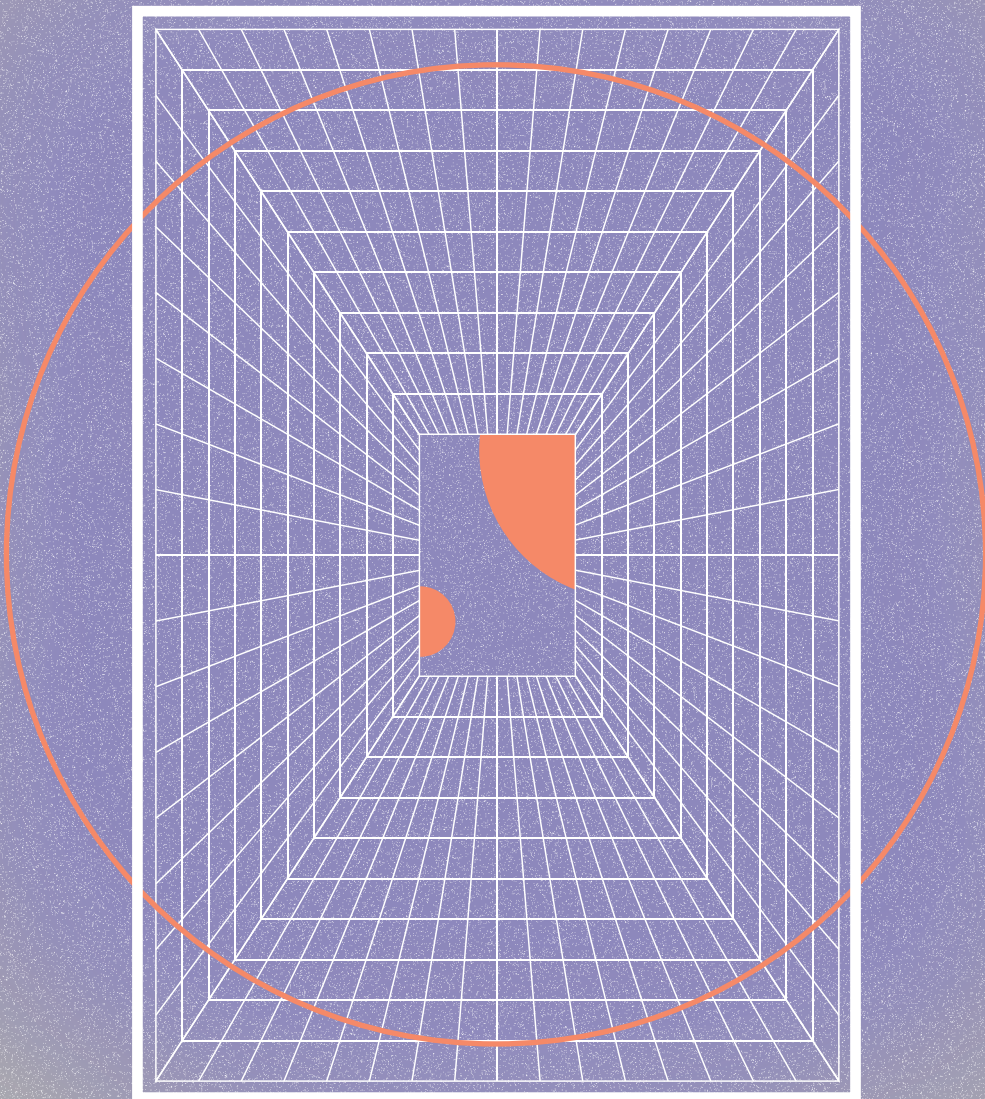


DIGITAL FASHION: THE REDEMPTION OF DIVERSITY, EQUITY, AND INCLUSION?



Politecnico di Milano
Master's Degree in Design for the Fashion System

Hananeh Sefidabi
Academic Year 2021/2022



POLITECNICO
MILANO 1863
DIPARTIMENTO DI DESIGN

DIGITAL FASHION: THE REDEMPTION OF INCLUSIVITY?

Politecnico di Milano

School of Design
Master of Science in Design for the Fashion System
Design for the Fashion System

Hananeh Sefidabi
ID Number 914965

Thesis Supervisor: Alessandra Spagnoli

Academic Year 2020/2021

*“ THESE WALLS ARE FUNNY. FIRST, YOU HATE
‘EM, THEN YOU GET USED TO ‘EM. AFTER
LONG ENOUGH, YOU GET SO YOU DEPEND
ON ‘EM. THAT’S ‘INSTITUTIONALIZED.’”*

–THE SHAWSHANK REDEMPTION

ACKNOWLEDGE- MENT



With sincere gratitude to my supervisor Alessandra Spagnoli for the insightful comments, suggestions and encouragement throughout the process of this dissertation.

And with my endless gratitude to my parents, sisters, and friends who keep me grounded with their constant and unconditional love, remind me of what is important in life, and are always supportive of my adventures.

ABSTRACT

(EN)

Digital fashion and social issues such as diversity, equity, and inclusivity are two of the most widely debated topics in our contemporary world. We all live in a progressively interconnected and interdependent global society shaped by globalization and technological advance where social justice and fairness are fundamental values for sustaining a diverse and tolerant society. With the behaviour shift after the Covid-19 pandemic, both for consumers and enterprises, we can see increasing demand for credibility, mindful consumption, and social justice.

Disciplines associated with traditional fashion design are being disassembled, and the dimensions of reality are being broadened. Historically, the fashion business has fostered discrimination and biases. On the other hand, as technology advances and individuals acquire greater access to media resulting in more awareness, unprecedented debates about inclusion and diversity are taking place.

Moving toward a future deeply linked with digital communities, individuals become more concerned with their online presence and digital personas in online games, social media, and the metaverse. Therefore, digital fashion will become more prevalent and an essential part of self-expression and exploration in the digital realm.

Given that digital fashion is still in its infancy in which designers and creatives are attempting to reshape the future of the fashion system, and given the critical importance of diversity, inclusion, and equity in the fashion system, this dissertation explores the two fields through literature review, case study, and conduction of a glossary for providing a shared understanding of the terminologies associated with each domain. The study's findings reveal that, despite some barriers to DEI in the domains of digital worlds and digital fashion, various opportunities exist due to the more egalitarian nature of digital fashion and Web3, which can support DEI in the fashion ecosystem.

ABSTRACT



La moda digitale e le questioni sociali come la diversità, l'equità e l'inclusività sono due degli argomenti più dibattuti nel nostro mondo contemporaneo. Viviamo tutti in una società globale progressivamente interconnessa e interdipendente modellata dalla globalizzazione e dal progresso tecnologico in cui la giustizia sociale e l'equità sono valori fondamentali per sostenere una società diversificata e tollerante. Con il cambiamento di comportamento dopo la pandemia di Covid-19, sia per i consumatori che per le imprese, possiamo vedere una crescente domanda di credibilità, consumo consapevole e giustizia sociale.

Le discipline associate al design della moda tradizionale vengono smantellate e le dimensioni della realtà vengono ampliate. Storicamente, il business della moda ha favorito discriminazioni e pregiudizi. D'altra parte, man mano che la tecnologia avanza e gli individui acquisiscono un maggiore accesso ai media con conseguente maggiore consapevolezza, sono in corso dibattiti senza precedenti sull'inclusione e la diversità.

Muovendosi verso un futuro profondamente legato alle comunità digitali, gli individui si preoccupano maggiormente della loro presenza online e dei personaggi digitali nei giochi online, nei social media e nel metaverso. Pertanto, la moda digitale diventerà più prevalente e una parte essenziale dell'espressione personale e dell'esplorazione nel regno digitale.

Dato che la moda digitale è ancora agli albori in cui designer e creativi stanno tentando di rimodellare il futuro del sistema moda, e data l'importanza critica della diversità, dell'inclusione e dell'equità nel sistema moda, questa tesi esplora i due campi attraverso la letteratura revisione, studio di casi e conduzione di un glossario per fornire una comprensione condivisa delle terminologie associate a ciascun dominio. I risultati dello studio rivelano che, nonostante alcune barriere alla DEI nei domini dei mondi digitali e della moda digitale, esistono varie opportunità dovute alla natura più egualitaria della moda digitale e del Web3, che può supportare la DEI nell'ecosistema della moda.

TABLE OF CONTENTS



PART 0: INTRODUCTION

(0.0)	INTRODUCTION	11
(0.1)	OBJECTIVE	13
(0.2)	METHODOLOGY	14

PART 1: DIVERSITY, EQUITY, AND INCLUSION

(1.1)	DEI TRINITY IN GLOBAL SOCIETY	18
(1.2)	DEI DEFINITION	21
(1.3)	FOUR WAVES OF GLOBALIZATION	37
(1.4)	DEI IN THE FASHION SYSTEM	45
(1.5)	AN INSIGHT INTO REPRESENTATIVE CASES THROUGH DEI LENSES	72
(1.6)	THE RELEVANCE OF DEI CULTURE AND FASHION SYSTEM IN THE DIGITAL AGE	84

PART 2: DIGITAL FASHION

(2.1)	INTRODUCTION TO DIGITAL FASHION	90
(2.2)	DIGITAL FASHION: WHAT IS IT?	92
(2.3)	HISTORICAL PERSPECTIVE AND MILESTONES	94
(2.4)	WILL DIGITAL FASHION EVER BECOME COMMONPLACE?	112

PART 3: DEI CULTURE IN DIGITAL FASHION

(3.1)	CASE STUDIES	124
(3.2)	DEI DRIVERS IN THE DIGITAL FASHION	147
(3.3)	DEI BARRIERS IN THE DIGITAL FASHION	152

CONCLUSION	156
-------------------	-----

GLOSSARY	158
-----------------	-----

LIST OF FIGURES	170
------------------------	-----

REFERENCES	176
-------------------	-----

INTRODUCTION



0.0 Introduction

Digital fashion and social issues such as diversity, equity, and inclusivity are two of the most widely debated topics in our contemporary world. We all live in a progressively interconnected and interdependent global society shaped by globalization and technological advance where social justice and fairness are fundamental values for sustaining a diverse and tolerant society. Additionally, the Covid-19 pandemic has already caused a shift in values, both for consumers and enterprises. We can see that consumers increasingly demand that the companies from which they purchase products reflect values intrinsically linked to credibility, mindful consumption, and social justice.

Disciplines associated with traditional fashion design are being disassembled, and the dimensions of reality are being broadened, distinguishing contemporary design processes from those associated with earlier eras. Historically, the fashion business has fostered discrimination and biases as a result of persistent beauty standards, exclusivity, and the hierarchical power structure vested in fashion system monopolies. On the other hand, as technology advances and individuals acquire greater access to media and, as a result, increased knowledge and awareness, unprecedented debates about inclusion and diversity are taking place.

We are all moving toward a future in which we will work and live in various digital communities and domains. As individuals, particularly members of Generation Z, become more concerned with their online presence and the creation of multiple digital personas in online games, social media, and the metaverse, digital fashion will become more prevalent and an essential part of self-expression and exploration in the digital realm.

Given that digital fashion is still in its infancy and is an evolving realm in which designers and creatives are attempting to reshape the future of the fashion system, and given the critical importance of diversity, inclusion, and equity in the fashion system, this dissertation will attempt to explore

the ways in which digital realms, specifically digital fashion, are fostering DEI frameworks within the fashion ecosystem, ensuring a more just and equitable design environment as well as fair consumption models.

0.1 Objectives

Digital fashion is still in its infancy, which can be seen as a significant advantage since it provides the opportunity to study, explore, and address its potentials while still in the early stages of development.

The study's findings provide valuable insights for emerging digital fashion designers and start-ups, as well as for all designers and emerging start-ups interested in contributing to the development of an open, decentralized, and inclusive digital fashion world. This thesis aims to provide answers to the following primary research inquiries that have emerged during the research process concerning the relevance of the two primary studied fields:

- 1) The significance of the DEI trinity in the contemporary global society, as well as a thorough understanding of the DEI's definition, origins, frameworks and influencing factors, and its role in the fashion system
- 2) The origins of the digital fashion phenomenon as well as an exploration of how digital fashion has the potential to influence our lived experiences
- 3) Identifying whether and how digital fashion may foster DEI culture through an evaluation of DEI drivers and obstacles in the digital fashion landscape
- 4) Given the frustration felt by fashion stakeholders regarding DEI issues in IRL fashion, how can designers and executives leverage opportunities afforded by the digital realm to amplify the DEI culture inside the fashion system?

0.2 Methodology

The research has been carried out in three phases.

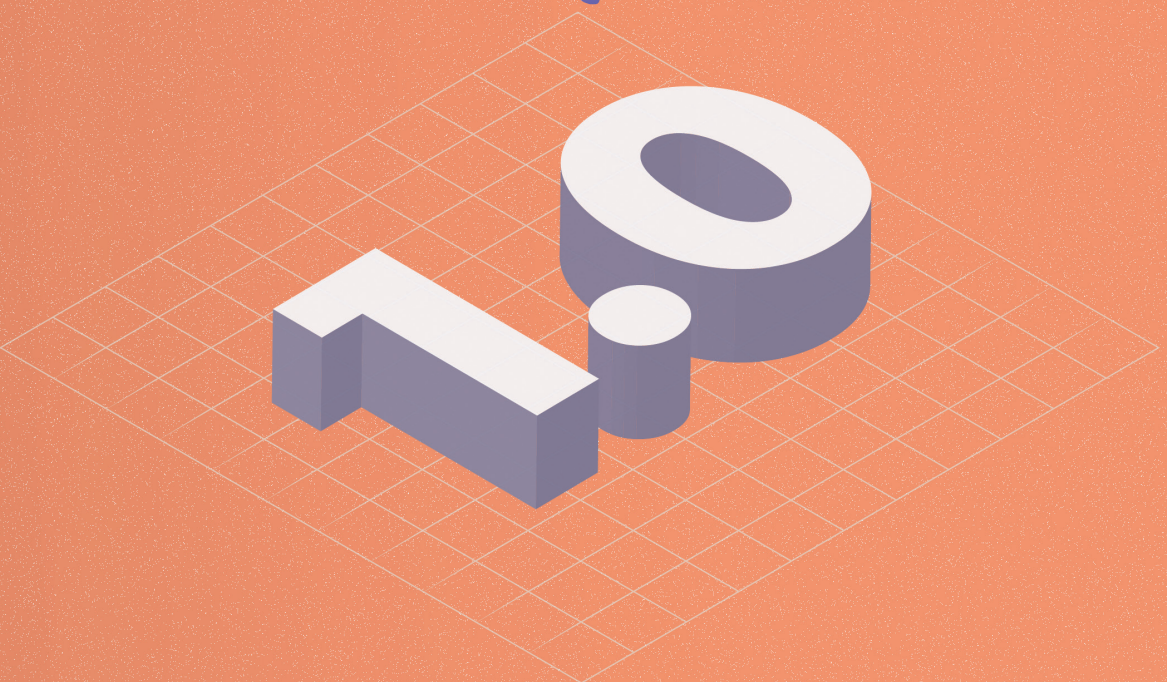
The first section conducts an in-depth investigation of the DEI trinity through a literature review, thoroughly defining diversity, equality, and inclusion since their effective implementation requires a thorough understanding and appreciation of the ideas. This part also discusses the DEI trinity's significance in contemporary societies and the four waves of globalization as the primary driver of global diversity. Additionally, it analyzes fashion systems from a DEI perspective by applying the generated lenses to selected cases and explores the evolution of the digitized fashion system.

The second part is devoted to the digital fashion phenomenon, defining the newly emerging form of fashion, tracing its historical emergence to explore its characteristics and opportunities, and assessing whether and how it will become ubiquitous and integrated into our lives, thereby affecting social issues such as diversity, equity, and inclusion.

The third part provides eight case studies to identify the nature of digital fashion by analyzing the most prominent existing examples and decoding the spirit of inclusion, diversity celebration, and equity linked with each case. The part is continued by a cross-case analysis based on main themes generated through the course of study to emphasize how designers and executives are attempting to amplify DEI culture in the fashion system and recognizing the potential opportunities for creators and consumers through digital fashion and also identifying the few barriers for DEI culture in the digital fashion realm.

A glossary has been provided in this thesis to achieve a shared understanding, acknowledging the broad and growing dialogue around DEI and the digital world and the need for and importance of common vocabulary to avoid misunderstandings and misinterpretations. The glossary has been conducted as a meaningful starting point toward the creation of a common vocabulary for the field rather than as a definitive and authoritative source.

DIVERSITY, EQUITY, INCLUSIVITY





DEI TRINITY

In global society

The starting point of this study is the trinity of diversity, equity, and inclusion (DEI), three concepts that have been increasingly applied to social issues in recent years and are highly relevant in contemporary societal structures. We all live in a progressively interconnected and interdependent global society shaped by globalization and technological advance where social justice and fairness are fundamental values for sustaining a diverse and tolerant society (Eswaran, 2019). Although words such as justice, diversity, tolerance, inclusion, fairness, and equity are some abstract words, they are intensely real in life and have a direct influence on our "lived experience."

We are each identified and identify in multiple ways (through gender, ethnicity, class, generation, geography), and at the intersection of numerous combinations of these attributes, we shape our identity and viewpoints. On the other hand, we are shaped by our community's norms and expectations as human beings. Our biases and beliefs about ourselves and others are reinforced by the signals we receive from our peers.

However, the paradox appears when we acknowledge ourselves in a way not approved or undermined and questioned in our peer group or, even on a broader scale, in our society. For all those who have experienced this paradoxical moment at least once in their life, this is where intangible concepts such as fairness, equity, prejudice, bias, marginalization, or many

other similar concepts become more tangible.

In today's world, requests for social justice are increasingly divided into two categories. The first and most familiar is a more just distribution of resources and goods present for a long time throughout history. However, as we move forward in time, we are increasingly confronted with the second form of social-justice argument, which has been called "the politics of recognition," and ideally refers to a difference-friendly world in which conformity to the majority or prevailing cultural norms will be no longer the price of equal respect.

As a result of historical connections with other local or regional groups, human beings have forever been involved in various types of exchange (such as cultural, economic, and so on), which have either brought them closer together or resulted in conflicts of dominance amongst them. In recent decades, this phenomenon has been intensified due to globalization and the massive growth of new communications technologies which have brought many parts of the world into close communication (UNESCO, 2000).

We will study the globalization phenomenon more profoundly in chapter 1.3 to better understand how the world has encountered this interconnectivity and how it is still relevant to our everyday lives. However, it is essential to remember that while globalization has created tones of new opportunities for development and economic progress worldwide, new forms of intolerance and aggressiveness emerge at the individual and institutional levels. Xenophobia, racism, ethnic wars, colonization, white

supremacy, homophobia, prejudice, stigmas, and discrimination are a few examples of this intolerance that are the consequences of refusing to accept others as whole human beings with the same rights as oneself (UNESCO, 2000).

As stated in the United Nations Millennium Declaration (United Nations, 2000), "[...] only through broad and sustained efforts to create a shared future, based upon our common humanity in all its diversity, can globalization be made fully inclusive and equitable." In this report, at the dawn of the third millennium, United Nations has declared freedom, equal rights, and opportunities for development, equity, diversity, sustainability, and responsibility as the central values and principles of the twenty-first century.

Nevertheless, we are still witnessing a violation of these shared values and growing polarization – both in the physical and digital worlds – proving the constant necessity of extending our knowledge of these concepts and recognizing our role in the cycle of social cohesion.

Not surprisingly, the terms diversity, equity, and inclusion (DEI) have attained significant attention from a wide range of different institutions in various fields over the past decade. Many of these institutions have formed operating teams, initiatives, policies, programs, and toolkits to step forward in acknowledging the importance of an equitable and fair community "to transform society into a more just place" (Dunn, 2020), especially in workplaces—highlighting the fact that work plays a crucial role in shaping our levels of happiness (de Neve & Ward, 2017). Companies

have even begun to see these activities as a source of competitive advantage and, more specifically, as a vital driver of growth among their competitors (McKinsey & Company, 2018). But the question is, what exactly is DEI, and how should these terms be interpreted?

Diversity, Equity & Inclusion (DEI) is a conceptual framework that embodies the interdependent relationship, philosophy and culture of accepting, acknowledging, embracing, and supporting people of different ages, ethnicity, abilities and disabilities, gender, religions, cultures, sexual orientations, socioeconomic backgrounds, as well as people with diverse backgrounds, experiences, skills and expertise, among other defining qualities within the social group.

Any of the three interrelated elements missing from the DEI puzzle would result in an incomplete picture. Diversity is the chorus of voices that make up the conversation. Equity is the approach to amplifying voices. Inclusion is encouraging, acknowledging, and hearing each and every voice. Although these three terms might seem similar, there are significant differences, and each requires specific attention. The definitions of each term in this trinity will be discussed in further detail in the following chapter.

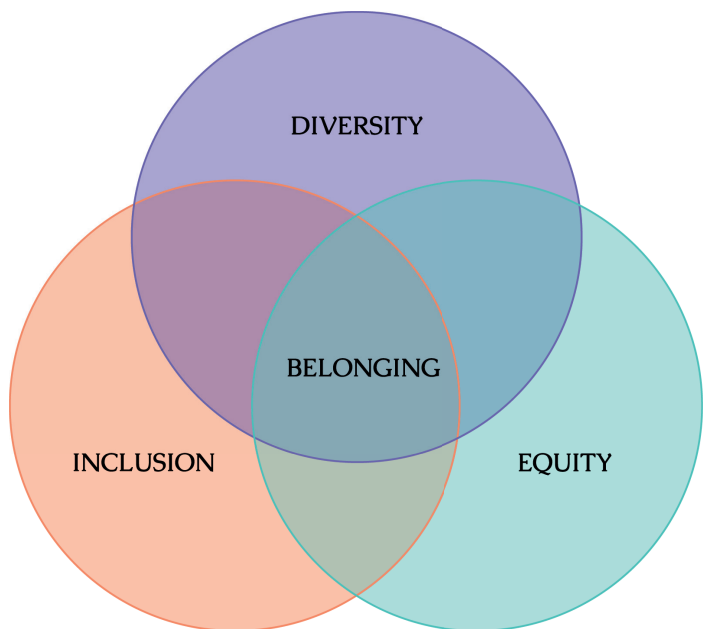


FIG. 1.
DEI trinity, Source: (Medium, 2019)
Addressing only one or two of these falls short on gaining the full human experience — a sense of belonging.



DEI DEFINITION

*“IF WE ARE TO HAVE
PEACE ON EARTH,
OUR LOYALTIES MUST
TRANSCEND OUR
RACE, OUR TRIBE,
OUR CLASS, AND OUR
NATION; AND THIS
MEANS WE MUST
DEVELOP A WORLD
PERSPECTIVE.”*

*—MARTIN LUTHER
KING, JR.*

— Diversity

If you look up the term “Diversity” in the Merriam-Webster dictionary, you can see it defined as “the condition of having or being composed of differing elements” (Merriam-Webster, n.d.-b). When we use this word, we often refer to how each of us brings a fresh perspective to the group, which is influenced by our social backgrounds, identities, experiences, and other attributes.

Diversity in societies means embracing a notion of tolerance for and appreciation of differences. By celebrating diversity, there is a recognition and affirmation of the differences between and among members of society, which enables societies to move away from labeling, categorizing, and classifying people toward more inclusive policies and paradigms. Furthermore, allowing for a diversity of opinions provides the balance of power necessary for the development of society while allowing for even the most diverse opinions to enter every dialogue (UNDESA, 2007a).

Scholars have carried out many studies on diversity definition, origin, and debates around this concept. (Janssens & Steyaert, 2003) state in their paper that an often-cited categorization of diversity from an organizational and economic perspective is the following five clusters:

- 1. Demographic characteristics such as age, ethnicity, gender, sexual orientation, physical status, religion, education*
- 2. Task-related knowledge, skills, and capacities*
- 3. Values, views, and attitudes*
- 4. Personality and cognitive and attitudinal styles*
- 5. Status in the organization, such as one’s hierarchical position, professional domain, departmental affiliation, and seniority.*

Another way to identify the significant ways human beings differ—regardless of organizational point of view yet focusing on the traits mentioned in the first cluster above—is by dividing characteristics into primary and secondary

dimensions offered by (Loden & Rosener, 1991) initially in the book "Workforce America! Managing Employee Diversity as a Vital Resource". Loden has updated her Diversity Wheel model since its original publication in 1991. The final update of the model is used in this study. They use the term dimensions to describe properties/ characteristics that constitute the whole person. "All individuals have a number of dimensions by which they are measured, and no one dimension stands alone." (Loden & Rosener, 1991; Lou, K & Dean, 2010)

The classification presented below is Loden & Rosener's model. Although recent findings show the notion of biological race has been recognized as a cultural invention, entirely without a scientific genetic basis, I kept the original form of the model for preserving the authenticity of the work. It is clear today that differentiations presumed to be related to ancestry from different parts of the world cannot be tracked to distinct biological categories, yet racial bias fuels social exclusion, discrimination, and violence against people from certain social groups (Adelman, 2003; Blakemore, 2019; Britannica, n.d.-d; IDR/PC, 2000).

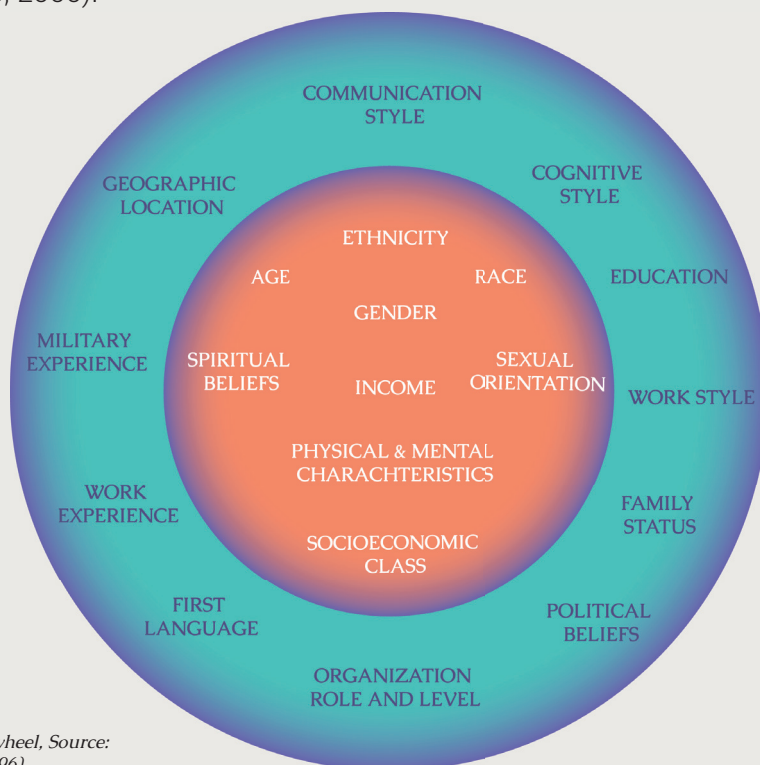


FIG. 2.
Diversity wheel, Source:
(Loden, 1996)



**THE
PRIMARY
DIMENSIONS
OF DIVERSITY**



The primary dimensions of diversity are usually the most visible and immutable differences that have an essential impact on our early socialization and ongoing impact throughout our lives. Nine primary dimensions are listed in alphabetical order: age, ethnicity, gender, income, physical and mental abilities, race, sexual orientation, socioeconomic class, and spiritual beliefs. These dimensions are our core interdependent elements that shape our primary self-image and worldview and have a profound and constant lifelong impact on individuals and groups within the society and workforce and their life experiences.



THE SECONDARY DIMENSIONS OF DIVERSITY



The secondary dimensions are other essential differences that we acquire, discard, and/or modify throughout our lives and presumably have less influence in defining who we are. There are eleven secondary dimensions listed in alphabetical order: cognitive style, communication style, education, family status, first language, geographic location, work experience, work style, military experience, organization role and level, and political beliefs. So, the influence of secondary characteristics is more variable and presumably less defining early in life, although not always, than primary characteristics. Later, as adults, we have the power to modify some or any of them. These secondary dimensions impact our self-esteem and self-definition yet do not usually change our fundamental core identity.

When two or more of these interconnected and interdependent dimensions overlap in an individual or group, another concept can be captured called Intersectionality. Individuals are members of different groups at once and may be excluded, prejudiced, or marginalized through one of their identities but not another.

The notion of intersectionality is based on the understanding that people are simultaneously situated in multiple social structures and realms. However, identities can multiply advantages or disadvantages when they intersect. Intersectional frameworks entail that individuals' experiences are not simply the sum of their parts but represent the intersections of social power axes.

For instance, the intersection of gender, age, ethnicity, and place of residence can have significantly more deleterious effects than the effects of gender alone; or immigrant women's health experiences may differ from those of immigrant males and non-immigrant women (Crenshaw, 1991; The World Bank, 2013).

As mentioned before, workplaces were one of the most critical grounds for responding and adapting to diversity debates. Companies recognize that diversity in the workplace is a valuable asset for both their businesses and their employees, as it can foster innovation, creativity, and empathy in ways that homogeneous workplaces rarely can achieve (Eswaran, 2019).

Offices and workplaces became the testing ground for how people would come and build together and create a diverse industry to remain competitive. Companies began putting their efforts into developing a "business case" for their initiatives to enhance diversity and began to measure diversity in terms of turnover, retention, productivity, succession planning, public image, revenue/market share, and even the value of their stock (McCormick, 2007).

Numerous studies have demonstrated that diverse teams improve company performance and that diverse organizations are more innovative, resilient, and capable of responding to complex challenges (Eswaran, 2019). Yet, progress on diversity initiatives has been slow.

Since 2014, McKinsey & Company has conducted in-depth analyses and follow-ups on hundreds of companies in terms of the diversity business

case. They have discovered that the overall slow growth in diversity that has been observed is actually masking a growing polarization within these organizations.

However, while most have made little progress, are stalled, or have even gone backward, few have made significant strides forward, particularly in diversity in executive teams (McKinsey & Company, 2020b).

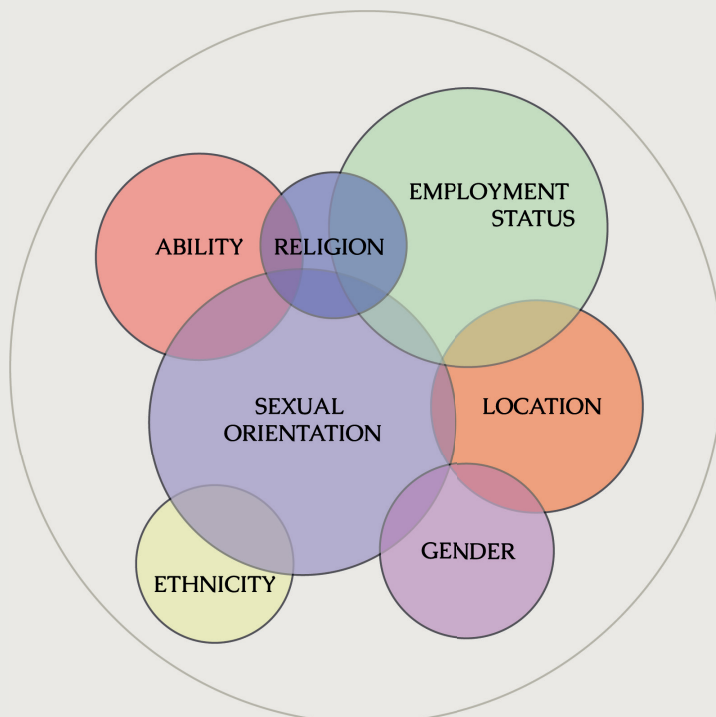


FIG. 3. Intersectionality, an illustration of the many forms of identities. Each bubble's size indicates the significance of an identity, which varies among people, groups, and even within the same individual over time. Source: (The World Bank, 2013)

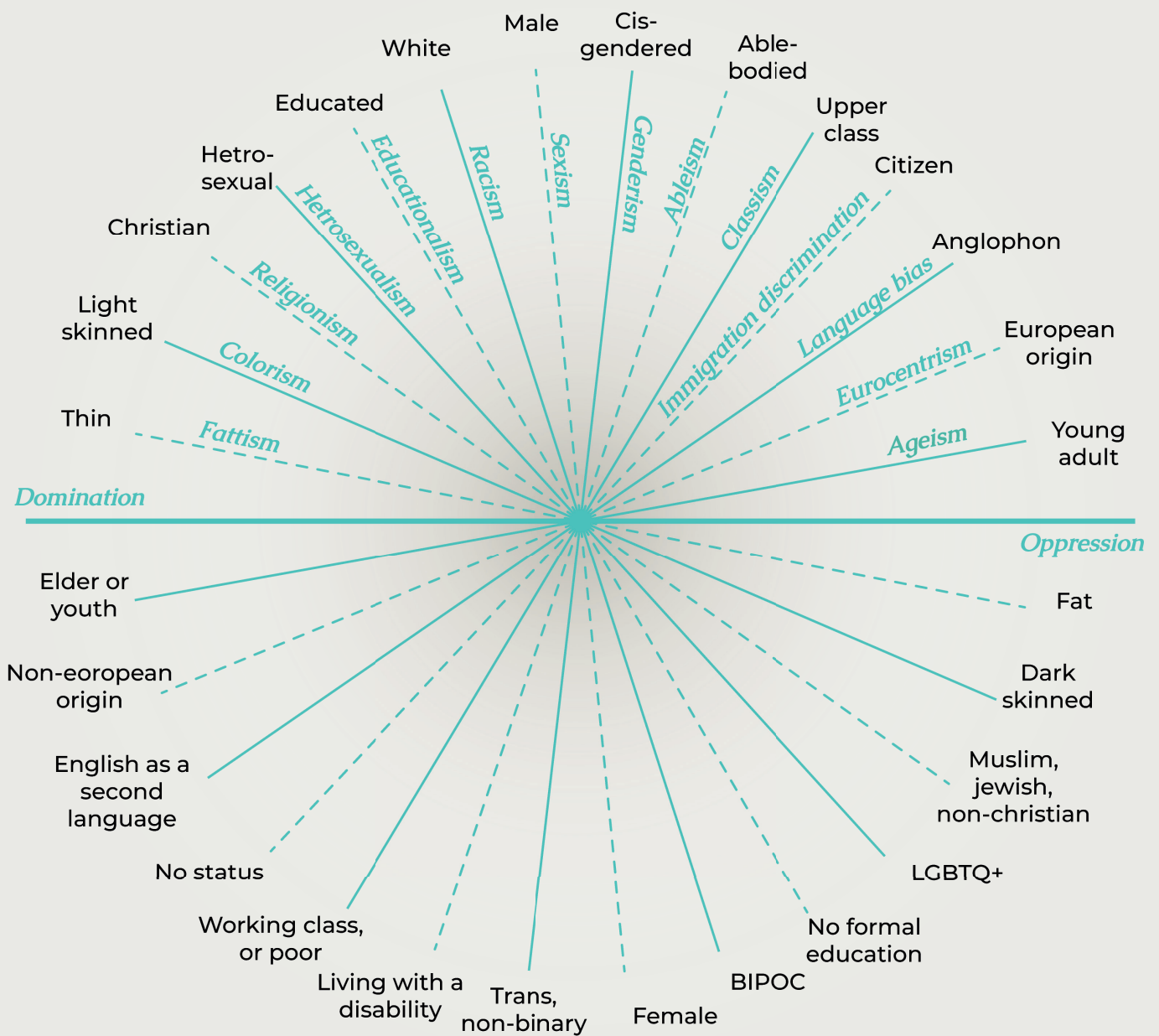


FIG. 4.
 A visual representation of the matrix of domination, Source: (Goodwill, 1969)

“EQUALITY IS GIVING EVERYONE THE SAME PAIR OF SHOES. EQUITY IS GIVING EVERYONE A PAIR OF SHOES THAT FITS.”

— *AUTHOR UNKNOWN*

1.2.2

— Equity

The word “equity” can signify different things to different people, just like any other normative idea. Various countries and academic disciplines have interpreted it differently from different viewpoints such as economics, law, philosophy, or religion, which makes it a challenging idea to grasp.

However, the underlying theme of these numerous opinions is that equity is about fairness, whether in families and communities or across nations, both locally and internationally. If we want to comprehend the concept of “equity” in social issues, we must first admit that there are injustices in the world, we live in disproportionate societies, and not everyone starts in the same place (Cook & Hegtvedt, 1983; World Bank, 2005).

Equity aims to correct this imbalance by ensuring that everyone receives fair treatment, access, equality of opportunity, and advancement while also identifying and removing the obstacles that have kept some groups from fully participating. This can include providing further opportunities and resources for those who have been mistreated or altering policies and regulations that have historically and currently been damaging to the well-being of a group of people (underrepresented groups such as women, people outside the gender binary, Black, Indigenous, People of Color, people with disabilities, poor and working-class folks, and more) (Dainkeh, 2020; Dunn, 2020).

The term “Equity” is often used interchangeably with “Equality.” Although, there is a fundamental distinction: equality is a system in which every individual receives the same opportunities regardless of circumstance, while equity is a system in which resources are distributed according to need (Dunn, 2020).

Equity aims to ensure that everyone has access to “equal opportunities” through a just and fair recognition process, while equality focuses on providing equal resources regardless of context or someone’s experience or specific social position. While equality entails treating everyone evenly, equity entails achieving the same benefits for everyone, even if this means that everyone receives different, but still just and fair, treatment (World Bank, 2005).

From an institutional point of view, organizations that follow equity practices do not set one-size-fits-all policies. Instead, they take into account each person’s needs and situation while also rearranging organizational structures to adapt regarding the disadvantages that underrepresented groups face daily and to reinforce a fundamental sense of belonging, fairness, and equity, enabling people to bring their “full self” to work (World Economic Forum, 2020).

As mentioned in the previous section, despite some progress in diversification initiatives on an institutional scale, a culture of inclusion and equitability is necessary to appropriately deliver the benefits of diversity.

According to a Harvard Business Review study

(Krentz, 2019), nearly 75% of employees in underrepresented groups women, racial and ethnic minorities, and LGBTQ employees – do not feel their employers’ diversity and inclusion policies have benefited them directly.

This data does not even address a broader range of characteristics and identities, such as generation, national culture, or persons with disabilities, all of which are relevant to an organization’s workforce. Moreover, during the pandemic, Black people and other underrepresented groups, including LGBTQ, have been disproportionately affected by COVID-19. These all together show there is still much room for progress in achieving equitable and just societies and should “continue to engage with new opportunities to join critical conversations and drive transformational programs, policies, and collaborations” (David, 2020).

INCLUSION IS COMMUNION. NO ONE BECOMES INCLUDED BY RECEIVING HANDOUTS, EVEN IF THESE HANDOUTS ARE GIVEN BY PUBLIC BODIES AND WITH PUBLIC RESOURCES. [...] INCLUSION IS CONNECTION TO THE NETWORK OF COMMUNITY DEVELOPMENT; IT IS TO BECOME A LINK, [...]

— CEZAR BUSATTO (BUSATTO, 2007)

1.2.3

— Inclusion

In every country, certain groups—whether illegal immigrants, indigenous people, or other minorities—face hurdles restricting them from fully engaging in their country's political, economic, and social life. Stereotypes, stigmas, and superstitions are applied to label these groups who frequently experience feelings of insecurity.

These barriers limit their opportunities for a better life and deprive them of dignity. That said, the need for an inclusive society, “a society for all,” should be one of the critical goals of social development (The World Bank, 2013; UNDESA, 2009). Merriam-Webster dictionary defines inclusion as “the act or practice of including and accommodating people who have historically been excluded (because of their race, gender, sexuality, or ability)” (Merriam-Webster, n.d.-c).

Although the terms diversity and inclusion are frequently used interchangeably, they refer to different efforts. Inclusion is about diversity in practice. In other words, diversity efforts are frequently focused on representation, whereas inclusion practices are more concerned with

assisting groups to feel like they belong. Diversity is the act of establishing a community comprising of people from diverse backgrounds and beliefs, while inclusion entails adopting a strategy for ensuring that each of these individuals feels completely welcomed, valued, respected, and supported so that they never have to wonder if they belong there (Dunn, 2020).

It is essential to realize that even if a community or environment is the most diverse in the world or if laws and policies are changed toward social justice, the effort to create a diverse community may end up doing more harm than good if its culture is dismissive or exclusionary of the thoughts, challenges, and passions of members of marginalized communities (Dainkeh, 2020).

It takes time for us to unlearn what we have subconsciously or consciously accepted over the years. Thus, inclusion is a necessary part of the DEI framework since it enables us to go from theory to practice. It allows traditionally underrepresented individuals and groups to feel belonging and empowers them to engage fully and meaningfully in the prevailing culture, influencing and redefining it in different ways.

As Busatto argues in (Busatto, 2007), emphasis should be placed on recognizing the individual and the link between the individual and the community. It demonstrates that inclusion benefits both the community and the individual. Social inclusion is defined by the notion of full participation in all aspects of life, whereas exclusion refers to the factors (barriers and processes) that prevent inclusion. Participation is crucial in inclusiveness since it implies an active role in the process, not only having access to society's activities but also participating in them and developing and maintaining social networks.

