Annotated bibliography: the textiles industry and circular design

The relationship between the textiles industry and circular design.

Evaluation of the sources below provides insight into the relationship between the textile industry and circular design. ‘It has been suggested that designers could play a significant role in the circular economy; it is estimated that 80–90% of a product’s lifecycle impacts are decided during the design phase (Graedel et al, 1995). Circular design aims to redefine sustainability models, urging a more cohesive and interconnected design approach where the “full lifecycle of products and processes emulate natural systems, in which there is no waste” (McDonough, 2009). However, this is perhaps far from the current reality, and in many cases, designers are failing to implement the changes required to move towards a circular textile industry.

Fletcher, K. (2014). *Sustainable Fashion and Textiles*. (online) Routledge. doi:https://doi.org/10.4324/9781315857930.

The author presents a critical outlook on the sustainability of the textile industry, presenting an analysis of each stage of current textile design approaches. The book is divided into two halves, the first explaining and evaluating the four key stages of designing for textiles: material extraction, production, use and disposal. The second explores potential approaches to alter the ways in which we consume. Fletcher presents a broad perspective on sustainability issues, presenting alternative opportunities for design opportunities which enable cyclical design qualities from production through to use. Through a reflection and critique of each stage of a product's life cycle, the author concludes that there is a level of ignorance within the industry, and companies currently fail to take responsibility for their contribution to the environmental crisis, 'because handling waste is expensive and brands will want to minimize exposure to such costs, it incentivizes the creation of products that are more durable and are easier to reuse and recycle' (Fletcher, 2014). Ultimately the author concludes that the future of the textiles and fashion industries are 'complex and unpredictable', though does imply that an interconnected and cyclic design approach is the key to a more sustainable textile industry. However, as evidenced by the later publication from the Environmental Design Agency (2022), cited below, a decade on there has still been very little movement towards cyclical, sustainable design practices.

Hornbuckle, R. (2018) 'What Else Do We Know? Exploring Alternative Applications of Design Knowledge and Skills in the Development of Circular Textiles', ***Journal of Textile Design Research and Practice,*** **6 (1), pp. 23–41. DOI: 10.1080/20511787.2018.1434745.**

The journal draws on existing research to explore ways of applying existing design knowledge to introduce a circular economy, specifically within the textile industry. The author

acknowledges that in recent years textile designers have begun to expand the conventional view of design's role and appreciate that there is a need for change and consideration surrounding our environment. Thus far there has been some attempt to address the challenges of material circularity, however, this is 'far from the reality of mainstream design practice' (Hornbuckle 2010). Though there are various ways that textile designers can apply their knowledge and skills to implement circular design, Hornbuckle concludes that the environmental crisis is too complex for the industry to face independently. The author advocates for interdisciplinary, collaborative projects being the key to change. Though acknowledges that more work needs to be done to refine these methods of collaboration, 'including a much clearer understanding of how designers from different disciplinary backgrounds and cultures can work together' (Hornbuckle, 2010).

Goldsworthy, K. Earley, R and Politowicz, K. (2018) 'Circular Speeds: A Review of Fast & Slow Sustainable Design Approaches for Fashion & Textile Applications', *Journal of Textile Design Research and Practice*, 6 (1), pp. 42-65. DOI: [10.1080/20511787.2018.1467197](10.1080/20511787.2018.1467197)

In 'Circular Speeds' the authors offer a definition of a circular design model in the context of a a range of design speeds, specifically slow to fast fashion. The article reviews both historical and contemporary industry approaches, alongside academic design research, to suggest the ways in which the notion of 'speed' can offer new opportunities for a more sustainable industry. Through an offering of reflection and guidance, the authors offer a diverse range of approaches to coming together to devise a vision for an industry that is sustainable and circular. Similarly, to the article by Hornbuckle cited above, it is proposed that 'by working in communities of practice, designers can identify both the

physical and psychological barriers to more sustainable solutions, translating them into creative proposals for transformation.' (Hornbuckle, 2018). Again, this suggests that multi-disciplinary integration is crucial in moving towards an industry of circular design.

Norris, L. (2019) 'Waste, dirt and desire: Fashioning narratives of material regeneration', L. Pickering, S. Armstrong, & P. Wiseman (eds.), *The Sociological Review,* 67 (4), pp. 886–907. doi:10.1177/0038026119854273.

