

Threads of Change: Exploring Fashion's Impact on Our World and Innovations for a Sustainable Future

(by S.C., Liceo N. Machiavelli, Rome)

Have you ever paused to reflect on the journey of our clothes? Have you wondered about the materials they're crafted from, the hands that shape them, and the impact they leave on our world? These questions often linger silently, yet they carry profound significance in our modern era. Within the fashion realm, where trends reign supreme, lies one of the least scrutinized sectors of industry.

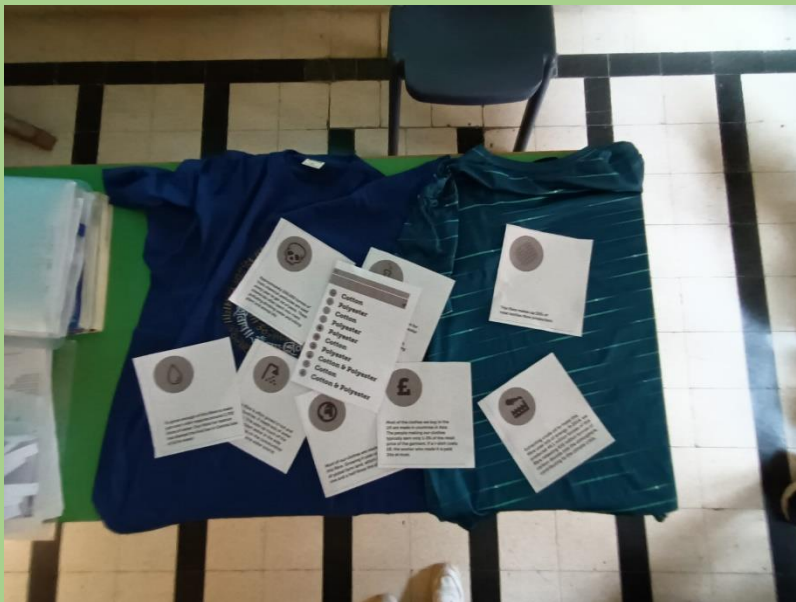


Figure 1: Garments brought in by our teacher: what are they made from?

Consider cotton farming, for instance, consuming a staggering 2.5% of the world's farming land. Picture vast fields drenched in synthetic pesticides, poisoning the soil and seeping into our waterways, all while jeopardizing the health of farmers. Then there's polyester—an omnipresent fabric born from fossil fuels and chemicals, leaving a trail of environmental havoc in its wake, perpetuating pollution and degradation.

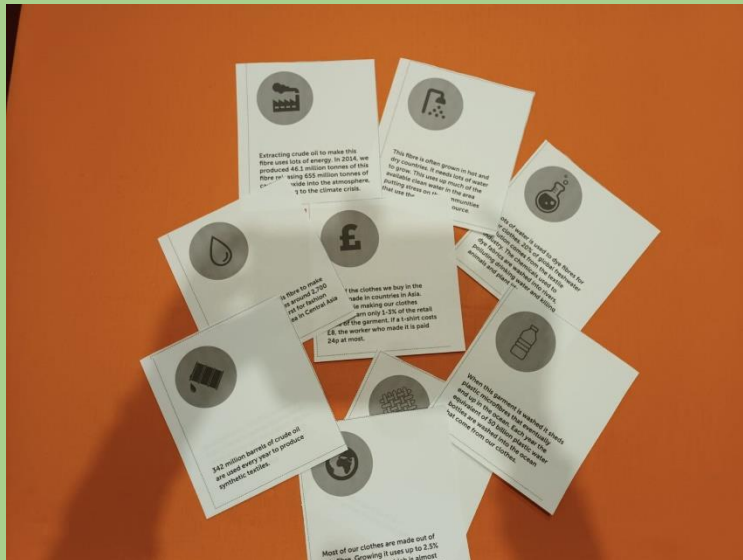


Figure 2: The flashcards about fabrics we analysed in class

It was our school project "The Way We Wear" that prompted me to ask these questions, especially when our teacher brought garments to class and encouraged us to reflect on the materials they were made of. We were tasked with researching the environmental impact of organic material cultivation and synthetic material production and that sparked my curiosity.