Additionally, participation creates a sense of responsibility toward others, a community, or an institution and affects decisions or enables individuals to participate in decision-making processes (UNDESA, 2009). Social inclusion must occur simultaneously at multiple levels, from the individual, community, and local to the regional and national, since social inclusion affects all societal stakeholders (figure 4).

It is a process through which the dignity of each individual is recognized, the needs and concerns of all people are reflected, rights of all people are not only guaranteed in legislation but also respected, and people can participate actively in life activities.

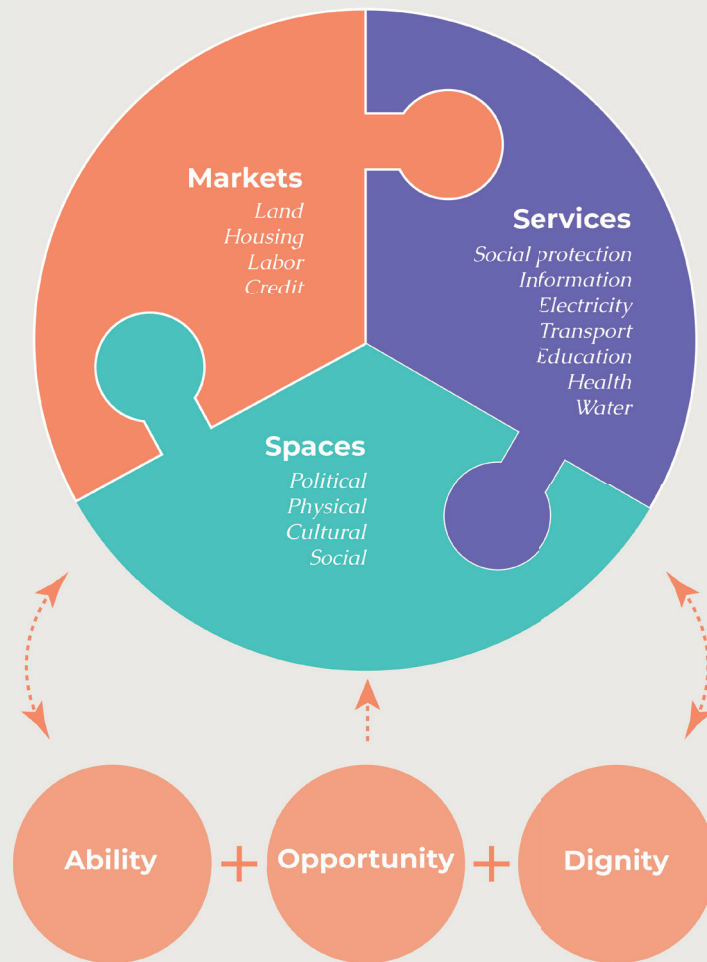


FIG. 5.
Levels involved in a social inclusion process
Source: (UNDESA, 2009)

It is argued in the World Bank infusion report (The World Bank, 2013) that Individuals and groups desire inclusion in three interconnected domains: markets, services, and spaces. (figure 5).

These three domains reflect both obstacles to and enablers of inclusion. Intervening in one area without regard for the others is arguably one of the main reasons for inclusion policies and programs' poor performance. Feelings of being included and respected by others, or being heard by the state, are central to shaping people's abilities, their sense of dignity, the opportunities they access, how they take part in society, and how the state responds to them.

FIG. 6.
Social inclusion domains
Source: (The World Bank, 2013)



Göran Therborn, Professor and Chair of Sociology of the University of Cambridge, identified five levels of inclusion that could be used as a basis for developing social inclusion indicators in the Expert Group meeting organized by (UNDESA, 2007b).

These steps are arranged hierarchically, with visibility being the first. Without the ability to fulfil the lower steps, the individual is discouraged and unable to go to the next step. Each of the five steps may be approached and comprehended from both a "process" and a "contents" perspective (Therborn, 2007). The five steps are as follows:

1) Visibility: First and foremost, people need to be noticed, recognized, and have their voices. There is no possibility of having a voice if an individual or group is not accounted for and represented in the processes that make up society.

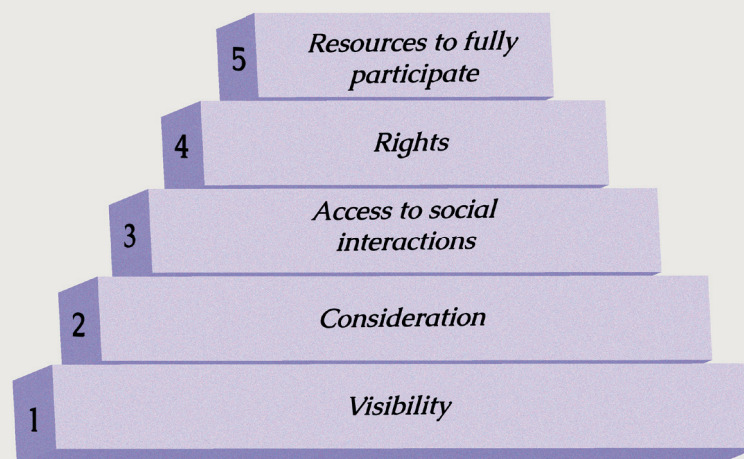
2) Consideration: Policy-makers take the concerns and needs of individuals and groups into account. Often policy-makers do not consider the marginalized groups as essential stakeholders and, therefore, do not incorporate their needs and concerns.

3) Access to Social Interactions: People must be able to engage in society's activities and social networks in their daily life, including economic, social, cultural, religious, and political activities.

4) Rights: People must have rights to act and claim, rights to be different, legal rights, rights to access social services, such as housing, education, transportation, and health care. They must have the right to work and participate in social, cultural, and political life. If someone is discriminated against, their right to claim will regress.

5) Resources to participate in society fully: Those who do not have access to rights cannot participate fully in society. However, even if people have rights to access, they cannot participate fully without adequate resources. Therefore, resources to fully participate in all aspects of social activities are the ultimate step for successful social inclusion. It is not only because of a lack of financial resources that people cannot participate or stop participating, but also because of insufficient time or energy, spatial distance, lack of recognition, lack of respect, physical conditions, or constraints. These elements all need to be taken into consideration.

FIG. 7.
Levels involved in a social inclusion process
Source: (UNDESA, 2009)



Recently, COVID-19 has highlighted gender, racial and disability gaps in workplaces. Although, it is clear that these issues did not arise due to lockdowns. COVID-19 has only uncovered, revealed, and exacerbates these problems. Substantial gender, racial, and disability inequities existed throughout history, mainly regarding obtaining exemplary work and economic opportunities (Sault, 2020). According to (McKinsey & Company, 2020a), just 20% of Black employees in the United States were able to work from home during the pandemic, compared to 30% of white employees and 37% of Asian workers. According to the paper, black Americans are more likely to work in low-wage, “high-contact, critical services” positions, which raises the risk of infection and reinforces the racial wealth disparity. As the workplace recovers from the COVID-19 crisis, ensuring racial justice, gender parity, disability inclusion, LGBTI equality, and inclusion of all kinds of human variety must become the “new normal” (World Economic Forum, 2020). It cannot be a one-shot effort. Promoting them in the workplace is an ongoing process that should be maintained to ensure success. Empathetic leadership is essential, and for a meaningful change to occur, each leader must intellectually and emotionally accept the significance of belonging (Eswaran, 2019).



1.3

FOUR WAVES

of Globalization

In the search for the primary motive of the notion of diversity (and thus DEI frameworks) and its historical significance, I came upon the “Globalization” phenomenon. Globalization emerged as a buzzword in the 1990s, referring to an increase in “Globalism,” a state of the world involving networks of interdependence at multicontinental distances. In their paper “Globalization: What’s new? what’s not? (and so what?)”, Keohane & Nye argued that the connections occur through flows and influences of capital and goods, information and ideas, and people and forces (Keohane & Nye, 2000).

Globalism is not a new concept. Indeed it is a phenomenon with ancient roots and has existed for centuries as a process through which societies affect one another, build a closer relationship, and get more and more alike through trading, immigration, and the exchange of ideas and information (Arnett, 2002). For instance, back in the 1st century BC, the Silk Road connected ancient Europe and Asia economically and culturally. However, it is not considered globalization because a small group of courageous merchants pursued it and the items traded had an influence on a limited and relatively elite tier of customers along the route (Keohane & Nye, 2000; Vanham, 2019). What is noteworthy is that the pace of globalism has dramatically increased since the 2000s.

In recent decades, advances in telecommunications and a rise in global economic and financial interdependence have remarkably enhanced the degree and intensity of connections among different societies and regions (Arnett, 2002).

According to many scholars (Arnett, 2002; Kearney, 1995; Northrup, 2009; Vanham, 2019; Wang, 2008), when we talk about globalization, we typically refer to the process of globalism becoming increasingly intense, and national and regional economies, policies, societies, and cultures become integrated through the global network of trade, communication, immigration, and transportation and hence, local events become impacted by events occurring kilometers away and vice versa.

A significant aspect of this process is the advent of technology and the communications revolution, which have transformed the world into a global village due to its velocity and range. Airplanes, cheap telephone service, email, computers, massive oceangoing vessels, instant capital flows are just a few examples of this technology-driven progress.

Although globalism is often defined in strictly economic terms, there are several equally important forms of globalism, such as Economic globalism, Military globalism, Environmental globalism, and, last but not least, Social and cultural globalism (Keohane & Nye, 2000). Needless to say, they all have made the world more interconnected than ever before and have created opportunities to overcome many barriers

when producing, conducting business, and forming teams and enabled economic growth and cheaper products. Yet, it has undoubtedly resulted in inter-ethnic, inter-cultural, and inter-religious conflicts worldwide (Wang, 2008).

Indeed, globalization is accompanied by increasing gaps, in many ways, between the rich and the poor, between different cultures, between various belief systems that might come across one another in a so-called community. In the new global era, we can see people searching for their cultural roots, subaltern groups, and indigenous people still affirming and defending their cultural and social identities while facing discrimination by the dominant groups (Wang, 2008). This has made globalization and cultural identity in contemporary societies quite complex since the values of current global culture often conflict with traditional cultural values, raising the challenge of adjusting to both the global culture and their local culture (Arnett, 2002).

I believe the history of globalization, and more importantly, the fourth wave of globalization which is more relevant and linked to the subject of focus in this thesis, proves that we have moved beyond a "Global Village." The convergence of people and cultures worldwide is undeniable, especially with the advancement of technologies like the internet and social media. It seems globalization is something we cannot run away from. However, there is still a lot to do to feel like we live in a diverse, equitable, and inclusive Global Community, not in a world with a homogenized global culture where diversity is intolerable.

According to Richard Baldwin and Philippe Martin's theory (Baldwin & Martin, 1999), human societies have witnessed four major global waves throughout history so far (applied by influential organizations such as World Economic Forum (Vanham, 2019)). To understand how our societies are still being influenced by the latest wave of globalization (Globalization 4.0), it is necessary to look back on the history of previous globalization waves 1.0, 2.0, and 3.0 and see how we arrived here:

1.3.1

— Globalization 1.0

Globalization 1.0, which occurred along with the Industrial Revolution, refers to the fast expansion of global trade and the significant reduction in trade costs during the nineteenth century or the pre-1914 era.

It was exacerbated by the communication and transportation upheaval—the invention of long-distance communication tools and the evolution of steam and coal transport engineering— which exposed human societies throughout the world to the notion of time-space compression on a previously unknown scale (Baldwin & Martin, 1999; Postel-Vinay, 2020). "While Britain was the country that benefited most from this globalization, as it had the most capital and technology, others did too, by exporting other goods" (Vanham, 2019).

This wave entailed novel regulatory mechanisms, which showed themselves in new governance institutions such as transoceanic steamships, the Panama and Suez canals, the International Telegraph Union, the International Association of Railway Congresses, and the International Sanitary Convention, the predecessor of the World Health Organization, which connected the world entirely and sparked an explosion of trade in raw and manufactured goods.

However, unfortunately, the first wave of globalization and industrialization corresponded with darker occurrences. Most globalizing and industrialized European countries wanted a piece of Africa, and by 1900, Ethiopia was the only sovereign country left on the continent (Khan Academy, n.d.).

Similarly, once-powerful nations such as India, China, Mexico, and Japan were either unable or denied by Western powers to adapt to economic and global trends (Vanham, 2019). The first wave of globalization ended around 1914, with the beginning of World War I and the reduction of international flows of products and people, which further decreased the cost of global transport (Baldwin & Martin, 1999; Postel-Vinay, 2020).

1.3.2

— Globalization 2.0

Globalization 2.0 or the post-1945 era refers to the international industrialization after World War II. Global commerce resumed its upward trend under the leadership of a new hegemonic power, the United States of America, boosted by Second Industrial Revolution innovations such as the car and the plane (Vanham, 2019). By developing technical innovation and expanding infrastructure and standardization, the major international organizations that still regulate global relations at a planet-level today were conceived and established in this phase of globalization.

Some examples are the European Union (UN), International Monetary Fund (IMF), the International Atomic Energy Agency, and the World Bank, to name just a few (Baldwin & Martin, 1999; Postel-Vinay, 2020).

Rapid development accompanied increased equity to an extraordinary amount for the industrial world. By the end of the 1980s and early 1990s, global trade integration had reverted to levels last seen before World War I (Subramanian & Kessler, 2013).

However, developing countries were being left behind by developed countries and their income growth —though rebounded after the interwar slowdown— was much slower than in the developed countries.

1.3.3

— Globalization 3.0

Globalization 3.0 —also called the era of hyper-globalization (Subramanian & Kessler, 2013)— began in the early 1990s and was defined by the emergence of further technological advancements, most notably the advent of the internet or the “worldwide web.”

It resembled the first wave of globalization in terms of technological revolutions. The personal computer, the Internet, and technological devices revolutionized the industry by introducing whole new forms and levels of commerce and lowering trade barriers, and increasing access to services on a local, national, and international scale.

This wave made it possible for various manufacturing phases to be carried out in different locations around the world, contributing to the development of modern supply chains and making them more and more integrated on a global scale thanks to the internet. It was possible to do research and development in one nation, source materials in another, manufacture in a third, and distribute the finished product throughout the world, a process known as offshoring (Blinder, 2006).

1.3.4

— Globalization 4.0

Globalization 4.0 is driven by the technological megatrend of the 4th Industrial Revolution – I4.0 or Industry 4.0, which is happening right now.

It was based on a strategic initiative developed by the German government and presented at the Hannover fair in 2011 (BMBF, 2011) to support the development of the industrial manufacturing sector through digitalization and the exploitation of potential new technologies. It was then targeted by many governmental plans and other initiatives around the world as a goal for a sustainable future, pursuing the goal of strengthening the beneficial impacts of the so-called “fourth industrial revolution” (Bertola & Teunissen, 2018).

The current wave is, in fact, based on the convergence between physical and digital environments, where humans meet the cyber world, where technology and people are not distinct nor separate. The fear is that Industry 4.0 will be a continuation of 3.0 with massive jobs losses among the workers and a race to the bottom in wages. The rise of machines and mechanization heralded back in the 70s and 80s caused great worry machines—robots—would run our production lines and, as it was initially successful in heavy industry, it resulted in the advent of automation in industry. Although automation resulted in the loss of many low-wage manual workers’ jobs, and many workers

did lose their jobs and livelihoods and were deemed the end for humans on the production line, it does not work out that way in the fourth industrial revolution.

Industry 4.0 has proved to be a transition to the digital transformation of manufacturing, holding other possibilities and creating new opportunities in the industry, which does not necessarily mean downsizing. Industry 4.0 has introduced a new form of human and machine interactions, and industries find it increasingly necessary to keep up with the times, especially if they plan to remain competitive (Gilchrist, 2016).

In 2019, the term Globalization 4.0 was introduced by World Economic Forum at its Annual Meeting in Davos-Klosters to signal the coming shift in globalized structures (Roynance, 2019; World Economic Forum, 2019). While Globalization 1.0, 2.0, and 3.0 mainly were a concern of individuals who manufactured things for a livelihood (since globalization was primarily concerned with things that we made), Globalization 4.0 is expected to significantly impact the service industry. For the first time in history, a considerable number of service-sector and professional employees in advanced economies will be exposed to the challenges and opportunities of globalization (Baldwin, 2018). Developments such as high-speed broadband networks (especially 5G), the Internet of Things (IoT), Artificial Intelligence (AI), Big Data, Data Visualization, Blockchain Technology, Cloud Computing, Additive Manufacturing, advanced robotics, and Smart factories have already established a beachhead on our future shores.

“It is time to understand [Internet] – and not as a curiosity or an entry in the annals of technology or business but as an integral part of our humanity, as the latest and most powerful extension and expression of the project of being human.”

Virginia Heffernan, Magic and Loss: The Internet as Art (Heffernan, 2017)

What mainly differentiates this wave of globalization from 2.0 and 3.0 is mass customization. Mass production was a prominent feature of Industries 2.0 and 3.0. However, despite the fact that the assembly line and other comparable inventions helped drive society ahead, there are several issues with this business approach, such as overproduction or lack of optimization and customization.

The fourth wave enables mass customization as an optimized solution to obtain both quantity and flexibility, allowing for optimal customer satisfaction. This is where acknowledging diversity and employing DEI frameworks reveals its importance. When we talk about customization, it is necessary to respond to the whole spectrum of diverse demands; hence a deep understanding of inclusion and diversity and various voices and needs existing in our societies is fundamental for delivering the most satisfying product or service.

From another point of view, globalization in today's society is about more than trade and manufacturing. Culturally, it seems that people connected to the internet have the opportunity to participate in and contribute to dialogues. This opens up the possibility of greater cultural understanding and empathy, but it also raises the potential of divisive dynamics and prejudice (Davis & O'Halloran, 2018).

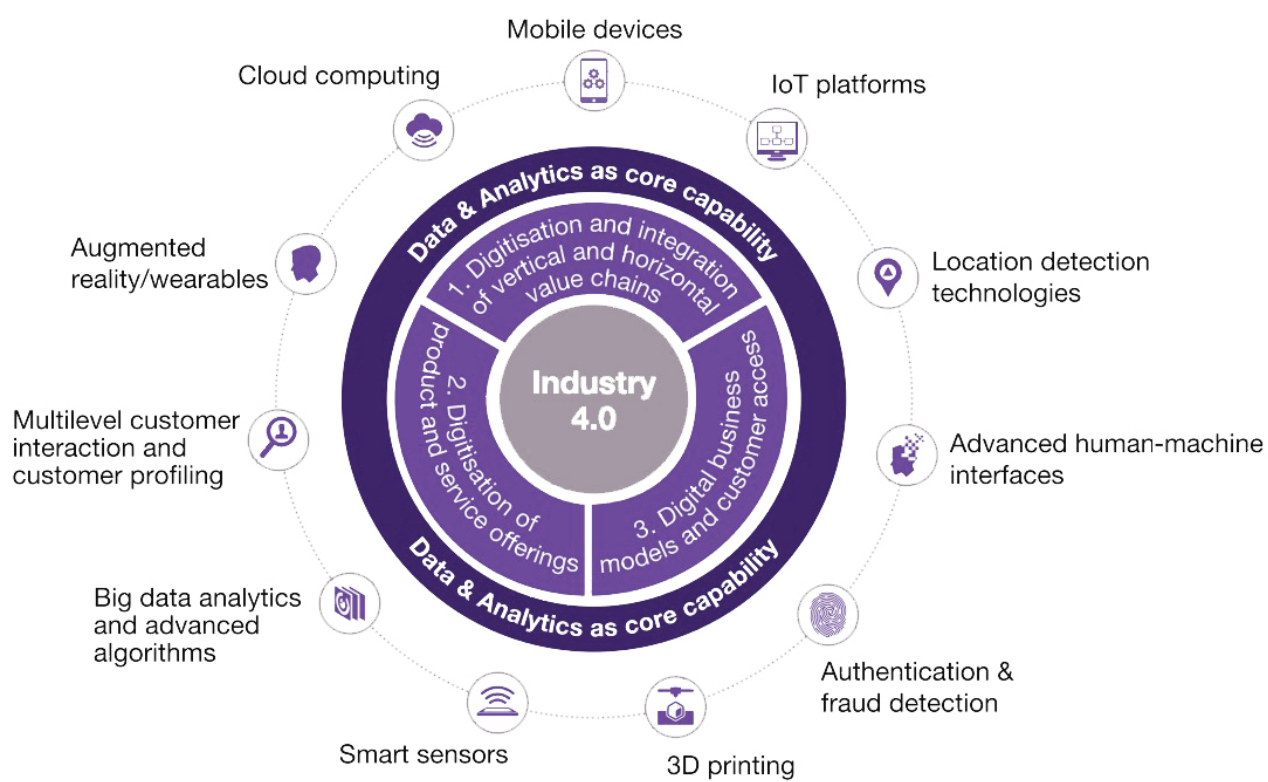


FIG. 8.
 Industry 4.0 framework and contributing
 digital technologies Cloud
 Source: (PwC Global Industry 4.0 Survey, 2016)

As emerging technologies transform our societies (from health and transportation systems to communication, production, and distribution), we must develop new paradigms in public policy and organizations, on the one hand, and corporate behavior and norms, on the other, in order to outperform the false choices seen in previous waves of globalization and fix what went wrong in previous eras. No longer are the headlines that dominate our societies formed by a restricted group of authoritative sources—instead, everyone has a say on everything from local and international politics to gender, ethnicity, or other social concerns (World Economic Forum, 2019).

As mentioned earlier, globalization 4.0 is no longer a threat to workforces and creates new industry opportunities. Yet, while celebrating the opportunities of globalization 4.0 and industry 4.0 for making our organizations more productive, we need to ensure that they are human-centered and driven by positive values; that the algorithms challenge, rather than reinforce, existing prejudices and discrimination.

Creating a shared future begins with a shared commitment to those principles that transcend cultural boundaries, such as working toward a common goal, preserving human dignity, and serving as guardians for the next generation's well-being. The goal should be to widen the meaning of "profit" to emphasize fairness, inclusiveness, equitable distribution of benefits, and sustainability.

In the second chapter, we will discuss the importance of dialogues and debates around technologies now that they have become completely integrated into our lives. It is crucial for everyone living in the globalization 4.0 era to understand what these technologies are, how and to what extent they influence our identities, viewpoints, and everyday life, and what norms and paradigms should be established or questioned.



1.4

DEI IN THE *Fashion System*

As a result of globalization, the fashion system has steadily evolved into a dominant factor in shaping clothing patterns, first in Western countries and then in many other regions of the globalized world. Fashion can be defined as both a social and an economic system (Volonté, 2019b). In this chapter, we will take a look at the fashion system through a DEI lens and from two aspects in which the fashion industry and fashion system severely lack inclusion, equity, and diversity: the Consumer-facing perspective (product and media) and the Non-consumer-facing perspective (organizational & systematic).

Although these two contexts are inextricably connected, and there may not be a clear line separating them, the two facets will be explored to understand better issues and arguments, such as where fashion and beauty standards came from and affected social cohesion and social inclusion? How have economic and institutional structures affected the fashion system both in the supply chain and workplace? And lastly, what is the fashion system doing now to compensate and fix this broken wheel?

1.4.1

— Consumer-facing perspective: (product and media)

Size

It comes as no surprise that fashion has a significant impact on the rules of body communication, and it continues to exert control on our clothing landscape, having a fundamental impact on social cohesion, self-expression, and our social identity (Volonté, 2019b). Undoubtedly, throughout its long and rich history, the fashion industry has witnessed radical changes in the ideal (feminine) body regarding weight, shape, and size. However, for a century now, and particularly in the last fifty years, it has continued to promote a relatively homogeneous idea of true feminine beauty in societies where the western cultural industry is hegemonic —a tall, thin, fair-skinned young woman (DAY, n.d.; Volonté, 2019b).

From advertising campaigns to runways, fashion brands for decades have typically gravitated toward models with a typical build, age, and ethnicity, although we all know the world is a much more diverse place, as discussed in previous chapters. I do not intend to discuss the evolution of feminine beauty standards and generally the notion of beauty throughout history as notoriously, each historical period has generated its expectations and norms based on various sociological structures and social conditions of the time. However, the question is, who decides what beauty standards (or other discriminatory paradigms) exist?

In the case of body shape norms, (Volonté, 2019a) argues that “practice theory” can help explain how the thin ideal became embedded in the fashion system and that the inertia of the thin ideal is better described by referring not to its widespread adoption, nor the desire of any human actor, but to the

FIG. 12. Channel dress fitting on a model aligned by eurocentric standards

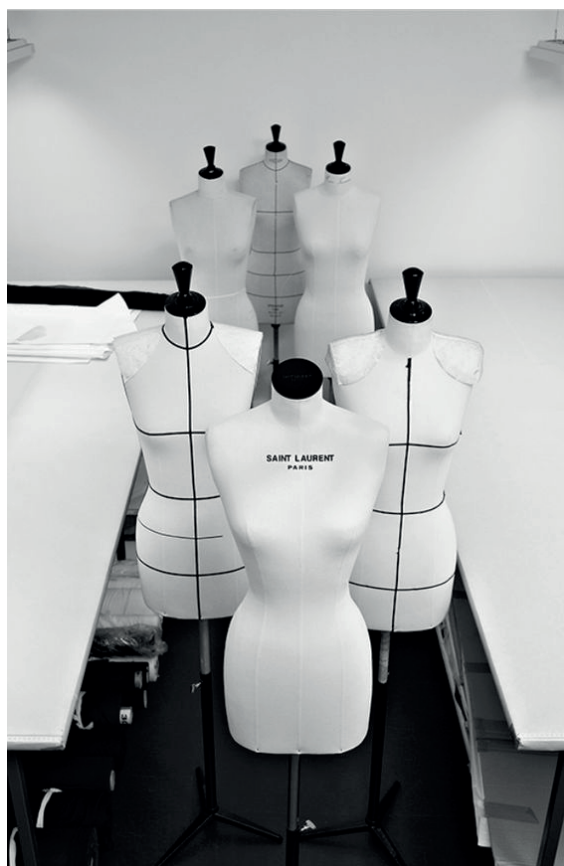


FIG. 11. Standard sized mannequins in a fashion house

**Buy the top that fits.
Buy the bottom that fits.**

Suit-Your-Size at Sears Junior Bazaar.

Show up in a bikini that fits from top to bottom.
At Sears Junior Bazaar you can choose a top in size A, B, C or D. Then choose a bottom in small, medium or large. Buy the combination that fits you best.

Pick a print in orange, white and green. Tan up in solid yellow. Even still, turn up in stripes—green, yellow and orange.
Available at most Sears, Roebuck and Co. larger stores. Similar styles in the catalog.

Sears
Tops and bottoms under \$2 each.

FIG. 10. Sunny Harnett: Photographed by Irving Penn, Vogue, September, 1952, hourglass silhouette

FIG. 9. Show up in a bikini that fits from top to bottom.

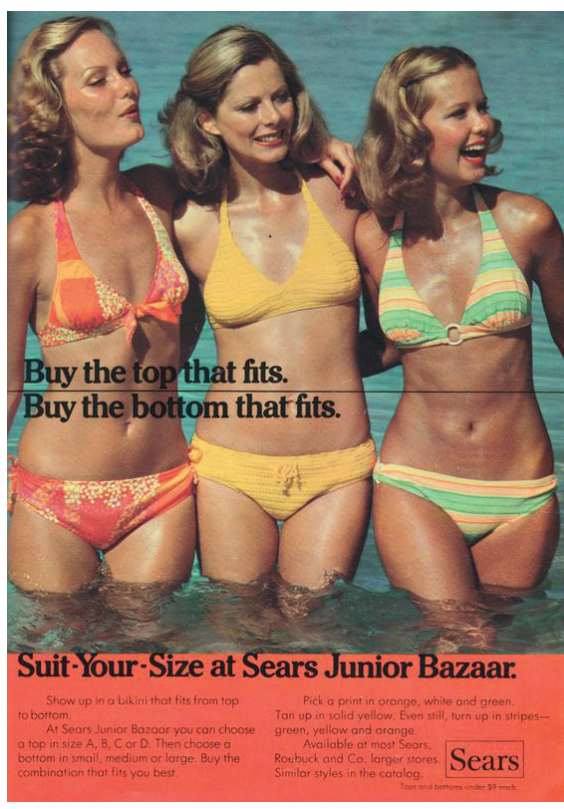




FIG. 13.
Dior haute couture show, Spring/
Summer 2018 in Shanghai/
Photo: Sophie Carre

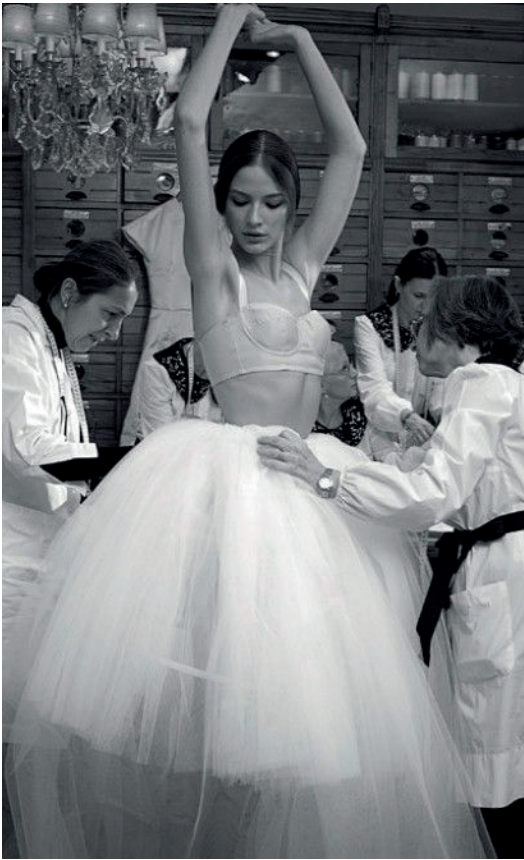


FIG. 14.
Behind-the-scenes at Dolce & Gabbana's
Alta Moda couture collection.



FIG. 15.
Chromat Debuted Sample Size T-Shirt
At Spring NYFW 2019



FIG. 16.
Ester Maras Fall 2022 Ready-to-Wear
Fashion Show-Paris

fact that it has become part of the fashion practice. He explains, "The theory of practice is an effort to explain how social beings adapt to the world in which they live, internalize the social order and thus become able to govern situations. According to such approach, it is at the level of practice that social order is reproduced and an alignment among actor's behaviors is achieved."

Based on the practice theory approach, he explains that "the ideal of thinness has been incorporated into habits, routines, objects and the bodies of those who engage in the practice of fashion. On one hand, at the origin of the tyranny of thinness there is, among other things, a technological development in the production of fashion, the application of the sizing system to the manufacture of clothing." In the second half of the 20th century, after the industrialization of fashion, the clothes sizing system was interpreted to facilitate production, storage, distribution, and purchasing.

He specifically draws attention to the fact that the application of the sizing system simplifies the design process because it allows the creation of patterns by using simple algorithmic derivation from a single original pattern designed on a primary size—and this "basic size" has established the foundations of the so-called "standards." On the other hand, he argues that in a system based on the standardization of sizes, having a standard body becomes an increasingly crucial professional requirement for models. We must thus recognize that the thin ideal is no longer just a cultural construct that has been appropriated and then reinforced for economic gain by the fashion industry—paradoxically, with the increase of overweight people fashion industry gives up a significant share of the business to remain faithful to the thin ideal.

Instead, it has evolved along with the practice of fashion, entangled with several aspects (technology, people, tastes, images). It has made it difficult for all protagonists of the fashion system to change their attitudes and practices toward the standards to be pursued. It also explains that the awareness of the harm caused by the thin ideal is not sufficient to defeat it; establishing new policies and paradigms based on these insights at institutional and organizational levels is essential for real change in this matter (Volonté, 2019a).

FIG. 17.
 Dress By Gucci, Fishnet Top (Worn Underneath)
 By Kozaburo, Necklace By Arielle De Pinto
 photo by MATTHEW TAMMARO



FIG. 18.
 Skin tone diversity, Photo by Michelle
 Van Dijk



FIG. 19.
 Mama Cox in Chromat's fall 2019
 show/Photo: Indigital.tv



Physical & mental disability/characteristics

Shopping for clothes as a disabled person is another massive area for fashion's lack of inclusion to swell. Barriers to finding clothing for people living with physical disabilities stem from the same venue reinforcing idealized body shape in fashion for decades: Current standard sizing system employed in fashion practices.

Additionally, people with intellectual disabilities may not handle common garment closures. Consequently, people with disabilities are underrepresented in the fashion system since companies often do not consider them not conforming to the "ideal" client. To address these issues, some brands have evolved that specialize in producing adaptive clothing that meets the demands of this underrepresented group. Yet there are still some issues that consumers tackle (Kosinski, 2019).

Some adaptive brands (or conventional brands that offer adaptive collections, such as Tommy Hilfiger) are online-based, and this will exclude this group from the in-store shopping experience and force them to remain indoors and not participate in social situations.

Another characteristic of the adaptive clothing market is the limited styles provided without commonly expected aesthetics, resulting in a "homemade" or "institutionalized" look. People living with disabilities will have restrictions on



FIG. 20.
Photographed by Emma Lightbown
celebrating body diversity

of restrictions on their clothing style choices, which will undoubtedly affect their social identity (Brownlees, 2019; Kosinski, 2019).

This social group has also been marginalized in the context of fashion media, and disabled models are mainly absent from fashion campaigns and catwalks. Although, in recent years, partly due to viral reactions on social media, the fashion system has witnessed the integration of some diverse models into the frame (Bremner, 2021; Brownlees, 2019).

Additionally, brands have started to produce adaptive clothing to address issues that people with intellectual difficulties may face. Currently, only two nationally-known companies, Target and Tommy Hilfiger, provide adaptive clothing lines (Moniuszko, 2018).



FIG. 21.
 Humane project, by artist Angélica Dass taken from almost 4,000 volunteers and matched with the Industrial palette Pantone®

FIG. 22.
 Donyale Luna, First Black Supermodel

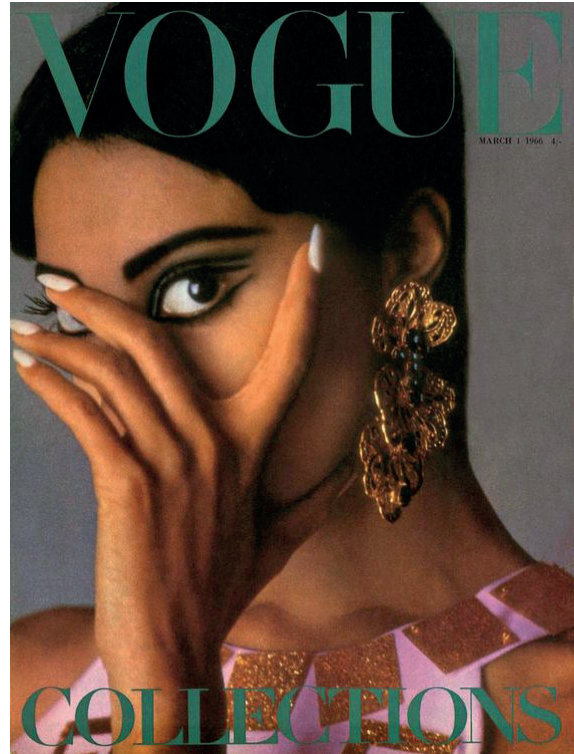


FIG. 23.
 Photographed by Tyler Mitchell, Vogue, September 2018

Ethnicity

Besides body shape and size, there are several other areas in which fashion lacks diversity and inclusion. The fashion industry has long been criticized for cultural appropriation, discriminatory advertising, and a conspicuous lack of diversity in campaigns, catwalks, and behind the scenes. From advertising campaigns to magazine spreads, the face of fashion has a long history of being exclusively white with no opportunity for diversity both in front of the camera and behind it, which has led to a lack of representation for women of color on the catwalk and in advertising campaigns, which frequently serves to reinforce discriminatory attitudes (Jackson, 2019).

Donyale Luna was the first black model to appear on the cover of a Vogue edition – British Vogue in 1966 – and is still referred to as the first black supermodel. Soon after, the world was introduced to Beverly Johnson– the first black woman on the cover of American Vogue in 1974, and several black women have since been featured on Vogue's cover: Naomi Campbell, Rihanna, Beyonce, Serena Williams, and Lupita. However, despite the fact that the magazines seem to be racially progressive on the surface, the majority of the employees and decision-makers are white (Jackson, 2019). Tyler Mitchell is the first African American photographer to shoot the cover of Vogue in its 125-year history and was commissioned to shoot Beyonce in 2018. He says, "For so long, black people have been considered things," he adds. "We've been thingified physically, sexually, emotionally. With my work I'm looking to revitalize and elevate the black body" (Nnadi, 2018).

Gender expression

Having a non-white face on the cover of a magazine and including diverse body shapes and sizes does not guarantee a brand or a campaign to be inclusive, diverse, and equitable. Unfortunately, several other diversity dimensions, such as gender expression, have been underrepresented until relatively recent years.

In the world of fashion, the most apparent representation of binary code in fashion is the men's and women's departments on almost every fashion brand website that you can find online. Consumers are forced to decide between two genders regardless of whether they identify with either one, which is highly limiting for young individuals who are still figuring out their sexual and personal identity.

Representation of the LGBTQ+ community is critical for the future of fashion, and considering that this population's cumulative buying power would equal the world's fourth-biggest economy, the fashion system has no choice other than to embrace trans and gender-non-conforming people not just as inspiration, but as intended customers (Matano, 2021).

That is changing fast: brands are incorporating genderless designs and nonbinary models on the runway and in stores, in campaign imagery, and on social media. However, while there is no denying the positive impact of that inclusive messaging, the work does not stop there.

In order to be inclusive and to attempt encouraging cross fashion they have heels and pumps with varied sizes that enables people with larger "manly" feet can wear. They can design dresses with broader shoulders making it easy for people with masculine shoulders to be able to live their fashion dreams.

They can release a design encompassing dazzling, glittery and colourful patterns conveying a message that the community should not feed into their apprehensions regarding being shunned for dressing up boldly and experience the liberty to clad themselves up in clothes they only ever imagined to wear in public. It should be understood that waving the rainbow flag is a matter of true honour and pride which should only be deserved by people once they fully believe in the community's rights on doing meaningful structural work.

FIG. 26.
Cara Delevingne walks the runway at Burberry's Spring/Summer 2018 Show wearing a rainbow faux fur cape Photo by SAMIR HUSSEIN



FIG. 25.
Sasha Velour au défilé Opening Ceremony's SS19 show photo by Fernanda Callat



FIG. 24.
Dany Levy in Loewe and Cartier at the 2021 Met Gala BY JOHN SHEARER/GETTY IMAGES.



FIG. 27.
Pierre Davis and Arin Hayes, founders of No Sesso





Age

The lack of age diversity in the fashion media is equally as detrimental as the lack of size, race, and gender diversity, although it is seldom discussed. Moreover, while it is necessary to create more visibility so that older people can see themselves reflected in mainstream media, it is equally important to raise visibility so that younger people can develop more positive perceptions of aging.

Learned from recent racial, size, and gender diversity conversations in fashion media, people are now more familiar that the visibility of marginalized people and bodies helps to normalize, celebrate, and integrate them with dignity in societies. The majority of media sources categorize their primary audience as

being between 18 and 55. However, with an aging population (United Nations, n.d.), failing to appeal to the majority of this audience is a grave mistake.

Additionally, it overlooks the potential of getting into a consumer market that is likely to have a higher average income (Mathison, 2020; Sinha, 2021). Once models reach a certain age, they are reverently referred to as "mature" and are seldom offered runway representation. I

n recent years, there has been a slight rise in the number of senior models. Some brands have awakened to the inclusion of varied age groups in their advertising and marketing, such as Fendi SS 2021, Dolce & Gabbana SS 2019, Versace SS



FIG. 28.
Insieme Jewelry , Handmade jewelry brand

2018, Glossier, and Mango. While giant fashion houses have been lauded for their choice of age diversity, they still remain in the minority.

The industry as a whole continues to be ignorant of the issue of ageism, as proved by the diversity report by Fashion Spot (Schimminger, 2022), in the FW 2022 fashion shows, there was only 23 over-50 or 0.52 percent of total castings, less than SS 2022 with 35 over-50 model appearances or 0.78 percent of total castings, way down from FW 2020's high of 44 over-50 models.



FIG. 29.
*The Prevalence of Age Diversity on the Fall/Winter 2022
 Valentino Runway*



FIG. 30.
*Valentino haute couture spring/summer 2022.
 Alessandro Lucioni*



FIG. 31.
HANA TAJIMA x UNIQLO 2020 Spring/Summer



FIG. 32.
HANA TAJIMA x UNIQLO 2020 Spring/Summer

Religion

Modest fashion has mainly been described as dressing oneself in less figure-hugging and skin-revealing clothing without compromising style (both in high-fashion and street-style fashion) and has entered the mainstream thanks to a youthful Muslim population and social media.

