

Question 4: Outline a current environmental, political, or social issue that requires redesign.

Explain how you will solve the issue over the duration of your future design career.

Underline the tools and approaches you will use and discuss how and why.

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Surface Pattern Design

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Textile Industry / Sustainability

The development of the textiles industry has consequently seen a universal negative effect on the environmental system. Despite the recent developments in the sustainability of the textiles industry, many countries still rely on heavily polluted methods within the textiles production. Throughout this essay, I will reflect on the problematic effects the textiles industry is having globally, along with possible strategies that could be implemented to resolve the environmental issues throughout my design career.

Global warming is a major contributor to the earth breaking down, with sea levels continuing to rise, according to Environment activist organisation Green Peace, putting man and species at a 'high risk of being robbed from being able to sustain a future on a healthy, liveable planet' (Greenpeace.org). The textiles industry is stated to be one of the 'top five' most harmful industries in the world responsible for the harming and consumption of the important eco systems, along with contributing to water pollution through using harmful dyes. It is not necessarily the production of textiles that cause these drastic effects, but more so how the fibres are grown, manufactured, and exported. According to the Environmental Protection Agency '16 million tons of textile waste was generated, of this amount, 2.62 million tons were recycled, 3.14 million tons were combusted for energy recovery, and 10.46 million tons were sent to the landfill', Environmental topics (epagov, 2019). A shocking statistic, one that isn't highlighted enough in order to educate mankind.

To supply high demand fabrics like cotton, it requires up to ten to twenty thousand litres of water to produce a kilogram of fabric. Furthermore, to create a 't-shirt, and jeans, it may use up as much water as one person drinks in 13 years' (Oxfam.org). The textiles industry has been described as 'one of the dirtiest industries in the world' by Green Peace, with them even stating it as the second largest polluter, after oil. There is an undoubted need for a more sustainable textiles industry, I plan on discussing possible strategies to which we can strive to achieve this.

The solution to the issue is not to end all production of fabric, as it is a crucial element of the globe's economics. The textile industry is especially important within developing countries, of which suffer from extreme poverty. These countries rely on the production of fabrics and materials for their jobs, whether it be through the factories, or other vacancies along the overall production. An example of which is China, where the processes that are involved throughout the textile production have been seen to result in unprecedented problems to its environmental system (S. You., 2009). A consideration must be acknowledged regarding the textiles industry being one of the greatest sources

of income for countries like china, however at what cost to the environment? If there were a globally available cheap, sustainable method of producing fabrics, it would see the textiles industry continue to grow and evolve whilst maintaining our treasured environment.

As a student designer, I feel strongly about re designing a more forward thinking, sustainable method of practice, for the sake of younger generations futures, and for the sake of the planet. I will be discussing traditional and more modernised ways of thinking about design in the context of my practice. Along with looking at current strategies and designers of whom are currently attempting to change the textiles industry.



Fig. 1

(greenofchange,2019).

The issue isn't the materials themselves but the methods in which they are made. Sustainability doesn't have simple framed approaches, as its ever changing and developing through research. We don't have to abolish the production of textiles, but to efficiently design innovative ways to create environmentally friendly fibres. To be educated about where these products are sourced and how they are produced and then make mindful decisions considering the environmental impacts, as well as economic effects. Every fibre has an individual product life, which include of 'cultivation, production, manufacturing, distribution, consumer laundering, reuse and final disposal'. (Fletcher, K.,

2013). The product cycle shows that it has a long timeline before the product can be used. Today due to consumerism, the product becomes short lived, and disposed in landfills contributing to the production of waste.

There have been significant changes ethically in designs and production of fabrics. Modern-day design activist and female entrepreneur, Grace Beverly created an innovative way of producing textiles, whilst supporting sustainable designs through her business 'TALA'. TALA is an activewear fashion brand that is both affordable and recycled. Their produce is made from recycled plastic bottles and factory offcuts. According to TALA, over '17,874 zinnia leggings have been sold which equates to saving around 1.9 million glasses of water' (TALA, 2019). Not only are the garments '92% sustainable', but the tags are made from seeds that can then be planted and grow into plants, with instructions placed on the tags. The company's main aim is to reduce its carbon footprint through simple means of shopping in up cycled fashion stores and buying from more sustainable ethical brands, and re wearing clothing. The young designer wants to become 100% fully sustainable

soon and is determined to make that happen.