The article explores three contexts where manufacturers and retailers have experimented with adding value to fashion and textiles with the aim of reshaping their narratives of material sustainability. The author criticises the current state of an industry 'which currently recycles less than 1% of its own cast-offs back into clothing' (Norris, 2019), presents the reader with the concept that keeping fibres in circulation for longer may not only be environmentally sustainable but also economically advantageous. Norris advocates for a drive towards a more circular textiles system in Europe, presenting frameworks developed from sustainability and resource effectiveness. The article summarises by suggesting some evidence where different attempts are being made for creating value around material, particularly amongst new brands, yet suggests we are still in an 'era of transition' and only now is the textiles industry beginning to take sustainability through design circularity seriously. Much like the earlier dated writings cited above, the author concludes through an emphasis on the need for change. This perhaps indicates that though there has been recognition that revision of current design practises is essential, the concept of circular design remains largely overlooked and disregarded by the textile industry.

European Environment Agency, (2022) *Textiles and the*

***environment : the role of design in Europe's circular economy*. Publications Office of the European Union. https://data.europa.eu/doi/10.2800/578806**

'Textiles have on average the fourth highest negative life cycle impact on the environment and climate change' (European Environment Agency, 2022). The publication explores this statement through research and statistics, relaying the information to the reader with the purpose of creating an urgency for change. The authors analyse the major challenges faced by Europe to make changes to the textiles industry both in terms of production and waste, presenting four pathways for change: longevity and durability, optimised resource use, collection and reuse, and recycling. From the perspective of the author, a shift away from mass consumption to a circular textile production and consumption system is essential. 'Circular design is an important component of circular business models for textiles. It can ensure higher quality, longer lifetimes, better use of materials, and better options for reuse and recycling.' (European Environment Agency, 2022). This publication gives way to an interesting comparison between the earlier dated texts cited above. Written over the span of a decade, all of the texts demonstrate a sense of awareness that circular design is a key enabler of the transition towards sustainable textile production. Nonetheless, as statistically proven within this publication, to date, there has been a severe lack of action and failure to change.

To conclude, it is clear that 'textile designers have the potential to play a key role in the…shift to a circular and sharing economy. The need to create materials that are recycled and can be recycled again means that we require textile designers to take centre stage in this new era.' (Goldsworthy, Earley and Politowicz, 2018). However, thus far there has been fairly little attempt to move the industry towards the circular design economy that is so clearly

essential for a healthy and sustainable environmental future.

References:

Graedel, T. E., Comrie, P. R., Sekutowski, J. C. (1995) 'Green product design.' *AT&T Technical Journal,* (74) (6), pp. 17-24.

McDonough, W. (2009) *Cradle to cradle:remaking the way we make things*. London : Vintage.

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week 5: social and environmental justice

The concept from this week's lecture that I found I was the most inspired by, was design activism and the relationship between design, social and environmental justice.

So what is design activism?

'Design activism reallocates resources, reconfigure systems and reprioritises interests. It is necessarily broad in its scope and aims…Design activism is overtly material in that it grapples with the everyday stuff of life; it is also

resolutely driven by ideas and understandings. It is a making of politics.'

(Guy Julier, 2013:144-145)- writer and academic who has spent the past 30 years researching global changes in design, economics and society)

As designers we are trained to constantly seek improvements to how people live, however, it is becoming more and more apparent that design processes are often ethically questionable due to a lack of consideration or awareness of their implications. As I have touched on previously, within the design industry, practises have been strongly focused on maximising profits with little attempt to understand or solve the social and environmental problems that they are contributing to. However, design activists are looking to break this mould and look at how we can utilise the power of design to create change for the better. They look to bring about change by focusing on designing for community and moral beliefs and values rather than individual gain.

Standing Rock Protests

From this week's lecture, the 2016 Standing Rock protests were the example of design activism that particularly stood out to me, and I then went on to research and try to understand further in my own time.

The Standing Rock encampment in North Dakota began in 2016 and was made up of many of the tribes and protestors that opposed the Dakota Access pipeline. The pipeline was intended to run from North to South Dakota, passing Lake Oahe, which acts as the main source of water for the indigenous population in that area. The pipeline posed a huge threat to their health, but also to that of millions of others whose water and land could also be contaminated by any leaks. Within a few months, more than 4000 people resided in the camp, with thousands more on weekends.

I find it so inspiring that the camps became places of social organisation based entirely around a sense of community and care for the environment. So many people came together to share their experiences and knowledge of what was happening in their environment; working as a collective to share ideas on sustainable living and creating a future involving a peaceful and purposeful relationship with our environment.

It was interesting to read further into 'Learning from the Standing Rock as a Site for Transformative Intercultural Pedagogy' by Jilly Traganou and Regine Halter. Something that particularly stuck with me was the lessons for design towards the end of the reading. Their first objective inspired by the Standing Rock encampment is that 'the participants in the site of encounter (students and educators of design from different parts of the world) should agree and aspire to the goal of creating together a new community of change.' (Traganou, 2019:88-89). This also aligns with their fourth objective which states the importance of collectively developing a new community of change.