Modest fashion appeals not only to Muslim women but also to a range of women, including women of various cultural and religious backgrounds (like Jewish, Arab women) or those with no affiliation to a spiritual or ethnic objective, who choose to dress more conservatively. In recent years, Dolce and Gabbana, Cos, ASOS, H&M, Mango, Uniqlo, Nike, Net-a-Porter, and The Modist have attempted to offer modest fashion to this social group.

The modest fashion industry is worth approximately \$283bn, and the global Islamic fashion industry is estimated to reach \$361bn by 2023, proving it is a profitable market for brands to invest in. Previously, the consumer market was majorly centralized in the Middle East but now has been expanded to multicultural western cities like London. Although this is an exciting and essential trajectory, it needs to be genuinely fulfilled. The critical question is whether modest fashion campaigns are commodifying identity components for profit or genuinely complying with the promise of being more inclusive and embracing and appreciating diversity? (Kadiri, 2021; Sharma, 2019)

Choices for modest women have always existed. However, they have never been easily accessible for women in the West until recently, when big fashion brands consider them legitimately as their consumers; the more attention it gets and the more it becomes involved in mainstream media, the more people will realize it is not an alien concept and will be normalized.

The point is that in the course of normalization and integration of modest fashion,—similar to many failed race diversity practices—rather than catering actual fashion needs of Muslim women, some brands appropriate cultural dress. I believe this is all due to the lack of education and deep understanding of the targeted culture and ethnicity, misrepresentation in the media, and companies not training their staff in this context.

Fair representation is needed to create a safe space for all people. Diversity, Inclusion, and equity must be legitimately employed in fashion practices to flourish the dignity of all its consumers. To deliver this mission, the fashion system must deepen and widen its mutual understanding of the diverse world we all live in and acknowledge its diverse components.

1.4.2

— Non-consumer-facing perspective: (organizational & systematic)

Studies and reports clearly show that inclusivity and diversity in fashion are more product and media representation-oriented than organization and system-oriented (yet both of these landscapes have a long road ahead of them for progress). However, the most critical component of diversity & inclusion in the fashion system is the infrastructural change inside a firm, the commitment to invest in and believe in change.

As stated by Erica Lovett (CFDA & PVH, 2019), Inclusion & Community manager at Condé Nast, "The current state of inclusion and diversity in fashion is focused on visibility. It's the diversity of race and ethnicity that we see on the runways, magazines, and in overall brand coverage. [...] It's exciting [...], but visibility alone is not the solution to advancing diversity and inclusion in fashion. The industry must recognize and prioritize efforts to support greater diversity on the business side: the financiers, the chief executives, the heads of fashion houses, the senior-level magazine editors, and business leaders. There is a lack of opportunity and access for people of underrepresented backgrounds in the fashion industry. It's a systemic issue tied to the homogeneity of industry leadership. Until fashion leaders across all categories become more diverse, we will continue to only progress at the surface level."

When diverse decision-makers and executives are allowed to enter the industry's highest levels, that is when real change happens. This requires placing an equal, if not higher, emphasis on internal structure as on the choice of models for a runway (BoF & McKinsey, 2020), having a diverse hiring strategy, and giving them an influential voice a seat at the table where decisions are being made.

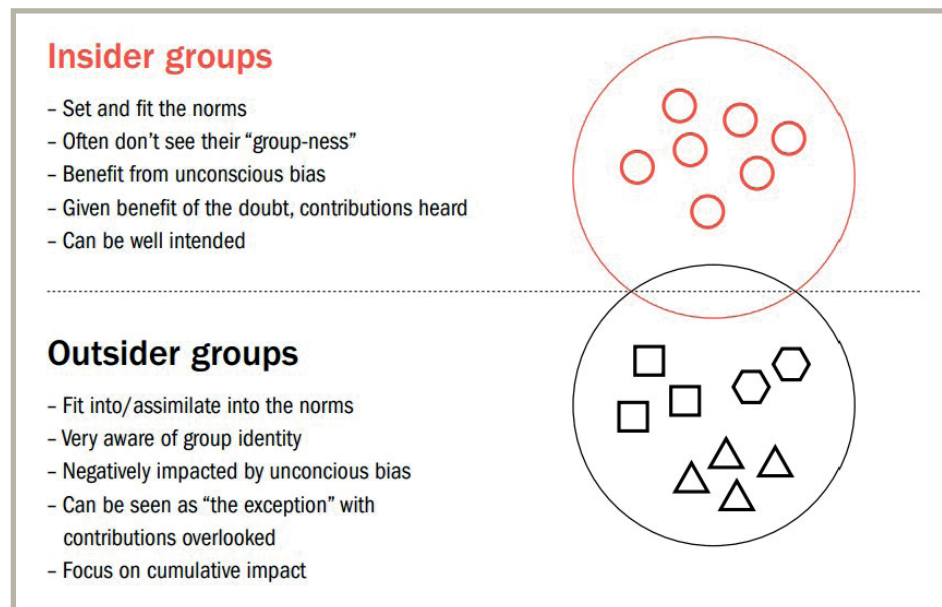
Following some progress in recent years and several significant failures (such as Gucci and Prada PR crises), the fashion industry has started to recognize the need for diversity and inclusion in the inner part of organizations, especially at the C-suite level (BoF & McKinsey, 2020). However, there is still a need for significant development. Adidas was recently called out in a New York Times article (Creswell & Draper, 2019) for its lack of diversity when workers discovered that fewer than 5% of its US headquarters personnel identified as black. Jason Campbell said in a BoF article (BoF & McKinsey, 2020), "Examine fashion's underlying power structure, what you find is male, cis-gendered whitewashing. Data is limited, but a close look at the executive committees at major fashion companies shows that they are packed with white men." In 2018, more than two-thirds of fashion industry workers were female; however, this proportion lowers to fewer than a third in the C-suite (BoF & McKinsey, 2020).

Similarly, there are only a handful of black creative directors, like Olivier Rousteing and Virgil Abloh, at the helm of high-profile luxury fashion houses, and Edward Enninful as Editor-In-Chief at British Vogue. While the industry as a whole is making progress, there are still instances of inertia, notably in creative leadership, decision-making, and technical roles ranging from creative directors and business unit heads to chief operating officers and chief technology officers. Evidence has shown that underrepresented groups are less likely to apply for roles if people like themselves cannot be seen within an organization (McGregor-Smith, 2017). This lack of visibility may signal that a workplace is not a supportive or growth-oriented atmosphere. Creating diverse teams and cultivating a culture that fosters inclusion and belonging is one of the first steps in adopting DEI.

The CFDA and PVH's Inclusion and Diversity report (CFDA & PVH, 2019) explains that based on surveys carried out, an "insider-outsider" dynamic between identity groups in organizations has been identified, which can create an uneven power dynamic. Insiders have more systemic power, but they are less conscious of the dynamic and their own significance as insiders. Outsiders better comprehend the dynamic but may struggle to establish influence and create change. Outsiders' points of view, which are often crucial to creativity and innovation, might be lost in this uneven dynamic. Most of these insider-outsider dynamics are fed by implicit

biases. The most effective solution for fixing this broken wheel is embedding DEI training programs within organizations to increase awareness and knowledge and revisiting legislation; real change starts from a complete infrastructural makeover.

FIG. 33.
Dynamics of identity groups
in organizations, from *Insider/
Outsider* report by CFDA x
PVH, (CFDA and PVH, 2019)



Being aware of the key biases and challenges that the fashion industry faces is critical. The following are some of the topics that emerged from the CFDA/PVH study (CFDA and PVH, 2021):

"Taste"

Assumed to be inherent/intrinsic and therefore linked, sometimes unconsciously, to perceived socio-economic status.

Aesthetic

The importance of fitting a brand's aesthetic – from how one looks to what one wears to one's lived experiences.

Connections

A reliance on referrals — a “job gray market” — where not all jobs are posted, and most jobs are attained through personal networks.

Low Pay

Frequently not being paid in money but in product, discounts, exposure, and access to influence, especially with unpaid internships and at the entry level.

Geography

The focus on geographic specificity with New York City (high cost of living) as American fashion's capital.

Mentorship

Criticality of mentorship given the importance placed on networking and navigating internal politics of organizations.

Buying Power

Untapped yet growing, diverse customer bases (e.g., Black buying power increased by 48% from 2010 - 2019 vs. 40% white customers and is projected to grow to \$1.8T by 2024).

Cultural Appropriation

Brands creating products based on diverse cultures don't always provide the credit or compensation for the source of ideas and contributions and/or the misuse of cultural designs for popular culture.

As mentioned before, there is clear evidence that organizations with a diverse workforce outperform their competitors financially (Eswaran, 2019). However, there is still a lack of diversity at the head of fashion firms, with senior positions often dominated by white men — the chief diversity officer position being one of the few exceptions. A separate CFDA/PVH study found that industry experts perceive the condition of DE&I in fashion as “evolving”

and "improving," but fewer than half think initiatives implemented in 2021 would result in lasting change (BoF & McKinsey, 2022).

The pandemic has amplified public awareness of social injustice in the supply chain, and consumers are demanding more from brands in their engagement with socio-political values. Kantar Monitor research found that 54 percent of consumers believe brands "have an important role in social conversations about issues like #MeToo and race relations," but consumers are quick to call them out when brands fall short. Brands that jumped on the Black Lives Matter movement with tokenistic marketing messages have faced accusations of hypocrisy, while many brands have been called out for having all-white upper management teams (BoF & McKinsey, 2021).

While society indeed expects more excellent representation of difference, there is also a strong economic case for diversity (which, as we will see later, is valid within companies too). In the US, for example, the buying power of people of color is growing significantly faster than that of the white population.¹¹⁸ The implication for fashion players is that sales rise significantly as more customers feel visibly represented and aligned to the brand in terms of shared values (BoF & McKinsey, 2020, 2022).

Diversity per se is not enough for fashion companies to become equitable and inclusive. Once companies hire people of color or other minoritized groups, it is crucial to ensure that they are given the equitable opportunity and space to actually create and influence. According to data from the CFDA's 2019 diversity report, an alarming 36% of questionnaire respondents gave their organization a three-out-of-five rating for "the degree to which diverse groups feel able to contribute fully" (CFDA & PVH, 2019). According to another survey (BoF & McKinsey, 2022), half of the employees of color believe a career in fashion is not equally accessible to all eligible people.

Farfetch is one of the companies that have embedded diversity and, more importantly, inclusion paradigms in their organizational structures. The company's chief people officer, Sian Keane, is concerned about not encouraging microcultures within the business, particularly between creative and tech specialists, as she believes that undermines their common thread of values (BoF & McKinsey, 2022). Keane sees opportunities in the

“borderless society” (that has emerged since remote and hybrid working took hold during the COVID-19 pandemic) and also in creating a solid sense of belonging as people need to be connected to meaningful work. Creating a sense of belonging in a hybrid world is a new challenge that the company faces.

CFDA and PVH have organized six specific opportunity areas that individuals, organizations can address, and the broader industry – and must be operated across all levels to drive sustainable change. By suggesting these six areas, CFDA and PVH aim to guide companies to quantify their culture's strengths and opportunities for improvement; offer insight into actionable steps towards a more diverse, equitable, and inclusive future. Although the report is developed based on the American fashion industry and surveys are carried out in that industry section, the results are highly applicable in other areas with the same Eurocentric fashion system paradigms. The opportunity areas are:

- Awareness • Access • Promotion • Advocacy • Compensation • Belonging

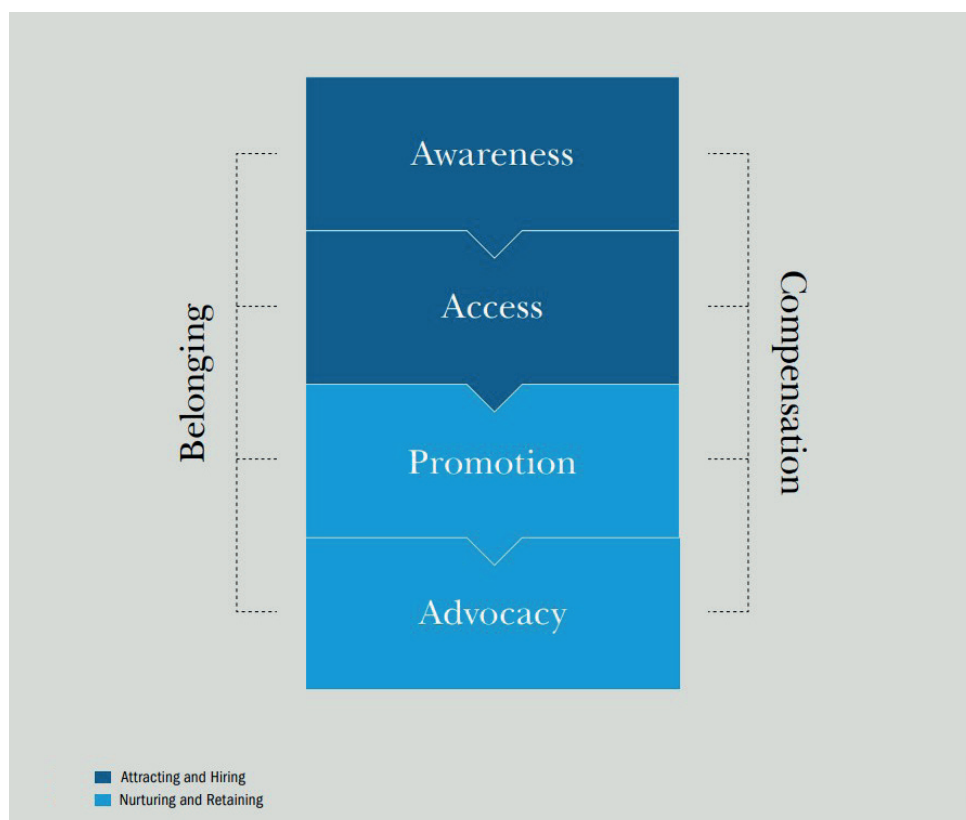


FIG. 34.
AREAS OF
OPPORTUNITY, Source: Fall
2020 CFDA Diversity, Equity,
and Inclusion Survey; N = 1,081
(CFDA and PVH, 2021)

Awareness

There is an overarching lack of awareness of the fashion industry's range of opportunities, especially in low-income communities, communities of color, and the pre-college pipeline. A Black student said, "It's hard for people of color to reach for opportunities they don't even know about," and a non-profit leader who works in this space pointed to the lack of information about fashion in underrepresented communities.

Access

Fashion schools play a critical role as a key feeder into the pipeline for those interested in being a designer. However, a former creative director pointed out that the concern must be shifted towards those who cannot afford to go to fashion schools and consequently will not even enter the pipeline.

"I live in a lower income area and I do not have access to [fashion] programs or opportunities around me. This is something that I think that people in higher-income areas do not recognize. If they don't come into our space, we will not have access to these opportunities...it's hard for people to reach for opportunities they don't even know about." – Black Student (CFDA & PVH, 2019)

On the other hand, there is a perception of unfairness in hiring, primarily due to unconscious bias and reliance on referrals. Perceived socioeconomic status and race are often intertwined with ideas about "taste" or "looking like a [brand's] girl." A Latinx fashion editor commented, "There's a pre-judgment that if you don't grow up with rich things, you don't know what luxury means."

Promotion

There are real concerns about whether promotions are fair. Black employees reported the lowest agreement (50%) that promotions are based on fair and objective criteria. When asked to diagnose the biggest reasons for lack of racial equity at the management level, 16% of respondents of color point to the lower likelihood of a person of color being promoted to first-level

management roles.

Respondents of color expressed that their race/ethnicity has had a negative impact on receiving raises and promotions in the past (26% employees of color, vs. 1% white respondents), notably Black (40%) and Asian (27%) respondents.

Advocacy

Lower levels of promotions have structural reasons, namely, the lower levels of advocacy and mentorship available to employees of color. Fewer employees of color reported having at least one person who creates or advocates for new opportunities for them (28% vs. 33% for white employees) and having a senior person advocate for them regularly (33% vs. 44% for white employees)

The lack of sponsorship is especially acute for Asian and Latinx employees, who reported the lowest sponsorship levels at 23% and 26%, respectively, compared to 33% of white employees who report having at least one sponsor. Surprisingly, Black respondents report the highest sponsorship level (35% of Black employees reported having one or multiple sponsors).

Compensation

Insufficient compensation stands as a significant barrier to entering and thriving within the fashion industry. The impact of low compensation continues even after getting a full-time job in the fashion industry. The most common form of income support reported by entry-level and employees from small companies is parental support (12% entry-level; 14% small companies). Black employees, however, cite needing to supplement parental support with additional income from freelancing and the gig economy (20%). All of this points to inequity of compensation existing across races and ethnicities.

Belonging

employees of color feel like they do not belong. Black employees, in particular, point to an environment of non-inclusive behavior. Almost a quarter (23%) of respondents observed discriminatory behavior, with race/ethnicity and

physical appearance being the most common biases. Additionally, two in three Black employees experienced microaggressions, with one of the critical issues being that their competence is doubted.

This is partly due to not being able to bring their “full self” to work. A Black student said, “You get these jobs, and you feel like you can’t talk the way that you talk... it’s a huge challenge. I’m going into the creative industry where individualism is celebrated, but that element of being yourself doesn’t necessarily work for me as a Black woman.” Despite the stereotypes of fashion as being inclusive for LGBTQ+ employees (especially gay men), 18% of LGBTQ+ employees report that they would not recommend others like them apply for a job in the fashion industry.

1.4.3

—How can the fashion system outperform the DEI culture?

The conventional style of operating a large firm—in which you told people what to do and, as you went further down in the organizational hierarchy, the more you relied on just execution—is likely to become outdated. Fashion firms will no longer be able to draw talent only on the strength of their brands or the glamour of the fashion in the following years. Rather than that, organizations must reinvent their personnel strategy and abandon certain unhealthy embedded traditions, such as recruiting from inner circles to compete with other industries. Employees today want their employers to reflect their values, meaning that a company’s position on corporate social responsibility (CSR) issues, including sustainability and DE&I, will play a significant role in attracting and retaining talent. Indeed, one recent study revealed that 64% of Millennials said they would not take a job if the employer did not have a strong CSR policy (BoF & McKinsey, 2022).

Moreover, the longer-term trend of citizen activism will continue, boosted by social media and a widening gap between the rich and poor exacerbated by the pandemic. Gen-Z, which will account for more than 40 percent of global consumers in 2020, will lead the charge as the most politically active age group on social platforms. Companies that want to showcase their diversity credentials must ensure that they are genuine, deep-rooted, and consistent with the brand message. For instance, if a brand's fashion shows incorporate models of all body shapes and ages, a beauty campaign featuring exclusively young models with flawless skin may confuse customers about the brand's underlying values. The consequences of mistakes and misjudgments in this area are not limited to social media. Almost two-thirds of customers self-identify as "belief-driven consumers," indicating that they would choose, switch, avoid, or boycott a brand depending on its views on social issues (BoF & McKinsey, 2022).

Some companies are taking positive action. LVMH has pledged equal gender representation for executives by 2020, while Nordstrom claims it has achieved equal pay for employees of all genders and races and is close to approaching equal representation. Public announcements of such initiatives may seem self-aggrandizing, but today's belief-driven customers look beyond the glossy imagery to decide if a brand's values match their own. Some of the industry's most recognized players, such as Chanel, Gucci, and H&M, have hired executives devoted to diversity to show their commitment, but employee training and complete integration across functions still lag across the industry. A 2019 US fashion industry report revealed that only 56 percent of respondents said they had taken a professional class or workshop related to inclusion and diversity.

In 2020, visible expressions and public statements of diversity and inclusion will be more frequent, and companies will not be shy about sharing them. However, they will also be vocal about their broader commitment to diversity and will be held to account by employees and customers. Fashion players should articulate their own business case for diversity while clearly understanding how better diverse teams are across functions, from customer insight and product innovation to marketing and digital.

Chief diversity officers will become more common, better resourced, and further empowered, laying out ambitious roadmaps for initiatives such as workforce training, strategies to improve diversity in key creative and corporate roles, and improving inclusion-related indicators. The core business must own the diversity and inclusion agenda beyond the chief diversity officer, with inequality in the workforce addressed by efforts to de-bias recruitment and advancement processes, provide sponsorship and leadership development programs for diverse talent, ensure the workplace caters to employees of all genders, races, and abilities, and by promoting equal pay and opportunities. In a female-dominated industry, the average representation will be insufficient as a target; businesses should use cascade targets to increase representation in specific areas of the business, with managers held to account while being supported in meeting these targets.

Leading companies will foster a sense of belonging and equity of opportunity, engaging more closely with employees to develop comprehensive recruitment, retention, and inclusion policies. This will include clearly articulating their corporate purpose, values, and career development opportunities (BoF & McKinsey, 2022). Overall, companies should consider transforming their organizations to create a genuinely inclusive culture for employees and consumers, eschewing a skin-deep veneer of change for profound and lasting reform.



1.5

AN INSIGHT INTO REPRESENTATIVE CASES

through DEI lenses

This section intends to represent how fashion companies are taking steps towards a more diverse, equitable, and inclusive fashion system through several cases briefly introduced. These cases are just a few of many initiatives carried out in this environment so far, although, as explained in the previous chapter, there is still a need for more progress in achieving DEI-related expectations from society in the fashion industry.

I conducted these lenses based on Loden's diversity wheel (Loden, 1996) introduced in the second chapter and with an eye on several intervention areas (both consumer and non-consumer facing section) discussed in the previous chapter. Although these lenses do not cover all aspects of the fashion system lacking diversity, equity, and inclusion, they can help us identify the most general and impactful criteria that a fashion company can make progress in for fulfilling the ideal of ethical fashion. The six lenses are listed below in alphabetical order:

SIX DEI LENSES

1. Age

2. Body shape and size

3. Ethnicity, race, religion

4. Gender representations/identity

5. Rank/stratum

6. Physical & mental ability/ characteristics

In the following pages, we will see the six lenses applied to 10 representative cases to show how these brands are performing regarding the selected criteria. The cases have been selected from various categories of fashion to cover a broader spectrum of brands and companies as it helps have a better understanding of the overall performance, including high-end brands, fast fashion, and niche markets.

—1. Universal Standard

Universal Standard is an American company that sells high-quality basics direct-to-consumer at reasonable prices. Universal Standard cofounders Alexandra Waldman and Polina Veksler were frustrated that so many mainstream fashion brands did not make clothes over size 12, and plus-size brands did not often create outfits that were in fashion or high quality. In 2016, they set out to change this with a new brand, Universal Standard, that offers an assortment of casual, active, denim, and dressy styles in sizes 00-40 or 4XS-4XL. In addition to the aesthetics, the brand uses a very deliberate design process that involves multiple fit models so that the garments are flattering and well-fitted on the bodies of curvier women. Universal Standard has built a reputation as a pioneer in the democratization of fashion, and it now boasts the most expansive size range of any non-bespoke brand. However, more than that, the company has encouraged others in the industry to follow suit. Universal Standard has partnered with outside brands to make progress in the level of inclusion. It is hardly a side gig: To date, those partners have included J. Crew, Rodarte, Adidas, and Goop — and a host of others, working behind the scenes and off the record that Universal Standard is tapping the company's expertise in grading patterns, a complex process for such a diverse set of customers.

Despite some progress in the modeling world, there remains a lack of diverse models. To



FIG. 35.
Photograph courtesy of Tiffany Nicholson
UNIVERSAL STANDARD

FIG. 36.
Rodarte collaborates with Universal Standard for a size-inclusive line



remedy that, the company in August cast more than two dozen women, recruited during their commute on the New York City subway, who are “diverse in age, gender identity, race, and sexual orientation,” for an advertising campaign. To help women shop on its site, the company features “See It In Your Size,” which shows how each item looks in various fits — and entails shooting images of women wearing every item in the entire size range. Alexandra Waldman says, “Access to clothing is a matter of dignity. When a designer offers their clothes in sizes that everyone can wear, it makes a statement that says that the customer is welcomed, seen, and considered worthy of that product.”

The company is also transparent in its diversity and inclusion progress at the corporate level. As stated on the company website, Universal Standard is very serious about examining every aspect of our business - from our approach to content creation and brand alignments to our company culture and hiring practices. A couple of their steps taken so far are:

- Engaging in anti-racism work, addressing unconscious bias, creating safe spaces for every single employee, and allyship coaching is a top priority for us.
- Amplifying Black voices in our community.
- Investing in Black creators & creatives.
- Increasing awareness by offering a webpage dedicated to tones of Anti-Racism Resources

—2. Tommy Hilfiger

Tommy Hilfiger has announced the 'Make it Possible' program powered by the PVH Corp's Forward Fashion strategy as part of its approach to becoming a more sustainable organization that "wastes nothing and welcomes all." Two of the four pillars of this program are dedicated to inclusion, equity, and diversity under the titles 'Everyone Welcome', which is to be completely accessible to all people, and Opportunity for All, which creates opportunity for all employees of Tommy Hilfiger.

By 2030, Tommy Hilfiger aims for all its consumers to feel comfortable with its products, experience the brand as welcoming, and find all its channels accessible. In addition, the brands assure that all their employees and workforce are enabled to speak up for themselves and have the opportunity to maximize their potential. The three most effective approaches of the brand towards DEI are:

Adaptive collection

In 2016, Tommy Hilfiger partnered up with the non-profit organization Runway of Dreams to launch Tommy Adaptive, a line of clothing designed to make wearing clothes easier for people with disabilities featuring magnetic closures, adjustable hems, one-handed zippers, and velcro fastenings. Following a successful launch in North America, we have expanded the Tommy Hilfiger Adaptive collection to consumers in Europe, Japan, and Australia. In the U.S., the collection is also now available to buy through the Tommy Hilfiger Adaptive Skill on Alexa, allowing any shopper to navigate through the Tommy Hilfiger Adaptive range using only their voice. "The democratization of fashion is one of the core values the brand was founded on," said Hilfiger.

FIG. 37.
Tommy Hilfiger Adaptive collection



FIG. 39.
Tommy Hilfiger JEANS ADAPTIVE RELAXED FIT,
magnetic closure



FIG. 38.
Tommy Hilfiger SHORTS CHINO ADAPTIVE
REGULAR FIT, magnetic closure, and adjustable waist



Zendaya collaboration

Another powerful example was Gen-Z superstar Zendaya's collaboration with Tommy Hilfiger, featuring a size-diverse cast composed solely of black models (59 black models, ages 18 to 70), including some women of color Zendaya wants to thank for their influence in fashion, Hollywood, and beyond. Pioneering icons Beverly Johnson, Veronica Webb, and Beverly Peele walked the show). "We wanted to pay tribute to the women who came before, the women who made it possible for me to be here," said Zendaya. "Size-inclusivity has been important to me always — if women in my family can't all wear it, I don't want to make it," Zendaya said of the inclusive message of the show.

Fall 2020 global campaign

For its Fall 2020 campaign, Tommy Hilfiger features a diverse cast reflective of modern America, including Halima Aden (a successful black, hijab-wearing model), Carolyn Murphy (a sustainability advocate and supermodel who defies industry ageism), Dilone (a model, actress, and social advocate who defies established gender norms through her androgynous aesthetic), Michaela DePrince (a Sierra Leonean-American war orphan turned internationally renowned ballerina), Soo Joo Park (a Korean-American top model who advocates for more robust BIPOC representation in beauty and fashion), Jasmine Sanders (a multicultural supermodel advocating for social justice through her social media platforms), Precious Lee (a trailblazing black activist advocating for race and size diversity), Audrey Hilfiger (an artist, entrepreneur, and activist who advocates for the LGBTQI+ community).

FIG. 40.
The finale of the Tommy Hilfiger x Zendaya show



FIG. 41.
Tommy Hilfiger, Fall 2020 global campaign

FIG. 42.
Rihanna's Savage X Fenty lingerie
pride collection



FIG. 43.
Savage X Fenty Show
Vol. 3 Released via Amazon Prime

—3. Fenty

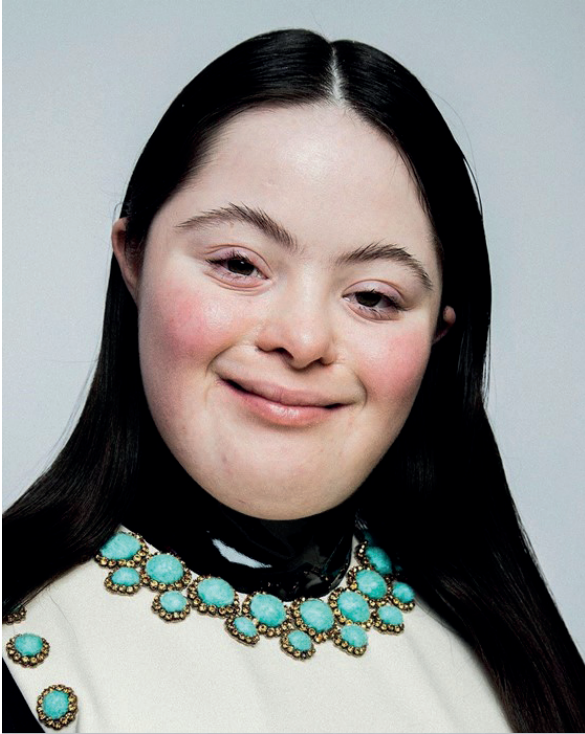
Savage X Fenty

Savage Fenty is a size-and gender-inclusive lingerie line featuring bras in sizes ranging from 30A to 44DDD and XS to 3X in underwear and also is a tribute to older and pregnant models as well as models with disabilities. The industry lauded Rihanna's diverse show for her lingerie line Savage x Fenty as a riposte to competitor Victoria's Secret's long-projected homogeneous view of beauty. Her product lines are hugely successful, and, in many ways, she is showing other brands how to adequately cater to a diverse society. At one of her recent Savage X Fenty lingerie shows, Demi Moore modeled lingerie alongside Bella Hadid. Moore is 57, and Hadid is 24. Another aspect of the Savage X Fenty show which generated a lot of buzz and media attention was that it featured men. Not only does it make sense to market men's underwear in a fashion show with women, but the show was also heralded for featuring a plus-size male model.

Fenty Skin

After Fenty Beauty disrupted the cosmetics category back in 2017 with its 40 and then 50 shades of foundation, Rihanna launched Fenty skin in 2021 as a gender-neutral skincare line positioning itself as the "new culture of skincare." One of the keys to Fenty Skin's success has been its ability to handle inclusion in a holistic, genuine, and non-performative way, both in terms of products and marketing message – uncommon for a major skincare brand.

FIG. 44. Gucci Beauty. The campaign for the new "Mascara L'Obscur", Photographed by DAVID PD HYDE



— 4. Gucci

In 2018, Gucci released the 'Gucci Equilibrium' program and portal, part of a 10-year process to embed a comprehensive sustainability strategy into and around the brand, governed by a Culture of Purpose, to showcase the stories, ideas, and science behind environmental and social impact initiatives of the house. One of the three pillars of this program is called 'People,' dedicated to enhancing the lives of the workforce and employees and is focused on supporting communities.

The brand is transparent about its progress toward DEI goals, and the annual data reports are available at the portal, such as diversity and inclusion in terms of generation, gender, race, and ethnicity within the workforce. Gucci's People Strategy includes Attracting, Recruiting, and Selecting Talent; Developing, Engaging, and Retaining Employees; Gender Pay Parity; Creating Greater Opportunities for People with Disabilities; Adopting expansive language and improving self-identification options for employees (regarding visible or invisible disabilities and non-binary self-identification)

A tangible example of Gucci's progress towards its DEI program was the Gucci Beauty campaign in 2020 for its L'Obscur mascara. As the face of their campaign, the brand chose Ellie Goldstein, an 18-year-old model affected by Down Syndrome, represented by inclusive talent agency Zebedee Management. Alessandro Michele explained that the message behind the L'Obscur Mascara was



FIG. 45.
A page from Impact report
2020, Gucci Equilibrium



FIG. 46.
Gucci Equilibrium, CHIME
initiative

that each person would use it to complete their look and use make-up as a form of expression.

Other models of the campaign include Jahmal Baptiste, Enam, Kadro Vahersalu, and Ruoyi Yi, each echoing the message of inclusion and diversity. The campaign was shot by photographer David PD Hyde- who shared on Instagram the importance of representation for disabilities 'behind the scenes' too, as "half of the team who are behind this shoot have some form of physical disability too," including himself. According to a press release, this follows Gucci's overall goals of "supporting emerging talents and promoting the theme of unconventional and non-stereotypical beauty," according to a press release.



1.6

THE RELEVANCE OF DEI CULTURE

and fashion system in the digital age

We live in a rapidly digitizing world of service and support, where digital transformation is rising in a way that we could not have foreseen, and at the same time, a focus is being placed on transformation in human resource development, inclusion, and diversity. As mentioned earlier, the current wave of globalization –globalization 4.0– is, in fact, based on the convergence between physical and digital environments, where humans meet the cyber world, where technology and people are not distinct nor separate. One side of globalization 4.0 is the unprecedented increase of focus on advanced tools and technology, while the other side of it is the increase of focus on advanced human knowledge and practices as the 4.0 era is merged with human and human societies.

The covid-19 pandemic has shed light on both of these phenomena and has again shown how significant the effect of widespread adoption of new digital tools and behaviors on our industries and living conditions today is. On the other hand, it reminded us of something that has been overlooked. Some people and regions within our societies have better access and benefit

far more from technology and digital tools than others which is a sign of social injustice and disproportionate opportunities within our societies. With the massive diffusion of technologies, without appropriate policies or systemic thinking about how they are designed and how we interact with them, certain people are ever more excluded as existing inequalities are amplified. Creating equal and equitable access to the internet, technology, and digital tools should definitely be subject of focus of policymakers and authorities within the societies, yet is out of the scope of this thesis. Here I aim to draw attention to the opportunities that globalization 4.0 has had and is still having on our lived experiences.

Accelerated by the worldwide pandemic, companies across all industries have been required to adopt some form of remote working or accelerate the adoption of a form of technology in their business to overcome the barriers of that specific period. This has prompted governments worldwide to expedite their digital transformation efforts by increasing investment in science, technology, engineering, and mathematics (STEM) education, critical for developing the skills necessary to fill new digital positions. Simultaneously, as previously said, executives across all types of organizations have recognized that in order to survive and grow in the long term, businesses must embrace a diversity and inclusion mindset. As society seeks to create a more equitable world for current and future generations, the increased focus on digital technology provides an opportunity to build a more diverse and inclusive society and workforce and the fashion industry –and on a more holistic level, the fashion system, is no exception (Magdalena, 2021).

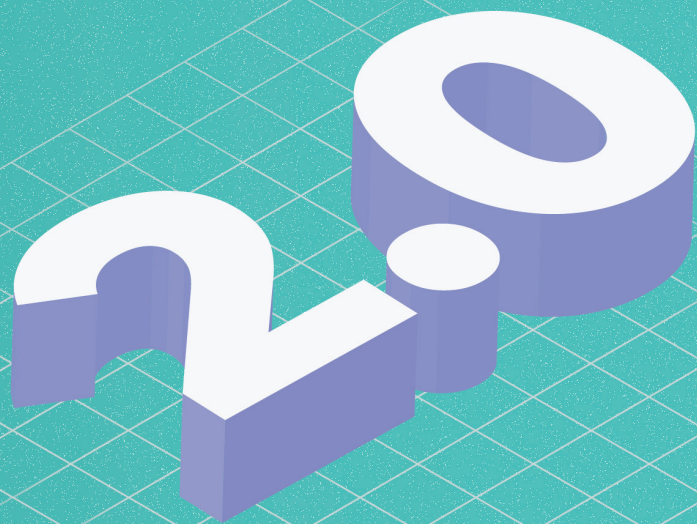
From another point of view, the increasing popularity of social networks and user-generated content (UGC), the explosion of data generated by cloud computing, and the proliferation of connected multimedia devices – smartphones, tablets, phablets, and e-readers – in users' hands have had a profound effect on the cultural landscape in both the global North and South . Therefore, technological changes have led to the emergence of new players and new logic. We are witnessing the constant convergence of the world of fashion, design, luxury, and media. Lifestyle markets have diversified due to customers' complicated need to express their unique identity and disdain for being pushed aside into conventional categories. Meanwhile, the borders between the physical and digital realms of creative

expression are eliminated. The physical element of sociality is fading away: the continued proliferation of personal avatars, digital collectibles and NFTs, and virtual representations in social media, virtual reality environments, the metaverse, and online gaming is expected to establish a whole array of new paradigms and forms of cultural production in socio-creative communities (Hernandez et al., 2020).

Such changes are 'democratizing' because they allow more people to access these cultural goods, services, and environments. Meanwhile, digital innovations as we are experiencing today can significantly help to integrate minoritized groups, reduce the digital divide between urban and rural populations —provided they have the necessary equipment and internet connection—and tend to eliminate geographical and social barriers and involvement in cultural creation resulting in facilitation of creativity, self-expression, and cultural engagement. The increasing shift in consumer behavior towards replicating their daily physical habits in the virtual realms (such as metaverse and social-virtual worlds) assigns a growing value to digital assets, and "Digital fashion" is a crucial example. In the second part of this thesis, I will discuss the context of digital fashion from a historical point of view to have a better grasp of what it is and how it has emerged, and later from a DEI point of view to understand whether and to what extent it can help the fashion system to redeem and accelerate equity, diversity, and inclusion.

It is worth mentioning that much of the progress made so far in enhancing DEI culture in the physical fashion system has already been made thanks to the digital transformation and the powerful impact of social media and the internet. However, digital fashion may open a new window to a greater level of inclusion, diversity, and equity due to its specific features explained in the second part.

DIGITAL FASHION





2.1

INTRODUCTION

to the Digital Fashion

Although some may think digital clothing and couture only exist in sci-fi movies, today digital fashion has found its way into the fashion industry and is proof that the lines between the digital and physical worlds are blurring more and more every day. We are no strangers to dressing up a character and choosing the outfits for our avatars in *The Sims* videogame or playing dress-up games to decorate our virtual model. However, digital fashion is not just about video game character styling—although it is an important part of the digital fashion world and we will take a closer look at it later in this study, it is not the only one.

Digital fashion is a fast-growing fashion subculture that encompasses the digital design and 3D modeling of real-world clothing, digital garments rendered onto real people on request, uploading digital clothing and designs onto the blockchain to be sold as NFTs (non-fungible tokens), and even a digital version of a product you are trying on through the 'Virtual Try On' feature of your favorite brand app.

Being built on the foundations laid by the 3D modeling and gaming industries, digital fashion has gradually—accelerated by the COVID-19 pandemic—become a subculture situated at the intersection between digital socializing, fashion, design, and mixed reality (Dissrup, 2022). This community-based culture exists adjacently to the conventional fashion industry, redefining paradigms, forms, and concepts within the fashion industry—and sometimes condemning the conventional fashion industry's legitimization (Särmäkari, 2021a).

Finding diversity, inclusion, and equity as fundamentals of any healthy community, and after acknowledging their importance in the fashion system in the first part of the thesis, in this section, I will take a profound look at the digital fashion world and the culture developed around it from the DEI perspective to see how executives in this field are operating and moving towards a more ethical and equitable version of fashion.



*“DIGITAL FASHION IS
A PROCESSUAL TOOL
TO ASSIST DESIGN BUT
ALSO A NEW FASHION
SPACE, CULTURE, AND
COMMUNITY.”*

(SÄRMÄKARI, 2021A)

FIG. 47.
A genderless robe features in the debut
collection of The Fabricant Studio



2.2

DIGITAL FASHION:

what is it?

We live in a world where the constant proliferation of personal avatars, digital collectibles, and virtual representations in social media, virtual reality environments, and online games is rapidly spawning new opportunities in socio-creative communities. Digital fashion is one of these rapidly developing subjects happening in the world of fashion design that has piqued the interest of fashion industry executives following the Covid-19 pandemic.

Digital fashion is an umbrella term for any garment that exists in the digital realm, whether it is created as a prototype or sample simulation for real-world clothing, to be tried on in a virtual showroom, or digital collectibles with physical counterparts, or created to be purchased as a final product by end-users and worn in a digital environment or edited, on images and videos of real humans. Amber Jae Slooten, co-founder of The Fabricant — a digital fashion house— defines digital fashion as “Anything that has to do with fashion beyond the physical realm — fashion you can wear with your digital identity” in an exclusive interview with ThePowerHouse, a leading innovation agency for FashionTech and wearable technology (Pinent, 2019). The Fabricant is a digital couture house based in Amsterdam which claims to be “a digital fashion house leading the fashion industry towards a new sector of digital-only clothing” (The Fabricant, n.d.).

