

# Virtual Fashion: Digital Representations of Materiality and Time

By  
Tyla Stevenson

A thesis  
submitted to the Victoria University of Wellington  
in fulfilment of the requirements for the degree of  
Master of Arts in Media Studies

Victoria University of Wellington

2023

# Table of Contents

Abstract .....	2
Acknowledgements .....	3
Introduction .....	4
Chapter 1. Defining Fashion .....	9
1.1. The Contemporary Fashionscape.....	15
1.2. The Virtual Fashion Landscape.....	16
1.3. Fashion and Time .....	22
Chapter 2. Framework: Walter Benjamin and Fashion.....	25
2.1. Benjamin, Fashion and The Arcades .....	25
2.1.1. Fashion, Death and Renewal.....	28
2.1.2. The Tiger's Leap.....	30
2.1.3. The Dialectical Image.....	31
2.1.4. The Wish Image .....	32
2.2. About Time: Fashion and Duration Exhibition.....	34
2.3. Walter Benjamin, Fashion and Radical Materialism .....	40
Chapter 3. Case Study: DRESSX Website Walkthrough .....	45
3.1. Methodology .....	46
3.2. DRESSX Website Walkthrough and Analysis.....	50
3.2.1. Drag METaverse Collection Analysis .....	54
3.2.2. Auroboros: Nature-Tech Collection Analysis .....	64
3.2.3. The Virtual Fashion Purchase and Social Media .....	71
3.3 The Materiality of Virtual Fashion.....	73
3.3.1. Virtual Fashion and Sustainability .....	77
3.3.2. DRESSX Augmented Reality App.....	80
Chapter 4. Discussion .....	85
Conclusion.....	94
Works Cited.....	101

# Abstract

This thesis analyses the recent exploration of virtual fashion and how it affects fashion's conceptual relationship to materiality and time. Virtual fashion is a digital rendering of a garment or accessory designed and sold for virtual spaces such as social media, video games, and metaverses. This research is navigating a novel area of fashion that intersects with new media studies. While previous research provides insight into the economic potential of virtual fashion in commercial spaces, this thesis focuses on the fundamental and metaphysical properties of fashion when represented in virtual spaces.

Walter Benjamin and his work on the Parisian arcades provide a theoretical framework for this thesis due to Benjamin's specific understanding of fashion, temporal materiality, and the revolutionary potential of material culture. By applying a Benjaminian framework, this project critically examines rhetoric amplified by virtual fashion brands and online fashion reporting to unpack an ideology of progress and investigate virtual fashion's political potential.

The case study DRESSX is a multi-brand virtual fashion retail boutique. This research examines the website as an object of material culture guided by a methodology incorporating a new materialist walkthrough and applied theory. The research findings suggest that virtual fashion performs many of the same social and cultural roles as material fashion. Additionally, virtual fashion maintains a relationship with time by displaying historical and politically charged design references and demonstrates a connection to materiality through new media hardware and its associated environmental impacts. This study provides a framework to critically engage with virtual fashion's conceptual and material outcomes as the industry continues to explore the potential of virtual spaces.

## Acknowledgements

First, I would like to thank my supervisors, Heli Salomaa and Michael Daubs. Heli, I am grateful for your guidance, patience, and trust not only when it came to my research but also when tutoring classes together; it has been a pleasure to work with you in all respects.

Michael, I benefited greatly from your experience, breadth of knowledge and diligent eye for passive voice.

Secondly, thank you to an assortment of colleagues, close friends, and family. Who would tentatively ask how my research was going throughout the year and would always provide a listening ear when I needed to talk through ideas. But specifically, to my parents, Tina, and Tony, who have only ever met my academic aspirations and general interests with love and unwavering support.

And lastly, I would like to dedicate this thesis to my baby niece Billie. In hopes of installing a curious mind, a love of learning, and to encourage you to dive headfirst into any passion you might one day have.

# Introduction

This thesis is an investigation into a recent fashion phenomenon: virtual fashion. Virtual fashion is a 3D rendered garment, outfit, or accessory made and sold for online virtual spaces, such as social media, video games, and metaverses. A metaverse is a virtual reality (VR) space where participants can interact with users via headset devices. The COVID-19 pandemic accelerated the development of virtual fashion ventures due to consumers spending more time inside their homes and online for work and socialising.

The aim of this research is to investigate the properties of fashion as it is represented and produced in contemporary virtual spaces. Fashion is a material commodity and cultural phenomenon defined by its relationship to the physical body and the production of ephemeral trends. Therefore, as highlighted throughout this research, two central conceptual pillars for the concept of fashion are materiality and time. What happens to the concept of fashion when its materiality is limited to pixels rather than textiles? Furthermore, how is the passing of time and history reflected and represented in a virtual space?

Academic literature and reporting surrounding the topic of virtual fashion at the time of writing was limited to subjects such as social media dressing and performance (Moore 106), avatar and Second Life fashion monopolies (Watstein and Czarnecki 276), and the economic potential in a retail space through the use of virtual and augmented reality (AR) try-on mirrors (Harris 170). What this research adds to the field is a philosophical enquiry into the theoretical foundations of fashion as it becomes increasingly digitised and manifest in virtual spaces. Rather than solely addressing virtual fashion's economic potential or uptake in the industry, this study focuses on fashion's metaphysical relationship to materiality and time.

