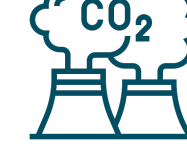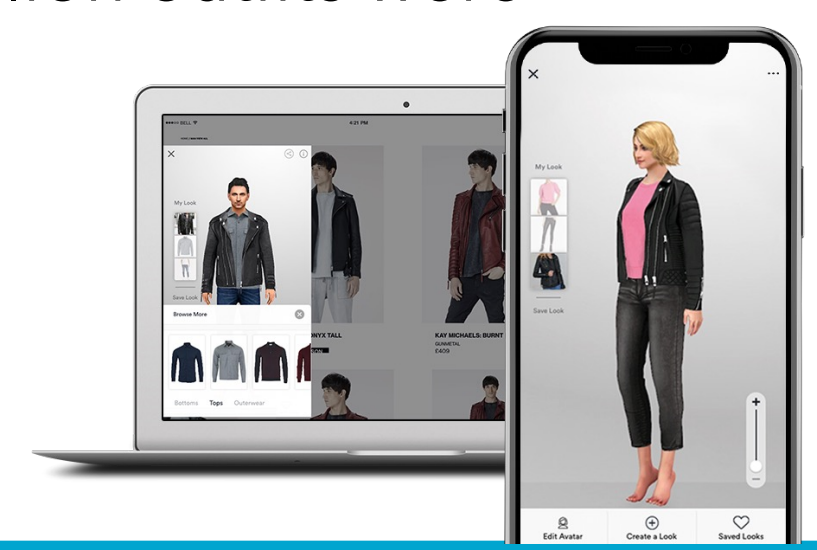# THE SUSTAINABILITY POTENTIAL OF DIGITAL FASHION

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SSM1100Y Y LEC0101: Research Paper

Is Digital Fashion a Viable and Sustainable Alternative to Gen Z and Millennials' Conventional Clothing Consumption?

THE PROBLEM

Gen Z and Millennial consumers are buying much more clothing yet wearing each garment less frequently

o In 2019, the average American **purchased 68 pieces of clothing**; a five-fold increase in consumption since 1980 (Thomas, 2019).

o One in six young people feel they **cannot wear an outfit again** if it has been seen on social media (Bowman, 2019).

o One in three women consider a garment "old" after only wearing it "once or twice" (WRAP, 2021).

o There is **a rise in single-use outfits**: in Britain alone, 7.5 million outfits were purchased and worn once for music festivals (Petter, 2019).

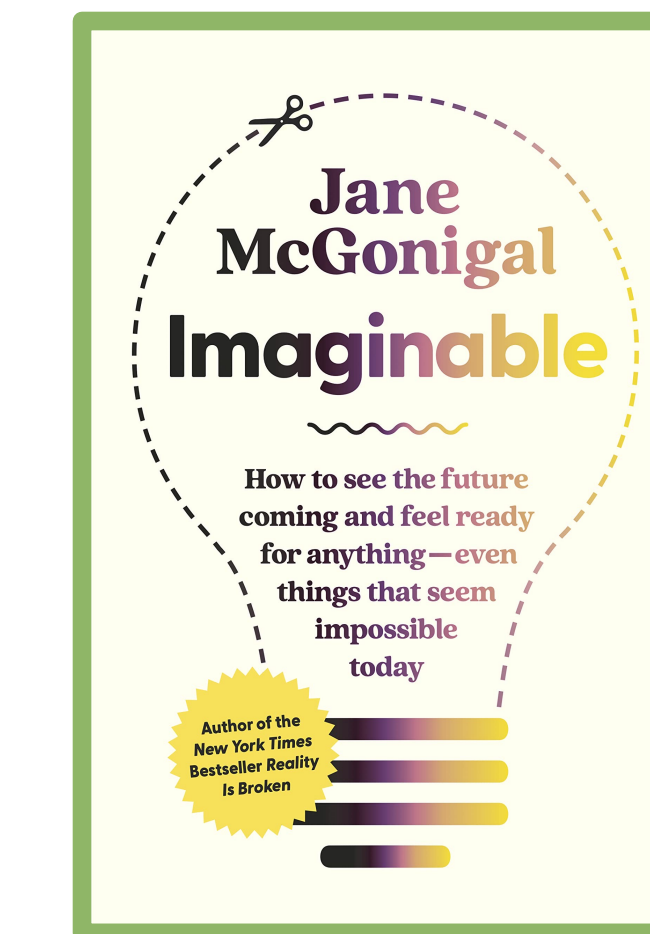o The fashion industry accounts **for roughly 10 percent of global carbon emissions** (Howell, 2021).

DIGITAL FASHION

Digital fashion is a depiction of clothing worn by a person or avatar that uses extended reality technology

o Digital fashion can be worn on social media, over videos, in videogames, and in the metaverse.

o Goldman Sachs predicts that by 2025, global revenues **from VR retail sales will reach $1.6 billion** (Bellini et al., 2016)

o While it seems futuristic, it is predicted that, by 2025, **more than 60% of consumers will accept** extended reality technology that changes how they shop (Retail-Tech,2022).

o Brands are using digital fashion as new revenue streams as well as a new way to market existing physical clothing.