This digital fashion house has become the catalyst for normalizing the idea of digital clothes after successfully auctioning a unique NFT for \$9500. In November 2019, Richard Ma, the CEO of a leader company in blockchain security “Quantstamp,” gifted his wife a 9500\$ dress called Iridescence that does not exist physically created by The Fabricant in collaboration with Johanna Jaskowska, creator of the number one futuristic filter taking over Instagram, Beauty3000, and Dapper Labs, the team behind the CryptoKitties blockchain phenomenon (Kapfunde, 2021; Salamone, 2019). Richard Ma stated, “it’s definitely very expensive, but it’s also like an investment... In 10 years, everybody will be ‘wearing’ digital fashion. It’s a unique memento. It’s a sign of the times” (Salamone, 2019).

What Richard Ma stated is not much far from what Kerry Murphy —the founder of The Fabricant—believes. He says, “The Iridescence [...] is a digital artwork that will be as famous as the Mona Lisa is, 500-years from now. Establishing provenance in the digital-only fashion ecosystem is something we’re extremely proud and grateful for and will keep developing projects that challenge the status quo of the fashion industry in similar ways” In an interview with Your Majesty Co., a Dutch digital experience agency (Tamuli, 2020).

However, the question still remains about how the mainstream will accept this phenomenon? Why would someone need and spend a fortune for a digital garment while cannot actually wear it? What are the reasons why proponents invest in the digital fashion industry? And after all, how is this field impacting our societies in terms of inclusiveness, diversity, and equity?

In fact, this query can be answered from a variety of perspectives as the advent of digital fashion did not occur overnight and gradually evolved around several concepts such as sustainability, self-expression, democratic fashion, diversity, industry and consumer shift, and so on. So, in order to gain a better grasp of the evolution of this sector and the mission that experts in this field are pursuing, we will have a look at the history of the digital fashion industry and the milestones that it has achieved so far in the next part.

2.3

HISTORICAL PERSPECTIVE *and milestones*

Although it is difficult to pinpoint the exact origin of digital fashion, many have tracked down its preliminary instances in the gaming industry, a form of entertainment that, according to the New Yorker's Anna Wiener (Wiener, 2022), "train[s] players to be eager, expectant, and constant consumers" (Nguyen, 2022). MMO (massively multiplayer online) games allow players to create and modify their avatar – the digital representation of a user living in a parallel world and reflects the users' activities and interests (Varvello et al., 2009)— that will then interact with the virtual community. This customization feature not only adds a social factor but also allows self-expression in digital and online spaces (Mjasnikova, 2021). The possibility of communicating with other players and contributing within an online community has helped digital fashion evolve within the

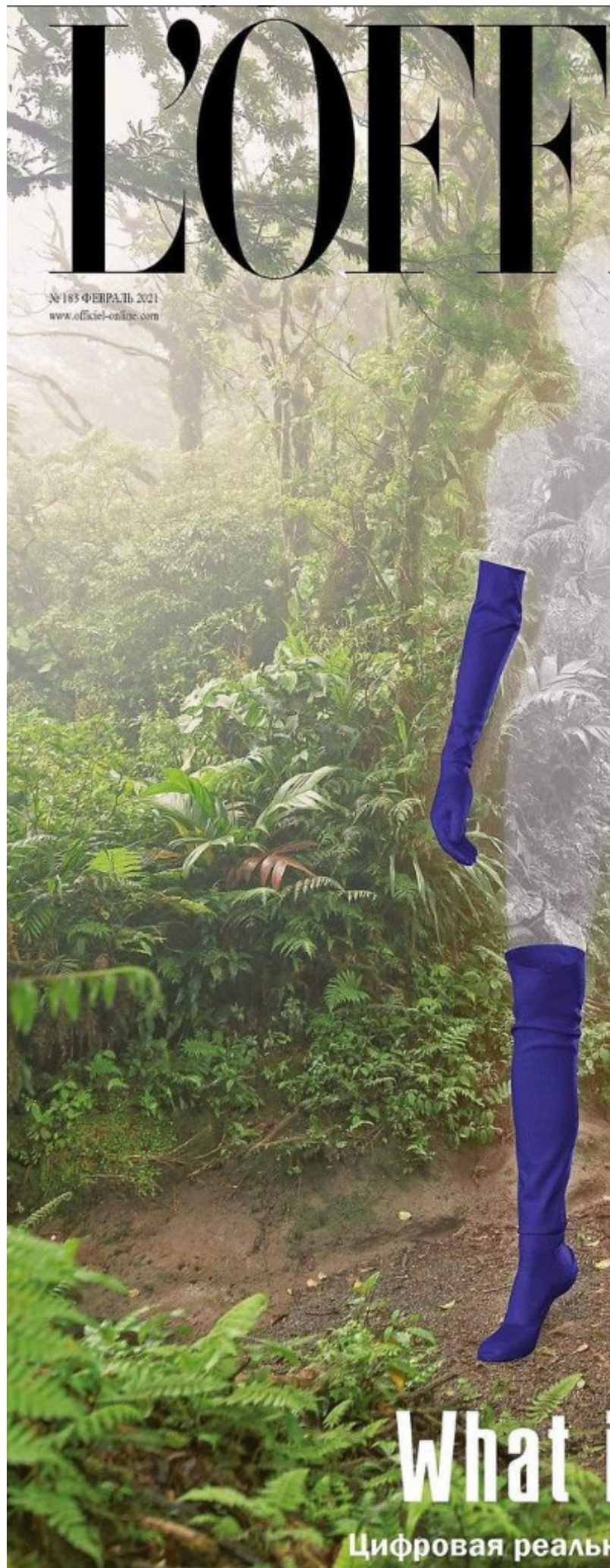




FIG. 48.
@lofficelukraine. Art direction and photo:
@synchrodogs_official @lenashcheiglova @
romamoven. Digital fashion: @dressxcom,
Digital look: @the_fab_nic_anf

gaming realm at the intersection between video games and digital socializing and has been the most prolific and influential form (Dissrup, 2022; Wirman, 2008).

Tetsuya Nomura, a 45-year-old veteran character designer at Square Enix (a Japanese entertainment conglomerate and video game company), believes clothes in a video game are a part of a character's identity that they must be considered from the very beginning of the character design process. "[...] within the limited world of a video game, clothing is one of the most important elements that express and define a character's individuality," Nomura says. "One of the biggest elements that help the player better imagine a character's personality or background is fashion" (Bhasin, 2016). As stated by (Fron et al., 2007), virtual fashion design and purchasing are among the most popular activities in metaverse-type social environments such as Second Life and There.com. He also states that dressing up games is a means to "infuse greater gender balance into both game studies and game design."

There have been several investigations into the different classifications of dress and clothing in the electronic entertainment and gaming industry by scholars such as (Makryniotis, 2018) and (Fron et al., 2007). In the article "Playing Dress-Up: Costumes, roleplay and imagination" (Fron et al., 2007), The authors distinguish two forms of dress-up play based on the player's interaction with the outfit and the game character. These two modes of dress-up play are doll-play, in which the player "dresses up a character who is clearly



not herself, but over whom she exerts (often god-like) control," as in *Barbie Fashion Designer* and *The Sims*; and identity/avatar/costume, where the player is the character (as in open-ended metaverses where identity is a form of personal expression, but does not have an effect on gameplay). The second mode may contain one or more of the following mechanics: armor/instrumental, where dress-up is an instrumental part of gameplay; acquiring/trying clothes, mostly done as a social activity; twinkling/gifting/trading, e.g., giving items away to lower level players. The first mode (fashion-oriented activity software such as *Barbie Fashion Designer*) obviously contains fashion design/creation mechanics. (Makryniotis, 2018)

Since avatar styling and in-game-purchases in video games, lifestyle-simulator games, and interactive social platforms (such as *The Sims*, *Second Life*, *Fortnite*, *Roblox*, ...) bridged the

gap between character and fashion design, as Makryniotis argues (Makryniotis, 2018), the amount of digital fashion designers has increased rapidly simultaneously with traditional fashion companies that release virtualization of their designs and products (Särmäkari, 2021a). This phenomenon hallmarks the beginning of social digital fashion—as it is the social context that elevates clothing from functional to fashion (Dissrup, 2022). As (Nguyen, 2022) states, MMO games are one lucrative avenue to reach millions of worldwide young consumers, mainly Millennials and Gen Z. The \$40 billion market for in-game items is enticingly profitable. It can be a thrilling platform for experimentation and exploitation for creative designs and executives in the creative design world.

On the other hand, digitalization and transition toward digital technologies in the conventional fashion industry sphere have been significant



FIG. 49.
The Singroy Water Puffer / INSTAGRAM @
nyamstudio

since the “Fourth Industrial Revolution” and implication of the Industry 4.0 paradigms (Bertola & Teunissen, 2018). In the beginning, digital garments were mainly used as a processual tool in the production phase for speeding up the sampling and prototyping processes, as well as sustainability-oriented production (Bertola & Teunissen, 2018).

Despite the significant progress and evolution that digital clothing and digital fashion have made (both in the gaming realm and production process), the virtual clothing industry did not experience a business boom until the COVID-19 pandemic. Like many other businesses, the fashion sector was forced to stay quiet for a year and a half, forcing designers and executives to change their paradigms and adapt to the new situation. Fashion shows went virtual, and creative designers launched everyday clothing in digital format and presented in online

marketplaces dedicated to digital fashion (Agne, 2021). Since then, fashion news agencies such as Vogue Business have taken a more serious attitude towards digital fashion, which has also been featured in fashion summits and accepted by designers who traditionally work with physical fashion (Särmäkari, 2021a).

Over the recent years, people have worn digital accessories through social media filters, and the gaming skins market—in which players of games like Fortnite buy custom outfits, or “skins,” for their avatars—is thought to be a multibillion-dollar industry. Moreover, Meta’s recent announcement about its plans for a metaverse is proof of merging the digital and the physical realms. Digital fashion is getting more and more real as designers are now making more reality-bending digital fashion items for individuals to wear as a means of self-expression and pushing creative limits.

2.3.1

— Digital fashion milestones

Based on in-depth research, I collected the most significant milestones that have occurred in the domain of Digital Fashion, which can assist in gaining a better understanding of the path that this phenomenon has undertaken so far. The milestones are as follows:

Final Fantasy

•1987

The first Final Fantasy game was created by Hironobu Sakaguchi and released in Japan by Square Enix in 1987. In the beginning, the game featured four nameless, pixelated light warriors wearing trite outfits with mediocre defense bonuses. But as the series evolved, Final Fantasy showed how it is connected to fashion by constantly reshaping the worlds in which the characters were performing, which compelled constant creativity in character development. Each of these worlds is distinctive with its own theme, and following those themes, each game's wardrobe seems to be a mini collection. Final Fantasy's characters were designed with careful attention to style, believing that clothing helps express a personality. "A lot of games rely on fantasy tropes and not fashion," says Mia Consalvo, a professor and research chair in game studies and design at Concordia University. "But Final Fantasy characters have always excelled at that. Not just high fantasy, but fashionable high

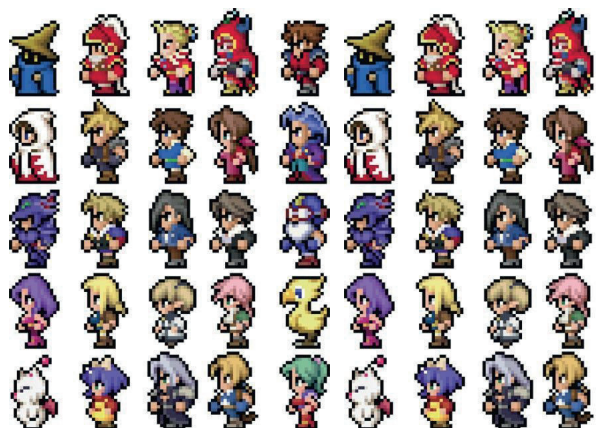


FIG. 50.
Final Fantasy I pixelated characters

FIG. 51. Final Fantasy XIII-2 characters wearing pieces from Prada's spring 2012 men's collection



fantasy" (Bhasin, 2016; Final Fantasy Wiki, n.d.-a).

•2012

In April 2012, Final Fantasy XIII-2 characters modeled a Prada collection at the behest of the Japanese men's fashion Arena Homme+. The "CGI shoot" appeared in an issue of Arena Homme+ magazine, focusing on "a world of direction and escapism" and as part of the 25th-anniversary celebration of the Final Fantasy series, featuring characters wearing looks from Prada's spring 2012 men's collection (Bhasin, 2016; Final Fantasy Wiki, n.d.-b).

•2016

In 2016, Square Enix and Louis Vuitton collaborated to bring Final Fantasy VIII's protagonist, known as Lightning, to the modeling world. This was the first time when mainstream gaming and luxury fashion collided officially. She shows off some of Louis Vuitton's Spring/Summer 2016 collection items products, performing her iconic maneuvers from the game in the campaign videos and appearing as the face of the campaign.

FIG. 52. Lightning modeling for Square Enix and Louis Vuitton collaboration wearing items from Luis Vuitton's Spring/Summer 2016 collection



Square Enix has gone so far as to have the heroic figure "speak" with the media. In an interview published by The Telegraph newspaper, she talked about her place in fashion and her love for Louis Vuitton creative director Nicolas Ghesquière's new collection (Bhasin, 2016; Final Fantasy Wiki, n.d.-b). Louis Vuitton's science fiction enthusiast Creative Director has commented that "It's clear that the virtual aesthetic of video games is predominant in this collection. [...] Lightning is the perfect avatar for a global, heroic woman and for a world where social networks and communications are now seamlessly woven into our life. [...] Lightning heralds a new era of expression" (Louis Vuitton, 2016).

The Sims

•2000

According to Wirman (Wirman, 2008), only two computer games have had a ground-breaking role in attracting and engaging girls and women in computer games: Barbie Fashion Designer, released in 1996 by Mattel Media, and The Sims published by Electronic Arts in 2000. The Sims is a life simulation game that allows players to create and rule their own mini world by making a character and deciding what they do, such as making outfits and changing the appearance of game characters.

•2007

H&M has been a part of the Sims universe since 2007 in The Sims 2. The H&M stuff pack for Sims offered a wide range of clothes and accessories for men and women, inspired by real-life H&M designs, and also you could entirely build up your own H&M store (Tuazon, 2021). H&M even held a Sims 2-based fashion design contest judged online, with the winner being invited to build a physical version of his creation for H&M stores (Makryniotis, 2018).

•2012

In The Sims 3, the Italian retail clothing company Diesel, released its stuff pack, including fashion items and furniture, to complete the Sims house and also add a stylish edge to the Sim's go-to outfit. The campaign's tagline was "For Successful Living" which Sims deserve, as the brand states (Tuazon, 2021).



FIG. 53. The Sims 1, game profile creation interface



FIG. 54. The Sims 2: H&M Fashion Stuff and virtual runway



FIG. 55. The Sims 3: Diesel Stuff Pack, "For Successful Living"

FIG. 56. The Sims 4 x Moschino. Simmer dressed up in the Moschino Freezer Bunny Hoodie, and Moschino IRL ready-to-wear collection

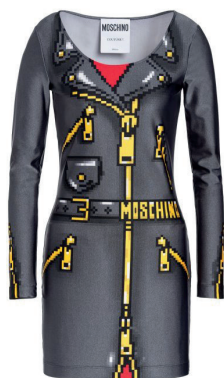


FIG. 57. The Sims 4: Gucci Off the Grid. The upper image is the in-game simulation of the garments and space, the bottom image is the IRL editorial campaign



•2019

In 2019, Moschino launched a ready-to-wear collection inspired by The Sims that could also be purchased and worn in the game. Jeremy Scott, the creative director of this Italian luxury fashion house, has reached peak millennial courtesy of this collection featuring Moschino's signature motifs and aesthetic and iconic motifs from The Sims franchise. Aside from the IRL collection, the Simmer was able to dress up their Sims in the Moschino Freezer Bunny Hoodie. Besides, this collaboration also enables Sims to become a freelance fashion photographer and work on campaigns and magazine covers in the game (Electronic Arts, 2019).

•2020

In tandem with the Gucci Equilibrium initiative to generate positive change for people and the planet, Gucci and two content creators from The Sims 4 community reveal the first digital recreation of the former's sustainable fashion line, #GucciOffTheGrid. True to their original designs, hats, and shoes will be available for The Sims characters to wear, while the backpacks and other accessories can be used as decorations for players to fill their builds with. In real life, the Gucci Off The Grid collection is sustainably made with regenerated, recycled, organic, and sustainably sourced materials, and in the game, when players use the Gucci Off The Grid pieces, they obtain a green eco-footprint and an environment score of 10 (Gucci, n.d.).

Second Life

•2003

Second Life (SL), launched in 2003 by Linden Lab, is one of the most famous user-created and social virtual worlds, counting more than 16 Million registered users in September 2009. The virtual land consists of several regions, and users can control characters living in these regions called avatars – the digital representation of a user living in a parallel world and reflects the users' activities and interests. Some use it to learn, educate, and share information, while others use it for fun or escapism from real life. It is a place where people with common interests can meet and form online virtual communities and interact with their avatars (Huvila et al., 2010; Varvello et al., 2009).

The design and acquisition of virtual fashion are among Second Life's most popular activities. All clothing in Second Life is player-created. Many SL designers sell their fashions for virtual currency and promote their designs on blogs, online advertising, and online publications (Second Style, Linden Lifestyles, Pixel Pinup) that mimic established fashion magazines like Vogue. It has gone so far as to enable players to award other avatars points for "appearance" for a small fee in virtual currency, so players value their appearance scores highly to obtain these valuable scores. A refusal to update the avatar's appearance carries a social stigma that shows the existence and importance of a social norm in SL (Fron et al., 2007; Makryniotis, 2018). As (Särmäkari, 2021b) states, Virtual reality spaces such as Second Life have become marketplaces for amateur designs and brand stores of digital-



FIG. 58. Giorgio Armani's virtual avatar in Armani store in Second Life having live interview with Style.com's Candy Pratts Price



FIG. 59. Giorgio Armani store in Second Life

FIG. 60.

Clement Balavoine has created a process called Neuro that lets clothes be completely digitally tailored



FIG. 61.

The method relies on a combination of several pieces of 3D software, used together to create garments that are fitted on virtual models



only clothing back then. Many fashion brands have experimented digital fashion on Second Life. Giorgio Armani once said how he is inspired by pushing boundaries and that Second Life is one of those opportunities to experiment and learn from. Armani opened up shop his virtual shop in Second Life and his virtual avatar had a live interview with Style.com's Candy Pratts Price. (Quack, 2021; Trend Hunter, 2007).

Neuro Studio

•2014

A creative agency based in New York utilizing advanced technologies to improve different phases of fashion such as Design, Promoting, Production, and Selling and make the Fashion Industry more sustainable and efficient. According to (Särmäkari, 2021b), Neuro is one of the earliest commercial examples of digital fashion. In 2013, Clement Balavoine - founder of Neuro Studio, decided to use his familiarity with the film and video game industries and taking inspiration from technologies used by concept artists and engineers to develop an innovative digital methodology that permits even to "[...] scan the customer and design the garment directly onto the digital avatar of the customer" says Balavoine in an interview with Dezeen (Tucker, 2016). In 2016, Neuro unveiled the world's first-ever digital collection, which revealed the studio's avant-garde methodology alongside a virtual campaign, runway show, and lookbook (Neuro, n.d.).

Atacac

•2016

Atacac is a small Swedish fashion company founded in 2016 by fashion designer-researcher Rickard Lindqvist and digital creative Jimmy Herdberg. As (Deacon, 2021) indicates, Atacac is a purveyor of digital and made-to-order genderless creations and has opened up the virtual doors to a new digital storefront designed to create an online experience that is better than a regular store as well as solve common e-commerce issues such as high return rates. Atacac created a reverse process where sales happen predominantly before the production, and the garments are presented virtually before sampling and then created in the brand's micro-factory in Gothenburg at a slow pace. Atacac places the fleshy body at the center of their design process. The company's website is designed to ease the virtual fitting process and help customers have a more efficient experience in their virtual fitting room rather than IRL fitting rooms. The process is very smooth: first, the user chooses the avatar that best matches its identity – girl, boy, hag, hubby, gal, tomboy, man, or woman – and enters its height and weight. Adjusting the levers will allow see how the garment might fit on the consumer's body in real life (Deacon, 2021; Särmäkari, 2021b).

What really attracted my attention about this company was its "transparency initiative" called Sharewear. In tandem with this initiative, the company shares garment 3D files and patterns



FIG. 62. Atacac's web shop allows you to see all its garments at once on your specific body type



FIG. 63. Bodies of all shapes and sizes modeling Atacac's genderless, organic linen koftan



FIG. 64. Atacac sharewear no.13. Atacac shares the pattern and 3D-model of some pieces as part of their transparency initiatives

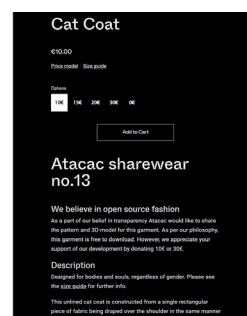
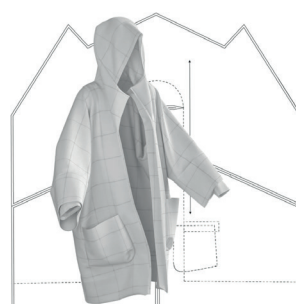


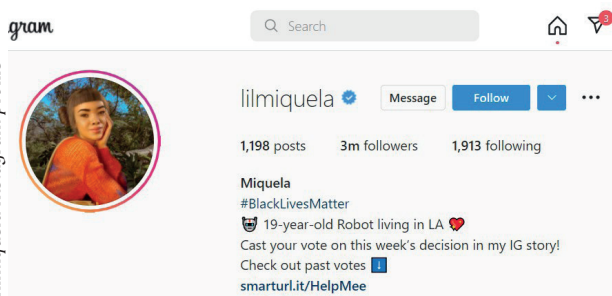
FIG. 65.
Miquela Sousa, better known by her
Instagram handle @lilmiquela



FIG. 66.
Calvin Klein campaign, 19-year-old
robot Lil Miquela blurs the lines of
truth and fiction with Bella Hadid



FIG. 67.
Lilmiquela Instagram profile



online for free, an interesting step that Atacac has taken towards transparency, decentralizing fashion, and building up a community. Atacac says, "Our genderless garments reflect the increasing recognition of every individual's fluidity. Removing the social norms surrounding garments gives us all a little more freedom to be ourselves"(Atacac, n.d.).

Lilmiquela

•2016

Miquela Sousa, better known by her Instagram handle @lilmiquela, is the first CGI Fashion influencer, created by Trevor McFedries & Sara Decou in 2016 (Dissrup, 2022).

Lil Miquela has amassed millions of followers on Instagram – 3 Million followers as of May 2020— since her first 'selfie' was posted in 2016. Chanel, Proenza Schouler, Supreme, Vetements and Vans. She shares pictures of herself attending events like ComplexCon with fellow influencers and celebrity friends, along with memes and inspirational quotes. She even uses her platform to support social causes, including Black Lives Matter and transgender rights (BOF, 2018).

Fortnite

•2017

Fortnite is an online video game developed by Epic Games and released in 2017, attempting to create “the entertainment experience of the future,” according to Donald Mustard, the chief creative officer at Epic Games. Describing Fortnite, Mustard said, “It’s going to be a new medium, where it’s this blended entertainment experience that has interactive elements” (Wunderman Thompson Intelligence, 2021). As one of the most popular video games currently in existence, Fortnite has fueled its multi-billion-dollar revenue by in-game purchases that players make to differentiate themselves from one another and to express status within their community. At the end of 2018, New York Magazine reported that Fortnite-videogame – free-of-charge to play – made more profit with its virtual “fashion industry” than Amazon (Särmäkari, 2021a). Fashion has a long history in the Fortnite community, and the brand has made several collaborations with brands such as Puma, Nike, and Havaianas.

Players can purchase character accessories and costumes known as skins, which depict a form of virtual-only fashion. Each item has tiers that players can go through as they collect experience points. This distinguishes the skins from others and gives players respect within their community. Fortnite represents more of a global lifestyle than merely a virtual game. It is populated by



FIG. 68.
Fortnite skins, online video game
developed by Epic Games



FIG. 69.
Four fan favorite characters dressed
in Balenciaga and some Balenciaga
signatures with a Fortnite twist

FIG. 71.
Carlings's digital fashion campaign
with CGI Virtual Model Peri



FIG. 70.
Puffer coat from the 19-piece
digital-only Neo-Ex collection



celebrities, extremely competitive, and highly social. While their cultural impact is here to stay, Fortnite's 'skins' represent an intermediary step in the developments around virtualization and ownership (Hernandez et al., 2020).

•2021

In September 2021, Fortnite teamed up with Balenciaga, a high-end luxury fashion house, to bring digital fashion into the Fortnite realm. Inspired by authentic archival looks from luxury fashion house Balenciaga, this collaboration revealed a digital capsule collection during Milan fashion week, including apparel, accessories, spray sets, and even featured hubs and campaigns (Fortnite, 2021).

Carlings

•2018

The Scandinavian retail brand and market leader in denim released the first digital-only collection, "Neo-Ex," aimed to raise awareness of the environmental damage caused by the fashion industry while yet allowing clients to show off realistic new items and experience new ways of self-expression. Carlings pioneered the selling of virtual 3D fashion collections and products through this genderless and size-less 19-piece collection—each item had a price between €10 to €30, with all the proceeds of each sale going to benefit the WaterAid Foundation.

While skins have been around for decades in the gaming world, allowing players to customize their avatar's style in a digital realm, this is the first time they have been sold as a clothing alternative for actual consumers. "We have bought 'Skins'

at Fortnite for a while now [...] The future has arrived, and we must adapt and remain relevant to our clients as well as the next generation." Says Carlings' Marketing Manager referencing the popular video game (Moen, 2018).

Carlings CEO, Ronny Mikalsen, explained that, through the collection, the label hopes "to challenge ourselves and the whole industry to take the next step to explore how fashion can exist in the not-so-distant future." Inspired by their streetwear heritage and gaming, the collection includes a variety of silhouettes, from track pants to puffer coats in neon colors and bold graphic prints. Users would send Carlings a photo, and their staff of 3D designers would edit and fit the purchased digital clothing onto the customer in the photo, making it appear that the user is wearing the pieces In Real Life (IRL). They also teamed up with CGI virtual influencer Perl to promote the collection on Instagram, and the consumers were encouraged to share the image on their social media channels with the hashtag #adDRESSTHEFUTURE to build up an entirely digital campaign (Groves, 2018; Quack, 2021; Stanley, 2018).

•2019

Later in 2019, the retailer introduced the first AR graphic t-shirt called the "Last Statement T-Shirt." The concept was created in collaboration with Virtue (an international creative agency that emerged from digital media company Vice) using Facebook's open-source Spark AR software to enable interactive AR experiences on Instagram. As explained by Ronny Mikalsen, "A statement T-Shirt is a way for the voiceless to get their message out there and today, social media allows people to amplify that a thousand times." (Sabina, 2020) By scanning The Last Statement T-shirt with Instagram filters and

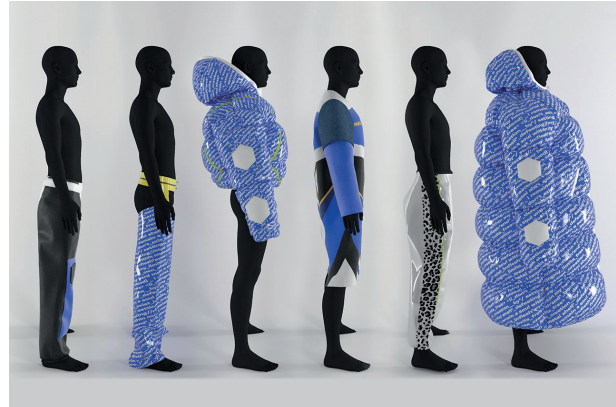


FIG. 72.
The 19-piece digital-only Neo-Ex collection



FIG. 73.
Carlings' augmented-reality The Last Statement T-shirt

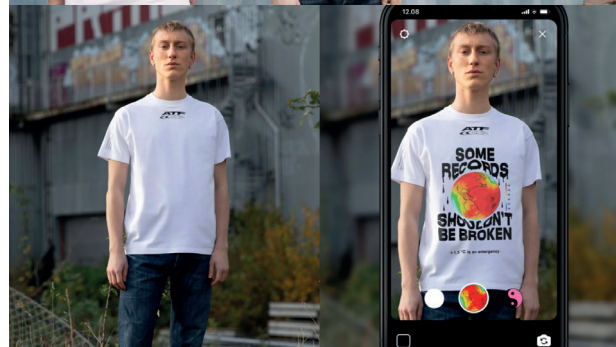


FIG. 74.
Digital fashion by The Fabricant



FIG. 75.
PUMA presents a collection in collaboration with the London Central Saint Martins



sharing it on social media, users can change the look of the T-shirt on their phones and add new designs choosing from a selection of animated designs that are constantly updated to reflect daily news and issues. The implication was that the user would buy one shirt for one price and spread numerous messages and statements on Instagram— without ever having to buy another physical T-shirt (Quack, 2021).

The Fabricant

•2018

Known as the first digital-only fashion house, The Fabricant was founded in 2018 by Kerry Murphy, an expert in film production, visual effects, and advertising; and co-founded by Amber Jae Sloaten, a trained fashion designer and the creative director of the house, and Andrea Hoppenbrouwer, with solid corporate experience who is responsible for the commercial direction. According to their website, The Fabricant is positioned at the intersection between fashion and technology, being the first “Digital Fashion House” that makes digital-only clothing, “wastes nothing but data and exploits nothing but imagination” (Särmäkari, 2021a; The Fabricant, n.d.).

As seen in this study, before The Fabricant, digital clothing was limited to gaming spaces and the production process of physical clothing. But what The Fabricant's game-savvies founders initiated was going beyond “[...] physical limitations like gravity and material durability,” The Fabricant's Kerry Murphy tells (Wunderman Thompson Intelligence, 2021)—unlocking a new dimension for designers and creatives. They design surreal bodies, imaginative clothes, dystopian environments, and fashion films. “[...] for me, digital fashion is full self-expression, without the

limits of size, body type, gravity, whatever”, says Amber(Pinent, 2019).

As stated by The Fabricant, in the digital world, “people are not passive consumers, but creative agents crafting their self-expression and curating their virtual identity.” The Fabricant is laying the groundwork for a next-gen virtual world full of inspiration, individuality, and imagination (Wunderman Thompson Intelligence, 2021). The Fabricant believes not only in social and environmental sustainability but also in the sustainability of work, opposing the fashion's stressful and withering culture, providing decorated studios and pleasant working environments, and encouraging open communication. They also believe in an open-source, decentralized, transparent fashion and promote this notion through community creation and sharing their designs for modification or just for copying online free of charge (Särmäkari & Vänskä, 2020).

•2019

In this year, the Fabricant digital fashion house and the area of “digital fashion” came under the spotlight, covered mainly by fashion and mainstream media from BBC to Cosmopolitan (Särmäkari, 2021a), bringing the phenomenon of digital fashion into the mainstream (it was then relatively niche, an experimentation ground for curiosity creatives and designers). In collaboration with blockchain company Dapper Labs, the Dutch digital-only fashion house auctioned their digital-only dress (the Iridescence) in cryptocurrency worth 9500 dollars (Dissrup, 2022; The Fabricant, n.d.). This collaboration aimed to promote the possibilities of blockchain and the digital fashion world. Since then— and of course, due to COVID-19- restrictions that forced more and more fashion companies to adapt to this new world and go virtual— digital fashion has been



FIG. 76.
Digital fashion by The Fabricant



FIG. 77.
Iridescence Digi-Couture Dress sold for \$9500 in May 2019

FIG. 78.
DressX



FIG. 79.
DressX



regarded in a more serious tone by fashion media and included in fashion summits and embraced by physical fashion (Särmäkari, 2021a).

DressX

•2020

DRESSX is the most prominent digital fashion store that carries 3D clothing collections from the most well-known contemporary brands born in the physical and digital spaces. This digital marketplace, founded by Daria Shapovalova and Natalia Modenova in 2020 amid the pandemic, strongly believes that the amount of clothing produced today is way greater than humanity needs (Chaplin, 2021; DressX, n.d.). DressX's goal is to democratize fashion for the end-user, allowing them to digitally dress in the clothing they want and get instant verification from their social media online community. Although digital clothing was initially popular among online influencers, DressX sets no limits on its audience; they state that "Our product is used by everyone who has at least one profile on social media, platform agnostic. [...] among people who use Instagram as the platform for work and to express themselves, [...] also among active travelers and environmental advocates who care about the future of our planet. [...]" (Chaplin, 2021).

"Don't shop less, shop digital fashion" is the company's motto addressing specifically "[...] those who buy clothes just to take a photo or for a special occasion and encourage them to move from fast fashion to more conscious consumption: the digital fast fashion" said DressX founders in an interview with Vogue Italy (Bellini, 2020). Many see DressX digital marketplace as an opportunity to be the Farfetch or Net-a-Porter of digital fashion, says Dress-X co-founder Natalia Modenova, based in Los Angeles (McDowell, 2021).

2.4

WILL DIGITAL FASHION

ever become commonplace?

Back to the questions raised in chapter 2.2, this chapter is dedicated to the reasons for the rise of digital fashion and how it is gradually becoming commonplace. Understanding the answers to the question helps us better discuss how digital fashion can help the industry progress in DEI culture and recognize the limits in this context.

The questions are: how digital fashion is being accepted and adopted by the mainstream? Why would someone need and spend for a digital garment while cannot actually wear it? What are the actual reasons proponents are investing in the digital fashion industry?

Based on my research, I have classified the factors that are pushing the phenomenon of digital fashion into the mainstream as follows:

2.4.1

— Tech-celeration

Consumers' reliance on tech is constantly growing. We are rapidly heading towards a future dominated by IT and communications, a process that COVID-19 has accelerated. The millennial and Gen Z generations are savvy digital natives who are more demanding and in control than any previous customer cohort. More than three-quarters (76%) of global consumers say their everyday lives and activities depend on technology, rising to 79% of gen Z (ages 16-26) and 80% of millennials (ages 27-41) (Wunderman Thompson Intelligence, 2021). It is worth mentioning that this reliance pervades every facet of daily life: 64% of global consumers say technology plays a role in their social lives, 61% say it plays a role in their livelihood, 56% say it plays a role in their creativity, 52% say it plays a role in their pleasure, and 50% say it plays a role in their wellness (Wunderman Thompson Intelligence, 2021). The Economist (Economist, 2020) calls this movement toward digitizing government, businesses, and societies "Tech-celeration."

To address this need, businesses are rushing to build the technology that will enable 360-degree digital experiences. Social media giants and huge tech businesses have been investing money and manpower into VR and AR in anticipation of immersive spaces powered by these technologies. In August 2021, TikTok announced building its

own AR development platform, called TikTok Effect Studio. A March 2021 report revealed that Facebook now has 10,000 people—almost a fifth of all Facebook employees—working on AR and VR under the Reality Labs division. The fashion industry is no exception to this transition. Artificial Intelligence (AI) has begun to re-shape the fashion life of many people with a range of application improvements from e-retail, personal stylists to fashion design processes; therefore, it requires fashion designers to quickly update advanced technologies to meet the constantly changing requirements of the fashion industry (Tran Minh & Ngo Ngan, 2021). AI technology improves customer access to the brand and is a sustainable direction for the new era of the fashion industry.



2.4.2

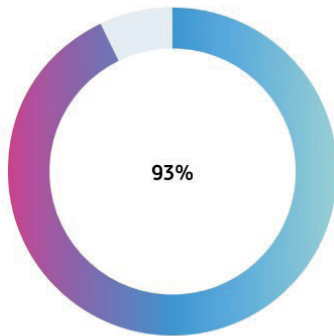
— Living in Metaverse

The metaverse, a term first coined in Neal Stephenson's 1992 sci-fi novel *Snow Crash*, is a blending of digital and physical existence (Wunderman Thompson Intelligence, 2021). That definition is taking form right in front of our eyes right now. Some refer to it as a new internet, while others refer to it as a democratized virtual society. Still, others refer to it as the fusion of virtual and physical realities, persistent virtual environments, or a digital twin of our real world. An increasing number of indicators refer to the metaverse's emergence in recent years, including the rapid advancement of VR and AR technologies, the proliferation of gaming platforms serving as social and cultural hubs, and the rush among companies to secure a place on metaverse or even claim the metaverse as their own. From Meta (former Facebook) to Microsoft announcing their adoption of the metaverse, from law firm Reed Smith releasing a legal guide to the metaverse to Metaverse REIT real estate investment trust for virtual assets, and from Nvidia Omniverse platform "metaverse for engineers" to many other gaming companies are anticipating its growing value and carving out space for the metaverse on their platforms.

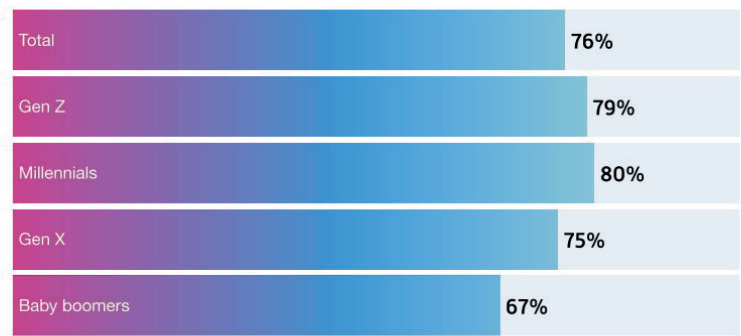


FIG. 80.
Photo Credit: Westend61

Technology is our future



My everyday life and activities depend on technology



People depend on technology in every aspect of their lives

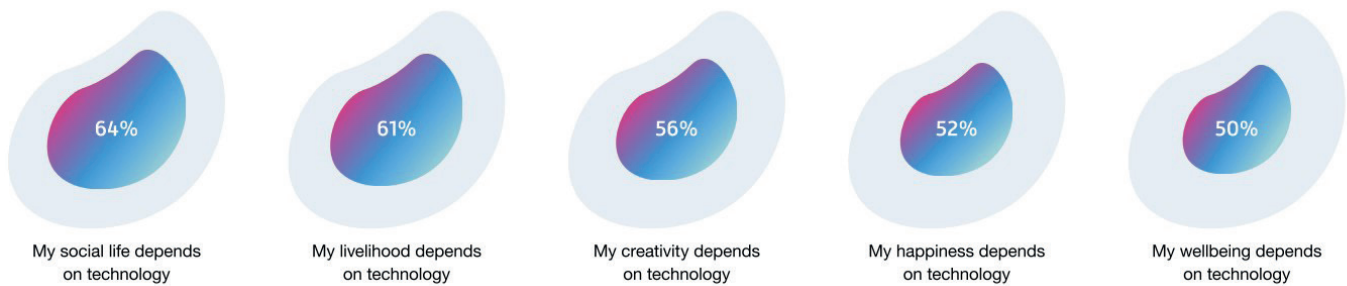


FIG. 81.
Survey findings from Wunderman Thompson Intelligence report: 3,011 participants across the United States, United Kingdom and China, fielding from July 9–July 27, 2021. Survey by Wunderman Thompson Data. Source: (Wunderman Thompson Intelligence, 2021)

Here I want to point out some critical aspects of the metaverse that may facilitate the course of digital fashion being commonplace:

1) Beyond gaming:

The entertainment industry (television, radio, theater, film, music, and literary publication) is already being reimagined through the use of gaming platforms and technology, and the lines between gaming and entertainment are blurring—projecting a \$300 billion market size by 2025 (Wunderman Thompson Intelligence, 2021). Traditional gaming platforms are transforming from singular game environments into social spaces and massive global venues. Video games have become a “highly social, highly organized, highly cooperative, collaborative and creative medium,” Keith Stuart, games editor at the Guardian, tells Wunderman Thompson Intelligence—transforming them into “games as a space rather than a specific game experience.” People are open to attending digital events such as digital concerts or digital stage performances. The gaming landscape is going to be more than a game; a new medium in which entertainment is blended with interactive elements to create a whole new set of experiences. In other words, a place merging social media, gameplay, and entertainment, offering a first glimpse into what the metaverse could become; ‘a new social space’ filled with virtual venues, as interpreted by many sector executives (Wunderman Thompson Intelligence, 2021).

2) Borderless virtual community:

Between the worlds of social media and gaming is an emerging middle ground: social virtual reality platforms, such as Decentraland and Sansar. What MMO games have in common with a coffee shop is their social aspect; they are places to meet people, communicate and socialize and allow the player to interact with the virtual community. Nearly two-thirds (61%) of UK adults played games with friends and family to stay in touch during the lockdown, according to a May 2021 survey from Xbox (Wunderman Thompson Intelligence, 2021). As stated by (Huvila et al., 2010), Second Life is an excellent example of these virtual communities. Some use it as a tool for learning things and exchanging ideas. Others use it as a kind of escapism or entertainment. Defying geographic restrictions, new communities connecting around shared interests and values are being created in the digital world. These user-created social spaces reflect the users’ activities and interests and enable the relationships between people and between avatars that represent them. Briefly, virtual worlds and communities foster the accumulation of social capital; the more the users engage in production, the more they have social capital (Huvila et al., 2010).