I first define fashion as a phenomenon with ambivalent qualities to inform the discussion of virtual fashion and to ground and maintain a consistent theoretical scope. Before investigating its virtual counterpart, fashion needs to be defined and understood as a material and conceptual phenomenon. This research is specific to virtual fashion made available and marketed in 2019 and highlighted throughout the COVID-19 pandemic. It, therefore, has a temporal anchor ranging from the years 2019 to 2022. Due to virtual fashion's contemporary status, online articles and reports became vital sources, as there were few published academic works on virtual fashion specific to the context of this project. Although there is a limitation of scholarly sources, it provides an opportunity for this research to contribute to an expanding, multidisciplinary field and analyse virtual fashion as a novel industry phenomenon. Although this study prioritises the fashion studies discipline, it will add to an academic field that intersects fashion and new media studies.

This thesis devotes its first chapter to defining fashion and exploring the process that distinguishes fashion from the likes of clothing, dress, and style. It outlines historical and sociological understandings of fashion and its relationship to a contemporary understanding of fashion today. This chapter further explores how fashion functions in the contemporary fashionscape, as fashion continues to integrate with elements of new media and the virtual (Karaminas 177). Articles from online fashion magazines and marketing material from virtual fashion brands provide an overview of the virtual fashion landscape developed from 2019 to early 2022 that express several general themes this thesis explores. Common themes include virtual fashion's accelerated development due to the COVID-19 pandemic and goals for replacing elements of the material industry, such as fast fashion, with the virtual to create a more sustainable fashion product. A section dedicated to the fashion industry's ongoing and generalised relationship with time cues up a more detailed and specific understanding of a

politicised expression of time and history developed in chapter two, Framework: Walter Benjamin and Fashion.

Walter Benjamin and his work on the twentieth century Parisian arcades provide a fundamental theoretical framework for this thesis explored in chapter two. Benjamin established a temporal materialist method dedicated to critiquing traditional historicism and capitalist modernity's ideology of progress. Benjamin illustrates through the concept of the tiger's leap and the dialectical image that fashion's connection to history and time is inherent, as a commodity object and has political and revolutionary potential. Temporal materialism is not a Benjaminian term but rather a term this research has employed to describe his specific materialist framework closely associated with his understanding of time and rejection of a traditional historicism. Benjamin's observations and methods matured into a critical analysis of fashion and how it functions in capitalist modernity while emphasising its relationship to a revolutionary praxis. While inspired by Marx, Benjamin deviates from a traditional materialist method, inspiring contemporary new materialists to develop frameworks and methodologies that highlight material culture's agency and possible political outcomes.

Benjamin and his contribution to an unconventional materialist tradition are essential for this research as fashion and virtual fashion as topics of inquiry require a methodology that can embrace the ambivalence of the fashion phenomenon on a material and conceptual level. Using a framework developed by Benjamin, I argue that fashion has an inherent relationship to materiality and time and, when utilised, can harness revolutionary potential. This thesis investigates what happens to fashion metaphysically when it moves into a virtual space and

more specifically if virtual fashion can maintain a relationship with history, time and materialism and uphold revolutionary praxis.

Chapter three, Case Study: DRESSX Website Walkthrough, begins with an introduction to the methodologies chosen to investigate DRESSX: the walkthrough method and applied theory. The walkthrough method utilises elements of actor-network theory (ANT) and cultural studies to examine and gather data from an online application (app). Applied theory is a fashion studies method that utilises a combination of relevant critical theories ranging from academic disciplines such as philosophy, history, film, material culture and design to analyse fashion outcomes such as collections and fashion media. The case chosen to investigate the virtual fashion phenomenon is an online retail store, DRESSX. DRESSX provided a broad scope of data to understand and analyse general virtual fashion aesthetics and discourse as a website, digital object, and vehicle for disseminating virtual fashion.

While there are various virtual fashion outcomes to investigate, this research concentrates on the photo editing process produced by DRESSX and their specific virtual fashion model. DRESSX provides a unique service as a virtual fashion boutique and hosts various virtual fashion brands. The service allows an individual to purchase a virtual, rather than material, fashion item, which DRESSX then superimposes onto a photo of the customer. That edited image is sent back to the customer for them to post to their social media profiles.

The walkthrough method requires describing the interaction while simultaneously providing an analysis, allowing space for an applied theory approach to unpack the data as one interacts with it. As the researcher and participant, I embodied the role of a DRESSX customer and purchased a virtual item, all whilst recording and noting the purchasing process and



subsequent social media posting. The interaction I had with the DRESSX website provided data to analyse and gain insight into DRESSX, virtual fashion and specifically its representations and discourse regarding materiality and time.

The fourth and final chapter provides a discussion that will outline the outcomes and results of the research—linking the data collection and analysis with the implementation of specific definitions and frameworks developed throughout the thesis. The findings imply that virtual fashion maintains a relationship to materiality and time, similar to material fashion.

Furthermore, virtual fashion preserves fashion's revolutionary potential when the designs utilise referential and historical references, indicative of a Benjaminian framework. The conclusion highlights the limitations set by the research scope and its potential future directions and prospective contributions.

# Chapter 1. Defining Fashion

The definition of fashion itself is challenging to grasp without the use of common synonyms such as clothing, dress, style, and adornment, all of which can describe different outcomes or attributes of fashion. A garment, for example, is defined as a piece of clothing, and clothing is a commodity worn to protect the human body. Dress can be a noun used to describe a particular type of garment, as well as a verb, describing the action of wearing and putting on clothes. The term dress includes clothing, as well as decorations such as jewellery and body modifications. Embellishments such as jewellery, for example, are also defined as adornment (Barnard 10-11). There are different styles of dress, categorized by design features and aesthetics, and while all types of dress, garments and adornment might be of a particular style, not all styles are in fashion (Barnard 10-11). As presented, all descriptors of fashion are intertwined and connected, while also being distinct, and for the likes of clothing to be considered fashion, system interventions such as fashion media need to intervene to perpetuate trend cycles for the public to consume, popularize, and therefore become in fashion.