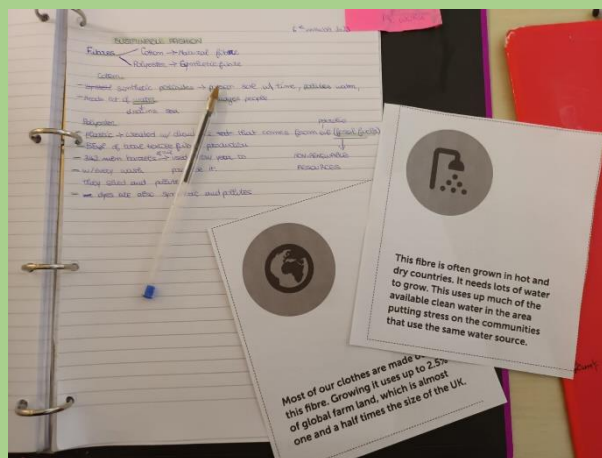


Figure 3: Activity done in class

Our teacher also invited us to explore if there were local initiatives addressing the issue of sustainable clothing and this is how I came across "Fondazione Mondo Digitale," FMD, a non-profit Italian organization anchored in Rome. I must say that I tried to obtain an interview with the community manager, C.S, who kindly responded to my initial email. However, when I sent her the questions I would ask during the interview, she couldn't schedule an appointment due to lack of available time. Nevertheless, I gladly conducted research on my own initiative, which I would like to share here.



Figure 4: FMD logo

At FMD they leverage the power of digital technologies as catalysts for social change. Through their endeavors, they strive to nurture growth, enhance welfare, boost productivity, and foster competitiveness. With nearly two hundred social inclusion and innovation projects under their belt, many of which receive funding from European sources, their impact resonates from local communities to the global stage.

In 2019, the foundation embarked on a bold mission titled "Digital Made: For Young Fashion Talents." This visionary project sought to unearth innovative solutions within the fashion and textiles industry by seamlessly blending art, design, and technology. The journey commenced with a captivating fashion show in Rome, a celebration of the fusion of wearable technology and sustainable production. Drawing participants from fourteen different countries, it epitomized a truly global collaboration, sparking creativity and collaboration across borders.

Fast forward to 2020, and the fashion show evolved into three distinct categories: Bio materials, digital fabrication, and wearable technology. In the bio materials segment, alternative methods of clothing production took center stage, unveiling prototypes that integrated natural resources like mushroom and pineapple skins, alongside cutting-edge materials designed to absorb greenhouse gases from the atmosphere.

Meanwhile, digital fabrication aimed to minimize waste and environmental impact by harnessing state-of-the-art digital devices like 3D printers and laser cutters. Here, the focus lay on repurposing excess materials, such as leather from luxury brands, and streamlining production processes for sustainability.

Lastly, the wearable technology category showcased garments infused with technological marvels. From hats that monitor heart rates and translate them into color patterns on dresses, to kimonos equipped with sensors that detect CO2 levels and repel mosquitoes, these innovations epitomized the seamless integration of fashion and technology, offering glimpses into a future where style and sustainability intertwine.

In conclusion, while the fashion industry grapples with myriad challenges, it also brims with boundless opportunities for positive change. Initiatives like "Digital Made" serve as beacons of hope, showcasing the tireless efforts of individuals and organizations dedicated to fashioning a more sustainable and environmentally conscious future for humanity as a whole.

Consulted sites

<https://formazione.mondodigitale.org/>

<https://traid.org.uk/news/new-education-toolkit/>

All the pics – but the FMD logo - have been taken by us in class