Another example is IMVU by Together Labs, a 3D avatar-based friendship discovery social network—a new kind of social network in the metaverse where people are actively working on building new and meaningful relationships.

According to Daren Tsui, CEO of Together Labs, “social platforms do not really fulfill our desire for friendship—they are more media than social network.” According to Tsui, IMVU is promoting “more authentic and immersive” experiences, establishing the platform as the next-generation social network (Wunderman Thompson Intelligence, 2021). On the other hand, activist groups are rising to support social issues and political campaigns. There are many social causes led by the IMVU community, including amplifying the voices of LGBTQ+ people, Black Lives Matter, and COVID-19 relief. A wider range of people is now stepping into the metaverse arena. People expect companies to take the initiative, too: 88% of global consumers say brands need to work just as hard to create inclusive spaces online as they do offline, and more than half (67%) believe that online/digital platforms are more inclusive than the physical/offline world.

3) *Extension of Self:*

At the center of the metaverse are the ‘Avatars’ that inhabit these immersive virtual environments. Avatars are not a new concept in the digital world; we are all acquainted with the personalized graphical illustration representing a user’s profile or an in-game character representing a player in video games. However, avatars are critical to the metaverse because they offer crucial interoperability across the metaverse’s many features and enable seamless connectivity between real and virtual worlds (not only games but music, theater, and many other applications in the metaverse). Individuals interact with the virtual world and sense the presence of others

through their avatars. It is possible to transmit real-world behaviors and experiences to avatars and develop a relationship with them. People direct and lead the avatars, which results in avatars behaving quite humanely (Huvila et al., 2010).

In the present era, our digital identity is nearly as important as our physical one. Games have evolved into places in which individuals define their identities. In the digital world, “people are not passive consumers, but creative agents crafting their self-expression and curating their virtual identity,” The Fabricant explains (Wunderman Thompson Intelligence, 2021). As stated by (Mjasnikova, 2021), When it comes to self-expression, the digital world offers new possibilities, where avatars serve as an “extension of self” and skins serve as a type of re-embodiment. MMO games and the metaverse environment enable players to create and modify their avatars, purchase one-of-a-kind products, personalize them, and stand out in their communities. This function not only provides a social element but also enables online self-expression and communication (Hernandez et al., 2020; Mjasnikova, 2021).

When users inhabit an avatar, they experience self-presence, which is the virtual environment’s influence on their perception of their body, i.e., their body schema or body image. This occurs as a result of a sign exchange. Class, gender, occupational role, and physical shape are all addressed within the embodiment. In the social world, clothing communicates critical aspects of identification that conclude in a person’s

individuality, and the same is true for gaming characters and virtual world avatars. Players utilize clothes in online environments for the same reasons they do in the real world: individuality and belonging. Dress acts as a sign of identity, and connection with or opposition to groups and trends are critical parts of identity (Makryniotis, 2018). The key point is that identification in the metaverse is permanent, portable, platform-agnostic, and interoperable, thus empowering users to maintain their personal reputation universally, thanks to Web 3.0 and blockchain technology (Hernandez et al., 2020).

4) The creativity catalyst

According to (Wunderman Thompson Intelligence, 2021), 91% of consumers around the globe believe that technology opens up a whole new world of creation. Digital engagement is moving from passive consumption to active creation—shifting creative power to the user. Especially Gen Z and growing generation are considered to adopt the virtual co-creation mindset (Särmäkari, 2021a). Snapchat believes that creativity is the driving force propelling the future of digital engagement. As a user, “you’re not creating content that people consume, you’re creating content that people then create with, that’s really powerful. You’re putting out a piece of content that everyone personalizes and has a personal experience with” (Wunderman Thompson Intelligence, 2021).

Digital tools have activated an entirely new world of creativity—one where creations can transcend physical limitations (Wunderman Thompson Intelligence, 2021). The Fabricant’s Kerry Murphy tells Wunderman Thompson Intelligence, “when designing virtual clothing, we’re not bound by physical limitations like gravity and material durability,”—unlocking a new dimension for

designers and creatives. “The digital world gives a space for a new wave of creativity, using materials beyond fabric, like water, smoke, or light,” cofounder Amber Slooten says. Today, we are witnessing 3D software that aims to attract a large number of young creatives posting instructions on YouTube and encouraging everyone to share knowledge about digital making. As a result, people who have not been taught in such environments have the opportunity to experiment as designers and contribute to virtual and digital design (Särmäkari, 2021a). This momentum is spurred on by what is referred to as the snowball effect of digital creativity.

5) Interoperable

The most challenging issue to overcome in creating a true metaverse is universal cross-platform interoperability. In the real world, as our bodies move from one place to another, our identity also moves with us. Even our personal belongings and valuables may be moved from one area to another with little to no inconvenience. As a result, we and our belongings are stable throughout transit since the actual world retains a sense of continuity. Likewise, the metaverse’s integration of numerous virtual worlds aspires to provide an environment for social and cultural interaction comparable to that found in the real world. This amalgamation would make all virtual worlds into a bigger entity or existence, regardless of its size or canvas. Once this is achieved, digital assets collected on one platform will be available to the collector on all platforms, thus allowing users to use them across the entire metaverse (Disrup, 2022).

2.4.3

— Web 3.0

The term web3 refers to the putative next generation of the web's technical, legal, and payments infrastructure – including blockchain, smart contracts, and cryptocurrencies (Gilbert, 2022). For its advocates, the peer-to-peer character of web3 means it represents a more equitable vision for the web than its current iteration, Web 2.0, which is dominated by powerful intermediary platforms (Facebook, Amazon, Apple, Google, and other big tech companies) (Gilbert, 2022). Web 3.0 is essentially an evolved form of the internet based on blockchain technology.

This version of the internet provides consumers greater control over the network by letting them decide about it. Web 3.0 may be on the horizon if the expansion of the NFT and cryptocurrency markets is any signal. Since investments in cryptocurrencies and NFTs eventually contribute to the growth and development of blockchain technology, they also contribute to the development of Web 3.0 (Pandey, 2022). Most existing web3 projects fit into one of three categories: Decentralised Finance (P2P, blockchain-based financial services), Digital Services (decentralized internet service provision, cloud storage, web infrastructure, data analytics, and identity management), Collectibles – digital artwork, sports memorabilia, and virtual goods (NFTs) (Gilbert, 2022). The most significant aspects of Web 3.0 are:

1) Decentralized

Rather than relying on a single centralized server, Web 3.0 is built on top of blockchain-powered crypto networks that enable data to be stored across distributed devices worldwide. Ultimately, these distributed devices serve as the framework of the blockchain, communicating with each other to enable the storage, spread, and preservation of data without the need for a trusted third party. There are currently massive dependencies across the internet on a small number of highly centralized applications such as Google and Facebook identity systems (Ginsburg, 2022). Thanks to these nodes, the blockchain provides an immutable record — it is a decentralized proof of ownership, unlike anything we have seen before, where middlemen are removed, the rules are unbreakable, and data is fully encrypted.

2) Permissionless and Trustless

In addition to decentralization, Web 3.0 will also be trustless, meaning the network will allow participants to interact directly without going through a trusted intermediary, and permissionless, meaning that anyone can participate without authorization from a governing body. As a result, Web 3.0 applications will run on blockchains or decentralized P2P networks, or a combination thereof—such decentralized apps are referred to as dApps. In other words, the power shifts back to individual users, creators, and application developers. This will lead to an explosion of new creativity in the form of applications, algorithms,

artwork, music, AI/robots, virtual worlds, and metaverse experiences, and more of the rewards in the hands of the owners and creators (Radoff, 2021).

3) Self-sovereign

Web 3.0 will bring us a fairer internet by enabling the individual to be a sovereign. True sovereignty implies owning and being able to control who profits from one's time and information. Web 3.0's decentralized blockchain protocol will enable individuals to connect to an internet where they can own and be properly compensated for their time and data, eclipsing an exploitative and unjust web, where giant, centralized repositories are the only ones that own and profit from it (Silver, 2020). Instead of having a company own your identity and then granting you access to other applications—you will own your identity and choose which applications to interact with. This is accomplished by using a digital wallet. Your wallet becomes your identity, which can then allow you to use various decentralized applications on the internet that need to interact with your currencies and property. This includes decentralized finance applications and metaverse experiences that will draw upon interoperable avatars, items for self-expression, game items, etc. (Radoff, 2021).

4) Open-source

The open-source model takes the web3 vision a step further. The idea is that decentralized applications are developed using open-source software and protocols. Distributed databases and public-key cryptography—where users

self-custody their private keys—confer control, ownership, and, ultimately, responsibility over one's digital assets.

5) Identity

Web 3.0 opens up so many possibilities for identity, especially when compared with Web2 platforms like Instagram and Facebook. Whereas these platforms are distinguished by photos and text, Web3 allows for a much broader definition of the concept of digital identity. The metaverse offers a more self-designed concept of identity – one that's more authentic and creative, less status-based, and increasingly community-oriented (Harris, 2022). With such a decentralized identity – a readable history unique to each person – one's crypto wallet would function as a sort of profile. If decentralized identity were widely adopted, people would be able to carry their full selves with them as they traverse the metaverse, resulting from the interoperability in Web 3.0 and metaverse.

6) New virtual possessions and NFTs

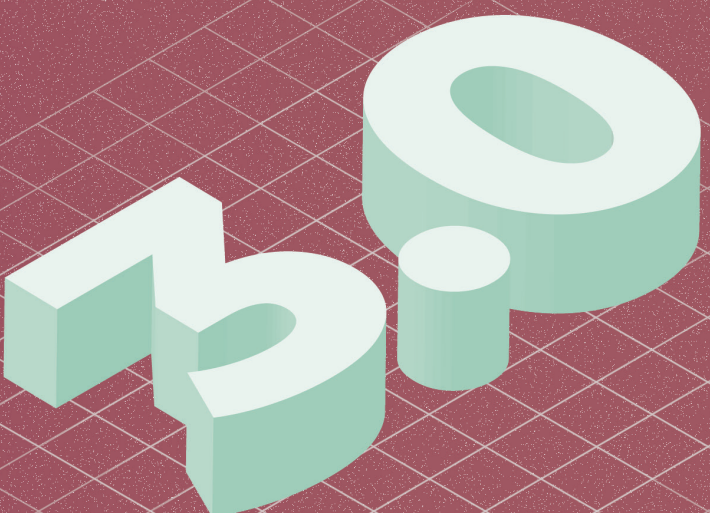
With the advent of the internet, people have increasingly acquired virtual possessions, including both possessions that have lost their material integrity (books, photos, music, movies) as well as things that have never had material form (e.g., email archives, social networking profiles, applications, screenshots, etc.). Now it is shifting again; non-fungible tokens enable one to transform digital works of art or other collectibles into one-of-a-kind, verifiable assets that are easy

to trade on the blockchain. It is not necessarily having a digital version of a physical good, it is a combination of these physical goods and these experiences put together into this virtual realm. NFTs can exist in many different types, such as collectible items/trading cards, artwork, event tickets, music and media, gaming, big sports moments, digital Fashion, real-world assets, memes, and domain names. It is no surprise that in a digital world that encourages socialization and self-expression, as explained before, NFTs in the form of clothing and avatar customization have taken hold.

NFTs have played a key role in building mainstream consumer awareness of Web 3.0. Moreover, the first step towards a true metaverse was taken with the development of the NFT, which allows creators to register digital collectibles in a cross-platform format on the blockchain (P. Adams, 2021; Gilbert, 2022). NFTs also give users actual and transferrable ownership of digital items (Dissrup, 2022). Like cryptocurrencies, NFTs are held in wallets. Technically, an NFT is not the digital file itself but a database entry on the blockchain that attributes ownership to a particular wallet (Gilbert, 2022). Gaming skins and NFTs have put a new lens on digital ownership, and brands are seizing the opportunities.

DEI IN THE
DIGITAL FASHION

30

A large, 3D teal number '30' is positioned on a light-colored grid. The number is rendered with a slight shadow, giving it a three-dimensional appearance. The grid consists of a series of thin, light-colored lines forming a diamond-shaped pattern.



3.1

CASE STUDIES

The purpose of this multiple-case study is to identify the nature of this contemporary phenomenon by analyzing the most prominent existing examples, while also decoding the spirit of inclusion, diversity celebration, and equity linked with each case. Eight cases were thoroughly examined: IoDF, Daz 3D, GCDS, DRESSX, The Fabricant, Digi-Gxl, The Diigitals & HUM.AI.N (as a single case due to their highly similar focus area), and Digitalax.

All eight cases were carefully selected by the intention of covering the whole digital fashion ecosystem and focusing on the most leading and pioneering companies in this evolving industry. All these cases are contributing in their own way to adapt digital fashion for the sake of leaving a more equitable, inclusive, democratized, decentralized, and open fashion to enable everyone enjoy the self-expression momentum.

According to many literatures (Fron et al., 2007; IoDF, 2021; Wirman, 2008), the gaming industry as the precedent of digital fashion has experienced a lack of diversity historically (mainly in avatars and skins) that has negatively impacted the entire gaming community. On the other hand, we thoroughly studied the lack of DEI in IRL fashion system and the need for it in the chapter 1.4. These cases clearly show how the frustration of gaming industry and IRL fashion industry is resulting in a more equitable, inclusive and truly diverse fashion world here stakeholders are genuinely promoting personal and professional accountability and opening up countless opportunities for designers through digital fashion ecosystem.

FIG. 82.
Placebo, Meta-Genesis Collection

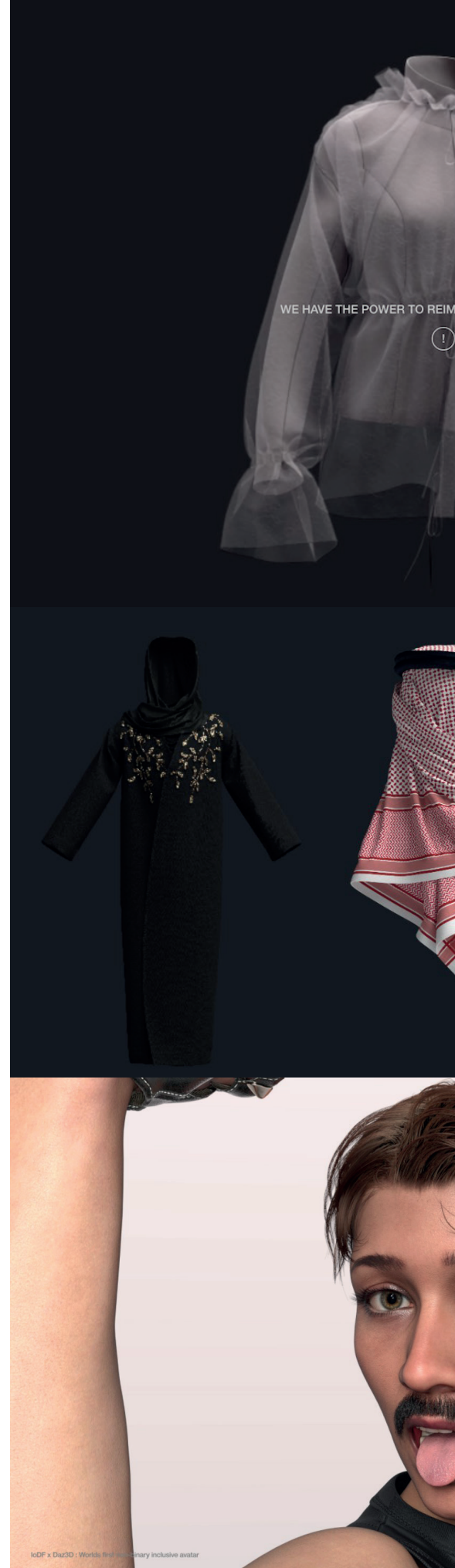


3.1.1

— loDF

The Institute of Digital Fashion (loDF) is a pioneering and innovative institute providing world-class immersive digital solutions, strategies, and innovations in the metaverse, with the goal of promoting a more inclusive, sustainable, and diverse IRL x URL reality. loDF was launched in 2020 amidst and in response to the accelerated digitisation of fashion during the pandemic by Catty Taylor and Leanne-Elliott Young. This dynamic duo committed to establishing an institute capable of dismantling archaic fashion structures and reshaping the way the system thinks, produces, creates, broadcasts, educates, and demands. loDF is using technology as a democratic tool to change the system, raising concerns about patriarchal structures in tech and fashion, a lack of diversity, innovation failures, insipid activations in the fashion-tech space, inaccessibility of fashion weeks, questionable sustainable practices, and the need to contextualise digital craft and artisanship.

The Institute of Digital Fashion (loDF) has collaborated with many industry proponents such as The British Fashion Council, NIKE, Balenciaga and the V&A in order to develop a more inclusive digitisation of fashion. Among the steps taken so far by the institute are the following:





IMAGINE A BROKEN SYSTEM

FIG. 83.
Source: loDF website



FIG. 84.
Source: loDF diversity report



FIG. 85.
loDF x Daz 3D
Source: loDF diversity report,
Inclusive avatar

- London Fashion Week became wearable; a digital garment try on which reached 2 million wears in 2 days, a world's first for the fashion week calendar.
- offering desk spaces at loDF's London HQ to support and mentor BAME, LGBTQIA+ individuals.
- Collaborating with Machine-A through Covid-19 lockdowns to launch an exclusive IRL x URL campaign for London Fashion Week, allowing visitors to experience collections within a virtual reality store, showcasing the AW21 collections and BTS in the studio with designers such as A-Cold-Wall* and Richard Quinn, all within the hand held mobile devices and live at LFW.
- Launched the new media trend of IRL X URL advertisements to continue their work of further democratising the landscape; each of these experiences were launched via traditional OOH media/campaign billboards.
- Partnered with Daz 3D, a leader in 3D digital art to release the world's first non-binary and photorealistic digital double, Catty 8.1, for Pride in 2021. This release was developed by a largely queer team for a queer audience and reflects loDF's work with Daz 3D, shifting characterization into representation. To continue this work loDF developed a board for Daz3d that works with the individuals from the cultural backgrounds that are being 'represented to be a voice within the creation



of the assets, this is an integral positioning piece.

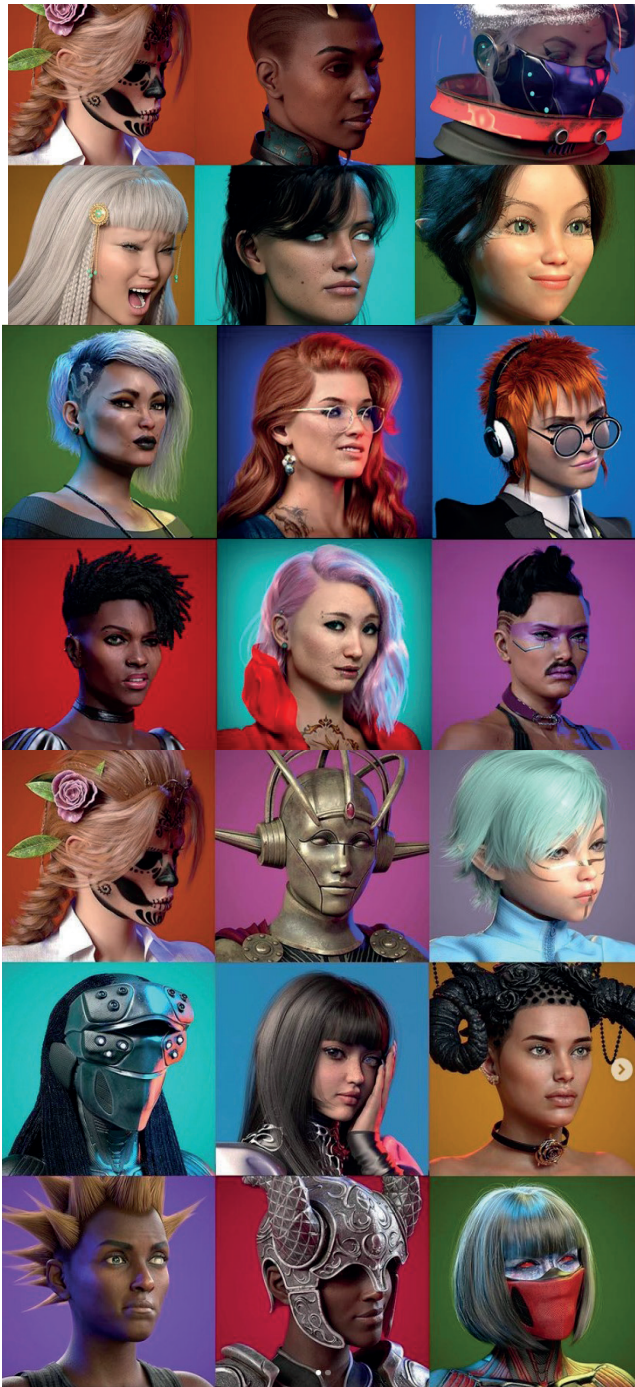
- Collaborating with Circular Fashion Summit, IoDF launched avatars and a digital-only inclusive collection at the CFS 2021 VR metaverse SPIN by Lablaco and through the Oculus store during the summit. It will include inclusive non-binary avatars that amplify and uplift BIPOC and queer narratives, as well as those with disabilities, which the IoDF states are “currently missing from the VR space and digital platforms”. The collection will carry a range of gender-fluid and diverse digital garments including sheila, a traditional headpiece worn by Muslim women, which can be used to dress your avatar (Wightman-Stone, 2021).

“My Self, My Avatar, My Identity: Diversity and Inclusivity within Virtual Worlds” is the report by the Institute of Digital Fashion based on the surveys relating to representation, customisation and modification within virtual worlds allowing digital consumers to express themselves

honestly about their racial, gender, and identity experiences online .

The report demonstrates the exclusive nature of digital avatars in their current state, implying that without an inclusive, customisable design process, gamification of fashion could exclude millions of users and potential consumers. While prominent members of the gaming community, such as Playstation, have taken steps to make user avatars more inclusive, we are not gathering momentum enough. According to the report, 36% of over 6,000 strive to show themselves in a variety of potentially contradictory ways—creatively, accurately, uniquely, and imaginatively. IoDF states that the reality and fantasy are equally important - a user should be able to create an avatar that is as close to their IRL physical self as possible, or as detached from reality as the URL world allows and is limitless. All of this ultimately comes down to the user's right of choice. The report emphasizes key areas such as gender representation, character customization, sociocultural representation, fashion choices, and disability representation in current digital spaces.

FIG. 87.
 Non-Fungible People, a Generative 8,888 NFT
 Collection of Hyper-realistic 3D Avatars
 Source: Daz 3D blog



3.1.2

— Daz 3D

Daz 3D is a 3D content and software company that specializes in 3D human models, associated accessory content, and software for both the enthusiast and prosumer markets. In January 2022, digital design studio Daz 3D created 8,888 “Non-Fungible People”, which was purposefully created to counterbalance the predominance of white, male investors and developers. Daz 3D noticed a discrepancy in CryptoPunks’ NFT sales: avatars that are female, or have darker skin tones, tend to sell for less than masculine and white avatars, despite the fact that fewer female Punks to male Punks exist in circulation: 3,840 to 6,039, respectively. The Daz 3D collection, alternatively, is centered around female and non-binary avatars to balance the white male dominance currently prevalent in NFT collections.

These avatars are algorithmically generated female and some non-binary PFP NFTs features artwork created by Daz 3D’s award-winning international community of female, male, and non-binary artists. Each Non-Fungible People PFP comes paired with a full-body 3D model for frictionless use in Daz Studio. With the near-limitless potential for customization and the ability to export the model to popular 3D platforms like Unity, Unreal, Blender, and also can be imported into popular games— this launch supports a new evolution of utility and collectability in the NFT space. These avatars, like others, and customized to the consumer’s wants.

FIG. 88. Giuliano Calza's GCDS S/S 21 collection.
Source: ShowStudio



"One of our uniques in our PFP collection uses a wheelchair. You don't see it in the profile pic but if you were to open the software, you would see her wheelchair. She's a really cool gamer girl who happens to use a wheelchair," Kirsten Sharp, the Director of Content Production at Daz 3D, explained. "And full disclosure, I also happen to use a wheelchair, I have a lot of experience bringing diversity and inclusion into a story line without it being the main topic, and avoiding tokenism."(Calandra, 2022; Lewis, 2022)

3.1.3

— GCDS

GCDS, an Italian streetwear brand founded by brothers Giuliano and Giordano Calza in 2015 in Milan, created a unique experience for SS21 Milan fashion week: "OUT OF THIS WORLD." In response to the COVID-19 lockdown challenges forcing the fashion industry and designers to express their creativity, the brand presented its collection in a video released on its website featuring a completely CGI world that takes the viewer on a journey.

The show took place in a 360° virtual world, with digital garments displayed on a digital runway and worn by digital models. Given that digital fashion is (and will increasingly be) a business, the catwalk also featured CGI avatars of a number of well-known IRL celebrities, including Gigi Hadid, Chiara Ferragni, Fedez, Dua Lipa, and Gilda Ambrosio—they act as if they were actually

FIG. 89.
Giuliano Calza's GCDS S/S 21 collection.
Source: ShowStudio



following the show. The team collaborated with Emblematic, a Los Angeles-based engineering firm, to develop a digital platform that hosts the venue as well as interactive areas such as the game room, bar, and backstage. Following the virtual catwalk, viewers could interact with the GCDS team, ask questions, attend private short film screenings, and play with avatars.

The make-up designers of the show state that working with digital avatars rather than flesh-and-blood human models takes a different mindset than the usual skills required backstage. "I can literally create anything I have in my mind. There's no restrictions; the possibilities are endless," says one of the MUAs, exclaiming her desire to share the inclusion of an entirely different kind of being with the creatures.

While the collection was modern and daring yet fitting to what we are used to see from fashion brands, the virtual show was unconstrained by physical limits, and GCDS used the chance to recreate it in a utopian situation. The show included a broad range of models, both humans and aliens; even the human avatars delivered a genuinely diverse and boundary-pushing representation as a whole.

GCDS pioneered this virtual catwalk and fashion show format to appeal to a rapidly evolving and tech-savvy young customer. With the advent of virtual reality and such virtual fashion shows taking place in the metaverse, we will experience more democratized and accessible fashion shows, usually reserved (in their physical version) for journalists and VIPs (Peter, 2020; Riccio, 2020).

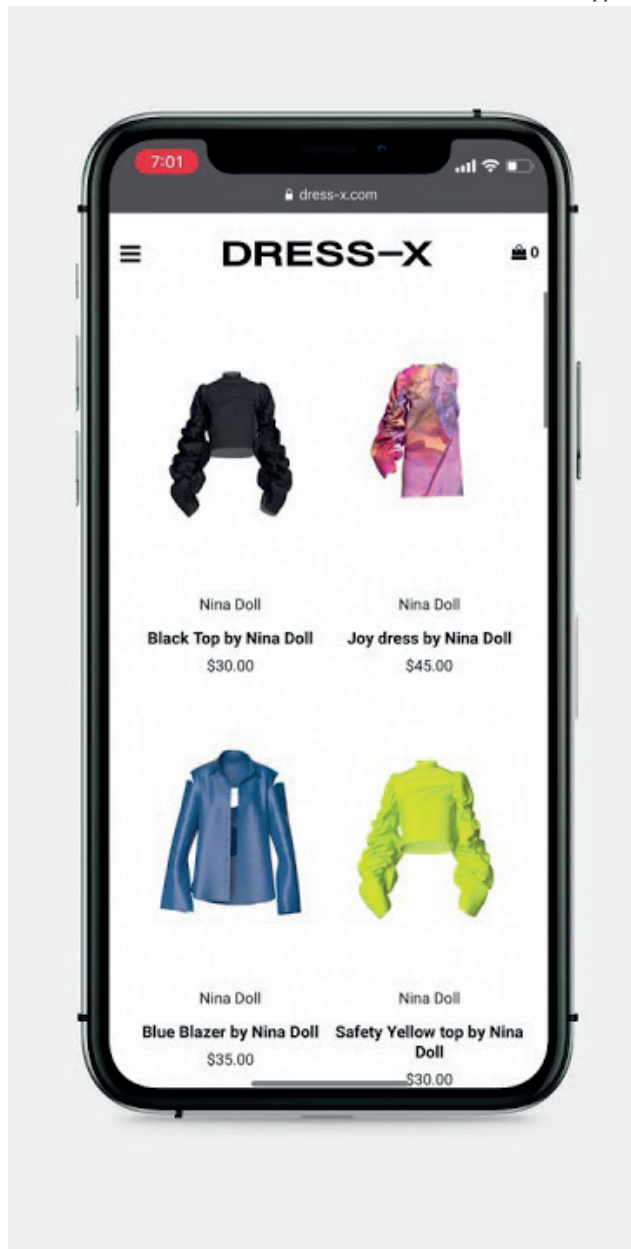
3.1.4

— DressX

DRESSX, one of the most prominent digital fashion marketplaces in existence today, provides both 3D designers and IRL fashion brands a platform to sell and distribute digital clothing, whether it is originally a digital asset or giving physical designs a new digital life and a new revenue opportunity. This digital marketplace, founded by Daria Shapovalova and Natalia Modenova in 2020 amid the pandemic, strongly believes that the amount of clothing produced today is way greater than humanity needs (Chaplin, 2021; DressX, n.d.). DressX's goal is to democratize fashion for the end-user, allowing them to digitally dress in the clothing they want and get instant verification from their social media online community. Users benefit from being seen in high-end looks they might not have had access to otherwise— given that the couture world normally revolves around an elite cluster in societies.

Although digital clothing was initially popular among online influencers, DressX sets no limits on its audience; they state that “Our product is used by everyone who has at least one profile on social media, platform agnostic. [...] among people who use Instagram as the platform for work and to express themselves, [...] also among active travelers and environmental advocates who care about the future of our planet. [...]” (Chaplin, 2021). The B2B offering ‘DRESSX for influencer marketing campaigns’ enables brands to receive digitalized looks and images of their

FIG. 90.
DRESSX app



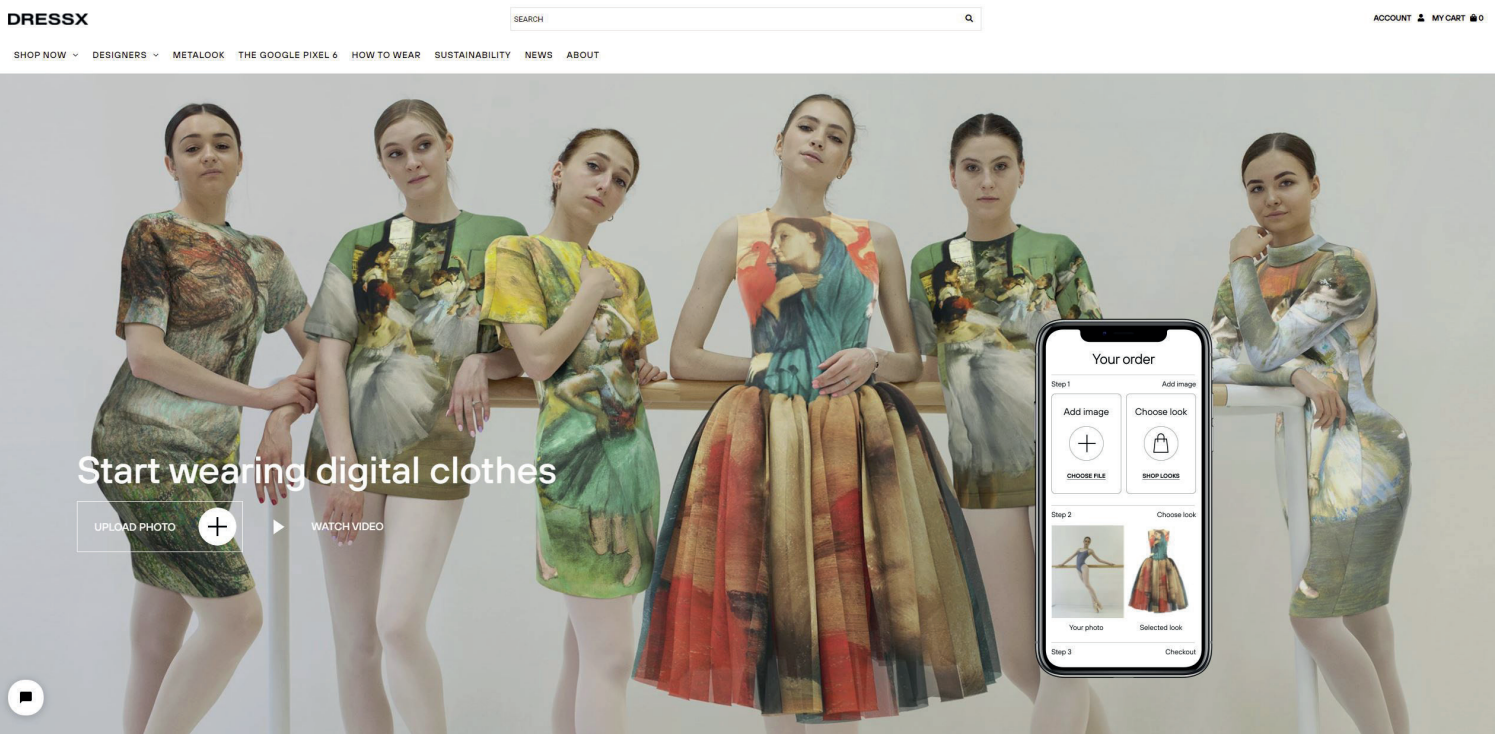


FIG. 91.
DRESSX website

ambassadors dressed digitally in their collection, ready to be shared across social media channels, thereby avoiding the high costs of the garments' production and delivery. Additionally, DRESSX launched an app that simplifies creating content with new outfits: digital looks can be applied in Augmented Reality (AR) to real-time videos and photos.

Many see DressX digital marketplace as an opportunity to be the Farfetch or Net-a-Porter of digital fashion, says Dress-X co-founder Natalia Modenova, based in Los Angeles (McDowell, 2021). "Don't shop less, shop digital fashion" is the company's motto addressing specifically "[...] those who buy clothes just to take a photo or for a special occasion and encourage them to move from fast fashion to more conscious consumption: the digital fast fashion" said DressX

founders in an interview with Vogue Italy (Bellini, 2020). She added that the best part about digital fashion is that people can wear clothes with features that cannot exist in the real world, emphasizing the limitless self-expression possibilities of the digital world, defying the contours of physical reality such as gravity or material limits.

What DRESSX proves is that democratized atmosphere of the digital fashion realm has a comparatively low barrier to entry in contrast to the fashion world's historic exclusivity. Digital fashion enables any artist to produce a virtual fashion collection with minimal financial resources and has attracted many independent designers—even without a formal background in clothing design.

3.1.5

— The Fabricant

FIG. 92.
The Fabricant



Known as the first digital-only fashion house, The Fabricant was founded in 2018 by Kerry Murphy, an expert in film production, visual effects, and advertising; and co-founded by Amber Jae Slooten, a trained fashion designer and the creative director of the house, and Andrea Hoppenbrouwer, with solid corporate experience who is responsible for the commercial direction. According to their website, The Fabricant is positioned at the intersection between fashion and technology, being the first “Digital Fashion House” that makes digital-only clothing, “wastes nothing but data and exploits nothing but imagination” (Särmäkari, 2021a; The Fabricant, n.d.). As seen in this study (in chapter 2.3.2), before The Fabricant, digital clothing was limited to gaming spaces and the production process of physical clothing. But what The Fabricant’s founders initiated was going beyond “[...] physical limitations like gravity and material durability,” The Fabricant’s Kerry Murphy tells (Wunderman Thompson Intelligence, 2021)—unlocking a new dimension for designers and creatives.

The Fabricant believes in an open-source, decentralized, transparent fashion and promotes this notion through community creation and sharing their designs for modification or just for copying online free of charge (Särmäkari & Vänskä, 2020). The Fabricant’s manifesto proposes using technologies such as blockchain and NFTs to establish a new creative economy



FIG. 93.
The Fabricant

“where our financial rewards are finally equal to our talent.” Alongside many boundary-pushing designs and significant collaborations and having diversity, equity, and inclusion as the core of the house, The Fabricant has taken some precious steps toward its core values, including:

- The Fabricant has launched an online design studio, called The Fabricant Studio, in which users can create exclusive virtual garments to trade and wear in the metaverse. The platform was developed to make virtual fashion design accessible to anyone, anywhere in the world. It also allows “non-tech-savvy fashion fans” to easily create digital fashion garments without the need for knowledge of 3D design software. “In the digital fashion world, there are no predetermined centers of fashion where you have to be present in order to participate, there’s equity of opportunity, and no one owns the space,” The Fabricant said. “Our audience are co-creators right alongside us.” (Crook, 2021)

- In tandem with their desire to adopt co-creation, democracy, and inclusivity, the fashion house shares free file drops called FFROP (so far, FFROP #4 has been released, generally soon after the emergence of the fashion house). Each FFROP features an outfit from the DEEP digital fashion collection; The Fabricant gives away the 3D pattern files of garments for free on its website so that digital creators can iterate their own versions of our pieces, although there is a need for a 3D software and 3D knowledge to benefit from the files. The Fabricant also designed challenges for its fellow designers to join and create their 3D garments given a specific theme



FIG. 94
The Fabricant

and then share it on their Discord channel, and the winner was asked to do a paid collaboration with The Fabricant.

- To address tech's skewed gender dynamic, The Fabricant presented a collaboration alongside Adidas and Karlie Kloss (from Kode With Klossy, which organizes free coding camps for young girls) called the #makingstrides initiative in the form of a competition to elevate womxn in tech through interaction with 3D digital fashion. Kloss is a longtime advocate for the need to inspire women to pursue STEM and participate in tech-centric environments. #makingstrides asks upcoming 3D artists of all genders to create an interpretation of a piece from the Adidas x Karlie Kloss collection, to magnify their visibility and fast-track their entrance into the world of digital fashion. The Fabricant offered a series of free Twitch webinars for guidance open to anyone who wished to participate. As well as cash prizes, 20 selected finalists had their designs showcased and converted to NFT, enabling them to make revenue from their work.

- The Fabricant fashion team hosts a 3-hour co-creation session every week, live on Twitch stream, where viewers can download the 3D pattern file and iterate their own design alongside the team and see how they work and exactly what they are working on in real-time. Defying the unspoken rules of IRL fashion to say that fashion's audience does not need to know its methods, hear its insights or participate in its collections, this fashion house promotes openness and decentralization in digital fashion, and as a distributed fashion atelier working daily across 8 locations, the idea of collective participation in the non-physical space is an essential to their in-house creative team, collaborating every day from The Netherlands, Germany, Sweden, Portugal, Spain, Tunisia, Switzerland and the U.K.

"Join our weekly Twitch stream to see our iteration process and co-create with us. Just like our Reveil headpieces, we're an expressive digital atelier with nothing to hide." Says The Fabricant (The Fabricant, 2021).

3.1.6

— The Diigitals & HUM.AI.N

After Lil' Maquela gained massive traction across Instagram as the first-ever virtual influencer, many brands have started working with virtual influencers due to many advantages, from brand safety to a new avenue for innovative storytelling. Since then, many virtual influencers and models have been created by creative agencies such as The Diigitals & HUM.AI.N, to name the most significant ones. Diversity and inclusion representation are essential to their creation, and below are some of their most significant steps.

The Diigitals:

The Diigitals, known as the world's first all-digital modeling agency, utilizes the rising accessibility of new technologies and takes steps into a new frontier of digital exploration. Shudu was their first creation, known as the world's first digital supermodel on Instagram, in 2017. Her glamazon appearance was inspired by the Barbie doll of the Princess of South Africa, which represents an unattainable beauty ideal. Shudu plays an essential role as one of the first virtual influencer models to celebrate women of color and encourage racial inclusion. Through her collaboration with Balmain (a member of Balmain's "virtual army"), Fenty, and Vogue Korea and her appearances on Instagram, Shudu has increased diversity among virtual influencers on



FIG. 95.
Above: Brenn, bottom: Shudu in a Balmain virtual army photoshoot

social platforms and commercial realms. The Diigitals have produced a number of other virtual influencers, including Boyce, Koffi, and J-Yung, all of whom have followed in her footsteps.

To balance Shudu's idealized figure, The Diigitals created digital supermodel Brenn in 2018. With her full-figured body and stretch marks, Brenn is a far more realistic representation of many women than many other virtual models out there. Brenn, posing confidently in designer swimwear, makes a great addition to the digital modeling agency. She celebrates real women and body positivity which could be a move to represent a broader range of audiences and encourages the inclusion of a diverse range of virtual influencers with a variety of body types (Hiort, 2022; The Diigitals, n.d.).

HUM.AI.N:

Conceptualized by the virtual platform SUMBOD1, HUM.AI.N is a digital modeling agency committed to breaking and disrupting fashion & beauty boundaries of physical beauty and gender through the presentation of Java, Unix, Mosi, and Aada; four diverse virtual models who celebrate and promote diversity, individuality, and inclusivity, thereby enabling a new dawn for beauty.