Clothing is not inherently fashion but, in a capitalist, economy focused on constant growth, an established fashion company's goal is to produce a popular and widely consumed style of clothing. For a particular style to become popularized, the garments pass through a set of institutionalised gatekeepers, for example, retailers and fashion media such as magazines and blogs, to legitimize and promote selected styles (Kawamura 71). The adoption of promoted fashions is equally as crucial to their legitimization, meaning consumers also play a role in the production of fashion. If the public buys and consumes the fashion, the style is disseminated and perpetuated. The consumption of fashion influences a particular style's future production. In addition to production, dissemination, and marketing influence future consumption by the

public. It is essential to understand that production and consumption practices are working simultaneously and need to be treated equally regarding the study of fashion (Kawamura 88).

Fashion is thus a complex concept that is ambivalent and contradictory. While it can be reduced to its material outcome (clothing), it is also a complex system that signifies an individual's identity and status or a community's culture and tradition. This research attempts not only to unravel the interconnectedness between culture and the material, but also embrace and accept fashion's ambivalence. This research is sympathetic to the idea that fashion is a cultural system of trends that can function independently to the production of clothing (Kawamura 43) while also acknowledging the material i.e., clothing, dress and style exist within a network that directly relates to the definition of fashion. Therefore, the fashion system is an all-encompassing complex structure in which rigid definitions are difficult to maintain.

While ambiguous, it is important to clarify a few fundamental processes that occur in the development of fashion. These processes include its changing sensibility and development of trend cycles. New fashionable styles are continuously occupied and the old discarded, creating a cycle of constant consumption and change. Davis explains that historically fashion was cast as a topic not to be taken seriously as a sociological and philosophical topic of inquiry due to its frivolous and flippant nature (114). For example, new fashions do not always serve a useful purpose, as details such as applique, fabric patterns and colours will change more frequently than a silhouette which is the overall shape of a garment (Davis 103). In this sense, fashion changes frequently but through minor modifications and subtle details, that are adapted regularly. A major modification, in terms of silhouette or a new look, when it does occur is amplified and celebrated (Ekardt 28).

A silhouette will remain present in the cultural zeitgeist longer than other design details, as it's easier to adopt and change new colours or fabrics than it is to popularise a new shape. A silhouette is important to the context of fashion; it refers to the overall shape of an ensemble and often represents a specific time or moment in history. For example, an A line dress silhouette is fitted in the bodice and flared at the legs resembling a capital 'A', and its name and inception was partly due to Christian Dior, releasing 'the A-Line collection' in the spring of 1955. Since then, the A-line silhouette has defined women's fashion of the 60s and 70s and has seen revivals of the silhouette throughout the 90s and 00s ("A-Line Dress Guide"). While they do not change as often as other design details, silhouettes do tend to follow a trend cycle.

A fashion trend cycle is the introduction of a new fashion or style to the public and the exit of the oldest fashion (Davis 103). When a successive fashion is introduced, it means the previous fashions are automatically phased out or discontinued. Cycles can overlap and co-exist with other fashion cycles as major and minor style changes are being established, adopted, and discarded (Davis 104). Within trend cycles are segments called micro cycles that are oriented toward different identities within the fashion market, be it mothers with young children, art students or retired professionals (Davis 104). So, while there might be a larger influence over style and fashion, there are micro cycles occupying distinct communities and identity groups, which is seen in the development of subcultural style (Davis 157). Therefore, fashion is specifically tied to the notion of change and continuous cycles of trends as well as its material outcome, a garment or piece of clothing.

To understand why fashion trend cycles function the way they do, Georg Simmel, Herbert Blumer, and Fred Davis explored the sociological traditions of fashion, and provided fundamental groundwork for the academic study of fashion and dress. Georg Simmel viewed

fashion as a process of imitation, and class differentiation (541). To Simmel, fashion is born out of its contradictory essence. He recognizes that there is both a drive for recognition with a community and individualism when dressing and presenting oneself (542). Individuals align themselves with particular social groups and positions through dress while simultaneously striving to identify themselves as individuals. This cognitive dissonance is what produces fashion; fashion needs the tension between individuality and collectively, and if the scales were to fall to one side or become overbalanced by the other, fashion would cease to exist (338-44). Carter, writing on Simmel, explains that “if the desire for uniformity and imitation could reach fulfilment there would be no such thing as fashion, only mass similarity” (Carter 67). The same would be true if everyone had unique and eccentric tastes; there would be no trends to follow and therefore no more fashion.

Another prominent idea for Simmel was that fashion was created as a form of class differentiation, where the elite look to set themselves apart from the lower classes using adornment and dress. The members of the lower strata strive to identify with the superiority and status belonging to the elite, so they adopt the presentation of the upper class. Simmel explains that each class imitates the group with more status directly above them. When the working classes adopt these styles and the fashion is no longer associated with the ruling class, the upper strata discard the once contemporary fashion for something new to disassociate from the collective considered below them. Constant transformation, for Simmel, was the very nature of fashion; once introduced, it continues to spread relentlessly to its demise (547). Simmel highlights that fashion can only exist in a particular society that values prestige, and the essence of fashion itself is in the operation of differentiation, collectively and ultimately, change (338-44).

However, Simmel's class differentiation theory, known as the trickle-down theory, has some shortcomings. His analysis positions the elite as the instigator of all fashion and ignores their own need to align with what is in fashion. Herbert Blumer exchanges the trickle-down theory with that of collective selection (Blumer 278). Collective selection is a theory that claims that, with social interaction and common experiences, collective tastes are formed. The elite are drawn to the styles for their potential to be fashionable. Picking the design with their added social status does not necessarily turn the garment into fashion. In other words, class differentiation takes place in the operation of fashion, but it is not its primary cause (Blumer 278). Blumer does not discount that fashion can serve as a class distinction but argues that the trickle-down theory reduces fashion's emergence to class differentiation, and it ignores other potential causes associated with identity such as age, gender, sexuality, religion and political dispositions, all of these characteristics play a role on what we wear (284).