World's first digital garment sold on the blockchain for $9,500 USD

IS IT SUSTAINABLE

Yes, if consumers are willing to reduce their physical clothing and replace it with digital

o On average, one digital garment can **save 3,300 litres of water** (DressX, 2021).

o One digital fashion garment **creates 97% less carbon dioxide** compared to a physical garment (DressX, 2021).

o However, the sustainability benefits of digital fashion depends on its distribution methods. NFT fashion is not as sustainable.

METHODOLOGY

Conducted a literature review of 70+ articles, followed by focus groups who discussed a future scenario where the sale of physical fashion is banned

A future scenario is a **coherent and plausible story** about a specific future based on existing signals of change and future forces.

o The first half of the scenario was **grounded in reality**. The second half described a fictional future where **governments ban the sale of fashion.** Citizens are given highly functional capsule wardrobes and digital fashion is the only option for self-expression through fashion.

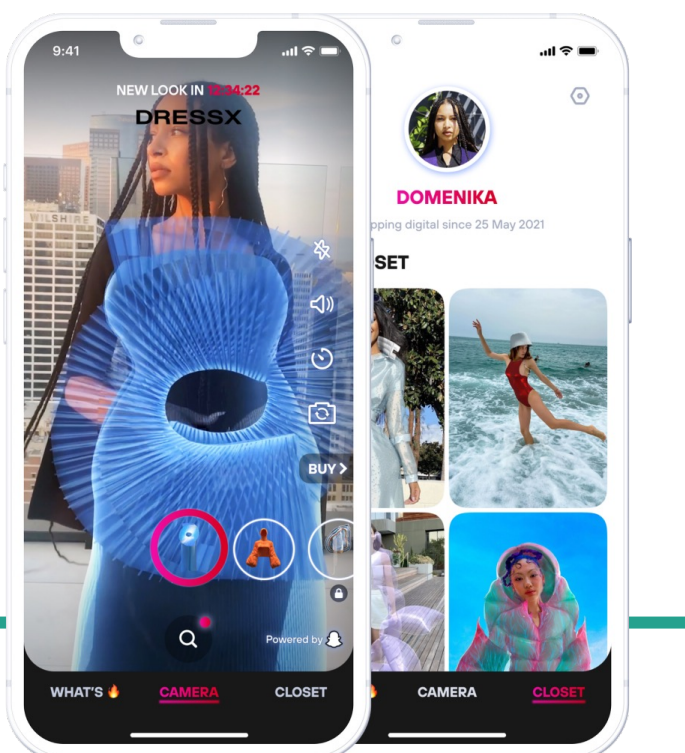o **7 young women** participated in the future scenario focus group.

Based on best practices shared by Jane McGonigal

FINDINGS: PYSCHOLOGICAL FACTORS

All participants were highly fearful of a virtual future

o Unfortunately, the **scenario was slightly flawed** caused participants to focus on the high level of governmental control rather than the viability of digital fashion.

o Overall, digital fashion was **perceived as a last-resort option**; this was not a future the participants were excited about.

The Diffusions of Innovations Theory may explain these negative sentiments towards digital fashion

Unfortunately, the focus groups revealed that none of the needed attributes for successful adoption were present (Rogers, 2003). **Digital fashion had …**

No Relative Advantages	High Complexity	Low Compatibility	Low Observability	Low Trialability

However, the use of influencers could help alleviate these barriers.

FINDINGS: SOCIAL FACTORS

Participants feared digital fashion would weaken their social connections and remove the benefits of 'retail therapy'

o As long as people are actively making decisions (even if they don't make a purchase), **the benefits of 'retail therapy' are preserved**, regardless of whether the shopping is online or in-person (Rick et al., 2014).

o But, shopping is a social activity and participants feared a virtual environmental would **hinder social connection.**

o While this is true for the current metaverse technology, the **metaverse will quickly become more realistic and authentic** (Murray, 2020).

FINDINGS: SOCIOECONOMIC FACTORS

The success of digital fashion depends on who wears it

o **Fashion trends typically flow in a trickle-down effect** from high-status peers to low-status peers (Galak et al., 2016).

o There are two main consumers of digital fashion: **videogamers** who buy "skins" and **wealthy collectors** who invest in NFT fashion.

o For digital fashion to be successful, the early adopters will need to be **influencers and high-status individuals**.

o Influencers could sell digital fashion through **microtransactions** and create awareness or **hide their use of digital fashion**, preventing its adoption.

FINDINGS: CULTURAL FACTORS

Fashion is inherently physical

o While there was a strong belief that fashion has inherently physical properties, the purpose of fashion consumption can be multi-faceted

o While digital fashion is still a futuristic technology for many, we can see that even non-physical clothing could fulfill some traditional purposes of fashion consumption, notably self-expression.

Will digital fashion devalue fashion as an art form?

o Participants were concerned about how digital fashion could devalue fashion as an art form. Participants also worried about the **potential impacts of digital fashion on the economic structures** and market conditions of today's fashion industry.

o These concerns parallel the concerns voiced as the music industry digitalized shifting from **CDs to streaming.**

o **Few thought the music industry would digitalize.** Like digital fashion, streaming was not seen as a viable option early on. However, the idea caught on, causing widespread disruption to an established and profitable industry.

o The digitalization of music **opened the door for new artists** and **reduced the environmental impacts** of music production. The fashion industry may experience similar impacts if it digitalizes in the coming years.

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