Java is a red-haired digital model with hyperpigmentation and freckles covering her entire body, promoting body positivity and offering a fresh perspective on what perfect skin should look like.

Unix is a transgender model celebrating personal identity and advocating for young transgender individuals to take pride in their body image.

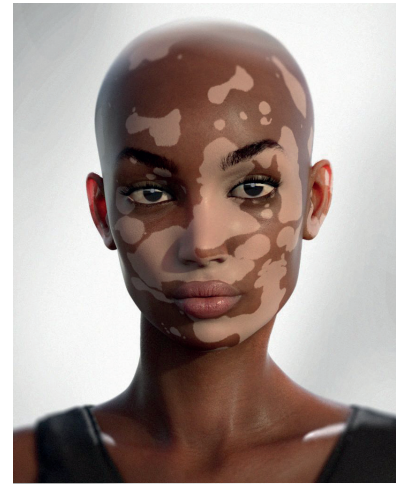


FIG. 96.
Java, Unix, Mosi, and Aada: HUM.AI.N

FIG. 97.
Java, Unix, Mosi, and Aada; HUM.AI.N



Mosi has vitiligo and advocates for a positive body image, regardless of appearance. She embraces her differences and offers a refreshing look on beauty, raising the diversity bar in the digital sphere.

Aada, the oldest mixed-race virtual influencer, is a virtual fashion journalist created for *Vogue Scandinavia*. With her mature appearance, Aada contributes to the conversation on age among virtual influencers as well as challenges fashion's relationship with age and its obsession with youth.

Richard Thornn, the Creative Director of *SUMB0D1*, says, "We are aligned with our generation and exploring identity, gender, and inclusivity; we want to reset the ethics of beauty in the digital realm, which has always previously been about IRL airbrushing and fake realities." He continues: as the industry standards are evolving, consumers' appetites for beauty is shifting as well. The new age of accountability marks a turning point for fashion's idea of the 'feminine' ideal.

The HUM.AI.N team spend a few months looking to all factors, sex, race, disabilities, gender, size and age. All our models are created using a number of different factors. Our HUM.AI.N models show that digital just doesn't mean tall, flawless blue skin with neon yellow hair and 8 arms. Relatability is key (Thornn, 2021).

Thornn believes AI models are not replacing human models; they still work with IRL models, photographers, hair and makeup artists to create the looks. Yet the shift is paramount; the re-appropriation of production skills will move from the physical to the digital (Hiort, 2022; Thornn, 2021).

3.1.7

— Digi-Gxl

Founded by Catty Taylor (co-founder of IoDF) in 2018, the Digi-Gxl network is a global community of womxn, trans folk, intersex, and non-binary people working in digital media. It quickly grew into a 300-strong worldwide community and commercial agency, which, among other projects, has since worked to digitally transform the designs of Maison Margiela, Chloé, Raf Simons, and Rick Owens for Selfridges' first fully 3D-digital campaign and also worked with the queer collective, Pxssy Palace, that centers Queer womxn, Trans, NB & Intersex BIPOC .

According to the Google Diversity report (Umoh, 2020), the tech world still has a long way to go when it comes to female representation—with female employees “dropping from 33.2% of global hires in 2018 to 32.5% in 2019,” it says. 50% of women in tech said they had experienced gender discrimination at work, while only 19% of men said the same. Women are not only underrepresented in STEM, but they are also underpaid - for computing fields, women earn 87% of what men earn. The numbers are even worse for black women in STEM, who earn around 87% of white women's salaries and just 62% of what men earn. As stated by Grey Swan Guild (Grey Swan Guild, 2022), only 24% of game developers are women; Black and Hispanic workers remain underrepresented in the science, technology,

engineering, and math (STEM) workforce, and facial-analysis software shows an error rate of 0.8% for light-skinned men, compared to 34.7% for dark-skinned women. The founder decided to build relationships with like-minded people working within the same field to address these issues and make a pivot in this broken practice.

The founder describes DIGI-GXL as an inclusive, 24/7 global community. “I wanted to build relationships with like-minded people working within the same field, so I set up @digi.gxl to document the work of others whilst forming new ‘internet friends’/‘future collaborators’ as I went along,” says Catty Taylor. She continues, “As a network, we offer each other technical guidance, industry and business advice, and general creative support; As an agency, we work on commercial projects, workshops, and curate exhibitions. Always ask pronouns; never assume. If in doubt, use ‘they/them’ but make it your priority to ask the person for their pronoun.” (Bardsley & Volquardsen, 2020)

It is rooted in 3D design and animation, a network of individuals that make, obsess, and push the boundaries throughout 3D design and animation, digital fashion and 3D clothing, 3D product, and accessory design, Spark AR, creative coding, 3D scanning, motion design, augmented reality, virtual reality, creative direction, graphic design and more. It also provides space for broader conversation and support from making, freelancing, studying, and cyberbullying. The network is dedicated to paving the way for marginalized gender identities to thrive in the tech sector by amplifying their voices.

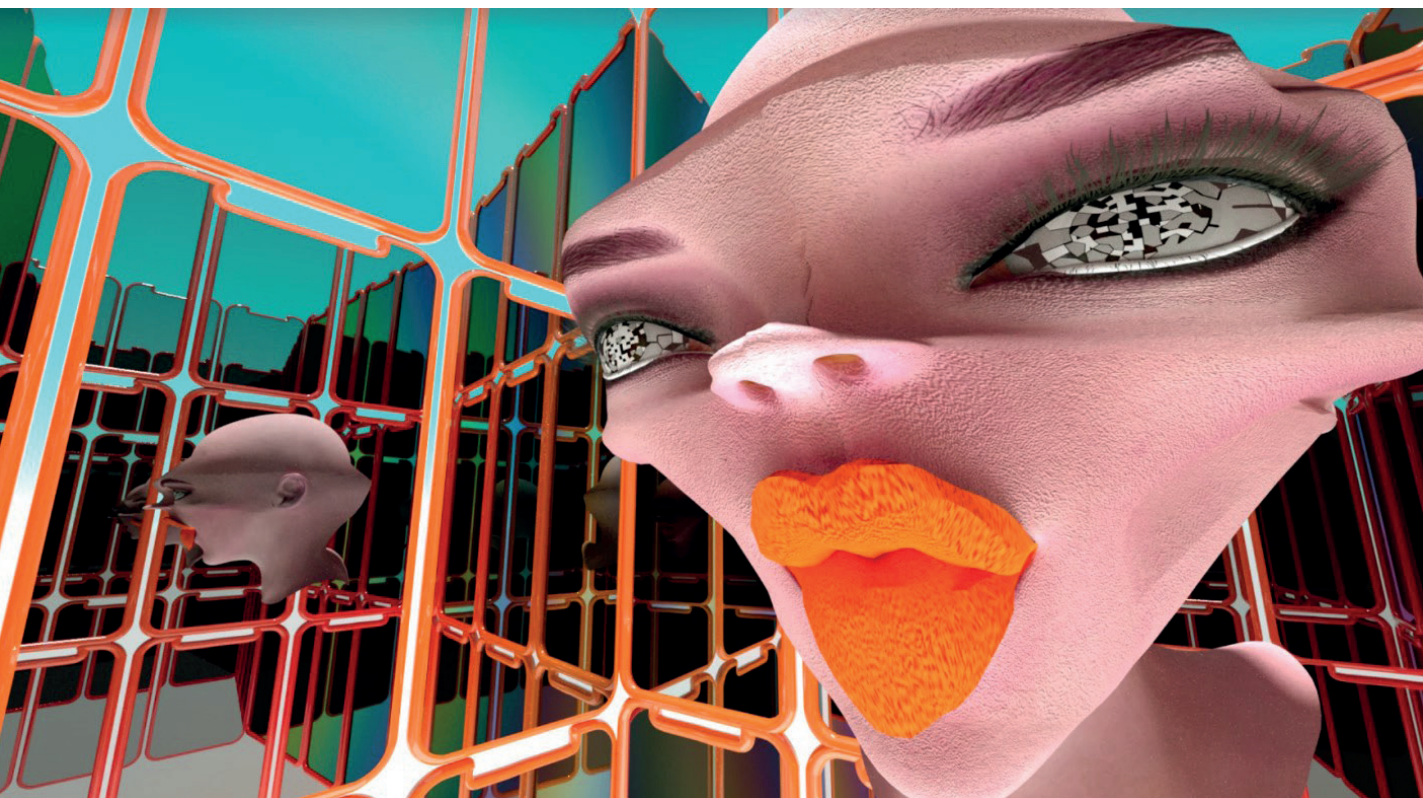


FIG. 98.
CREDIT: POLINA ZINZIVER, DIGI-GXL

3.1.8

— Digitalax

Pioneered by the 24-year-old Emma-Jane MacKinnon-Lee and the founding team in 2020, DIGITALAX is the first dedicated Digital-Only Fashion Auction Exchange Platform and Open Source Digital Fashion Toolkit. It is dedicated to bringing new industry standards around digital goods, open digital licensing, digital supply chain automation, and addressing core problems around NFT liquidity and stability. In other words, this start-up is aiming to build the first “web 3 fashion operating system.” Most of the company’s numerous projects are focused on spreading digital fashion to the people (for example, cooperative economic models that allow independent designers to collaborate on pieces and share in their ownership and royalties).

The digital fashion industry still hasn't been crafted in a way that allows the entire population to interact with it and gain the same value as what is experienced with physical clothing. DIGITALAX is building in web3 to create the very first decentralized and open-source digital fashion platform that allows players and creators to transparently own, trade, and wear their digital fashion in different content environments. The protocol's mission is to disrupt the Web3 fashion ecosystem through four key areas: Interoperability, Property, Composability, and Forkability. Given that DIGITALAX is a truly transparent Ecosystem, not a product, the focus areas and projects so far include:

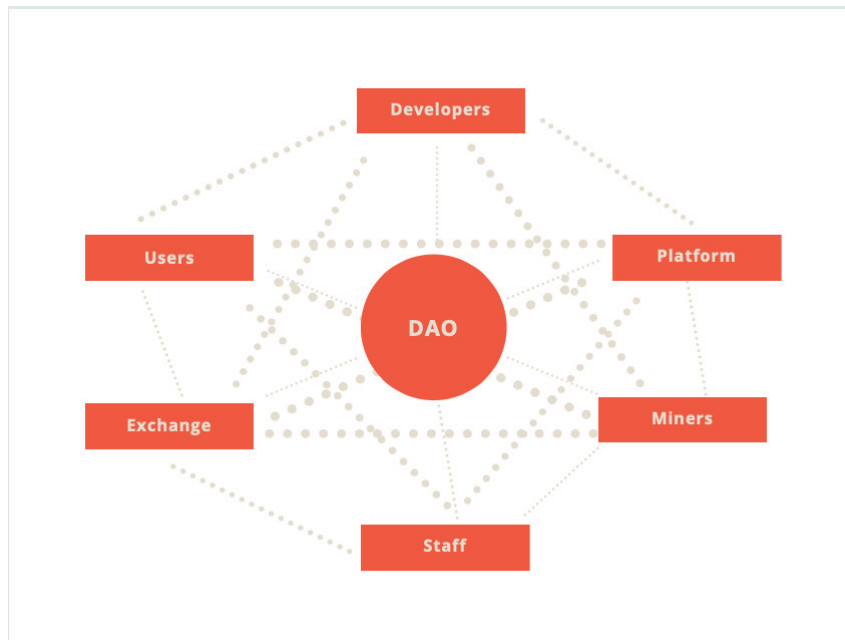


FIG. 99.
DIGITALAX GDN DAO

- Decentralised digital fashion supply chain: DIGITALAX's first goal has been to create a streamlined, comprehensive content supply chain with vast opportunities for creator incentives. DIGITALAX provides open-source libraries for raw materials, patterns, and textures as composable NFTs on its platform. Through fractal garment ownership (FGO), DIGITALAX allows any artists and creators who use these open-sourced digital modular assets in an NFT digital creation to capturing the majority of the value while enabling asset designers to receive a predetermined royalty each time a modular asset is used in a master garment or a master garment is traded. All royalties are paid out automatically with each transaction and accurately time-stamped on the blockchain for the public to see. These NFTs (both the modular assets and the masters) provide designers with a "scalable digital distribution channel where assets can be immediately verified & authenticated on-chain, backed by immutable ownership" (Ginsburg, 2022b)

- Global Designer Network (GDN): The GDN is the very first on-chain digital and physical web3 fashion designer DAO—DAO (Decentralized autonomous organizations) is a new kind of organizational structure built with transparent blockchain technology, controlled by the organization members and not influenced by a central government. The start-up's website states that the most important part of any DAO is to remember that decentralization does not mean a flat organizational chart. Instead, tiers and hierarchies do exist and are essential to the effective operation; however, instead of

being static, frozen in place, and not accurately representing the members that make it up, DAOs are dynamic, ever-evolving, and incentivized in a way that maximizes growth for all involved. GDN DAO creates this broad network of creatives to enable them with the right tool stack, distribution channels, and developer collaborations, to take the digital fashion industry into the future and be part of building the next digital economies of scale through gaming and VR.

- DASH 3D File Format: One of the central points of tension in the metaverse debate. The founder says giant web 3 proponents such as Facebook would prefer that virtual goods not be able to smoothly traverse platforms to maintain control over vendors and products. Decentralization advocates, on the other hand, feel that the ability to take your items with you, wherever you go, should be one of the core rights of a democratized metaverse. Digital fashion pieces are some of the first products to poke at this question; and currently, they cannot move around freely. Her team at Digitalax is rounding the corner on an interoperable 3D file format they call DASH, which they claim will permit digital fashion pieces to navigate all gaming platforms flawlessly (Lutz, 2021).

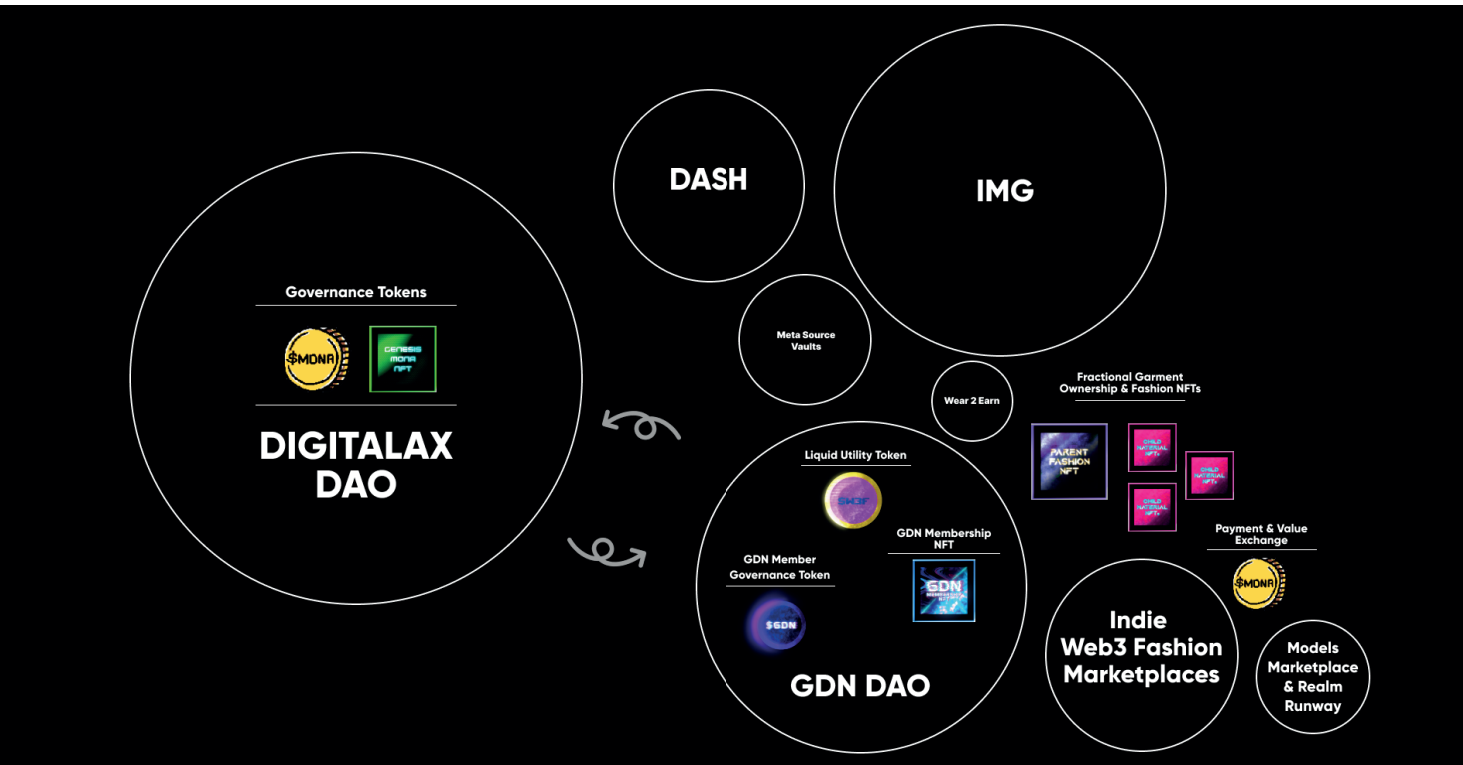
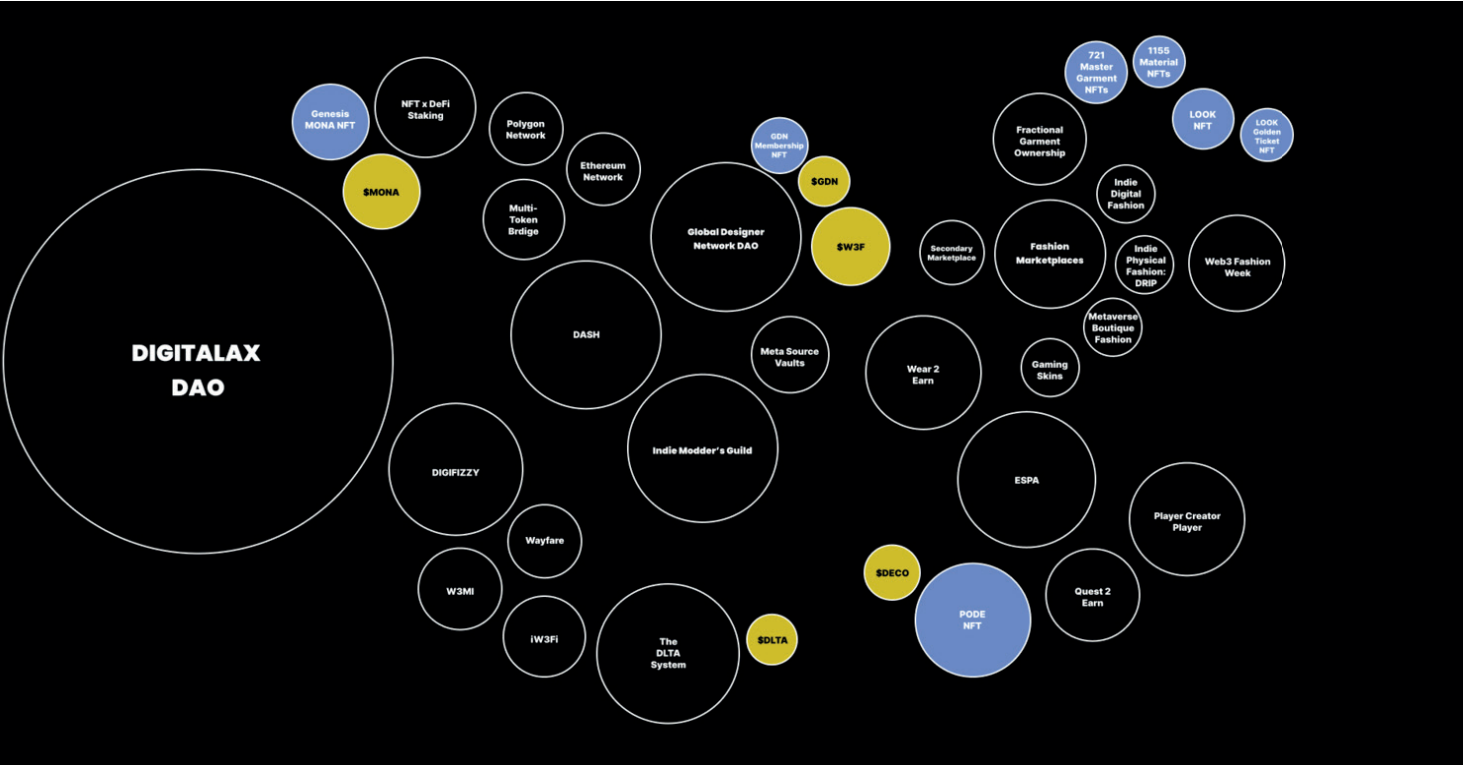
- Digital Fashion Rarity and Exclusivity: Programmable Scarcity: DIGITALAX has created the first digital-only fashion single-edition NFT

Auctions and partnered with digital fashion designers based globally, who are each creating rare and exclusive digital fashion garments to be listed on DIGITALAX. This is the first time at a wider scale that digital fashion designers have had access to a completely new market that sees value in rare, cosmetic digital collectibles. It is an amazing new distribution channel that can be scaled into applications across gaming and VR.

- Native Digital-Fashion Pricing Frameworks: The DOF Sheet: GIGITALAX aims to address the underlying problems faced with fair, transparent pricing of a natively digital asset. It has introduced The Periodic Table of Digital Fashion Elements: The DOF Sheet. DIGITALAX's DOF Sheet translates the listed NFT digital material and pattern libraries into a dynamic pricing and classification periodic table to evaluate a digital fashion garment's fair market price by gathering on-chain and off-chain data to classify, determine and group the base elements.

Eventually, DIGITALAX will be a fully decentralised protocol where designers, creators, modders, developers, players... every metaverse dweller globally... will be able to interact and create a sustainable livelihood for themselves filled with a clear roadmap for leveling up. This vision and stance is built into everything that we do (DIGITALAX, 2021).

FIG. 100.
DIGITALAX GDN DAO



3.2

DEI DRIVERS *in the digital fashion*

A qualitative case study analysis in chapter 3.1 helped us to see how these relatively new organizations, brands, institutes and companies are shaping the world of digital fashion— both the ones natively established in digital realm and those ones that are established in IRL fashion world and try to adapt and benefit from digital fashion contribute to developing this domain that is heavily tied to self-expression, creativity, co-creation, and the sense of belonging. All these attributes of the digital fashion world provide the whole fashion system stakeholders a whole new set of design, production, and retail opportunities while offering a more open version of the fashion.

The themes presented in the following table were drawn from literature and identified from the case studies to answer the question of whether and how DEI is deeply embedded to the digital fashion landscape.

To summarize the findings of the case-study analysis, I identified three main group of drivers nurturing the DEI culture in the digital fashion realm. Although these factors were initially emerged to defy frustrations driven by lack of DEI in the fashion system, they can mutually be a driver for DEI culture to be fostered not only in the digital fashion world but also act as a DEI framework to be adopted by the traditional fashion executives to step toward DEI culture and benefit from the digital realm. The three main drivers are:

DIVERSITY
Consumer-facing representation & advocacy
Non-consumer-facing representation & advocacy
Customization & self-expression
EQUITY
Decentralized
Democratized & accessible
Open-source
INCLUSION
Co-creation
Creative community

FIG. 101.
Case study analysis

<i>IoDF</i>	<i>Daz 3D</i>	<i>GCDS</i>	<i>DRESSX</i>	<i>The Fabricant</i>	<i>Digi-Gxl</i>	<i>The Digitals & HUM.AIN</i>	<i>Digitalax</i>
★	★	★	★	★	★	★	★
★					★		★
	★		★	★			
★			★	★	★		★
★	★	★	★	★	★		★
				★	★		★
	★	★	★	★			
★			★	★	★		★

1) Authentic representation, limitless self-expression, & true personalization:

A user-centered approach is the first and most addressed concept in digital fashion and other digital realms. The digital realm and specifically metaverse, is a persistent user-defined space as defined by (Wunderman Thompson Intelligence, 2021). Persistent as a place of perpetual and continuous existence; life will continue whether people are online or offline. User-defined as it is owned and shaped by the people living, connecting, creating, and participating in it. Gone are the days when people assumed digital worlds and gaming escapism from real life. Today, our digital identity has become a more robust extension of our daily lives, and in such a world, the need to authentically reflect a user's identity in all its dimensions is becoming more and more essential.

As mentioned before, the narrow and conservative representations of avatars in games and VR spaces forced the key figures behind the ethos of digital fashion to advocate for more diversity to ensure the groups that have been underrepresented and marginalized in the traditional fashion world and, especially digital culture can have a voice in the metaverse ad digital spaces (Särmäkari, 2021b).

Needless to say, clothing is a cue to identity (Makryniotis, 2018), and our identity is shaped at the intersection of our different attributes (different dimensions of diversity (Loden & Rosener, 1991)). Also, going beyond physical world boundaries is the nature of the digital world. Said that, these three elements have made digital fashion a means of exploration and limitless self-expression. It provides infinite freedom for designers and enables users to express their true selves without worrying about physical standards such as size, gender, age, body type, and even gravity and material limits. Meanwhile, personalization (which is a step further than customization (Hernandez et al., 2020)) has become an inevitable dimension of digital fashion and gaming, given that customization for Gen Z and Gen Alpha is a part of self-expression (Wunderman Thompson Intelligence, 2021).

As observed through the case study analysis, the single theme adopted by all cases was user-facing representation, proving the theme's significance in

the digital realm. From The Diigitals & HUM.AI.N creating diversity advocate CGI models and influencers to Daz 3D releasing a diverse collection of 8,888 “Non-Fungible People,” authentic representation is embedded in this evolving industry. Trying to dismantle archaic fashion structures, IoDF and Digi-Gxl are dedicated to advocating authentic representation and diversity in both consumer-facing and non-consumer-facing sectors of digital fashion. On the other hand, digital fashion proponents are fostering diversity and representation through giving users the opportunity to genuinely personalize their digital fashion experience as they wish, whether it be customization of their Daz 3D avatar before importing it into a game or buying a personalized digital garment custom fit on the user’s image.

Looking at these initiatives from the practice point of view, these brands and companies help people to be exposed to authentic representations and foster diversity celebration over time.

2) Open-source, democratized, & decentralized:

Finding the exclusivity and vertical hierarchy outdated and with mindful consumerism and ethical living on the rise (Hernandez et al., 2020), the companies are adopting principles of decentralization, democratization and open-source philosophy more and more every day to increase the overall transparency of their practices. In our contemporary system we are witness to the breakup of even the most common lifestyle boundaries. Distant hierarchies between creators and customers are being torn down; replaced by communities of empowered participants who are increasingly influencing the creative agenda themselves. The trendsetting power structures and privileges have been decentralized, resulting in more equal distribution of power. Today’s customer is seeking self-sovereignty, decision-making, and control over his identity and experience more than ever. As previously stated, Web3 is designed to be an Open Web by its very nature. Along with the digital advancement and web 3 open nature, it is no surprising that digital fashion is constantly becoming a breeding ground for redefining exclusive aspect of fashion industry and shift the industry power from centralized fashion monopolies to any designer and creative mind with access to the internet. According to 88 percent of global consumers, technology can make the

world a better place, and 78 percent believe it can contribute to the creation of a more equitable society (Wunderman Thompson Intelligence, 2021).

Believing that technology is meant to build connection not division, companies such as The Fabricant share their 3D files for modification or just for copying online free-of-charge, contest the secretive and protectionist culture of the fashion industry normalizing co-creation and amplifying accessibility and democracy in digital fashion ecosystem. The mission of DIGITALAX is inextricably linked to the concept of openness. It offers a whole decentralized digital fashion ecosystem through its open-source libraries for raw materials, patterns, and textures as composable NFTs. Its GDN DAO, in addition, is a complete example of how a fashion system can operate through a horizontal hierarchical structure. Its GDN DAO, in addition, is a complete example of how a fashion system can operate through a horizontal hierarchical structure. Its GDN DAO, in addition, is a complete example of how a fashion system can operate through a horizontal hierarchical structure.

GCDS enables anyone with access to internet to experience fashion show through digital fashion and VR in contrast with exclusive traditional fashion shows. Digi-Gxl is another example of how digital fashion can pave the way for marginalized gender identities have equal opportunity in the tech sector by amplifying their voices and making fashion landscape more accessible.

3) Creative community & co-creation:

Historically, one of the most important aspects of gaming—as the digital fashion predecessor—has been the social aspect; community, and sense of belonging. Today, with the proliferation of personal avatars, digital collectibles, and virtual representations in social media, VR, and online games the boundaries between the physical and digital spheres of creative expression are overcome and new socio-creative communities are being created constantly. In this contemporary environment, consumers hope that their belongings give them access to communities instead of just their ownership.

The ideal of community is central in the lives of today's young Gen Z and

Millennials we are witnessing many new communities connecting around shared values that are being created in the digital world regardless of geographic restrictions. On the other hand, the virtual co-creation mindset is widely adopted by Gen Z and Millennials (Särmäkari, 2021a). In other words, digital engagement is moving from passive consumption to active creation and digital spaces have been identified as catalyst for creativity and inspiration, where people actively engage with content, rather than passively consuming it (Wunderman Thompson Intelligence, 2021). For its pioneers, the beauty of 3D digital fashion is in its creative community-based nature and the evolving space where allows designer to transplant concepts from outside their usual sphere of reference and use them to create new forms of assets.

Through socio-creative communities such as Digi-Gxl and DIGITALAX GDN, digital fashion pioneers are trying to spread the sense of belonging and inclusivity among designers, creatives, ad enthusiasts in an unprecedented level. Co-creation opportunities offered by other cases such as The Fabricant Studio, in which users can create exclusive virtual garments or its 3-hour co-creation session every week, live on Twitch stream help their community to experience total inclusion and belonging into digital fashion ecosystem. The open-source aspect of digital fashion will also result in a collaborative ground play for co-creation as proved by The Fabricant. Since 2018 this fashion house have dropped free digital pattern files of their own garments and those of the brands they worked with, giving creators the opportunity to use them and reinterpret the piece based on their own aesthetic preference taking the garment to new levels of visual possibility.

As said by The Fabricant, "Unlike physical fashion, digital fashion is a collaborative environment where its audience has as much influence on its future as the brands within it. For us as a fashion house, we see ourselves as collaborators with our audience. Their insight and creative abilities will push digital fashion in the direction they want it to go and towards the visual expressions they would like to see. From our perspective, participation in the digital fashion space is one of connection and creativity that builds community and allows expression beyond the limits of the physical world. We're committed to facilitating this world, but it is the collective participation and co-creation of the individuals within that will make it something of lasting value" (Luxiders, 2021).

3.3

DEI BARRIERS

in the digital fashion

1) *The grey area of tech*

The technology industry is hugely imbalanced in terms of gender, race and ability. Globally, men make up between 70 to 90% of all roles. If technologies aren't designed to represent, include and meet the needs of all genders, then huge numbers of the world's population miss out on opportunities and benefits that they have a right to. Women aren't entering tech jobs at the same rate as men – and one reason can be traced back to male-dominated workplaces.

50 percent of women in tech said they had experienced gender discrimination at work, while only 19 percent of men said the same. 36 percent of women said sexual harassment is a problem in their workplace. Women are not only underrepresented in STEM, but they are also underpaid - for computing fields, women earn 87 percent of what men earn. The numbers are even worse for black women in STEM, who earn around 87 percent of white women's salaries and just 62 percent of what men earn.

The need for diversity in tech is a no-brainer. Our world is deep into the process of being digitally shaped and our virtual existence is being defined by a limited demographic, without input from full spectrum teams with a broad range of life experience. In a startling example from 2018, Amazon

scrapped the AI recruitment tool it was using because it treated any mention of the word 'women's' as a red flag. Using machine learning, the algorithm decided that male candidates were preferable and downgraded candidates from women's colleges (Bardsley & Volquardsen, 2020). Increasing attention on the need for diversity and inclusion is a force for change in the technology industry, with major companies making commitments to change their practices and build more equitable workplaces. None of these commitments, however, are an overnight fix, and some companies have failed to meet their own goals. We need to gain the confidence to challenge sexism and transphobia in the tech industry, changing workplace cultures so that everyone's experiences are valued.

2) The grey area of the Metaverse

For many people, the metaverse offers a better, more idyllic world; the world as we'd like it to be. But sadly, human weaknesses often follow us into the virtual realm—and that fact can easily extend to those who help create the metaverse. Without realizing it, harmful preconditions can be easily built into the software that perpetuates stereotypes and prevents metaverse users from enjoying a more inclusive and equal virtual experience. It's been proven that biases, cultural and ethnic assumptions, and even racism impact the technologies used in digital animation for motion pictures and video games. Those traits can also affect companies that serve the metaverse and digital fashion.

Said that, the importance of institutes and organizations such as IoDF, Digi-Gxl, Daz 3D, The Diigitals, and HUM.AI.N will be recognized. If avatar creation tools simply offer a choice between male and female, they don't allow those who are non-binary to make a choice consistent with who they are. Simply adding an "other" option doesn't help much because it conveys that people are either one of the two "normal" choices, or they're an anomaly. Nor does moving away from humanoids in favor of aliens, monsters, and animals, which simply circumvents the issue. IoDF asked their respondents in a survey (IoDF, 2021), their thoughts on the option of blue skin as an inclusive measure, and the responses were varied. Although some liked the idea and saw it as a way for VR to be more inclusive and better navigate unconscious

biases, a lot of respondents agreed that blue skin still equates to whiteness, and in fact has the potential to do more harm than good, specifically to people of colour. Companies can begin by having female, Black, Hispanic, queer, non-binary, and special needs designers and creators on hand or on staff. This helps to curate not only appropriate content but also the subconscious messaging that accompanies it.

It is still evident that there is a significant lack of disability representation in virtual worlds. There needs to be further discussion involving disabled people about how to represent disabilities virtually in order to fairly represent those with disabilities (one way can be avatar customization options addressing bodily differences). Similarly to the response to the use of pronouns, 60% of the respondents were concerned about the increased potential for bullying and discrimination against disabled people within virtual worlds.

3) Accessibility limitations

Digital fashion and metaverse accessibility issues start with cost. An accessible platform is more than just making the experience comfortable for people with specific disabilities. The start of making something accessible requires the majority of the population to be able to access it. Although Web 2 is perceived as accessible as more than half of the world (59.5 percent of the global population) has access to the internet, it does not mean everyone can experience metaverse and web 3 equally. To fully experience and participate in a metaverse one requires a virtual reality headset although some forms of digital fashion will be available and feasible without them.

Another pitfall digital fashion and metaverse realm faces is being relied on visual elements. Blind people often have issues with absorbing most types of media. In a report by Booktrust, only 7% of books are available in formats that help visually impaired and only 2% are in braille. For movies, blind-friendly audio descriptions are more common, but services like Netflix still only provide a quarter of its content in audio descriptive form. Visually impaired glasses users have often complained about how uncomfortable VR headsets can be. Meta claims that its next generation of mixed reality headsets will be more comfortable for glasses wearers, but still there is an unfair gap regarding blind people that are interested in experiencing digital and virtual world.



CONCLUSION

Finding Digital fashion and DEI two of the most widely debated topics in our contemporary world, this thesis explored the ways in which digital realms, specifically digital fashion, are fostering DEI frameworks within the fashion ecosystem, ensuring a more just and equitable design environment as well as fair consumption models. There is undeniable pressure on brands and companies to create an equitable version of fashion that is accessible to all people in an age when power is shifting into the hands of the consumer. They have never had access to this level of technological and digital connectivity before, and their newfound access to a wealth of information has given them a significant amount of power. This is reflected in the increased demand for convenience, transparency, ethical production, curation, and personalisation, among other things.

As discussed in the study, this convenience is provided by the digital fashion. Perhaps the most significant development in digital fashion is the adoption of NFTs for item registration on the blockchain bringing real value to digital work by embedding provenance and proof of scarcity within the asset itself. Living in this progressively interconnected and interdependent global society shaped by globalization and technological advance, we should all acknowledge the significance of social justice and fairness as fundamental values for sustaining a diverse and tolerant society.

Disciplines associated with traditional fashion

design are being disassembled, and the dimensions of reality are being broadened, distinguishing contemporary design processes from those associated with earlier eras. Historically, the fashion business has fostered discrimination and biases as a result of persistent beauty standards, exclusivity, and the hierarchical power structure vested in fashion system monopolies. On the other hand, as technology advances and individuals acquire greater access to media and, as a result, increased knowledge and awareness, unprecedented debates about inclusion and diversity are taking place.

Digital fashion is still emerging and a number of key challenges are yet to be faced. Yet, the silhouettes of these modern creative economies and societies are clearly visible today and designers and creatives are attempting to reshape the future of the fashion system. Numerous opportunities have been created or unleashed thanks to blockchain and Web3 initiatives and members of the fashion system must take part in benefiting from these opportunities to create more equitable product, established more inclusive and diverse teams, and contribute to developing this version of fashion and enable widespread participation in this conversation.

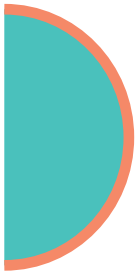
Said that, I strongly believe DEI culture would not experience a redemption unless we all contribute to building it. Digital fashion is providing many valuable new paradigms and frameworks that can be inherited to develop diversity, equity, and inclusion more and more in the fashion system. Although, I believe the final redemption for DEI is only possible if we all take action, expanding our knowledge and comprehension of the context, regardless of our position in the social hierarchy.

THIS IS NOT A TRIAL RUN. WE'RE WAY BEYOND PROOF-OF-CONCEPT AND BETA TESTING. AS OF RIGHT NOW, THE NEW DIGITAL REALITY IS FORMING AROUND US AND YOUR INPUT IS REQUIRED.

IN THIS FASHION REVOLUTION THE ROLE OF CREATIVE DIRECTOR ISN'T RESERVED FOR A SINGLE INDIVIDUAL. THAT'S NOT HOW THIS WORLD WORKS.

TECHNOLOGY HAS GIVEN US ALL THE ABILITY TO INFLUENCE HOW DIGITAL-ONLY COLLECTIONS WILL LOOK AND FEEL. BRANDS WILL ASK FOR INPUT AND INSPIRATION. YOU WILL BE MUSE, TASTEMAKER, TREND WATCHER, AND LABEL.

(THE FABRICANT, 2019)



GLOSSARY

Words and their various applications represent the huge diversity that defines our society and therefore, it is essential to achieve a shared understanding, particularly when using the most common terms. So, for a better understanding of the field of diversity, equity, and inclusion, some terms and concepts must be explained (This glossary is provided as a meaningful starting point toward the creation of a common vocabulary for the field, rather than as a definitive and authoritative source).

Orange: DEI terminology

Turquoise: Digital fashion terminology

Accountability

It refers to the ways in which individuals and communities hold themselves to their goals and actions and acknowledge the values and groups to which they are responsible. To be accountable, one must be visible, with a transparent agenda and process. Accountability demands commitment. It might be defined as “what kicks in when convenience runs out.” Accountability requires some sense of urgency and becoming a true stakeholder in the outcome. Accountability can be externally imposed (legal or organizational requirements), or internally applied (moral, relational, faith-based, or recognized as some combination of the two) on a continuum from the institutional and organizational level to the individual level. From a relational point of view, accountability is not always doing it right. Sometimes it is really about what happens after it is done wrong (Cushing et al., 2010).

Avatar

An icon or figure representing a particular person in digital environments and virtual realities, such as video games or Internet fora (Hernandez et al., 2020).

BIPOC

BIPOC stands for Black, Indigenous, and people of color. Pronounced “bye-pock,” this is a term specific to the United States, intended to center the experiences of Black and Indigenous groups and demonstrate solidarity between communities of color (YWCA, 2022).

Blockchain

A cryptographic or encoded ledger comprising a digital log of transactions shared across a network (Hernandez et al., 2020).

Cis-gender

Of, relating to, or being a person, whose sense of personal identity and gender corresponds with the sex the person had or was identified as having at birth. The prefix 'cis' simply means "on the same side as" (Merriam-Webster, n.d.-a).

CGI

(Computer-Generated Imagery) Application of computer graphics to create or contribute to images, most commonly used to refer to 3D computer graphics (Hernandez et al., 2020).

Colonization

Colonization can be defined as some form of invasion, dispossession, and subjugation of a people. The invasion need not be military; it can begin—or continue—as geographical intrusion in the form of agricultural, urban, or industrial encroachments. The result of such incursion is the dispossession of vast amounts of lands from the original inhabitants. This is often legalized after the fact. The long-term result of such massive dispossession is institutionalized inequality. The colonizer/colonized relationship is by nature an unequal one that benefits the colonizer at the expense of the colonized. Ongoing and legacy colonialism impact power relations in most of the world today. For example, white supremacy as a philosophy was developed largely to justify European colonial exploitation of the Global South (including

enslaving African peoples, extracting resources from much of Asia and Latin America, and enshrining cultural norms of whiteness as desirable both in colonizing and colonizer nations) (Ross et al., 1982; Smith, 2012).