Fred Davis, almost a century after Simmel published on fashion, described the phenomenon of fashion as being seeped in ambiguity and ambivalence (21). The concepts of ambiguity and ambivalence explain that fashion can hold multiple meanings at the same time, and that those meanings can be contradictory (Davis 21). Davis explains: "The sartorial dialectic of status assumes many voices, each somewhat differently toned from the other but all seeking, however unwittingly, to register a fitting representation of self, be it by overplaying status signals, underplaying them, or mixing them in such a fashion as to intrigue or confound one's company" (Davis 63). The inconsistencies observed by Davis is particularly prevalent in Simmel's understanding of imitation and distinction, such as the contradiction between an individual's association with a particular group whether that be a class, gender or subculture, and that individuals desire to stand out from that group.

To expand on the work of Fred Davis and Georg Simmel, Mackinney-Valentin explored trend theory and trend distribution in the contemporary era (6). Whereas Simmel focused on the trickle-down theory, Mackinney-Valentin, employing the work of Davis that highlights fashion's contradictory nature and examines how trends can move in multiple directions and flows. For example, vertical flows resemble what has already been discussed as the trickle-down theory, but a horizontal flow describes a shift following up uprising of youth culture in the West during the mid-20th century. Trends would move across socioeconomic groups as the economic and social freedom to adopt or choose from different styles became available (Mackinney-Valentin 9). An upward flow describes the appropriation of blue collar or subcultural style by the fashion elite, for example, the adoption of denim jeans and other workwear associated with labouring careers. Vertical, horizontal, and upward flows are an example of continuous and scattered flows existing at the same time, opposing the outdated claims of trend distribution only coming from the top-down. The mix of high and low flows is prevalent in the modern industry, as high-end designers continue to appropriate grassroots subculture, while fast fashion retailers are replicating luxury couture fashion houses (Mackinney-Valentin 13). Some examples include the brand Vetements displaying denim jeans and fleece hoodies during an haute couture runway schedule (Hall) or notorious fast fashion outlets replicating high end designer garments (Pruitt-Young).

Sociologists' discussions of fashion place emphasis on its contradictory and ambiguous nature. As a phenomenon that is in constant renewal, it is always in negotiation with social, material, and cultural forces. As Simmel explains, fashion helps people identify with groups and communities as well as express an individualistic self. It is not only a product of class differentiation, but also expressions of other identity such as, gender, age, sexual orientation, and occupation. Now, especially due to new media and communication technologies, the

pace at which fashion is produced and communicated has accelerated, meaning fashion trends are more fluid flowing top-down, but more distinctly bubbling up and across social classes demonstrating a diverse and unfixed approach to style.

### 1.1. The Contemporary Fashionscape

Fashion has historically developed alongside digital media technologies, with fashion media outlets adopting the likes of digital photography and fashion film to promote their work. To navigate the intersection of the fashion industry and digital media, Vicki Karaminas, referencing the work of Arjun Appadurai, describes an all-encompassing description of the industry called the fashionscape. The fashionscape describes the globalised production and consumption of fashion, and the transformative moment in fashion media since moving online (Karaminas 177). It directly addresses the production and consumption of fashion imagery as more people engage with fashion through their personal devices, while also describing the new fashion digital media content disseminated by social media platforms such as Instagram and YouTube (Karaminas 178). The use of smart devices and social media have seemingly democratised the fashion image, as the traditional hierarchies that separate the fashion insider and public outsider have diffused. The consumer can now play the part of the fashion gatekeeper and producer as careers in fashion blogging and social media influencers have been more recently legitimised (Kawamura 113-114).

Due to its contemporaneity, understanding the concept of fashion in relation to the fashionscape is an important contextual thread explored throughout this thesis. Prominent fashion theorist Elizabeth Wilson suggests that fashion is a modernist project (Wilson 60). However, contemporary fashion as expressed in the contemporary fashionscape presents elements of a postmodern condition. Patrizia Calefato, building on the concept of the



fashionscape (33-34), highlights four events that show a prominent transformation in the conceptualisation of fashion today:

- The effect of the internet and digital media on the fashion system and the speed in which production and consumption of image and products are accelerated.
- The collapse of boundaries between global and local flows.
- The prominent diffusion between fashion and art.
- The unpredictable and fluid associations with identity and dress.

The contemporary fashion system is in constant negotiation with postmodern concepts such as insistent speed and the collapsing of global and metaphysical boundaries, this negotiation suggests that the twenty-first century fashion practice incorporates elements of both modern and postmodern qualities, making fashion a metamodern concept within the digital media driven fashionscape (Gerrie 16). Virtual fashion is a synthesis of the development of new media technology and the fashion industry. Fashion produced, displayed, and disseminated via virtual spaces demonstrate metamodern traditions since the virtual fashion landscape is itself a phenomenon that is constantly adapting with the development of new media and information and communications technology (ICT).