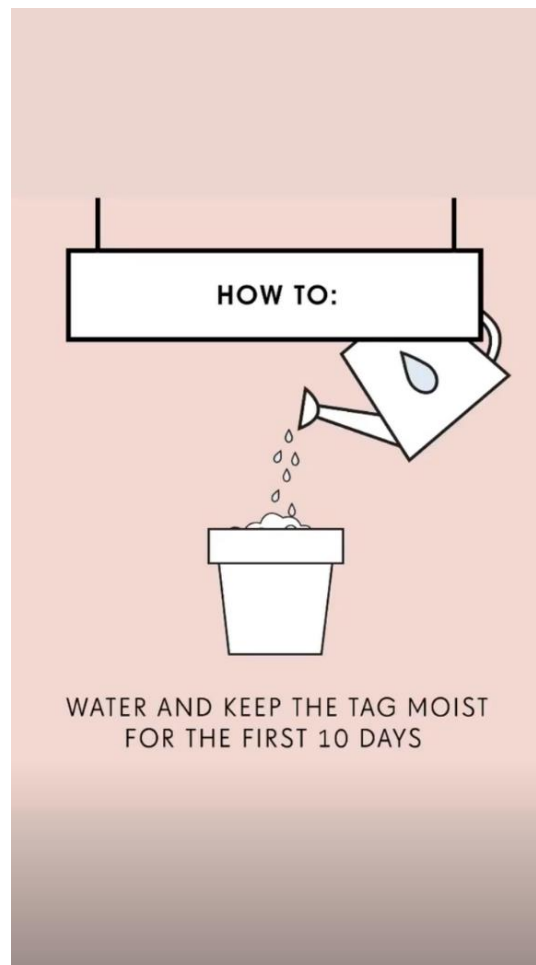


Fig. 2

(TALA,2019).

Grace Beverly and her company have taken a major step into the reduction of the textiles environmental impact. A similar approach could be taken as Grace Beverly in the sense of emphasising the importance of recycling, re-using and upcycling. From looking at what Grace Beverly has done with re using fibre waste from factories. I could take this idea and approach universities and set up clothes run by students at the universities that get on board. The idea will be promoted through social media which will encourage trends through activism run by younger generations. I feel that this idea will be effective as I myself has unwanted clothes that I would like to swap for something new, instead of feeding into the fast fashion industry. The outcome of my idea will demonstrate to individuals you don't have so consume so much, but by swapping unwanted clothing for new items, you are already making a huge impact on reducing your own carbon footprint.

Similarly, I could take this idea to a larger scale and approach sustainable fashion/textile businesses with the unwanted clothing university students have donated and send them off to be reused or made into other garments that they will then go on to sell.

Similarly, through finding a sustainable source of fabrics, a cycle of textiles production could take place, with the use of natural, accessible sources to create fabrics and materials.

Design activism is a crucial way of putting forward modern ideas to benefit the user and its environment. Author Alastair Fuad-Luke suggests that "...new ways of thinking about how design can catalyse, nurture, enable and activate positive societal changes towards more sustainable ways of living and working....". (Fuad-Luke, 2009). An example of innovative design activism may include such as 'Kilo Sale'. This company has a forward thinking, strategic way of reducing landfill waste by selling vintage clothing at an affordable price, aimed at students which reduces needless waste. As another strategy I could run fix by stitch workshops, to encourage others to mend their broken or snagged items instead of throwing away. Upcycling clothing by adding coloured stitch, embroidery, transferring the old to new. Popular high street fashion brands such as H & M, have been offering a garment recycling service since 2013, called the 'H & M Garment Collecting Programme', it is a 'global initiative working to prevent customers unwanted clothes go to landfill'. They offer a cash reward of five pounds or euros voucher to anyone whom hands in a bag filled with old clothes. To advertise the fix by stitch workshops, social media will be a big platform. I could potentially create a society dedicated to mending garment's needing fixing, providing my own tools. This will not only reduce landfill waste but demonstrate the importance of keeping traditional hand skills going, and how quality is more important than quantity. (H&M, 2013 Garment Collecting recycle).