Color blindness

Color blindness (sometimes spelled colour-blindness; also called race blindness) is a sociological term based upon the idea that racial group membership and race-related distinctions should not be considered while making decisions, forming impressions, and acting out actions (Apfelbaum et al., 2012). This ideology claims that the best approach to stop prejudice is to treat everyone equally, regardless of color, culture, or origin. On the surface, color blindness appears to be a positive approach towards. It emphasizes the things that humans have in common, such as their humanity. However, color blindness alone is insufficient to repair racial damages on a national or personal scale.

In a society with color blind beliefs, white individuals who are unwilling to face potential obstacles related to one's race can effectively disregard racism, rationalize the current social order, and feel more comfortable with their comparatively privileged social status. Color blind beliefs, on the other hand, are experienced quite differently by many people of color who are routinely hampered by race. Color blindness creates a culture that rejects negative racial experiences, degrades cultural heritage, and invalidates diverse viewpoints (Williams, 2011).

Cultural Appropriation

Theft of cultural elements—including symbols, art, language, customs, etc.—for one’s own use, commodification, or profit, often without understanding, acknowledgement, or respect for its value in the original culture. Results from the assumption of a dominant (i.e., white) culture’s right to take other cultural elements (COR Archive, n.d.-a).

Cultural Racism

The term “cultural racism” refers to ideas, attitudes, and narratives that convey the idea that white people’s or “whiteness” behaviors and values are automatically “better” or more “natural” than those associated with other racially defined groups. Cultural racism may be found in advertisements, movies, books, conceptions of patriotism, as well as policies and regulations. Cultural racism also has a strong influence on the survival of systems of internalized supremacy and racism. It accomplishes this through shaping societal attitudes about what constitutes proper conduct, what is considered beautiful, and the value put on different kinds of expression (Racial Equity Tools, n.d.).

Back in 1954, an American psychologist, author of the Theory of Personality Traits, Gordon Allport, wrote that Cultural Racism arises when “one group declares its claim to determine cultural values for the whole society”(Allpor, 1954). The idea that allusively constructed differentiations (not based on assigned physical traits) among social groups provide a rational

justification for racial and ethnic superiority – such as white supremacy – and therefore incorrectly justify the unequal relations of political and economic power is the core of the cultural racism concept (Chua, 2017).

Culture

A social system of meaning and custom formed by a group of people in order to ensure their adaptation and survival. These groups are distinguished by an unwritten set of norms and rules that determine values, beliefs, habits, ways of thinking, actions, and communication styles (IDR/PC, 2000).

DApp

Decentralised Application (dApp), An application that runs on a network in a distributed fashion with participant information securely (and possibly pseudonymously) protected and operation execution decentralized across network nodes (Hernandez et al., 2020).

DAOs

Distributed Autonomous Organisations, an organisational form governed by smart contracts rather than a central authority, which some see as a digital successor to co-operatives and trade unions (Gilbert, 2022).

Decentralization

A hard-to-quantify measure of a network’s resistance to attack, a function of how broadly control is distributed among different actors (Hernandez et al., 2020).

Decolonization

Decolonization is described as active opposition to colonial powers. It is about “cultural, psychological, and economic freedom” for Indigenous people with the goal of achieving Indigenous sovereignty — the right and ability of Indigenous people to practice self-determination over their land, cultures, and political and economic systems (Belfi & Sandiford, 2021). This process occurs politically and also applies to personal and societal psychic, cultural, political, agricultural, and educational deconstruction of colonial oppression. Decolonization demands an Indigenous framework and a centering of Indigenous land, Indigenous sovereignty, and Indigenous ways of thinking (Eric Ritskes, 2012).

Discrimination

The unequal treatment of members of various groups based on race, gender, social class, sexual orientation, physical ability, religion and other categories (IDR/PC, 2000). Discrimination especially occurs when individuals or groups are unfairly treated in a way which is worse than other people are treated, on the basis of their actual or perceived membership in certain groups or social categories (American Psychological Association, 2019; Cambridge Dictionary, n.d.).

Diversity wheel

A definition that gained popularity in the early 1990s as the fledgling diversity industry took off. Marilyn Loden, the creator of the model, saw the need for a tool that would help people better understand how group-based differences

contribute to people's social identities. “I wanted to identify the differences that make a major difference,” she explains, “... to show which dimensions of diversity are important in people's lives, acknowledge their power so that people who wanted to talk about them would be supported by the model.” The original version of the Diversity Wheel appeared in Marilyn Loden and Judy Rosener's book, *Workforce America! Managing Employee Diversity as a Vital Resource* (Loden & Rosener, 1991).

Ethnicity

A social construct that divides people into smaller social groups based on characteristics such as shared sense of group membership, values, behavioral patterns, language, political and economic interests, history, and ancestral geographical base. Examples of different ethnic groups are Cape Verdean, Haitian, African American (Black); Chinese, Korean, Vietnamese (Asian); Cherokee, Mohawk, Navaho (Native American); Cuban, Mexican, Puerto Rican (Latino); Polish, Irish, and Swedish (White) (Maurianne. Adams & Bell, 2016).

Gender Expression

Refers to an individual's presentation — including physical appearance, clothing choice and accessories, hairstyles, voice, or body characteristics — and behavior that communicates aspects of gender or gender role. Gender expression may or may not conform to a person's gender identity (APA & NASP, 2014).

Gender identity

An individual's self-conception as a man or woman or as a boy or girl or as some combination of man/boy and woman/girl or as someone fluctuating between man/boy and woman/girl or as someone outside those categories altogether. It is distinguished from actual biological sex—i.e., male or female (Britannica, n.d.-a).

Gender Pronouns

Gender pronouns are the terms people choose, either when they are referring to themselves or when they are being referred to, that reflect their gender identity. People may identify with genders that are different from sex assigned at birth, only the person themselves can determine what their gender identity is, and this can change over time. There are many gender pronouns that people choose to use but common ones are she/her, he/his and they/them.

People who identify outside of a gender binary most often use non-gendered or nonbinary pronouns that are not gender specific. While she/her and he/his are commonly associated with female/feminine and male/masculine, labels such as this should try to be avoided as not everyone who uses she feels female or feminine for example. They/them in the singular form on the other hand has become commonly adopted as a gender-neutral pronoun, allowing people to describe themselves without explicitly associating gender with their identity. While these are the most commonly used pronouns there are many more pronouns that people

might choose to use, and some people may choose to use more than one. These include ze (pronounced "zee") in place of she/he, and hir (pronounced "here") in place of his/him/her. These pronouns may or may not match their gender expression, such as how the person dresses, looks, behaves or what their name is (Hosking, 2021).

Global North and South

The concept of a gap between the Global North and the Global South in terms of development and wealth.

Implicit Bias

Implicit biases, also known as unconscious or hidden biases, are negative associations that people unknowingly hold. They are expressed automatically and without conscious thought. Many studies have found that implicit biases influence people's attitudes and actions, resulting in real-world consequences, even if people are not aware that they have those biases.

Notably, implicit biases have been shown to override people's stated commitments to equality and fairness, resulting in behaviors that differ from the explicit attitudes that many people profess. The Implicit Association Test (IAT) is usually used to measure implicit biases regarding race, gender, sexual orientation, age, religion, and other topics (Staats, 2013).

Inclusive society

An inclusive society is a society that over-rides differences of race, gender, class, generation, and geography, and ensures inclusion, equality of opportunity as well as capability of all members of the society to determine an agreed set of social institutions that govern social interaction (UNDESA, 2008).

Indigeneity

Indigenous populations are composed of the existing descendants of the peoples who inhabited the present territory of a country wholly or partially at the time when persons of a different culture or ethnic origin arrived there and, by conquest, settlement, or other means, reduced them to a non-dominant or colonial condition; who today live more in conformity with their particular social, economic, and cultural customs and traditions than with the institutions of the country of which they now form part, under a State structure which incorporates mainly national, social, and cultural characteristics of other segments of the population which are predominant (Martínez Cobo, 1972).

Intersectionality

The interconnected nature of social categorizations such as race, class, disability, religion, sexual orientation, and gender identity as they apply to a given individual or group. Intersectional identities create overlapping and interdependent systems of discrimination or disadvantage (Oxford English Dictionary,

n.d.). The term was coined in 1989 by lawyer, civil rights activist, and legal scholar Kimberlé Crenshaw to describe the “various ways in which race and gender intersect in shaping structural and political aspects of violence against women of color”(Crenshaw, 1991).

IRL

Abbreviation for the phrase 'In Real Life'. Used to differentiate reality from something that happens in virtual realities, such as games or social media (Hernandez et al., 2020).

Marginalization

A social process by which individuals or groups are (intentionally or unintentionally) distanced from access to power and resources and constructed as insignificant, peripheral, or less valuable/privileged to a community or “mainstream” society. This term describes a social process, so as not to imply a lack of agency. Marginalized groups or people are those excluded from mainstream social, economic, cultural, or political life. Examples of marginalized groups include, but are by no means limited to, groups excluded due to race, religion, political or cultural group, age, gender, or financial status. To what extent such populations are marginalized, however, is context specific and reliant on the cultural organization of the social site in question (Given,2008).

Microaggression

The everyday verbal, nonverbal, and environmental slights, snubs, or insults, whether

intentional or unintentional, which communicate hostile, derogatory, or negative messages to target persons based solely upon their marginalized group membership (Sue, 2010).

Minority

A culturally, ethnically, or racially distinct group that coexists with but is subordinate to a more dominant group. As the term is used in the social sciences, this subordinacy is the chief defining characteristic of a minority group. Minority status does not necessarily correlate to population. In some cases one or more so-called minority groups may have a population many times greater than the dominating group (Britannica, n.d.-b). To be minoritized means to be pushed to the margins often by means out of your own control (Paniagua, 2015).

The term Minoritized was coined by Yasmin Gunaratnam (Gunaratnam, 2003) to be used instead of the term "Minority" to highlight the social oppression that minoritizes individuals, i.e. it conveys that people are actively minoritized by other people and dominant power structures rather than naturally existing as a minority in and of themselves.

Misogyny

The extreme form of sexist ideology is misogyny, the hatred of women. A society in which misogyny is prevalent has high rates of brutality against women—for example, in the forms of domestic violence, rape, and the commodification of women and their bodies.

Where they are seen as property or as second-class citizens, women are often mistreated at the individual as well as the institutional level such as the gender pay gap, the harassment of women in the workplace and the ways in which women are treated and objectified in the media (Britannica, n.d.-f).

While all women experience misogyny it's important to understand that trans women experience misogyny differently from cisgender women. Trans women and feminine presenting trans people experience misogyny because of the way appear as well as being discriminated against because of the perception that they have "given up one's position as a (biological) man" in society which poses a "fundamental threat to male superiority and may be seen as a rejection of the "superior male identity." This phenomenon is known as transmisogyny (Kacere, 2014).

According to sociologist Allan G. Johnson, "misogyny is a cultural attitude of hatred for females because they are female". Johnson argues that: "Misogyny is a central part of sexist prejudice and ideology and, as such, is an important basis for the oppression of females in male-dominated societies. Misogyny is manifested in many different ways, from jokes to pornography to violence to the self-contempt women may be taught to feel toward their own bodies" (Johnson, 2000).

Misandry

Offered as the societal counterpoint to misogyny. Misandry is an active dislike of,

contempt for, or ingrained prejudice against men and masculinity (ODO, n.d.). Misandry can come in many forms from prejudice towards the male gender, to sexual objectification, social exclusion and violence against men. Sociologist Allan G Johnson argues in his book, *The Gender Knot: Unraveling our Patriarchal Legacy*, that men have used accusations of misandry to put down feminists and reinforce a male-dominated culture.

MMOs/ MMOGs

Massively Multiplayer Online Games an online video game which can be played by a very large number of people simultaneously (Gilbert, 2022).

Multiculturalism

Acknowledges and promotes the acceptance and understanding of different cultures living together within a community. As such, multiculturalism promotes the productive coexistence of different races, ethnicities, and other cultural groups in a given social environment. (Loden, 1996) That acknowledgment can take the forms of recognition of contributions to the cultural life of the political community as a whole, a demand for special protection under the law for certain cultural groups, or autonomous rights of governance for certain cultures. Multiculturalism is both a response to the fact of cultural pluralism in modern democracies and a way of compensating cultural groups for past exclusion, discrimination, and oppression (Britannica, n.d.-c).

NFTs

A non-fungible token is a non-interchangeable unit of data stored on a blockchain, a form of digital ledger, that can be sold and traded. Types of NFT data units may be associated with digital files such as photos, videos, and audio.

Non-binary

Is an umbrella term that includes those whose gender identity falls between or outside male and female categories; as a person who can have an experience of gender that blends elements of being masculine or feminine, at different times, or someone who has an experience of gender that exists outside of being masculine or feminine entirely (Matsuno & Budge, 2017). Some individuals identify with a gender identity that is opposite of their sex assigned at birth. Others identify as neither, both, or somewhere in between female or male. Many use the word "non-binary" to describe this identity; it is not a fixed category but one that is inclusive of a range of identities (OUT & EQUAL, 2018).

Open Source

Denoting software for which the original source code is made freely available and may be redistributed and modified (Hernandez et al., 2020).

Oppression

An unwanted pattern of subjugation, persecution, domination, abuse and exploitation

which consciously or unconsciously undermines freedom and liberty. Oppression can be employed physically, politically, institutionally, and/or economically by one racial group over another (or others) (IDR/PC, 2000).

Prejudice

A pre-judgment or unjustifiable, and usually negative, attitude of one type of individual or groups toward another group and its members. Such negative attitudes are typically based on unsupported generalizations (or stereotypes) that deny the right of individual members of certain groups to be recognized and treated as individuals with individual characteristics (IDR/PC, 2000).

Privilege

Unearned social power accorded by the formal and informal institutions of society to ALL members of a dominant group (e.g. white privilege, male privilege, etc.). Privilege is usually invisible to those who have it because we are taught not to see it, but nevertheless it puts them at an advantage over those who do not have it (COR Archive, n.d.-b).

Race

The socially constructed idea that the human species is divided into distinct groups on the basis of arbitrary physical characteristics. Genetic studies in the late 20th century disproved the existence of biogenetically distinct races, and scholars now argue that “races” are cultural interventions reflecting particular attitudes and beliefs that were imposed on

different populations in the course of the Western European conquests beginning in the 15th century (Britannica, n.d.-d).

What “RACE—The Power of an Illusion” (Adelman, 2003) has done is to help clear away the biological myths and misconceptions about race we all hold through a three-part documentary series asking a primary question rarely raised: What is this thing called “Race”? The study’s findings were that many conventional assumptions about race—for instance, that the world’s peoples can be classified biologically along racial lines—are wrong. However, the costs of racism are actual and can even have biological consequences.

Racism

An ideological system of oppression and subjugation, held consciously or otherwise, based upon unfounded beliefs about racial and ethnic inequality. This system of oppression is based on a view that an arbitrary set of physical characteristics, such as skin color, facial form or eye shape, are associated with or even determine behavior, culture, intellect or social achievement (IDR/PC, 2000) and that some races are innately superior to others. The term is also applied to political, economic, or legal institutions and systems that engage in or perpetuate discrimination on the basis of race or otherwise reinforce racial inequalities in wealth and income, education, health care, civil rights, and other areas. Such institutional, structural, or systemic racism became a particular focus of scholarly investigation in the 1980s with the emergence of critical race theory, an offshoot of the critical legal studies movement. Since the

late 20th century, the notion of biological race has been recognized as a cultural invention, entirely without scientific basis (Britannica, n.d.-e).

Social Integration

Social integration is understood as a dynamic and principled process of promoting the values, relations and institutions that enable all people to participate in social, economic, cultural and political life on the basis of equality of rights, equity and dignity. It is the process in which societies engage in order to foster societies that are stable, safe and just – societies that are based on the promotion and protection of all human rights, as well as respect for and value of dignity of each individual, diversity, pluralism, tolerance, non-discrimination, non-violence, equality of opportunity, solidarity, security, and participation of all people, including disadvantaged and vulnerable groups and persons (UNDESA, 2009).

Social Inclusion

Social exclusion is understood as the condition (barriers and process) that impede social inclusion. Social exclusion is a process through which individuals or groups are wholly or partially excluded from fully participating in all aspects of life of the society, in which they live, on the grounds of their social identities, such as age, gender, race, ethnicity, culture or language, and/or physical, economic, social disadvantages. Social exclusion may mean the lack of voice, lack of recognition, or lack of capacity for active

participation. It may also mean exclusion from decent work, assets, land, opportunities, access to social services and/or political representation (UNDESA, 2009).

Social Cohesion

Social cohesion refers to the elements that bring and hold people together in society. In a socially cohesive society all individuals and groups have a sense of belonging, participation, inclusion, recognition and legitimacy. Social cohesive societies are not necessarily demographically homogenous. Rather, by respecting diversity, they harness the potential residing in their societal diversity (in terms of ideas, opinions, skills, etc.). Therefore, they are less prone to slip into destructive patterns of tension and conflict when different interests collide (UNDESA, 2009).

Social Participation

Social participation is understood as the act of engaging in society's activities. It refers to the possibility to influence decisions and have access to decision-making processes. Social participation creates mutual trust among individuals, which forms the basis for shared responsibilities towards the community and society (UNDESA, 2009).

Transgender

Transgender is an umbrella term for persons whose gender identity, gender expression or behavior does not conform to that typically associated with the sex to which they were assigned at birth. "Trans" is sometimes used as

shorthand for “transgender”. Trans people may fall within a binary gender (woman or man) or be non-binary and not fit within either of these two categories. While some trans people choose to medically transition from the sex they were assigned at birth this is not a requirement of being trans. Transition for some trans people might mean simply occupying the gender they identify with through their appearance and actions (American Psychological Association, 2014).

Tokenism

The practice of making only a perfunctory or symbolic effort (such as hiring a person who belongs to a group in society who are often treated unfairly) only to prevent criticism and give the appearance of racial or gender equality. (Merriam Webster, n.d.).

Tokens

Piece of data that stands in for a valuable and more abstract piece of information, which can represent any form of asset (Hernandez et al., 2020).

Virtual Reality

Computer-generated simulation of a three-dimensional image or environment that can be interacted with in a seemingly real or physical way by a person using special electronic equipment (Hernandez et al., 2020).

White supremacy

The idea (ideology) that white people and the ideas, thoughts, beliefs, and actions of white

people are superior to People of Color and their ideas, thoughts, beliefs, and actions. While most people associate white supremacy with extremist groups like the Ku Klux Klan and the neo-Nazis, white supremacy is ever present in our institutional and cultural assumptions that assign value, morality, goodness, and humanity to the white group while casting people and communities of color as worthless (worth less), immoral, bad, and inhuman and “undeserving.” Drawing from critical race theory, the term “white supremacy” also refers to a political or socio-economic system where white people enjoy structural advantage and rights that other racial and ethnic groups do not, both at a collective and an individual level (DRWorks, n.d.).

Xenophobia

Any attitude, behavior, practice, or policy that explicitly or implicitly reflects the belief that immigrants are inferior to the dominant group of people. Xenophobia is reflected in interpersonal, institutional, and systemic levels oppression and is a function of White supremacy (Cokorinos, 2007).



FIGURES

FIGURE 1. DEI trinity

Medium. (2019). Belonging: A Conversation about Equity, Diversity, and Inclusion | by Krys | . <https://medium.com/@krysburnette/its-2019-and-we-are-still-talking-about-equity-diversity-and-inclusion-dd00c9a66113>

FIGURE 2. Diversity wheel

Loden, M. (1996). Implementing diversity.

FIGURE 3. Intersectionality, an illustration of the many forms of identities

The World Bank. (2013). INCLUSION MATTERS. THE FOUNDATION FOR SHARED PROSPERITY. <https://documents1.worldbank.org/curated/en/114561468154469371/pdf/Inclusion-matters-the-foundation-for-shared-prosperity.pdf>

FIGURE 4. A visual representation of the matrix of domination

Goodwill, M. (1969). Beyond Good Intentions: Towards a Power Literacy Framework for Service Designers. *Journal of the American Planning Association*, 35(4), 216–224. <https://doi.org/10.1080/01944366908977225>

FIGURE 5. Levels involved in a social inclusion process

UNDESA. (2009). Creating an Inclusive Society: Practical

Strategies to Promote Social Integration. In The Division for Social Policy and Development (DSPD) of the Department of Economic and Social Affairs (DESA) in collaboration with the Ministry of Employment and Social Welfare of the Government of Ghana. <https://www.un.org/esa/socdev/egms/docs/2009/Ghana/inclusive-society.pdf>

FIGURE 6. Social inclusion domains

The World Bank. (2013). INCLUSION MATTERS. THE FOUNDATION FOR SHARED PROSPERITY. <https://documents1.worldbank.org/curated/en/114561468154469371/pdf/Inclusion-matters-the-foundation-for-shared-prosperity.pdf>

FIGURE 7. Levels involved in a social inclusion process

UNDESA. (2009). Creating an Inclusive Society: Practical Strategies to Promote Social Integration. In The Division for Social Policy and Development (DSPD) of the Department of Economic and Social Affairs (DESA) in collaboration with the Ministry of Employment and Social Welfare of the Government of Ghana. <https://www.un.org/esa/socdev/egms/docs/2009/Ghana/inclusive-society.pdf>

FIGURE 8. Industry 4.0 framework and contributing digital technologies Cloud

PwC Global Industry 4.0 Survey. (2016). Industry 4.0: Building the digital enterprise. www.pwc.com

FIGURE 9. Sears Catalog April 1975. 'Show up in a bikini that fits from top to bottom.'

Just Seventeen. (2020). April 1975. 'Show up in a bikini that fits from... <https://justseventeen.tumblr.com/post/614657313581744128/april-1975-show-up-in-a-bikini-that-fits-from>

FIGURE 10. Sunny Harnett: Photographed by Irving Penn, Vogue, September, 1952, hourglass silhouette

Vogue. (2016). A Brief History of Fashionable Postures | . [https://www.vogue.com/article/history-fashion-posture-balenciaga-](https://www.vogue.com/article/history-fashion-posture-balenciaga)

FIGURE 11. Standard sized mannequins in a fashion house

Glam Observer. (2020). How to make the most out of your fashion school to get a job in fashion - . <https://glamobserver.com/how-to-make-the-most-out-of-your-fashion-school-to-get-a-job-in-fashion/>

FIGURE 12. Chanel dress fitting on a model aligned by eurocentric standards

Elle magazine. (2013). Inside Chanel Trailer - Coco Chanel Movie Series. <https://www.elle.com/fashion/news/a23650/chanel-series-trailer/>

FIGURE 13. Dior haute couture show, Spring/Summer 2018 in Shanghai

Photo: Sophie Carre

Vogue France. (2018). The making of the pleated dress from the Dior haute couture show, step by step | . <https://www.vogue.fr/fashion/fashion-inspiration/diaporama/la-robe-plissee-du-defile-dior-haute-couture-step-by-step/50024>

FIGURE 14. Behind-the-scenes at Dolce & Gabbana's Alta Moda couture collection.

Telegraph. (2013). Inside Dolce & Gabbana's exclusive couture club - . <http://fashion.telegraph.co.uk/news-features/TMG9955048/Inside-Dolce-and-Gabbanas-exclusive-couture-club.html>

FIGURE 15. Chromat Debuted Sample Size T-Shirt At Spring NYFW 2019

CHROMAT. (n.d.). Sample Size T. Retrieved April 10, 2022, from <https://chromat.co/products/sample-size-t>

FIGURE 16. Ester Manas Fall 2022 Ready-to-Wear Fashion Show-Paris

Vogue. (2022). Ester Manas Fall 2022 Ready-to-Wear Collection | . <https://www.vogue.com/fashion-shows/fall-2022-ready-to-wear/ester-manas>

FIGURE 17. Dress By Gucci, Fishnet Top (Worn Underneath) By Kozaburo, Necklace By Arielle De Pinto photo by MATTHEW TAMMARO

them. (2018). This Disabled Trans Model Is Taking Over the Fashion World | . https://www.them.us/story/aaron-philip-fashion-and-disability?mbid=n_l_themweekly

FIGURE 18. Skin tone diversity, Photo by Michelle Van Dijk

Pinterest. (n.d.). — celebswhogetslepton: Gideon Allen and Sanele Xaba... Retrieved April 10, 2022, from <https://seawitchedd.tumblr.com/post/623466489827196928/gideon-allen-and-sanele-xaba-photo-by-michelle-van>

FIGURE 19. Mama Cax in Chromat's fall 2019 showPhoto: Indigital.tv

Vogue. (2021). Fashion's Inclusivity Movement Is Missing Adaptive Fashion for Disabled People | . <https://www.vogue.com/article/whats-missing-in-inclusivity-movement-adaptive-fashion-disabled-community>

FIGURE 20. Photographed by Emma Lightbown celebrating body diversity

Emma Lightbown Styling. (2020). tonal — blog — . <https://www.fashionstylist.uk/blog/tag/tonal>

FIGURE 21. Donyale Luna, First Black Supermodel

The Zeal Life. (2019). A Brief History of Black Inclusion in Fashion: Inclusivity is Important, But Ownership is Indispensable - . <https://www.thezeallife.com/index.php/2019/07/24/black-fashion-and-ownership/>

FIGURE 22. Humanae project, by artist Angélica Dass taken from almost 4,000 volunteers and matched with the industrial pallet Pantone®

Angélica Dass. (n.d.). Humanae — Angélica Dass. Retrieved April 10, 2022, from <https://angelicadass.com/photography/humanae/>

FIGURE 23. Photographed by Tyler Mitchell, Vogue, September 2018

Vogue. (2018). Beyoncé September Issue in Her Own Words: Her Life, Her Body, Her Heritage | Vogue. <https://www.vogue.com/article/beyonce-september-issue-2018>

FIGURE 24. Dany Levy in Loewe and Cartier at the 2021 Met Gala BY JOHN SHEARER/GETTY IMAGES.

Vanity Fair. (2021). Met Gala 2021 Red Carpet: Inside 'Schitt's Creek' Star Dan Levy's Debut Look | . <https://www.vanityfair.com/style/2021/09/met-gala-2021-dan-levy->

loewe-superhero-debut-look

FIGURE 25. Sasha Velour au défilé Opening Ceremony's SS19 show photo by Fernanda Calfat

Vogue France. (2020). Fashion and queer culture | . <https://www.vogue.fr/fashion/article/queer-icons-shaping-fashion-culture>

FIGURE 26. Cara Delevingne walks the runway at Burberry's Spring/Summer 2018 Show wearing a rainbow faux fur cape Photo by SAMIR HUSSEIN

HuffPost Life. (2019). Iconic LGBTQ Moments From Some Of Fashion's Biggest Runways | . https://www.huffpost.com/entry/lgbtq-runway-moments_L5d07adf1e4b0f5338d4112bb

FIGURE 27. Pierre Davis and Arin Hayes, founders of No Sesso

WWD. (2020). Designers Open Up on LGBTQ Rights Movement, Charting a Path Forward – . <https://wwd.com/fashion-news/fashion-features/designers-lgbtq-rights-movement-baja-east-chromat-no-sesso-rafe-laquan-smith1234641271-1234641271/>

FIGURE 28. Insieme Jewelry , Handmade jewelry brand

Instagram. (n.d.). Insieme Jewelry (@insieme.jewelry) • Instagram photos and videos. Retrieved April 10, 2022, from <https://www.instagram.com/insieme.jewelry/>

FIGURE 29. The Prevalence of Age Diversity on the Fall/Winter 2022 Valentino Runway

L'official. (2022). The Prevalence of Age Diversity on the Fall/Winter 2022 Runways – Body Diversity Plus-Size. <https://www.lofficielusa.com/fashion/age-diversity-fall-winter-2022-runway-valentino-plus-size-body-diversity>

FIGURE 30. Valentino haute couture spring/summer 2022. Alessandro Lucioni

British Vogue. (2022). "I Want To Embrace Different Proportions": Pierpaolo Piccioli's Body Diverse Valentino SS22 Haute Couture Show | . <https://www.vogue.co.uk/fashion/article/valentino-haute-couture-ss22>

FIGURE 31. HANA TAJIMA x UNIQLO 2020 Spring/Summer

Eluxe Magazine. (2021). What Is Modest Fashion? And Should You Embrace It? - Eluxe Magazine. <https://eluxemagazine.com/fashion/what-is-modest-fashion-and-should-you-embrace-it/>

FIGURE 32. HANA TAJIMA x UNIQLO 2020 Spring/Summer

UNIQLO US. (2020). HANA TAJIMA 2020 Spring/Summer Collection is here! | UNIQLO TODAY | . <https://www.uniqlo.com/us/en/news/topics/2020041501/>

FIGURE 33. Dynamics of identity groups in organizations

CFDA & PVH. (2019). Insider/Outsider: Inclusion & Diversity in the American Fashion Industry. CFDA & PVH. https://s3.amazonaws.com/cfda.f.mrhenry.be/2019/04/ID_Industry_Briefing_11.pdf

FIGURE 34. AREAS OF OPPORTUNITY, Source: Fall 2020 CFDA Diversity, Equity, and Inclusion Survey; N = 1,081 (CFDA and PVH, 2021)

CFDA and PVH. (2021). State of Diversity , Inclusion in Insurance (Issue February).

FIGURE 35. Photograph courtesy of Tiffany Nicholson UNIVERSAL STANDARD

The Sunday Times. (2019). Universal Standard is bringing clothing in sizes 2-44 to the UK, and we got the first look | Style | . <https://www.thetimes.co.uk/article/fashion-women-universal-standard-is-bringing-clothing-in-sizes-2-44-to-the-uk-and-we-got-the-first-look-v2f8ldtv2>

FIGURE 36. Rodarte collaborates with Universal Standard for a size-inclusive line

The Hollywood Reporter. (2019). Rodarte, Universal Standard Launch Size-Inclusive Fashion Line – . <https://www.hollywoodreporter.com/news/general-news/rodarte-universal-standard-launch-size-inclusive-fashion-line-1200507/>

FIGURE 37. Tommy Hilfiger Adaptive collection

Dazed. (2018). Tommy Hilfiger's new campaign celebrates strength in disability | . <https://www.dazeddigital.com/fashion/article/41868/1/tommy-hilfiger-independence-campaign-disability-fashion-adaptive-collection>

FIGURE 38. Tommy Hilfiger SHORTS CHINO ADAPTIVE REGULAR FIT, magnetic closure, and adjustable waist

Tommy Hilfiger® IT. (n.d.). Collezione uomo Tommy Adaptive | . Retrieved April 11, 2022, from <https://it.tommy.com/tommy-adaptive-uomo>

FIGURE 39. Tommy Hilfiger JEANS ADAPTIVE RELAXED FIT, magnetic closure

Tommy Hilfiger® IT. (n.d.). Collezione uomo Tommy Adaptive | . Retrieved April 11, 2022, from <https://it.tommy.com/tommy-adaptive-uomo>

com/tommy-adaptive-uomo

FIGURE 40. The finale of the Tommy Hilfiger x Zendaya show

Carmon Report. (2019). Zendaya Just Had Her First Runway Show With Tommy Hilfiger & It Featured All Black Models - . <https://carmonreport.com/fashion/zendaya-just-had-her-first-runway-show-with-tommy-hilfiger-it-featured-all-black-models/>

FIGURE 41. Tommy Hilfiger, Fall 2020 global campaign

Numéro Netherlands. (2020). Tommy Hilfiger shares the new campaign - . <https://www.numeromag.nl/tommy-hilfiger-shares-new-campaign/>

FIGURE 42. Rihanna's Savage X Fenty lingerie pride collection

Glamour UK. (2021). Rihanna's Savage x Fenty Drops First Pride Collection | . <https://www.glamourmagazine.co.uk/gallery/savage-fenty-pride-collection>

FIGURE 43. Savage X Fenty Show Vol. 3 Released via Amazon Prime

Glamour UK. (2021). Rihanna's Savage x Fenty Drops First Pride Collection | . <https://www.glamourmagazine.co.uk/gallery/savage-fenty-pride-collection>

FIGURE 44. Gucci Beauty, The campaign for the new "Mascara l'Obscur", Photographed by DAVID PD HYDE

Dazed Beauty. (2020). Ellie Goldstein is the pioneer for models with Down's Syndrome | . <https://www.dazeddigital.com/beauty/community/article/51003/1/ellie-goldstein-model-gucci-beauty-downs-syndrome-representation>

FIGURE 45. A page from Impact report 2020, Gucci Equilibrium

Gucci Equilibrium impact report 2020. (2020). Impact Report - . <https://equilibrium.gucci.com/impactreport/>

FIGURE 46. Gucci Equilibrium, CHIME initiative

L'officiel. (2020). Gucci Beauty: campaign for greater diversity, inclusiveness and body positivity. <https://www.lofficiel.at/en/beauty/gucci-beauty-campaign-for-greater-diversity-inclusiveness-and-body-positivity>

FIGURE 47. A genderless robe features in the debut collection of The Fabricant Studio

Dezeen. (2021). Season 0 is the debut fashion collection of The Fabricant Studio. <https://www.dezeen.com/2021/11/03/season-0-is-the-debut-fashion->

collection-of-the-fabricant-studio/

FIGURE 48. @lofficielukraine, Art direction and photo: @synchrodogs_official @taniashcheglova @romannoven, Digital fashion: @dressxcom, Digital look: @the_fab_ric_ant

@modya. (2 B.C.E.). Natalia Modenova (@modya) • Instagram photos and videos. <https://www.instagram.com/p/CK8b71mH-b-/>

FIGURE 49. The Stingray Water Puffer | INSTAGRAM @myami.studio

Harper Bazaar. (n.d.). What You Need to Know About Fashion's Entry into the Metaverse. Retrieved April 11, 2022, from <https://harpersbazaar.com.au/fashion-metaverse/>

FIGURE 50. Final Fantasy I pixelated characters

Guest | Final Fantasy Wiki | Fandom. (n.d.). Retrieved April 11, 2022, from https://finalfantasy.fandom.com/wiki/Guest#Final_Fantasy_II

FIGURE 51. Final Fantasy XIII-2 characters wearing pieces from Prada's spring 2012 men's collection

Adrian On Gaming. (2012). The Final Fantasy XIII-2 Prada images: reality vs fantasy | . <https://adrianongaming.wordpress.com/2012/04/04/the-final-fantasy-xiii-2-prada-images-reality-vs-fantasy/>

FIGURE 52. Lightning modeling for Square Enix and Louis Vuitton collaboration wearing items from Luis Vuitton's Spring/Summer 2016 collection

Glamour UK. (2021). Rihanna's Savage x Fenty Drops First Pride Collection | . <https://www.glamourmagazine.co.uk/gallery/savage-fenty-pride-collection>

FIGURE 53. The Sims 1, game profile creation interface

Fandom. (n.d.). The Sims 2: H&M Fashion Stuff | The Sims Wiki | . Retrieved April 11, 2022, from https://sims.fandom.com/wiki/The_Sims_2:_H%26M_Fashion_Stuff

FIGURE 54. The Sims 2: H&M Fashion Stuff and virtual runway

Fandom. (n.d.). The Sims 2: H&M Fashion Stuff | The Sims Wiki | . Retrieved April 11, 2022, from https://sims.fandom.com/wiki/The_Sims_2:_H%26M_Fashion_Stuff

FIGURE 55. The Sims 3: Diesel Stuff Pack, "For

Successful Living”

Multiplayer.it. (2012). The Sims 3: Diesel Stuff Pack - PC - . <https://multiplayer.it/giochi/the-sims-3-diesel-stuff-pack-per-pc.html>

FIGURE 56. The Sims 4 x Moschino, Simmer dressed up in the Moschino Freezer Bunny Hoodie, and Moschino IRL ready-to-wear collection

Electronic Arts. (2019). Presentiamo Moschino x The Sims. <https://www.ea.com/it-it/games/the-sims/the-sims-4/news/moschino-collection>

FIGURE 57. The Sims 4: Gucci Off the Grid, the upper image is the in-game simulation of the garments and space, the bottom image is the IRL editorial campaign

Gucci Stories. (n.d.). A treehouse in the city is the setting for the campaign for new eco-sustainable collection Gucci Off The Grid. Retrieved April 11, 2022, from <https://www.gucci.com/us/en/st/stories/gucci-equilibrium/article/off-the-grid-shoppable>

FIGURE 58. Giorgio Armani's virtual avatar in Armani store in Second Life having live interview with Style.com's Candy Pratts Price

New World Notes: Ophelia's Gaze: Iris explores (and deplores) Armani's official site in Second Life. (n.d.). Retrieved April 12, 2022, from <https://nwn.blogs.com/nwn/2007/10/ophelias-gaze-i.html>

FIGURE 59. Giorgio Armani store in Second Life

Digital Designers In Second Life: Giorgio Armani's Avatar. (n.d.). Retrieved April 12, 2022, from <https://www.trendhunter.com/trends/second-life-armani>

FIGURE 60. Clement Balavoine has created a process called Neuro that lets clothes be completely digitally tailored

Clement Balavoine's Neuro process lets garments be digitally tailored. (n.d.). Retrieved April 12, 2022, from <https://www.dezeen.com/2016/08/14/clement-balavoine-neuro-fashion-collection-digital-printing-tailoring/>

FIGURE 61. The method relies on a combination of several pieces of 3D software, used together to create garments that are fitted on virtual models

Clement Balavoine's Neuro process lets garments be digitally tailored. (n.d.). Retrieved April 12, 2022, from <https://www.dezeen.com/2016/08/14/clement-balavoine-neuro-fashion-collection-digital-printing-tailoring/>

FIGURE 62. Atacac's web shop allows you to see all its garments at once on your specific body type

Atacac | Online shop | Merging the virtual with the real. (n.d.). Retrieved April 12, 2022, from <https://atacac.com/>

FIGURE 63. Bodies of all shapes and sizes modelling Atacac's genderless, organic linen kaftan.

Brands: Step inside fashion disruptor Atacac's new web shop. (n.d.). Retrieved April 12, 2022, from <https://www.the-spin-off.com/news/stories/Brands-Step-inside-fashion-disruptor-Atacacs-new-web-shop-15840>

FIGURE 64. Atacac sharewear no.13 Atacac shares the pattern and 3D-model of some pieces as part of their transparency initiatives

Cat Coat – atacac. (n.d.). Retrieved April 12, 2022, from <https://shop.atacac.com/products/cat-coat>

FIGURE 65. Miquela Sousa, better known by her Instagram handle @lilmiquela

Who is Miquela Sousa? @lilmiquela, explained. (n.d.). Retrieved April 12, 2022, from <https://www.virtualhumans.org/human/miquela-sousa>

FIGURE 66. Calvin Klein campaign, 19-year-old robot Lil Miquela blurs the lines of truth and fiction with Bella Hadid

Bella Hadid Makes Out With Lil Miquela in the New Calvin Klein #MyCalvins Ad. (n.d.). Retrieved April 12, 2022, from <https://www.elle.com/culture/celebrities/a27493112/bella-hadid-lil-miquela-kiss-calvin-klein-mycalvins-ad/>

FIGURE 67. Lilimiquela Instagram profile

Miquela (@lilmiquela) • Instagram photos and videos. (n.d.). Retrieved April 12, 2022, from <https://www.instagram.com/lilmiquela/>

FIGURE 68. Fortnite skins, online video game developed by Epic Games

Fortnite | Nintendo Switch download software | Games | Nintendo. (n.d.). Retrieved April 12, 2022, from <https://www.nintendo.co.uk/Games/Nintendo-Switch-download-software/Fortnite-1388372.html#Overview>

FIGURE 69. Four fan favorite characters dressed in Balenciaga and some Balenciaga signatures with a Fortnite twist

Balenciaga Joins Fortnite in the Metaverse | GQ. (n.d.). Retrieved April 12, 2022, from <https://www.gq.com/story/>

balenciaga-fortnite-collaboration

FIGURE 70. Puffer coat from the 19-piece digital-only Neo-Ex collection

How are Brands adapting to Fashion Digitalization? - VS-LB. (n.d.). Retrieved April 12, 2022, from <https://vs-lb.com/the-digitalization-of-the-fashion-industry-through-the-years/>

FIGURE 71. Carling's digital fashion campaign with CGI Virtual Model Perl

How are Brands adapting to Fashion Digitalization? - VS-LB. (n.d.). Retrieved April 12, 2022, from <https://vs-lb.com/the-digitalization-of-the-fashion-industry-through-the-years/>

FIGURE 72. The 19-piece digital-only Neo-Ex collection

How are Brands adapting to Fashion Digitalization? - VS-LB. (n.d.). Retrieved April 12, 2022, from <https://vs-lb.com/the-digitalization-of-the-fashion-industry-through-the-years/>

FIGURE 73. Carlings' augmented-reality The Last Statement T-shirt

Carlings releases "The Last Statement T-shirt" with slogans viewable in AR. (n.d.). Retrieved April 12, 2022, from <https://www.dezeen.com/2020/01/14/carlings-last-statement-tshirt-political-slogans-ar/>

FIGURE 74. Digital fashion by The Fabricant

The Fabricant | A Digital Fashion House. (n.d.). Retrieved April 12, 2022, from <https://www.thefabricant.com/>

FIGURE 75. PUMA presents a collection in collaboration with the London Central Saint Martins

PUMA presents a collection in collaboration with the London Central Saint Martins. (n.d.). Retrieved April 12, 2022, from <https://www.nssmag.com/en/fashion/21231/puma-central-saint-martins-london-collection/image:235534>

FIGURE 76. Digital fashion by The Fabricant

The Fabricant | A Digital Fashion House. (n.d.). Retrieved April 12, 2022, from <https://www.thefabricant.com/>

FIGURE 77. Iridescence Digi-Couture Dress sold for \$9500 in May 2019

The Fabricant | A Digital Fashion House. (n.d.). Retrieved April 12, 2022, from <https://www.thefabricant.com/>

FIGURE 78. DRESSX

(1141) Pinterest. (n.d.). Retrieved April 12, 2022, from <https://www.pinterest.com/pin/928445279401262452/>

FIGURE 79. DRESSX

DressX annuncia una raccolta di fondi di 2 milioni di dollari. (n.d.). Retrieved April 12, 2022, from <https://fashionunited.it/news/business/dressx-annuncia-una-raccolta-di-fondi-di-2-milioni-di-dollari/2021081822371>

FIGURE 80. Photo Credit: Westend61

Duperron, T. (2021). Op-Ed: The Metaverse Should Be A Beacon Of Diversity - AfroTech. <https://afrotech.com/metaverse-op-ed-ty-duperron>

FIGURE 81. Survey findings from Wunderman Thompson Intelligence report:

(Wunderman Thompson Intelligence, 2021)



REFERENCES

Adams, Maurianne., & Bell, L. A. (2016). Teaching for diversity and social justice (3rd ed.). Taylor and Francis. <https://www.perlego.com/book/2192751/teaching-for-diversity-and-social-justice-pdf>

Adams, P. (2021). How intense interest in NFTs and other collectibles is shaping marketing. Marketing Dive. <https://www.marketingdive.com/news/marketers-rush-to-cash-in-on-collectibles-like-nfts-is-it-a-long-term-stra/610085/>

Adelman, L. (2003). Race: The Power of an Illusion. California Newsreel. <https://www.racepowerofanillusion.org/about/>

Agne, M. (2021). What are digital clothes, and why it's the pandemic product to watch. The Michigan Daily. <https://www.michigandaily.com/arts/what-are-digital-clothes-and-why-its-the-pandemic-product-to-watch/>

Allpor, G. W. (1954). The nature of prejudice. Addison-Wesley Publishing Company.