## 1.2. The Virtual Fashion Landscape

Virtual fashion is a 3D rendered garment developed for image based virtual spaces. The type of virtual fashion this thesis is focused, is designed, and ‘manufactured’ by using 3D rendering software such as Clo3D and Vstitcher that can generate garment pattern drafting, draping and sewing displayed on a digital avatar in real time. The garments, outfits or

accessories can be sold online and superimposed on top of the consumers photography, showing the customer ‘wearing’ a fashion item that might represent an in-person garment, but does not exist in the physical world. Virtual fashion is the term I have chosen to describe this phenomenon, but other phrases such as digital fashion and crypto fashion are also used throughout virtual fashion media. However, at times, these terms can encompass different ventures within the virtual fashion space. For example, digital fashion can also describe the use of digital photography and social media to disseminate and market physical fashion and crypto fashion can refer to how the ownership of a digital garment can be tracked using blockchain technology, otherwise known as a non-fungible token (NFT). Therefore, the term ‘virtual fashion’ is used to focus the discussion from other generalised online fashion outcomes, but it is important to note that in fashion media these terms can be used interchangeably.

At the time of writing this thesis, the virtual fashion landscape developed with some urgency. Between July 2019 and early 2022, virtual fashion continued to receive publicity for its developments in retail, social media, gaming and NFT spaces. Virtual fashion was promoted throughout the likes of major online fashion media platforms Elle and I-D as early as 2019, with both parties focused on the sustainable potential of a virtual fashion practice, as well as the opportunity for it to be occupied by those that have physical disabilities, those of various sizes, and groups that often feel marginalised by the mainstream clothing industry (I-D, Semic). Although at this time, articles suggested virtual fashion would be available for consumers in the near future, fashion technology academic Matthew Drinkwater maintained that virtual fashion is a further five to ten years away from being seamlessly integrated into the fashion industry (Semic). It wasn’t until the year 2020, which coincided with the COVID-19 pandemic that the virtual fashion phenomenon started to gain more momentum.

The COVID-19 pandemic was a major catalyst for the development and adoption of virtual fashion practices in the industry. While more people were inside their homes and specifically online for work, school, entertainment and shopping, physical fashion shows were unattainable, so fashion brands turned to online and virtual options. On the 22nd of May 2020, during the height of the pandemic, Anifa Mvuemba, of fashion brand Hanifa, debuted her latest collection via 3D rendered models on Instagram live (Ware). The rendered garments were made to represent the real, tangible clothing that consumers can buy via their website. Teen Vogue claimed it was a collection reflective of the times we live in and an innovative solution to present a collection during a moment in time where physical shows were not an option (Ware). Similarly, Helsinki fashion week, held late in July 2020, was the first entirely online 3D fashion week. Attendance was open to anyone, and the spectators entered what was called the “digital village” as virtual avatars. Virtual models and collections would stride down a virtual runway, each with individualised rendered backgrounds representative of an other-worldly sci-fi film (Bateman). Designer Olivia Rubens stated, “Our industry, like many others, was hit hard. I don’t want to take away from the beautiful tactility and intimate experiences a fashion presentation can give us, but the scale of it all, and the speed, for a long time, has been getting quite out of hand” (qtd. in Bateman). In this regard, sustainability was at the forefront of Helsinki fashion week’s exploration of digital tools but the pandemic itself propelled designers that would normally work in a very tactile way into the virtual sphere.

Throughout the year of 2020, independent virtual fashion brands started to emerge including Tribute, The Fabricant and Auroboros. Tribute’s premise is to sell digital garments that will

only ever exist in the virtual world, creating a garment using 3D software to superimpose on top of a consumer's photograph for their social media platforms. Tribute saw an opportunity to create garments that could never exist in the physical world, stating: "We add new things that are impossible in the real world, like new materials—things that just couldn't function in the real world due to the laws of physics" (qtd. In Allaire). Auroboros also focus on otherworldly and futuristic designs that could not exist in the physical realm and in 2021, for the first time in London fashion week history, presented a digital only fashion collection.

The Fabricant is described as "the world's first digital fashion house" (qtd. in Fairs) and their aspirations are to create bespoke garments for their customers' avatars, to not only be worn in social media platforms but also in games and metaverses. The Fabricant attempt to appeal to a generation Z audience that does not distinguish online life from offline, or those that establish a curated identity for each platform they use (Fairs). By the end of the year 2021, The Fabricant released an online design studio, in which the users themselves can design and create virtual garments and can trade them as NFTs (Crook).

At the end of 2020, luxury brands began exploring gamified digital collections, with Balenciaga releasing their fall 2021 campaign in the form of a video game (Hitti). Consumers can access the video game via Balenciaga's website, while a select few could play the game via VR, a gesture that resembles the prestige of a front row fashion show seat. Later in May of 2021, Gucci sold a digital version of their Dionysus bag through their Garden Experience on gaming platform Roblox (Cambe). The purse was sold via the game currency Robux, with the starting price set at 475 Robux. Buyers continued to resell the purse to other customers, escalating its value to an inflated 350,000 Robux, which approximately equates to US\$4,115, a sum exceeding the original retail price point of the physical bag at approximately US\$3,400 (Cambe). Months later, in August of 2021, Balenciaga explored the gaming space again by

introducing virtual wardrobe upgrades to the game Fortnite. Introducing backpacks, their bestselling triple S Sneakers, avatar skins, and sneaker inspired pickaxe weapons (Cambe). Players can purchase these items via a virtual store resembling the layout of Balenciaga's in-person retailers. The collaboration between luxury fashion house Balenciaga and video game Fortnite is just one example of fashion crossing virtual divides, which also extends into the real world, with Balenciaga/Fortnite merchandise available for in person wear.

Another way to execute digital ownership of virtual fashion is with blockchain technology that accompanies the buying and selling of NFTs. Founders of the virtual fashion marketplace Dematerialise, Majorie Hernadez and Karinna Nobbs, endeavour to make fashion NFTs a mainstream and accessible market. An NFT is a virtual image or object that can be traded on a crypto marketplace, and blockchain technology is used to embed information into the object regarding its ownership, original creator, and scarcity. Dematerialise state that they want to demystify and uncomplicate the understanding of blockchain technology (Financial Fox). The founders acknowledge that there is a question of once you buy and own a virtual fashion piece, as an NFT, what can be done with it. Dematerialise state four different pathways:

- The object has exhibit potential, so you can show or present the digital object in an online space.
- The object is wearable via social media images and augmented reality.
- The object can also be imported into gaming and metaverse spaces.
- The object can be resold using secondary markets for NFTs, much like the reselling sector (Grailed, Depop, vintage) of physical fashion.