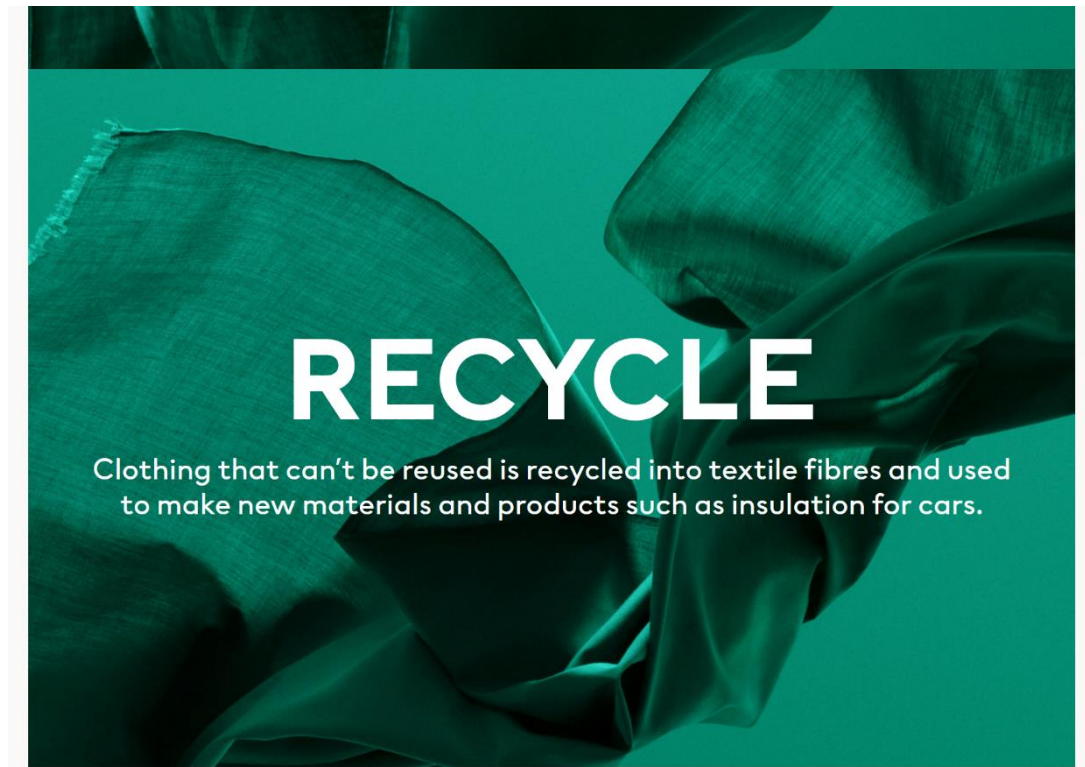


Fig. 3

H&M (2013).

Fashion designer and activist Vivienne Westwood uses her platform to protest and educate through graphic designs on the catwalk, highlighting social and environmental issues. She speaks passionately and enthusiastically about this, suggesting that 'we have no choice between a green economy and mass extinction'. In 2012, Vivienne put on a protest catwalk inaugurating Climate Revolution, using symbolic childlike imagery on her designs to call attention to the viewer to act now. She suggests that it is nearly impossible to carry on the way we are, as we are heading for a mass extinction, expressing how it is up to us as mankind to drastically re design the way we produce products. I could implement a strategy to influence and inspire people by creating my own fashion catwalk highlighting social issues that are happening around us, ones that can be changed once educated about, using Vivienne Westwood as a source of inspiration. My catwalk will be cost effective, and of course will have no carbon footprint. I will use unwanted garments donated by people, and stitch facts and figures about the impacting effects textiles may have on the environment onto the clothing to add dramatic effect to encourage change.