I think that particularly within the West we need to take a less individualistic approach to both design and our environment in general and begin to move towards community-based mindsets. In a society that is currently driven by capitalism, there is very little we do to immerse ourselves in the community, but I think this idea is fundamental to change for a better future.

What can I take from this as a designer?

I think as designers, we all need to come together to create a community of change, bringing our different knowledge and disciplines together to ‘prefigure what a future, desired society would feel like’ (Traganou,2019:88-89). With the common motivation of bettering our environment, designers should begin to create now for the future that we want to see in the world.

Though the transition might be slow, if awareness and responsibility continues to be raised amongst the design community, I truly believe that we will slowly see change.

Designer of the week…

Aram Han Sifuentes is a social practice and fiber artist who uses textiles and sewinf as her medium to investigate identity politics, immigration, citizenship and other poltical and environmental issues in the United States. Her work is political and informed by her own experience as an immigrant living and with her parents working in the garment industry.

For me it is so inspiring to see ways other designers within my discipline are creating awareness. I think her protest banners and garments are an amazing way of using textile design to create artwork that combines experience, activism and community. Using design in this way raises awareness and speaks out for vulnerable communities and people who don’t necessarily feel safe attending a protest.

https://www.aramhansifuentes.com/statement-bio

References

Julier. g. (2000) The Culture of Design. *SAGE Publications* Available at: https://designpracticesandparadigms.files.wordpress.com/2013/01/wk1_guy_julier_the-culture-of-design_intro_chapters-2-3-1.pdf

Mongabay Environmental News. (2022). *Standing Rock withdraws from ongoing environmental assessment of Dakota Access Pipeline*. [online] Available at: https://news.mongabay.com/202202/standing-rock-withdraws-from-ongoing-environmental-assessment-of-dakota-access-pipeline (Accessed: 20 October 2023)

The Guardian. (2016). *Standing Rock protests: this is only the beginning*. Available at: https://www.theguardian.com/us-news/2016/sep/12/north-dakota-standing-rock-protests-civil-rights.

Traganou, J. and Halter, R. (n.d.). Learning from the Standing Rock as a Site for Transformative Intercultural Pedagogy.

www.academia.edu. Available at: https://www.academia.edu/40941046/Learning_from_the_Standing_Rock_as_a_Site_for_Transformative_Intercultural_Pedagogy.

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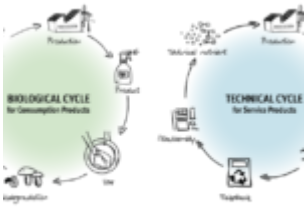
week 4: remaking the way we make things



In Cradle to Cradle: Re-Thinking the Way We Make Things

This week’s reading was by architect William McDonough and chemist Michael Braungart who combine design and science that present the ways in which society would benefit from a circular economy that is inspired by nature’s abundant supply

chains, with the ultimate goal of eliminating the concept of waste. They put forward the concept of ‘cradle-to-grave’ and ‘cradle-to-cradle’ design cycles which is an idea that has really inspired me to start constantly trying to seek improvement in my own designs.

Cradle-to-grave: Product is created, used and disposed of

Cradle-to-cradle: Sees waste as an eternal resource. Developing a product where all resources can be used effectively, and in a cyclical way.

The book also put forward a design framework of three principles, which I personally found quite interesting, though perhaps slightly unrealistic and idyllic.

3 principles:

1. everything is a resource for something else- everything can be designed to be disassembled and safely returned to the soil or re-utilized as high-quality materials for new products.

2. use clean and renewable energy- we should use clean and renewable energy, such as solar, wind, and other energy systems still being developed today; capitalizing on these abundant resources while supporting human and environmental health.

3. celebrate diversity- creating designs that respond to the unique challenges and opportunities of each place that they become part of so that they fit elegantly and effectively.

Although these principles do seem relatively reasonable, the reality of the large-scale changes that would have to be implemented makes them slightly naive. As a result of our irresponsible design history, there are already large amounts of products and large-scale energy systems that don’t fit this mould. Furthermore, ignorant mindsets surrounding the current environmental crisis, as well as priorities of designing for

trends and financial gain, may mean designers are reluctant to make these changes.