Depending on the accessibility to metaverses and the development of AR and VR technology, Dematerialise predicted in May 2021, that NFT virtual fashion will seep into the general fashion market in up to 6 to 12 months, a prediction yet to be realised.

Another illustrative example of the emerging virtual fashion market is DRESSX. DRESSX is a virtual fashion multi-brand retail platform, where digital fashions from the likes of The Fabricant and Auroboros, at the time of writing, were available to purchase. DRESSX is interconnected with a variety of virtual fashion brands while also being a platform for virtual fashion advocacy. The platform operates like much like an online fashion boutique but, instead of purchasing material garments to be worn, customers are buying a DRESSX service. The service is photoshopping and superimposing a virtual garment over the customer's photograph. DRESSX and their brand vision aligns with ideals demonstrated by other virtual fashion entities mentioned including, the sustainable, accessible, and creative potential of virtual fashion. Their brand vision finishes with the statement, "don't shop less, shop digital fashion" (DRESSX "OUR VISION"), making DRESSX not only a virtual fashion hub and retail platform, but also spokespersons for what they call digital fashion.

DRESSX is the case study for this research and a major conceptual component to be investigated is how time will be represented in DRESSX virtual garments. Time is an essential component of the concept of fashion, as time exposes itself in various ways, for example, through seasonal categorisations, concepts of slow and fast fashions and also shown in the materiality of fashion as illustrated by the concept of patina. Walter Benjamin and his works on the arcades establish a framework to further elaborate and help synthesise fashion's relationship to time, history, and materiality. In order to apply Benjamin's understanding of

fashion to the concept of virtual fashion, we must first examine fashion's relationship to time and history.

### 1.3. Fashion and Time

Time is integral to the understanding of fashion, as it manifests through clothing both materially and symbolically (Calefato 34). Each year, international fashion weeks such as Paris, London, Milan, New York City, run on a strict seasonal timeline. Consumers are presented collections through fashion shows, exhibitions, and other promotional material (held during fashion weeks), usually six months to a year before the items are made available to purchase. By the time garments are available to wear, the following year's collection has been publicised and what they most recently purchased is already becoming outdated. Some brands have been experimenting with alternative ways to time their collection publicity, for example, with items from the runway being made available for online pre order or purchase the day they are presented (Hoang). Both approaches are associated with time; one can patiently wait for fashion week scheduling or simply indulge in the immediacy and rush of fast fashion retailers.

Common terms associated with the industry and time are fast and slow fashion. Fast fashion refers to the increased speed in which fashion companies produce and consumers buy and discard fashion and is often associated with wasteful and unethical production practices (Idacavage 1). Parallel to fast fashion is what is known as the slow fashion movement. Presented as an alternative to fast fashion, slow fashion is a movement that promotes considerate consumption habits, prioritising quality products that last and making do with what you have over the frequent buying into new trends (Crewe 69). The slow fashion movement prevalent amongst millennials and generation Z has popularised a practice of

upcycling and opportunity shopping that was once thought of as only an option for the working class, and an interest in vintage and retro styles is prevalent in pockets of fashion communities.

Calefato, focuses on time and the way it manifests through vintage dress and the concept of patina (38). Patina describes the natural wear and tear of clothing over time, and why one might feel attached to their favourite pair of old jeans or holey jumper. The concept of patina can thus explain how the age of commodities becomes the principal reason for their status or demand. Vintage and retro clothing inscribes the effect of patina, as it is a revival of what was once appreciated and then discarded. Thrifting and vintage recontextualises the feeling of the previous time or moment as new generations rediscover dress and accessories, to explore the present by looking to the past. To quote Calefato, “The time of the patina, otherwise, gives us back the best of the past; it retrieves the aura of things and invites us to pursue practices of reuse and recycling of objects and signs” (38). Patina presents itself in new garments as well, as clothing manufacturers create and use technology to inscribe the feeling and look of well-worn products. For example, Levi’s have created a laser that etches areas where jeans naturally wear before selling them (Insider) and Dr Martens have promoted pre-worn boots, not only for the comfort of wearers, but for the impression and appearance of patina (Fischer). Time is woven into the very practice of the fashion phenomenon, as described by the ongoing changes, and cycling of styles, and the ways in which the industry subscribes to a sense of time in its production. Time, in the case of Levi’s jeans and Dr. Marten boots, is quite literally etched into the materiality of the garments themselves.

Time presents itself as an important element for the concept of fashion. Walter Benjamin and his works on the arcades establishes a framework to further elaborate and help synthesise



fashion's relationship to time, history, and materiality. Once it is understood, how these ideas are observed and produced via the concept of fashion, then it can be applied to the concept of virtual fashion.

## Chapter 2. Framework: Walter Benjamin and Fashion

### 2.1. Benjamin, Fashion and The Arcades

Walter Benjamin, specifically his works on the Paris Arcades, provides the fundamental theoretical framework for this thesis. *Das Passagenwerk* or its English title, *The Arcades Project*, is an arrangement of fragmented quotations and notes of deliberation, rumination, and reflection on early 20th century Paris. Fashion is a heavily featured subject of the text, with Benjamin dedicating a section to the phenomenon: Convolute B. Benjamin built a foundation of cultural, social, and political understandings of fashion through poetic and esoteric musings to unpack a political pattern of commodity consumption (Lehmann 36). He highlighted fashion's political and revolutionary potential as a material commodity and cultural phenomenon.

