The Dynamics of Environmental Responsibility for Fashion Producers

The fashion industry is one of the most considerable contributors to climate change in the world. The largest drivers of product growth is by fashion producers in power who operate without incentives toward or repercussions from their brands' environmental effects. In 2015 alone, greenhouse gas emissions (GHG) from the multibillion-dollar textile industry produced 1.2 billion metric tons of CO2, which was more than the emissions from all international flights and maritime shipping combined (Ellen MacArthur Foundation, 2017; International Energy Agency, 2016). This information cannot be ignored as the rapid growth of the fashion industry left unchecked will exponentially amplify its negative ecological impact over time, ultimately leading to irreversible climatic changes. In order to slow or reverse the ever-increasing carbon footprint of the fashion industry, it is necessary to first understand what drives decision makers within the industry and how to redirect their focus toward environmental responsibility.

The largest drivers of decision maker's initiatives in a capitalist system are stakeholders. In their role as producers/shareholders, they have previously been the dominant voice of fashion brands. Historically these companies have utilized a traditional linear neo-capitalist business model to approach strategic initiatives, which suggest that a company should prioritize the bottom line, placing financial profits as the top priority (John *et al.*, 2022). This is demonstrated by Amazon, for example, the leading fashion retailer in the US, that has deliberately chosen to pursue this approach. Through greenwashing, or false and misleading eco-friendly advertising (Gibbens,

2022), they have been able to divert consumer attention away from the monopolies and oligopolies they are building. Amazon offers 'greener' online shopping options for customers, but they also offer their Prime service, which prioritizes the fastest delivery possible. This results in multiple shipments and deliveries, thereby rapidly increasing CO2 emissions and packaging waste (John *et al.*, 2022). Many fashion companies similarly operate within this linear business model without considering the long term changes essential to lessening their carbon footprint.

Consumers are also stakeholders and have open access to better information and communication technology in recent years, allowing their role greater power. They now voice their interests and concerns more readily, which cannot be ignored by organizations in their decision making any longer (Ferns & Amaeshi, 2021). In the past, consumers did not influence the trajectory of decision making for large fashion brands as they do now. They play a more significant role in brand development today and could utilize their hold to focus further on environmental impacts.

Systemic change necessary for the evolution of the fashion industry has been inhibited by several factors. Since the linear business model dominates the fashion industry, it has become a 'locked-in' regime. When lock-in of a dominant way of thinking and governing occurs, a systemic structure develops in such a deeply ingrained way that few alternatives have space to flourish (Buchel *et al*, 2022). In turn, the standards of behavior in line with consumerist culture further feed into the business model dominant to the regime (Niinimäki, 2010). This further enables the fashion industry to remain opaque and unencumbered in continuing to pursue faster and cheaper production in competitive hubs globally (Buchel *et al*, 2022). Consequently, sustainability in large-scale fashion production continues to be dominated by the status quo, and any substantial gains continue to be based on economic capital amongst brands and manufacturers (Andersen, 2017). Without a regulated global market, there can be little collateral with which to demand change. "Although sustainability has become a matter of concern in the textile and fashion industry, the rules of the game largely remain environmentally and socially unsustainable—governed by various forms of capitalism" (Andersen, 2017). Yes, the traditional form of business operation under neo-capitalism has been extremely profitable, but largely at the cost of the environment. The capitalist pursuit of profit first hinders legitimate changes needed to prevent further harmful effects to the ecosystem.

To achieve transformation in the fashion industry, there must be buy-in to the vision of a new textiles economy based on the principles of a circular economy across different actors, including industry, government and cities, civil society, and the broader public. None of these groups can do it alone (EMF, 2017). Although some brands have initiated more sustainable efforts, they often only switch to materials with less environmental impact, which does not address greater systemic issues, such as the end-of-life of their garments and accessories (Buchel *et al.*, 2022). By addressing the bigger picture and shifting to a circular economy, decision makers can restructure the fashion industry, commit to focusing on the triple bottom line of people, planet and profit, and more accurately address the ecological issues they have created.

Several environmental problems result from fashion industry production. For example, there has been a heavy dependence by the industry on nonrenewable resources (e.g., virgin materials, petrochemical products), exhaustive farming practices (e.g., using substantial quantities of pesticides, fertilizers and water to produce cotton) and chemical dyeing that cause many effluents. These practices have contributed not only to water pollution but also to various other environmental consequences (Bick *et al.*, 2018; Niinimäki *et al.*, 2020; Peters *et al.*, 2021). Furthermore, less than 0.5% of post consumer textile waste is recycled into new fibers and garments (Textile Exchange, 2021) which in turn overloads landfills and leads to off-gassing, contributing even more GHG emissions. Garments made from synthetic materials such as polyester also shed micro plastic from their fibers, creating nearly half a million tons of ocean pollution annually. That is 16 times more than plastic microbeads from cosmetics (EMF, 2017). It is clear that more conscientious decision making by fashion producers is essential to alleviate the carbon footprint of the fashion industry.

Many solutions are available in addressing these adverse effects. First, transitioning to a regenerative circular economy can begin to remedy the negative impacts produced from a linear economy (EMF, 2017). Keeping more products and materials "in the loop" allows for extended use, reuse, repair, repurposing and recycling through emerging innovations both technical and social (EMF, 2017; EEA, 2021b).

More effective recycling is also crucial to increase its utilization on a global scale. With better methods such as chemical fractionation, which preserves fibers more valuably than mechanical fractionation, the recycling of fibers from the textile and fashion industry could increase by over 60%, allowing for the manufacturing of 100% recycled clothing (Niinimäki *et al.*, 2020). What cannot be recycled for wearables can be harvested for methane production, as anaerobic digestion (AD) technology for organic waste recycling has attracted growing attention due to its many advantages, such as

production of clean energy, lower emissions, and its large-scalability treatment analogous to other recycling technologies (Jin *et al.*, 2021).

Furthermore, innovations in bio-textiles such as with Bacterial Cellulose (BC) have the potential to replace fabric entirely as the manufacturing process is cleaner, using less water and energy compared to traditional fabric production (Yim *et al.*, 2017).

Lastly, prevention of waste creation is ultimately the best strategy to reduce CO2 and GHG emissions. "Increasing the average number of times clothes are worn" is perhaps the best way to reduce the environmental impacts of the clothing industry (EMF, 2017). The garment trade's climate pollution would surprisingly be cut by nearly half just by doubling the usage of clothing (Mackinnon, 2021). Solutions to the climate crisis created by fashion brands can be resolved through better decision making by those in charge.

It is apparent that the risk and reward structures of capitalism are inhibiting decision makers in the fashion industry from basing decisions on improving their carbon footprint. The industry clearly needs to transform its primary linear business model to a circular business model as the consequential environmental impacts have never been more evident. More than ever, stakeholders have greater decision making power and influence and are a driving force among brands to instigate change. If the focus of the fashion industry can be redirected to circular economic solutions, stakeholders will be satisfied and brands can begin to grow in promising areas that are sustainable as well as profitable.

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