Though I don’t think our current system can change entirely, the overall message of the reading was optimistic and the principles were insightful. I do believe that as designers it is our responsibility to find a balance between profit and ethical practice. Concepts such as downcycling where valuable components of products can be reused could be a good way to begin reusing products that are already in circulation. I also think it is key for designers to implement the cradle-to-cradle mindset as it could be revolutionary for the future of both our environment and design practice.

Designer of the week…

Berlin-based designer **Tobias Juretzek** works with an Italian recycling company to source unwanted clothes and with Italian furniture manufacturer Caamania and Horm to saturate them with a binding agent and compress them into chair-shaped moulds. It is currently a very hands-on, small-scale, process, but he has plans to scale up and use the pre-consumer waste streams of the fashion industry to create furniture.

The Rememberme chair was inspired by his interest in the nature and value of our relationships with the objects we own. The characteristics, details and colours of the original clothes of clothes remain visible, giving the chairs a unique and unconventional appearance, but also challenging people to think differently about waste.

http://www.tobiasjuretzek.com

References

Braungart, M. and Mcdonough, W. (2009). *Cradle to cradle: remaking the way we make things*. London: Vintage.

EPEA (2022). *Cradle to Cradle*. EPEA. Available at: https://epea.com/en/about-us/cradle-to-cradle.

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week 3: producing and consuming differently

The debate…

This week we continued to explore designers' role in environmental responsibility. This week's seminar debated the argument **"Designers have not yet come to terms with their complicity in the creation of the conditions of the environmental crisis or with their environmental responsibility, nor have they yet reformed their practices accordingly"** which I found to be an extremely thought-provoking topic of conversation.

I was given the opportunity to represent the 'against' side of the argument so tried to present evidence of ways that designers have started to move towards more environmentally responsible making and production processes. I drew on my own design discipline, Textiles, and largely based my argument around the Slow Design movement which is currently hugely relevant and having a significant impact within the Interior and Textiles industry. The trend is the interior industry's equivalent to the anti-fast fashion revolution and is a form of creative activism that presents an opportunity to slow down the process of design research, production and outcome. It focuses on the longevity of a product, valuing sustainability but also focusing on the whole story and lifecycle of a product or design and the consumer's appreciation of it.

I feel that this more conscious way of designing, producing and consuming, is very relevant to the 'against' side of the debate and also links nicely Kate Soper's concept of 'alternative hedonism'. The idea that we should rethink how we live in the light of impending environmental catastrophe and that alternative ways of living can be more enjoyable than consumerism, seems relevant to a movement like Slow Design that focuses on the balance between tradition and innovation as well as between technology and classic craftsmanship.

One example of a Slow Design company that I love and **Mizzi**

Studio, a multidisciplinary practice specialising in Bio architecture and Biophilic design and dedicated to achieving a resilient and sustainable future. They aim to slow design down and reconnect humanity with nature, focusing on projects which embrace experimentation and innovation, yet consistently look back at heritage and craft as they believe that learning from the past is the best way to eliminate wasteful processes and build the most sustainable future possible.

However, despite some interesting examples for the 'against' argument that covered a variety of design disciplines, I ultimately took from the debate that designers haven't fully understood how fundamental their role is in changing the current environmental crisis. One point that was raised for the 'for' argument that I completely agreed with is the intentional ignorance of designers about their role in the environmental crisis. The economic pressures of consumerism mean that many companies choose to design for trends and the short-term gain of profit, entirely disregarding sustainable design practices. Catering to trends leads to mass overconsumption and waste both of which are having a lasting impact on the planet, something I would argue most designers are aware of but choose to ignore.

Though there was no overall conclusion to this week's debate the discussion was definitely essential and needs to continue to be had amongst designers in order to combat our current complicity, and naiivity around the environmental crisis. The debate gave me a lot of ground for thought and has sparked an excitement to continue exploring ways designers can reform their practises to work towards a more sustainable and better future.

Designer of the week…

Mizzi Studio- an example of their design work that I felt was particularly inspiring and aligns well with slow design is

their design for Kew Gardens eating space which acts not only functionally but is an example of entirely sustainable design which also provides education on the natural world. It is entirely powered by the energy of an LED sun wall, and all the sculptures are made by independent sustainable craftsmen.

https://www.mizzi.co

References-

www.mizzi.co. (n.d.). *Mizzi Studio | Bioarchitectural & Biophilic design studio*. Available at: https://www.mizzi.co (Accessed: October 10 2023)

Soper, K. (2008). ALTERNATIVE HEDONISM, CULTURAL THEORY AND THE ROLE OF AESTHETIC REVISIONING. *Cultural Studies*, 22(5), pp.567–587. Availabe at: doi:https://doi.org/10.1080/09502380802245829. (Accessed: October 10 2023)