

SDG 9: Industry, Innovation, and Infrastructure

Sustainable fashion aims to make green the new black

Nick Klenske (Oct. 28, 2021)

Fast fashion, which encourages consumers to quickly discard and replace clothing, uses significant amounts of natural, social, and creative resources and creates excessive waste. Research into sustainable fashion aims to change this.

Employing more than 300 million people and producing 100 billion items every year, the fashion industry has a colossal impact on the environment. Driving this trend is so-called “fast-fashion,” an exploitative yet highly profitable business model that turns high-fashion designs into low-cost, mass-produced styles.

“Because these garments are meant to be disposable, fast fashion encourages over-consumption and generates excessive waste—much of which cannot be recycled,” said Gisa Schosswohl, a project coordinator with the Creative Region of Linz and Upper Austria, an organization dedicated to evolving the area’s creative industries, including fashion.

To make the fashion ecosystem fit for the circular economy, the European Commission has launched a roadmap for the future of sustainable textiles in the EU. This includes efforts to increase the reuse and recycling. With estimates that less than 1% of all textiles worldwide are recycled into new textiles, the report stresses the need for measures to address weaknesses regarding sustainable production, sustainable lifestyles, improving textile waste collection and recycling in the Member States.

Cheap clothes come at a high cost... for workers, too

Although the fashion industry is working to improve its environmental footprint, as is evidenced by the clothes recycling programs happening at many retailers, sustainability is about more than just the environment. It encompasses social and economic issues as well.

“Even though many fashion companies are committed to sustainability, their focus on waste, pollution and environmental issues means such social issues as human rights and working conditions go largely ignored,” said Hakan Karaosman, a researcher at University College Dublin.

“In pursuit of profitability, and now environmental sustainability, fashion brands have largely ignored worker exploitation,” added Donna Marshall, also a professor at University College Dublin.

Herein lies the dilemma: It's either profit, the environment, or workers. You can have one, two at best, but it's difficult to have all three.

According to Schosswohl, in an ideal world, fashion would be mindful of its social, environmental, and economic factors. “Companies would pay their workers a living wage, give them safe, healthy working conditions, monitor [fashion’s] environmental impact, use sustainable materials, and reduce resource usage throughout the product's lifecycle,” she said.

Fast fashion is so last year

“Our goal is to develop new concepts for the future of fashion by means of new processes and aesthetics that are both inclusive and sustainable,” explained Schosswohl, who coordinates the initiative.

The team of designers and scientists have already created some runway-worthy ideas. For example, your next purse might be made not from cowhide, but from recycled cork using re-FREAM’s biodegradable fibers and materials.

Or, instead of buying a pair of cheap jeans made using unfair, low-cost labor, why not get a pair that was made just down the street? Advances in 3D printing happening inside re-FREAM’s creative labs, might mean that soon you can.

3D printing also opens the door to personalized fashion, where quality clothing is produced locally and made specifically for your body. According to Schosswohl, such a development could help counter the wastefulness of mass production and fast fashion.

“I envision a future where the consumer will essentially be a co-creator of their own clothing,” said Schosswohl. “By creating a direct relationship between the garment and the wearer, the lifecycle of a given item will increase exponentially.”

The project is also addressing the social aspects of sustainability by making textiles more inclusive. “Our clothes can act as powerful tools for connecting with otherwise marginalized populations,” said Schosswohl.

To illustrate this point, Schosswohl highlights a fabric developed by the project that is integrated with sensor technology. “This material can provide multi-sensory stimulations for stroke patients and help them interact with and express ideas to others,” she added.

A community-to-wardrobe revolution

The transition to a truly sustainable fashion industry won’t be easy and it won’t happen overnight. But Karaosman, Marshall, and Schosswohl all agree that research, technology, education, and dialog are the models that will eventually put it on the cover.

“Transitioning to a fair and circular fashion industry will require holistic, long-term, and participatory social dialog where workers are included, their experiences understood, and their representation authentically ensured and protected,” added Marshall.

“Technology allows fashion to be locally produced using locally sourced materials,” concluded Schosswohl. “Like the farm-to-fork movement that has taken the food industry by storm, I think fashion is on the cusp of a ‘community-to-wardrobe’ revolution.”

Klenske, Nick. 2021. “Sustainable fashion aims to make green the new black.”

<https://phys.org/news/2021-10-sustainable-fashion-aims-green-black.html> (accessed on November 11, 2021).