American Psychological Association. (2014). What does transgender mean? International Journal of Transgenderism. <https://doi.org/10.1080/15532739.2011.700873>

American Psychological Association. (2019). Discrimination: What it is, and how to cope. <https://www.apa.org/topics/racism-bias-discrimination/types-stress>

APA, & NASP. (2014). Standards of Care for the Health of Transsexual, Transgender, and Gender-Nonconforming People, Version 7. American Psychological Association & National Association of School Psychologists. <https://doi.org/10.1080/15532739.2011.700873>

Apfelbaum, E. P., Norton, M. I., & Sommers, S. R. (2012). Racial Color Blindness: Emergence,

Practice, and Implications. *Current Directions in Psychological Science*, 21(3), 205–209. [https://www.hbs.edu/ris/Publication Files/Racial Color Blindness_16f0f9c6-9a67-4125-ae30-5eb1ae1eff59.pdf](https://www.hbs.edu/ris/Publication%20Files/Racial%20Color%20Blindness_16f0f9c6-9a67-4125-ae30-5eb1ae1eff59.pdf)

Arneson, K. (2019). Zendaya Just Showed Everyone How an Inclusive Fashion Show Is Done. *Glamour*. <https://www.glamour.com/story/zendaya-just-showed-everyone-how-an-inclusive-fashion-show-is-done>

Arnett, J. J. (2002). The Psychology of Globalization. *American Psychologist* by the American Psychological Association, 57(10), 774–783. <https://doi.org/10.1037/0003-066X.57.10.774>

Atacac. (n.d.). Atacac | Online shop | Merging the virtual with the real. Retrieved March 3, 2022, from <https://atacac.com/>

Baldwin, R. (2018). If this is Globalization 4.0, what were the other three? | World Economic Forum. World Economic Forum. <https://www.weforum.org/agenda/2018/12/if-this-is-globalization-4-0-what-were-the-other-three/>

Baldwin, R., & Martin, P. (1999). Two Waves of Globalisation: Superficial Similarities, Fundamental Differences (No. 6904). https://www.nber.org/system/files/working_papers/w6904/w6904.pdf

Bardsley, E., & Volquardsen, O. (2020). DIGI-GXL: Meet the digital collective who are changing the course of fashion | LOVE. *The Lovemagazine*. Co.Uk. <https://www.thelovemagazine.co.uk/article/digi-gxl-meet-the-digital-collective-who-are-changing-the-course-of-fashion>

Belfi, E., & Sandiford, N. (2021). Decolonization Series Part 1: Exploring Decolonization. In S. Brandauer and E. Hartman (Eds.). *Interdependence: Global Solidarity and Local Actions*. The Community-based Global Learning Collaborative. <https://globalsolidaritylocalaction.sites.haverford.edu/what-is-decolonization-why-is-it-important/>

Bellini, E. P. (2020). Sustainable fashion: Dress-X's virtual clothes. *Vogue Italy*. <https://www.vogue.it/vogue-talents/article/moda-sostenibile-vestiti-virtuali-intervista-creatrici-ecommerce-dressx>

Bertola, P., & Teunissen, J. (2018). Fashion 4.0. Innovating fashion industry through digital transformation. *Research Journal of Textile and Apparel*, 22(4), 352–369. <https://doi.org/10.1108/RJTA-03-2018-0023>

Bhasin, K. (2016). How Final Fantasy Characters Infiltrated Fashion - Bloomberg. *Bloomberg*. <https://www.bloomberg.com/news/features/2016-02-02/how-final-fantasy-characters-infiltrated-fashion>

Blakemore, E. (2019). Race and ethnicity: How are they different? *National Geographic*. <https://www.nationalgeographic.com/culture/article/race-ethnicity>

Blinder, A. (2006). Offshoring: The Next Industrial Revolution? *Foreign Affairs*, 85(2), 113–128. <https://www.jstor.org/stable/pdf/>

BoF. (2018). Meet Fashion's First Computer-Generated Influencer | BoF. *BoF*. <https://www.businessoffashion.com/articles/media/meeting-fashions-first-computer-generated-influencer-lil-miquela-sousa/>

BoF & McKinsey. (2020). The State of Fashion 2020. In *Business of Fashion* (Vol. 63, Issue 12). <https://www.businessoffashion.com/articles/luxury/the-state-of-fashion-2019>

BoF & McKinsey. (2021). The State of Fashion 2021.

BoF & McKinsey. (2022). The State of Fashion 2022. https://www.mckinsey.com/~media/mckinsey/industries/retail/our_insights/state_of_fashion/2022/the-state-of-fashion-2022.pdf

Bremner, J. (2021). How Adaptive Fashion is Breaking Down Barriers and Ableist Views in the

Industry. Vogue Magazine. <https://en.vogue.me/fashion/adaptive-fashion-brands/>

Britannica. (n.d.-a). gender identity. Britannica Encyclopedia. Retrieved December 11, 2021, from <https://www.britannica.com/topic/gender-identity>

Britannica. (n.d.-b). minority. In Encyclopaedia Britannica. Retrieved December 6, 2021, from <https://www.britannica.com/topic/minority>

Britannica. (n.d.-c). multiculturalism. In Encyclopaedia Britannica. Retrieved December 6, 2021, from <https://www.britannica.com/topic/multiculturalism>

Britannica. (n.d.-d). Race. In Britannica Encyclopedia. Retrieved December 11, 2021, from <https://www.britannica.com/topic/race-human>

Britannica. (n.d.-e). Racism . In Britannica Encyclopedia. Retrieved December 11, 2021, from <https://www.britannica.com/topic/racism>

Britannica. (n.d.-f). sexism. In Encyclopaedia Britannica. Retrieved December 6, 2021, from <https://www.britannica.com/topic/sexism>

Brownlees, J. (2019). What It's Like Shopping As A Disabled Person. Glamour UK. <https://www.glamourmagazine.co.uk/article/shopping-as-a-disabled-woman-real-life-story>

Busatto, C. (2007). Solidary Governance for Creating Inclusive Societies A contribution to the Expert Group Meeting on "Creating Inclusive Society: Practical Strategies to Promote Social Integration." https://www.un.org/esa/socdev/sib/egm%2707/documents/CezarBusatto_finalpaper.pdf

Calandra, C. (2022). Representation in the metaverse. Wunderman Thompson. <https://www.wundermanthompson.com/insight/representation-in-the-metaverse>

Cambridge Dictionary. (n.d.). Discrimination. In Cambridge Dictionaries Online. Retrieved November 30, 2021, from <https://dictionary.cambridge.org/dictionary/english/discrimination>

CFDA & PVH. (2019). Insider/Outsider: Inclusion & Diversity in the American Fashion Industry. CFDA & PVH. https://s3.amazonaws.com/cfda.f.mrhenry.be/2019/04/ID_Industry_Briefing_11.pdf

CFDA and PVH. (2021). State of Diversity , Inclusion in Insurance (Issue February).

Chaplin, M. G. (2021). DressX – Future of Fashion. L'Officiel. <https://www.lofficiel.cy/fashion/dressx-new-fashion-reality>

Chua, P. (2017). Cultural Racism. In The Wiley Blackwell Encyclopedia of Social Theory (pp. 1–3). <https://doi.org/https://doi.org/10.1002/9781118430873.est0079>

Cokorinos, L. (2007). The Racist Roots of the Anti-Immigration Movement. Equal Justice Society Newsletter. <https://www.blackagenda.com/content/racist-roots-anti-immigration-movement>

COR Archive. (n.d.-a). Cultural Appropriation. Colours of Resistance. Retrieved November 29, 2021, from <http://www.coloursofresistance.org/definitions/cultural-appropriation/>

COR Archive. (n.d.-b). Privilege. Colours of Resistance Archive. Retrieved December 6, 2021, from <http://www.coloursofresistance.org/definitions/privilege/>

Crenshaw, K. (1991). mapping the margins: intersectionality, identity politics, and violence against women of color. Stanford Law Review. https://drive.google.com/file/d/1ifzT7WVGj-C7k_f0qiQDSTDxqp7bssK3/view

Creswell, J., & Draper, K. (2019). Black Superstars Pitch Adidas Shoes. Its Black Workers Say

- They're Sidelined. The New York Times. <https://www.nytimes.com/2019/06/19/business/adidas-diversity-employees.html>
- Crook, L. (2021, November 3). The Fabricant Studio "allows anyone to become a digital fashion designer." Dezeen.Com. <https://www.dezeen.com/2021/11/03/the-fabricant-studio-digital-fashion-dezeen-15/>
- Cushing, B., Cabbil, L., Freeman, M., Hitchcock, J., & Richards, K. (2010). *Accountability and White Anti-Racist Organizing: Stories from Our Work*. Roselle, N.J. : Crandall, Dostie & Douglass Books.
- Dainkeh, F. (2020). Revisiting the DEI Acronym . She+ Geeks Out. <https://shegeeksout.com/blog/revisiting-the-dei-acronym/>
- David, A. (2020). Equity and inclusion should be a primary business objective. Here's why. World Economic Forum. <https://www.weforum.org/agenda/2020/09/equity-and-inclusion-should-be-a-primary-business-objective-here-s-why>
- Davis, N., & O'Halloran, D. (2018). The Fourth Industrial Revolution is driving Globalization 4.0 |. World Economic Forum. <https://www.weforum.org/agenda/2018/11/the-fourth-industrial-revolution-is-driving-a-new-phase-of-globalization/>
- DAY, E. (n.d.). Inclusivity in Fashion: How the Industry Became More Diverse in 2018 | Vogue Arabia. 2018. Retrieved November 7, 2021, from <https://en.vogue.me/fashion/news/how-inclusivity-became-a-norm-not-a-buzzword-in-2018/>
- de Neve, J.-E., & Ward, G. (2017). Does Work Make You Happy? Evidence from the World Happiness Report. Harvard Business Review; University of Chicago Press. <https://doi.org/10.1086/681096>
- Deacon, E. H. (2021). Step inside fashion disruptor Atacac's new web shop. The Spin Off Media. <https://www.the-spin-off.com/news/stories/Brands-Step-inside-fashion-disruptor-Atacacs-new-web-shop-15840>
- DIGITALAX. (2021). Meet the Web3 Fashion Anarchists | The Global Designer Network | . Medium. <https://blog.digitalax.xyz/meet-the-web3-fashion-anarchists-the-global-designer-network-1788ed2f4b49>
- Dissrup. (2022). Digital fashion in the metaverse. <https://dissrup.com/editorial/digital-fashion-in-the-metaverse>
- DressX. (n.d.). DRESSX: Panoramica | LinkedIn. LinkedIn. Retrieved March 3, 2022, from <https://www.linkedin.com/company/dressx/>
- DRWorks. (n.d.). Racism Defined: WHITE SUPREMACY. In Dismantling Racism Works (dRworks) web workbook. Retrieved December 11, 2021, from <https://www.dismantlingracism.org/racism-defined.html>
- Dunn, L. (2020). What Is Diversity, Equity & Inclusion (DEI)? InclusionHub . <https://www.inclusionhub.com/articles/what-is-dei>
- Economist. (2020). New technological behaviours will outlast the pandemic | . The Economist. <https://www.economist.com/the-world-ahead/2020/11/16/new-technological-behaviours-will-outlast-the-pandemic>
- Electronic Arts. (2019). Introducing Moschino x The Sims. <https://www.ea.com/games/the-sims/the-sims-4/news/moschino-collection?setLocale=en-us>
- Eric Ritskes. (2012). What is decolonization and why does it matter? | Intercontinental Cry. <https://intercontinentalcry.org/what-is-decolonization-and-why-does-it-matter/>
- Eswaran, V. (2019). The Business Case For Diversity is Now Overwhelming. Here's Why. World Economic Forum. <https://www.weforum.org/agenda/2019/04/business-case-for-diversity-in-the-workplace/>

- Final Fantasy Wiki. (n.d.-a). Clothes. Retrieved March 1, 2022, from <https://finalfantasy.fandom.com/wiki/Clothes>
- Final Fantasy Wiki. (n.d.-b). List of fashion industry collaborations . Final Fantasy Wiki. Retrieved March 2, 2022, from https://finalfantasy.fandom.com/wiki/List_of_fashion_industry_collaborations?so=search#cite_note-1
- Fortnite. (2021). High Digital Fashion Drops into Fortnite with Balenciaga. Fortnite . <https://www.epicgames.com/fortnite/en-US/news/high-digital-fashion-drops-into-fortnite-with-balenciaga>
- Fron, J., Fullerton, T., Morie, J. F., & Pearce, C. (2007). Playing Dress-Up: Costumes, roleplay and imagination. In Philosophy of Computer Games 2007 Conference. University of Modena and Reggio Emilia. <http://www.ludica.org.uk/LudicaDress-Up.pdf>
- Gilbert, S. (2022). Crypto, web3, and the Metaverse. <https://www.bennettinstitute.cam.ac.uk/wp-content/uploads/2022/03/Policy-brief-Crypto-web3-and-the-metaverse.pdf>
- Gilchrist, A. (2016). Industry 4.0 : the industrial internet of things. Apress. <http://proquest.safaribooksonline.com/9781484220474>
- Ginsburg, R. (2022a). A Comprehensive Guide to Web3: The Future of the Internet. NFTNow.Com. <https://nftnow.com/guides/a-comprehensive-guide-to-web3-the-future-of-the-internet/>
- Ginsburg, R. (2022b). DIGITALAX: Revolutionizing the Web3 Fashion Industry. Randy Ginsburg. <https://www.randymginsburg.com/articles/digitalax-revolutionizing-the-digital-fashion-industry>
- Given, L. (2008). The SAGE Encyclopedia of Qualitative Research Methods. <https://doi.org/10.4135/9781412963909 NV - 0>
- Goodwill, M. (1969). Beyond Good Intentions: Towards a Power Literacy Framework for Service Designers. *Journal of the American Planning Association*, 35(4), 216–224. <https://doi.org/10.1080/01944366908977225>
- Grey Swan Guild. (2022). The Future of Diversity, Inclusion, Equity, and Belonging (DIEB): in web3 and the Metaverse | by Grey Swan Guild | Feb, 2022 | Medium. Medium. <https://greyswanguild.medium.com/the-future-of-diversity-inclusion-equity-and-belonging-dieb-in-web3-and-the-metaverse-b34cec90c480>
- Groves, S. (2018). Carlings X Perl - Digital Clothing For Your Digital Body. *NORDIC STYLE MAG*. <https://www.nordicstylemag.com/blog/2018/11/carlings-perl-digital-clothing>
- Gucci. (n.d.). Gucci Off The Grid Custom Created Content Debuts in The Sims 4 Player Community . Retrieved March 2, 2022, from <https://www.gucci.com/us/en/st/stories/article/gucci-off-the-grid-x-the-sims-shoppable>
- Gunaratnam, Y. (2003). Researching race and ethnicity : methods, knowledge, and power. 218.
- Harper Bazaar. (2019). Jeremy Scott launches Moschino x The Sims collaboration. <https://www.harpersbazaar.com/uk/fashion/fashion-news/a27134399/jeremy-scott-moschino-sims-collaboration/>
- Harris, B. (2022). A brief analysis of identity in web3. Medium. <https://medium.com/@bdharris/a-brief-analysis-of-identity-in-web3-274430f257e3>
- Heffernan, V. (2017). Magic and Loss: The Internet as Art. SIMON & SCHUSTER.
- Hernandez, M., Vogelsteller, F., & Sieler, S. (2020). *Blueprint for the New Creative Economies*.
- Hiort, A. (2022). Why Diversity and Inclusivity in Virtual Influencers Matter — . VirtualHumans. Org. <https://www.virtualhumans.org/article/>

why-diversity-and-inclusivity-in-virtual-influencers-matter

Hosking, G. (2021). What are gender pronouns and why is it important to use the right ones? The Conversation UK. <https://theconversation.com/what-are-gender-pronouns-and-why-is-it-important-to-use-the-right-ones-169025>

Huvila, I., Holmberg, K., Ek, S., & Widén-Wulff, G. (2010). Social capital in second life. *Online Information Review*, 34(2), 295–316. <https://doi.org/10.1108/14684521011037007>

IDR/PC. (2000). A Community Builder's Tool Kit. The Institute for Democratic Renewal. <https://books.google.it/books?id=-wIQtwAACAAJ>

IoDF. (2021). My Self, My Avatar, My Identity: Diversity and Inclusivity within Virtual Worlds. In Institute of Digital Fashion. <https://docsend.com/view/wem8e7ppe7gr4mrk>

Jackson, M. (2019). A Brief History of Black Inclusion in Fashion: Inclusivity is Important, But Ownership is Indispensable - The Zeal Life. <https://www.thezeallife.com/index.php/2019/07/24/black-fashion-and-ownership/>

Janssens, M., & Steyaert, C. (2003). Theories of Diversity within Organisation Studies: Debates and Future Trajectories. In *SSRN Electronic Journal* (No. 14; Nota Di Lavoro). Elsevier BV. <https://doi.org/10.2139/SSRN.389044>

Johnson, A. G. (2000). *The Blackwell dictionary of sociology : a user's guide to sociological language*. Blackwell Publishers.

Kacere, L. (2014). Transmisogyny 101: What It Is and What Can We Do About It. <https://everydayfeminism.com/2014/01/transmisogyny/>

Kadiri, Z. (2021). Modest Fashion - Inclusion or Token Statement? The Strand Magazine. <https://www.thestrandmagazine.com/single-post/modest-fashion-inclusion-or-token-statement>

www.thestrandmagazine.com/single-post/modest-fashion-inclusion-or-token-statement

Kapfunde, M. (2021). Digital Fashion, A Solution or A Distraction? *FashNerd*. <https://fashnerd.com/2021/11/digital-fashion-a-solution-or-a-distraction/>

Kearney, M. (1995). The Local and the Global: The Anthropology of Globalization and Transnationalism. *Source: Annual Review of Anthropology*, 24, 547–565. <https://www.jstor.org/stable/2155949>

Keohane, R. O., & Nye, J. S. (2000). Globalization: What's new? what's not? (and so what?). *Foreign Policy*, 118, 104–119. <https://doi.org/10.2307/1149673>

Khan Academy. (n.d.). The Industrial Revolution. Khan Academy. Retrieved March 21, 2022, from <https://www.khanacademy.org/humanities/big-history-project/acceleration/bhp-acceleration/a/the-industrial-revolution>

Kosinski, K. A. (2019). INCLUSIVITY:, DESIGN FOR OVERCOMING, IDENTIFYING AND BARRIERS, THE DESIGN AND SOCIAL CLOTHING, TO ADAPTIVE.

Krentz, M. (2019). Survey: What Diversity and Inclusion Policies Do Employees Actually Want? *Harvard Business Review*. <https://hbr.org/2019/02/survey-what-diversity-and-inclusion-policies-do-employees-actually-want>

Lewis, R. (2022). Daz 3D's Non-Fungible People NFT Collection Celebrates Uniqueness & Inclusivity - *Techcover.com*. <https://techcover.com/2022/02/08/daz-3d-non-fungible-people-uniqueness-inclusivity/>

Loden, M. (1996). *Implementing diversity*.

Loden, M., & Rosener, J. B. (1991). *Workforce America! Managing employee diversity as a vital resource*. Irwin Publishing. https://openlibrary.org/books/OL1883198M/Workforce_America!

Louis Vuitton. (2016). SERIES 4: LIGHTNING - A VIRTUAL HEROINE - News. Louis Vuitton. <https://au.louisvuitton.com/eng-au/articles/series-4-lightning-a-virtual-heroine>

Lutz, S. (2021). Digitalax Is Racing to Build an OS for Digital Fashion in the Metaverse. Decrypt. <https://decrypt.co/84141/digitalax-is-racing-to-build-an-os-for-digital-fashion-in-the-metaverse>

Luxiders. (2021). The Magic of Digital Fashion, Interview with The Fabricant. Luxiders. <https://luxiders.com/the-magic-of-digital-fashion-interview-with-the-fabricant/>

Magdalena, P. (2021). Digital cultural diversity. EPRS | European Parliamentary Research Service.

Makryniotis, T. (2018). Fashion and Costume Design in Electronic Entertainment—Bridging the Gap between Character and Fashion Design. *Fashion Practice*, 10(1), 99–118. <https://doi.org/10.1080/17569370.2017.1412595>

Martínez Cobo, J. R. (1972). Study of the problem of discrimination against indigenous populations :preliminary report /. UN, PP - [New York] : http://digitallibrary.un.org/record/768953/files/E_CN.4_Sub.2_L.566-EN.pdf

Matano, A. (2021). Inclusive fashion is more than just size. The Ticker. <https://theticker.org/3684/opinions/inclusive-fashion-includes-more-than-just-size-inclusivity/>

Mathison, T. (2020). Ageism is a serious issue and we need to start talking about it . *Fashion Journal*. <https://fashionjournal.com.au/fashion/ageism-in-fashion-media/>

Matsuno, E., & Budge, S. L. (2017). Non-binary/ Genderqueer Identities: a Critical Review of the Literature. *Current Sexual Health Reports*, 9(3), 116–120. <https://doi.org/10.1007/s11930-017-0111-8>

McCormick, K. (2007). The Evolution of Diversity. <https://fliphtml5.com/avvl/rllb/basic>

McDowell, M. (2021). These platforms want to be the Farfetch of digital fashion. *Vogue Business*. <https://www.voguebusiness.com/technology/these-platforms-want-to-be-the-farfetch-of-digital-fashion>

McGregor-Smith, R. (2017). Race in the workplace. The McGregor-Smith Review.

McKinsey & Company. (2018). Delivering growth through diversity in the workplace | McKinsey. <https://www.mckinsey.com/business-functions/people-and-organizational-performance/our-insights/delivering-through-diversity>

McKinsey & Company. (2020a). COVID-19 has hit Black Americans hardest. Healing this divide would lift the nation. World Economic Forum. <https://www.weforum.org/agenda/2020/08/covid19-racial-wealth-gap-black-americans/>

McKinsey & Company. (2020b). Diversity wins: How inclusion matters? <https://www.mckinsey.com/featured-insights/diversity-and-inclusion/diversity-wins-how-inclusion-matters>

Merriam Webster. (n.d.). Tokenism. Retrieved December 11, 2021, from <https://business.vanderbilt.edu/news/2018/02/26/tokenism-in-the-workplace/>

Merriam-Webster. (n.d.-a). Cisgender. In Merriam-Webster.com dictionary. Retrieved November 29, 2021, from <https://www.merriam-webster.com/dictionary/cisgender>

Merriam-Webster. (n.d.-b). Diversity Definition & Meaning. Retrieved March 13, 2022, from <https://www.merriam-webster.com/dictionary/diversity>

Merriam-Webster. (n.d.-c). Inclusion Definition & Meaning. In Merriam-Webster. Retrieved March 17, 2022, from <https://www.merriam-webster.com/dictionary/inclusion>

com/dictionary/inclusion

Mjasnikova, K. (2021). Transcending the Physical Body: The Influence of E-Sports on Digital Fashion. In LAP Lambert Academic Publishing.

Moen, M. (2018). Carlings Shares Entirely Digital NEO-EX Collection. PAPER Magazine. <https://www.papermag.com/carlings-neo-ex-2620957136.html?rebelltitem=21#rebelltitem21>

Muter-Hamilton, J. (2020). Interview with the Institute of Digital Fashion: An Emblem for Change – Other day. Otherday.Co.Uk. <https://otherday.co.uk/magazine/2020/7/22/interview-with-the-institute-of-digital-fashion>

Neuro. (n.d.). Neuro. Retrieved March 2, 2022, from <https://www.neuro-studio.com/agency.html>

Nguyen, T. (2022). How digital fashion, the metaverse, and NFTs could change the fashion industry. Vox. <https://www.vox.com/the-goods/22893254/digital-fashion-metaverse-real-clothes>

Nnadi, C. (2018). Meet Tyler Mitchell, the Photographer Who Shot Beyoncé For Vogue's September Issue | Vogue. Vogue Magazine. <https://www.vogue.com/article/tyler-mitchell-beyonce-photographer-vogue-september-issue>

Northrup, D. (2009). GLOBALIZATION IN HISTORICAL PERSPECTIVE. In G. Modelski & R. Denmark (Eds.), WORLD SYSTEM HISTORY (pp. 196–211). Eolss Publishers/UNESCO. <https://www.eolss.net/sample-chapters/c04/e6-94-16.pdf>

Numéro. (2020). Tommy Hilfiger shares the new campaign. Numéro Netherlands. <https://www.numeromag.nl/tommy-hilfiger-shares-new-campaign/>

ODO. (n.d.). Misandry. In Oxford Dictionary Online (ODO). Retrieved December 6, 2021

OUT & EQUAL. (2018). BEST PRACTICES FOR NON-BINARY INCLUSION IN THE WORKPLACE. <https://outandequal.org/wp-content/uploads/2018/11/OE-Non-Binary-Best-Practices.pdf>

Oxford English Dictionary. (n.d.). intersectionality, n. : Oxford English Dictionary. In Oxford English Dictionary. Retrieved November 30, 2021, from <https://www.oed.com/view/Entry/429843>

Pandey, K. (2022). NFTs Metaverse & Web 3.0: Is It Worth Investing In? JUMPSTART. <https://www.jumpstartmag.com/nfts-metaverse-web-3-0-is-it-worth-investing-in-these-buzzwords/>

Paniagua, A. (2015, September 21). Minoritized, not a minority. The Kent Stater, 3. <https://dks.library.kent.edu/?a=d&d=tk20150921-01.2.15&e=-----en-20--1--txt-txIN----->

Peter, A. (2020). Go BTS of the virtual, otherworldly beauty at GCDS's digital fashion show | Dazed Beauty. Dazeddigital.Com. <https://www.dazeddigital.com/beauty/soul/article/50560/1/bts-virtual-otherworldly-beauty-gcds-digital-fashion-show-erin-parsons>

Pinent, L. S. (2019). What is Digital Fashion, by The Fabricant. ThePowerHouse. <https://thepowerhouse.group/digital-fashion-amber-jae-slooten-the-fabricant/>

Postel-Vinay, K. (2020). Globalization 4.0 and New Modes of International Cooperation. International Organisations Research Journal, 15(2), 60–67. <https://doi.org/10.17323/1996-7845>

Pradella, E. (2018). Tommy Hilfiger's new campaign celebrates strength in disability. Dazed. <https://www.dazeddigital.com/fashion/article/41868/1/tommy-hilfiger-independence-campaign-disability-fashion-adaptive-collection>

PwC Global Industry 4.0 Survey. (2016). Industry 4.0: Building the digital enterprise. www.pwc.com

com/industry40

Quack, A. (2021). Digital fashion: a historical perspective. Capture the Flag. <https://www.capturetheflag.today/digital-fashion/>

Racial Equity Tools. (n.d.). Cultural Racism. In Racial Equity Tools. Retrieved November 29, 2021, from <https://www.racialequitytools.org/glossary>

Radoff, J. (2021). Web3, Interoperability and the Metaverse | by Jon Radoff | Building the Metaverse | Medium. Medium.Com. <https://medium.com/building-the-metaverse/web3-interoperability-and-the-metaverse-5b252dc39da>

Riccio, G. (2020). GCDS, fashion makes way for the virtual show | Near future. Futuroprossimo.It. <https://en.futuroprossimo.it/2020/10/gcds-la-moda-fa-largo-alla-sfilata-virtuale/>

Ross, R., Arkel, D. van, Boogaart, E. van den, & Poliakov, L. (1982). Racism and Colonialism: Essays on Ideology and Social Structure. (R. Ross, Ed.; 1st ed.). Springer, Dordrecht. <https://doi.org/https://doi.org/10.1007/978-94-009-7544-6>

Roylance, W. (2019). Davos Was All About Globalization 4.0, So What Does It Mean? Diplomatic Courier. <https://www.diplomaticcourier.com/posts/davos-was-all-about-globalization-4-0-so-what-does-it-mean>

Sabina, R. (2020). Carlings releases "The Last Statement T-shirt" with slogans viewable in AR. Dezeen. <https://www.dezeen.com/2020/01/14/carlings-last-statement-tshirt-political-slogans-ar/>

Salamone, L. (2019). What is digital fashion? Nss Magazine. <https://www.nssmag.com/en/fashion/20094/digital-fashion>

Särmäkari, N. (2021a). "Digital Fashion" on Its Way from Niche to the New Norm. In L. Aliabieva

(Ed.), "The New Normal": Sartorial and Body Practices of the Quarantine Era (pp. 117–134). The New Literary Observer, Fashion Theory Russia.

Särmäkari, N. (2021b). Digital 3D FAtacacashion Designers: Cases of Atacac and The Fabricant. Fashion Theory, 1–30. <https://doi.org/10.1080/1362704X.2021.1981657>

Särmäkari, N., & Vänskä, A. (2020). Open-Source Philosophy in Fashion Design: Contesting Authorship Conventions and Professionalism. In S. Boess, M. Cheung, & R. Cain (Eds.), Synergy - DRS International Conference 2020 (pp. 2410–2426). Design Research Society. <https://doi.org/10.21606/drs.2020.195>

Sault, S. (2020). What you need to know about equity, inclusion and social justice in the workplace. World Economic Forum. <https://www.weforum.org/agenda/2020/10/equity-inclusion-and-social-justice-in-the-workplace/>

Schimminger, M. C. (2022). Diversity Report: Fashion Month Fall 2022. TheFashionSpot. <https://www.thefashionspot.com/runway-news/869507-diversity-report-fashion-month-fall-2022/>

Schwab, K. (2017). The Fourth Industrial Revolution. Crown Publishing Group.

Sharma, G. (2019). Modest fashion goes global as brands jump on the bandwagon. Raconteur. <https://www.raconteur.net/retail/modest-fashion/>

Silver, C. (2020). What Is Web 3.0? Forbes. Com. <https://www.forbes.com/sites/forbestechcouncil/2020/01/06/what-is-web-3-0/?sh=7b70bb7458df>

Sinha, S. (2021). Is the fashion industry age-inclusive? Fashion & Law Journal. <https://fashionlawjournal.com/is-the-fashion-industry-age-inclusive/>

- Smith, A. (2012). 4. Indigeneity, Settler Colonialism, White Supremacy. In D. M. HoSang, O. LaBennett, & L. Pulido (Eds.), *Racial Formation in the Twenty-First Century* (pp. 66–90). University of California Press. <https://doi.org/doi:10.1525/9780520953765-006>
- Staats, C. (2013). STATE OF THE SCIENCE Implicit Bias Review. https://kirwaninstitute.osu.edu/sites/default/files/2019-06/SOTS-Implicit_Bias.pdf
- Stanley, J. (2018). Carlings Releases Digital Clothing Collection. HYPEBEAST. <https://hypebeast.com/2018/11/carlings-digital-clothing-collection-details>
- Subramanian, A., & Kessler, M. (2013). The Hyperglobalization of Trade and Its Future. *Peterson Institute for International Economics*, 13(6). <https://www.piie.com/sites/default/files/publications/wp/wp13-6.pdf>
- Sue, D. W. (2010). Microaggressions: More Than Just Race. *Psychology Today*. <https://www.psychologytoday.com/us/blog/microaggressions-in-everyday-life/201011/microaggressions-more-just-race>
- Tamuli, N. (2020). State of Digital Fashion - Your Majesty Co. <https://yourmajesty.co/article/state-of-digital-fashion>
- The Diigitals. (n.d.). The Diigitals About. The Diigitals.Com. Retrieved April 2, 2022, from <https://www.thediigitals.com/about>
- The Fabricant. (n.d.). The Fabricant | A Digital Fashion House. Retrieved February 26, 2022, from <https://www.thefabricant.com/>
- The Fabricant. (2019). FFROP #4: THE FUTURE IS NOW. The Fabricant. <https://www.thefabricant.com/blog/2019/4/29/ffrop-4-the-future-is-now>
- The Fabricant. (2021). In a digital atelier, there are no secrets. | by The Fabricant | Medium. Medium.Com. <https://the-fab-ric-ant.medium.com/in-a-digital-atelier-there-are-no-secrets-379f03938782>
- The World Bank. (2013). INCLUSION MATTERS. THE FOUNDATION FOR SHARED PROSPERITY. <https://documents1.worldbank.org/curated/en/114561468154469371/pdf/Inclusion-matters-the-foundation-for-shared-prosperity.pdf>
- Therborn, G. (2007). Final Report of the Expert Group Meeting. Dimensions of Inclusion. Final Report of the Expert Group Meeting on Creating an Inclusive Society: Practical Strategies to Promote Social Integration. <https://www.un.org/esa/socdev/sib/egm%2707/documents/reportfinal.pdf>
- Thornn, R. (2021). THE NEW WAY TO USE AND VIEW THE WEB - officialglitchmagazine.com. Official GLITCH MAGAZINE LTD. <https://officialglitchmagazine.com/the-new-way-to-use-and-view-the-web/>
- Tommy Hilfiger. (n.d.). Everyone Welcome – Make It Possible. PVH. Retrieved March 26, 2022, from <https://responsibility.pvh.com/tommy/everyone-welcome/>
- Tran Minh, N., & Ngo Ngan, H. (2021). Digital fashion-An optimal solution for fashion industry during Covid-19 pandemic. *AIP Conference Proceedings* 2406, 020039, 2406. <https://doi.org/10.1063/5.0066478>
- Trend Hunter. (2007). Digital Designers In Second Life: Giorgio Armani's Avatar. <https://www.trendhunter.com/trends/second-life-armani>
- Tuazon, M. F. (2021). 6 Real-Life Brands that Also Exist in the Sims Universe. *Esquire Magazine*. <https://www.esquiremag.ph/culture/tech/sims-high-fashion-brands-a2668-20211104-lfrm>
- Tucker, E. (2016). Clement Balavoine's Neuro

process lets garments be digitally tailored.

Dezeen. <https://www.dezeen.com/2016/08/14/clement-balavoine-neuro-fashion-collection-digital-printing-tailoring/>

Umoh, R. (2020). Google Diversity Report Shows Little Progress For Women And People Of Color. *Forbes*. <https://www.forbes.com/sites/ruthumoh/2020/05/05/google-diversity-report-shows-little-progress-for-women-and-people-of-color/?sh=76420fe7207f>

UNDESA. (2007a). Summary of the E-dialogue On Creating an Inclusive Society: Practical Strategies to Promote Social Integration. <https://www.humiliationstudies.org/documents/UNESCOEdialogueFinal.pdf>

UNDESA. (2007b, September). Final Report of the Expert Group Meeting on Creating an Inclusive Society: Practical Strategies to Promote Social Integration. *Creating an Inclusive Society: Practical Strategies to Promote Social Integration* .

UNDESA. (2008). Expert Group Meeting "Promoting Social Integration." In The Division for Social Policy and Development (DSPD) of the United Nations Department of Economic and Social Affairs (UNDESA) in collaboration with the Government of Finland. https://www.un.org/esa/socdev/social/meetings/egm6_social_integration/documents/AIDEMEMOIRE_REVISED.pdf

UNDESA. (2009). *Creating an Inclusive Society: Practical Strategies to Promote Social Integration*. In The Division for Social Policy and Development (DSPD) of the Department of Economic and Social Affairs (DESA) in collaboration with the Ministry of Employment and Social Welfare of the Government of Ghana. <https://www.un.org/esa/socdev/egms/docs/2009/Ghana/inclusive-society.pdf>

UNESCO. (2000). World culture report 2000: Cultural diversity, conflict and pluralism. <https://unesdoc.unesco.org/ark:/48223/pf0000121070>

United Nations. (n.d.). Ageing. United Nations. Retrieved March 24, 2022, from <https://www.un.org/en/global-issues/ageing>

United Nations. (2000). United Nations Millennium Declaration. <https://documents-dds-ny.un.org/doc/UNDOC/GEN/N00/559/51/PDF/N0055951.pdf?OpenElement>

Vanham, P. (2019). A brief history of globalization | World Economic Forum. <https://www.weforum.org/agenda/2019/01/how-globalization-4-0-fits-into-the-history-of-globalization/>

Varvello, M., Ferrari, S., Biersack, E., & Diot, C. (2009, December). Distributed avatar management for second life. 2009 8th Annual Workshop on Network and Systems Support for Games, NetGames 2009. <https://doi.org/10.1109/NETGAMES.2009.5446230>

Volonté, P. (2019a). The thin ideal and the practice of fashion. *Journal of Consumer Culture*, 252–270. <https://doi.org/10.1177/1469540517717775>

Volonté, P. (2019b). Modelling Practice: The Inertia of Body Ideals in the Fashion System. *Sociologica*, 13(3), 11–26. <https://doi.org/10.6092/ISSN.1971-8853/9490>

Wang, Y. (2008). Globalization Enhances Cultural Identity.

Wiener, A. (2022). Money in the Metaverse. *The New Yorker*, 17(1). <https://doi.org/10.1177/15554120211014151>

Wightman-Stone, D. (2021). IoDF and CFS by Lablaco bring inclusivity to digital fashion. *FashionUnited*. <https://fashionunited.com/news/fashion/iodef-and-cfs-by-lablaco-bring-inclusivity-to-digital-fashion/2021102042982>

Williams, M. T. (2011). Colorblind Ideology Is a Form of Racism. *Psychology Today*. <https://doi.org/10.1016/J.JESP.2011.09.010>

Wirman, H. (2008). Virtual Threads of a Skin
Women Weavers and the Practice of Skinning
The Sims. University of the West of England,
Faculty of Creative Arts.

World Bank. (2005). World Development Report
2006. In World Development Report 2006.
Washington, DC. <https://doi.org/10.1596/978-0-8213-6249-5>

World Economic Forum. (2019). Globalization 4.0
Shaping a New Global Architecture in the Age of
the Fourth Industrial Revolution. www.weforum.org

World Economic Forum. (2020). Diversity, Equity
and Inclusion 4.0.

Wunderman Thompson Intelligence. (2021).
INTO THE METAVERSE.

DIGITAL FASHION: THE REDEMPTION OF INCLUSIVITY?

Politecnico di Milano

School of Design
Master of Science in Design for the Fashion System
Design for the Fashion System

Hananeh Sefidabi
ID Number 914965

Thesis Supervisor: Alessandra Spagnoli

Academic Year 2020/2021