There are ethical ways of producing fibres that aren't harmful to our environment, which puts back into the system and having little to no carbon foot print. Many new designers have already come up with new innovative and positive ways to create biodegradable fibres, which take very little energy. Fashion designer Suzanne Lee, has been working alongside biologists, coming up with creative new advances for ethical textile production. Lee used to vision materials as being sourced from animals, produced in large factories, grown in large fields, ruining infrastructures, and rivers being polluted from harmful toxins. She is known as 'bio-couture' pioneer, who produces these fibres through materials

we come across day to day. Lee uses a Kombucha recipe, which can be described as 'a traditional fermentation of sweetened tea, involving a symbiosis of yeast species and acetic bacteria'. (Teoh, Heard, Cox., 2004 International Journey of Food Microbiology).

By using the 'Kombucha' recipe, combining a 'symbiotic' mix of bacteria, yeast and other microorganisms that then spin cellulose fibres in a 'fermentation process', being 100% organic. Over time, these threads will begin to form a liquid into layers and thus produce a matte surface. (Suzanne Lee- Bio Couture Livingcircular,2014).

She states that her living cellulose fibres are fully bio degradable but don't have to be a replacement for cotton, lather or textile materials, but a smart and sustainable edition to us increasingly precious resources. Even suggesting we could grow, 'a lamp, chair, car or maybe even a house'. Her question to us as new designers is, 'In the future what would you choose to grow?' (Lee, s., 2013). Her

design still needs advances as it has one negative, when the fibre is introduced with water it becomes heavy, due to it not being water resistant. But the key ethos to her idea is that she is growing

consumable products, and will only grow what we need, not feeding into a wasteful society. Even going onto developing her sustainability further by suggesting that she could approach sugar waste streams, and use waste to grow more pure cellulose. To develop her ideas further to come up with a sustainable way of incorporating water resistant properties will improve the use of the living cellulose. Bacterial cellulose is already being used for the use of patients by doctors for wound healing.

Lee even suggests that in the future it may even be used for 'future replacement bone tissues, and biocompatible blood vessels. Her work is inspiring, and crucial to be educated about as a future textile designer, in order to engage with social and environmental happenings that surround

us. Her research still needs more work, which demonstrates she's always thinking about her practice, suggesting that she is looking for a way to give material stronger, longer qualities such as a 'future bug to spin a thread line in certain direction, make it hydrophobic and form it around this 3d shape' (Livingcircular,2014). In Lee's TedTalk, she weighs up the positives and potential negatives of her design process, her forward way of thinking is already reshaping the design world. During the future of my design career I am going to make my own fibres, like Lee has. As a strategy I think that fossil fuels should become banned, as a drastic measure. To then grow our own fibres in our gardens and learn how to stitch basic clothing and ideas of living with less. Cellulose fibres will be made naturally, and cotton farming will be irradiated.

Globally, mindsets are changing on how textiles should be made to become more sustainable. We are becoming more educated about the shocking effects it has on the environment and want to change this through means of changing mindsets. I have identified designers that all use design activism as a way of improving their own practices and changing the future for textile fibres. I have come up with several different design strategies, however I feel the most practical and applicable would be stitch and fix workshops to encourage upcycling and a catwalk inspired by Vivienne Westwood's Climate Revolution catwalk 2013 to educate those about the polluting effects it has on our planet. I believe that the most impactful strategy would be the growth of bio degradable fibres, due to the potential it has on the future of the textile industry, however it may be considered too costly, or too demanding. Within the near future, this may change, with evolving technology I think we will be able to grow our own fibres, cotton farming will be at a decline and we will learn how to make our own clothes ourselves, and see the throw away society we live in today as a distant memory for the sake of future generations live to be healthy and full.

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