves, food-industry discards, into fibre (FFN156 and FFN128), to producing fabrics from mycelium (mushrooms) and algae, and creating biomaterials, including bio-fur. These examples and others evidence the emergence of a new definition of designer: one that considers success in multiple, interconnected terms, with capabilities that are technical, philosophical, commercial and critical in thought and action.

The fundamental issue of infinite growth from a finite planet, however, remains. Recognizing this, Patagonia made a uniquely bold move in the US on Black Friday in November 2011. It ran an advertisement in the *New York Times*. Accompanying an image of its 'best seller', the R2 jacket, it read: 'Don't Buy This Jacket'. While it has long been recognized for its nature-respecting practices, this was a remarkable move on the day of proclaimed hyper-consumption. It suggests that what you have might be sufficient (FFN149).

Vast quantities of fashion are discarded to landfill or incinerators: some still with tags on, never having been worn. If, as Shakespeare said, 'apparel oft proclaims the man', what does this amount of profligate waste say about us as designers, producers and customers? As a designer, if pieces I create head to landfill, worn briefly or not at all, I have not designed 'better'. If, as a customer, I am buying clothes and soon discarding them, what do these pieces proclaim about me?

Fashion is an indicator of change; fashion colleges are incubators for its future. Since its inception in 2008, the MA in Fashion and the Environment (renamed MA Fashion Futures in 2015) has been offering the study of social, environmental, cultural and economic perspectives on fashion. The ecological thinking of Tara Mooney, one of its students, led to her creating a moss collar: a metaphorical call to slow down (moss grows incredibly slowly) and take care (moss needs careful attention, while being extremely resilient). By putting nature and human

equity at the foundation of fashion design, its practice changes radically in intention and appearance.

While much of this chapter has been devoted to fashion-industry practitioners designing actions aimed at changing existing situations into preferred ones, we, as citizens, wearers, buyers and communities of fashion, have a critical role to play. What we choose to wear and how we care for our clothes, or ‘tend’ them, is based on interconnecting factors of knowledge, culture and personal values. ‘Tending’ is part of the language of the *Craft of Use*,⁴¹ Professor, Dr Kate Fletcher’s (b.1971) insightful and industry-challenging findings observe, questioning some of the deep underlying political, economic and cultural issues at the heart of fashion’s current unsustainability.

Where Are We Now?

In 2017, US President Barack Obama (b.1961) referenced Martin Luther King’s (1929–1968) belief that there was such a thing as too little too late. To paraphrase his words, with regard to climate change, the hour is upon us, but if we act swiftly and boldly we can leave a world to future generations marked not by the suffering of nature and some its people, but a world marked by human progress.⁴² Fashion is known for its creativity; it is defined by and defines change. It has contributed to some of the problems we are facing in the world right now but it can use inherent creativity and skills to fashion from within a safe operating space for us in nature. So, the question now becomes: can fashion help us to find ways to reconnect to nature, the life force that sustains us all?

For those in the fashion industry and each of us as citizens, relationships involve intangible, emotional, experiential as well as measurable, transactional elements. The direction of change is dependent on intent. By taking one or more of the mindsets outlined in this chapter, we

⁴¹ Fletcher 2016.

⁴² Talk given by Barack Obama at the Seeds & Chips Global Food Innovation Summit. See Obama 2017.

contribute to a new culture. This is, in the words of the environmental activist Joanna Macy (b.1929), ‘a time of great turning’,⁴³ from an era of self-destruction to a life-sustaining society. It involves being honest about our intentions and our actions. Equipped with a strong idea of our values and knowledge to make informed decisions, knowing that all things come from nature, each of us can take action. For fashion, this means diverse, personal, splendid ways of moving towards a goal of protecting ourselves, each other and our shared home in nature.

⁴³ Macy 2013.pg 5