Benjamin witnessed the boom of the iron and textile trade, which are the material foundations and furnishings of the arcades, the historical predecessor of the shopping mall (Hroch 110). The industrialisation of the clothing industry, precipitated by the invention of the sewing machine in 1830, changed the production proficiency of the industry. The fashion industry moved away from a made-to-measure and individualised approach to making garments and toward a standardised ready-to-wear model. In the 1840s, systematised and regulated size development enabled the ready-to-wear industry to imitate the more luxury made-to-order fashions (Hroch 110). Benjamin noted this democratisation of the industry and explained that, with more affordable fabrics such as cotton replacing expensive silks, the lower classes of society had more access to 'fashionable' clothing (74). Ready-to-wear pieces with standardised sizing filled the arcades and, with their lower cost, promoted rapid turnover and increased sales volume. Profits gained were put back into the advertisement of these

department stores to perpetuate a fashion cycle that depended on affordability, convenience, and constant change (Horch 110).

Benjamin observed fashion and its trends and astutely recognised how fashion trends can anticipate the zeitgeist, exploit a particular pulse of the moment, and capture it via the production and sale of wearable items (64). As noted by Benjamin, this process was referential and historical because a mode or feeling of a previous time could be reflected and distributed throughout the fashions of the moment (Benjamin 72). Using a historical example, Benjamin explains that French revolutionaries embraced Roman costume, style, and etiquette as a representation of breaking away from the monarchy and embracing a capital bourgeois society. The draping and waistlines of ancient Roman dress represented to the French the democratic ideals they were aspiring to after the takedown of the monarchy (Benjamin 66). In this sense, the French revolutionaries tried to invoke a feeling associated with garments of a previous moment for their specific time and political context.

Benjamin and his interest in fashion was twofold, not just the speed in which styles change to appeal to the spirits of the modern times, but also the way fashions would reference history and recycle styles and trends. Looking at the history of dress as described in *The Arcades Project*, garment design variations can be seen in the length of hemlines, volume and length of sleeves and the position of the neckline and waist. These areas of clothing are regularly rotated and marketed as new items or styles (Benjamin 71). In other words a part of fashion's practice is to cite the old and present it as something new. Horch clarifies that fashion can simply just be old; for example, the market for vintage and antique clothing and accessories has been widely adopted, which is an example of patina at play (114). Other historical items

are referenced through design choices and using an aspect of a previous garment to create a new silhouette or style (Horch 114). Paying homage to designers and referencing fashion styles is a common trait of the industry; however, it was not this practice that concerned Benjamin, but rather that fashions insistent change provided a feeling of innovation and a perception of progress when it is simply a “eternal return of the same” (Benjamin 71).

Scholars closely associate the speed, temporality, and the repetitive nature of fashion with a Benjaminian critique of capitalist modernity (see, for example, Buck-Morss 97, Horch 112, Geczy, Karaminas 86). Not only is fashion considered an outcome or development of capitalist modernity, but it is said to epitomize the very nature of how it is sustained and functions (Horch 110). This outcome, of course, depends on the definition of fashion that one might subscribe to, i.e., fashion as something inherent to human nature and existing in all cultures and contexts, or something that is born or erupted alongside Western modernity (Ekardt 14). For those that align with the latter definition, fashion’s relationship with modernity is twofold; it is a product of modernity but also a representation of modernity’s attachment to capital, novelty and change (Geczy and Karaminas 83). The tempo of modernity reflects an ongoing turnover of styles as an effort to maintain a connection with the times (Horch 112), as well as a commodity that exposes modernity’s relationship with temporality and the need to maintain an image of insistent innovation (Geczy and Karaminas 86). Buck-Morss states: “...by unearthing buried markers that expose “progress” as the fetishization of modern temporality. Which is as endless repetition of the “new” as the “always the same” the rebus in which this temporarily appears is fashion” (56). Fashion continuously fluctuates from a new to old state, it gathers historical references, and repackages them as new for the present moment. History is presented in material culture, not as something that is

in a state of progress, but rather as something repetitive meaning its stagnant and as Buck-Morss describes “gathers dust” (95).

Philip Ekardt emphasizes less of fashion’s relationship with modernity, but rather Benjamin’s take on fashion as a chronotechnic, “i.e., a distributed, collectively actualized, and perpetually actualized technique for operationalizing time” (Ekardt 18). For Ekardt, Benjamin establishes fashion as a measure or register of time (Ekardt 19). Perhaps in contradiction to this idea, Susan Buck-Morss suggests that Benjamin’s philosophical understanding of fashion is specific to capitalist modernity, using Benjamin’s critique of the arcades as evidence that fashion emerges in relation to a “systemic break of modernization” (Ekardt 20). Ekardt does not limit fashion as a modern measure of time or a measure of modernity, but rather a measure of history and all time (22). Ekardt claims that Benjamin’s interest was not in fashion as a phenomenon in time and its representation of time or in modernity, but rather fashion as a model for “rethinking its temporal articulation” (Edkardt 43). Fashion as suggested by Edkardt, is not pitted against modernity as a measurement of time, but rather comparing “the limited temporal existence of fashions, and the vanitas aspect of the finitude of a human lifetime” (Edkardt 22), or in other words, fashion and its relationship to death making it a prominent metaphor throughout Benjamin’s writings.

### 2.1.1. Fashion, Death and Renewal

Convolute B begins with a quote from Giacomo Leopardi’s 1824 “Dialogue between Fashion and Death” that reads “Fashion: Madam death! Madam death!” (Benjamin 62). Leopardi’s narrative includes two sisters that personify fashion and death, discussing fashion as torture through its forceful body modifications that guides humanity closer to death. Benjamin’s thoughts on feminised fashion emphasise a witty parody of a cadaver, one that outruns death

every time, defying death and making a mockery of him (Brevik- Zender 9). The purpose of highlighting fashion's relationship to death, and contrasting it with the living body, is to call attention to fashion's contradictory, inbuilt obsolescence and to critique the ideology of perpetual progress, as a fashion must die to make way for the new (Wollen 138). Buck-Morss states, "Benjamin makes us see it, revealing the logic of modernity as 'the time of Hell'" (98). Hell, here is pictured as a state of ongoing repetition or stuck in a cycle fashion cannot escape from, an era of insistent change but ultimately non-change. The dialectical understanding of the new as always the same; narratives are superseded by new ones, meaning newness itself in this context is a myth (Buck-Morss 293).

Benjamin critiques the ideology of constant innovation, and that progress was assumed, automatic, and the premise of the human experience (Buck-Morss 79). Through his work on the arcades, he provided a critique of "natural history, as ideology" (Buck-Morss 68) and established a philosophical understanding that does not distinguish an absolute distinction between technology and nature. The distinction that Benjamin avoids is the separation and idealisation of the world as a natural state of being and categorises technology as "socially and historically produced" (Buck-Morss 68). In other words, when looking back on history, technological innovations are assumed to be a natural outcome and progress a natural state of society.

It is important to emphasise that Benjamin is not anti-technological progression; instead, he is hopeful for a democratisation of the arts. As modern technologies make it easier for the public to participate, the notion of an artistic or literary genius is undermined (Buck-Morss 137). Benjamin criticises not progress itself but the fraudulent ideology that disguises repetitive aesthetics and politics as revolutionary. Understanding modernity as a time of

technological transformations could easily equate the period with the image of innovation and progress. Equating modernity with progress keeps society in what Benjamin describes as a dream state. If the phantasmagoria of the collective is active, so are the relentless, repetitive, and empty objectives offered by a modern capitalist economy (Buck-Morss 107). Fashion, even in its industrial advances such as the development of textiles, printing, and pattern cutting methods, offers little beyond capital advancement (Lehmann 47). Therefore, the process of dying and renewal is necessary to fashion to perpetuate capital by generating a desire for new products, styles, and trends.

### 2.1.2. The Tiger's Leap

Benjamin used the metaphor of the 'Tigersprung' or in English, 'the tiger's leap' to narrate the way fashion referenced historical design elements. The metaphor describes a large feline leaping into history and isolating elements of the past that are recognised as important to the present (Lehmann 36). The tiger's leap is a historical materialist concept that is used to present an alternative model of history. Ulrich Lehmann explains the process of the tiger's leap stating:

The apparent opposition between the eternal and the ephemeral is rendered obsolete by the leap that needs the past for any continuation of the present... Through the *Tigersprung*, fashion can leap from the contemporary to the ancient and back again without coming to rest exclusively in one temporal or aesthetic configuration.  
(Lehmann 55)

Following the philosophical tradition of Hegel and Marx, Benjamin describes the historical relay from varying temporal planes as what renders fashion a dialectical process. For example, fashion is forever changing, reintroducing and reinterpreting historical fashions, but in this sense does not change at all. A constant negotiation between the eternal and the

ephemeral is obsolete as the specific fashion process needs the past to feed the present. Fashion is transhistorical, separating the infinite, the forever new from the continual progress of history (Lehmann 58). The archaic shapes and expresses itself through the aesthetics of the contemporary moment. Lehman states: “When fashion makes its own use of these remnants by quoting past attires for new styles, it visualises and materialises the demand raised by Benjamin’s dialectical image on an epistemological level” (58). Benjamin framed fashion as a commodity that exposes the dialectical process (Lehmann 59). The tiger’s leap and dialectical image contain a mystic quality found in the commodities of the past. To Lehmann, it carries both errors of the past and the potential to disrupt modernity’s abstraction of commodity fetishism and the alienation of man (58), which means that fashion represents the fetishisation of commodity culture while also carrying a framework for its own critique.

### 2.1.3. The Dialectical Image

Benjamin intended the dialectical image to be the principle governing the construction of *The Arcades Project*. The dialectical image is an aestheticization of a dialectic method, as is Benjamin’s application of historical materialism (Lehmann 165). Susan Buck-Morss describes dialectical images as working similarly to montage techniques used in film editing because a montage “interrupts the context into which it is inserted” and thus “counteracts illusion” (67). The dialectical image cuts or flashes momentarily to gain a greater insight into a subject. It interrupts the here and now, conjures the desires of earlier generations, and brings them forth into present consciousness. The images and wishes of the past generations are represented through the objects of the past (Geczy and Karaminas 89). For Benjamin, these desires were aligned with a Marxist utopian tradition that aspires for a classless society, and the dialectical image could rouse and generate a desire for revolution. By introducing the concept of the dialectical image, Benjamin exposes that the aim of progress in modern



society is not to progress in a political sense or to uplift those pushed to the margins but to perpetuate the dominance of the elite members of society(Buck-Morss 290). The dialectical image reveals the collective's desires, which is distinctive from the dominant narratives of history presented and written by those with the most economic and social power.

Fashion is a strong example of the dialectical image presented as a material commodity, as it has an intrinsic and dynamic relationship with time. Horch explains: "Fashion as a dialectical image creates a momentary break in history through its constant – and constantly fleeting – connection with the present." (117). Objects and fashions can weed through dominant narratives and break the continuum set to uphold and appeal to those with power. The illumination of dialectical images allows fashion to not only participate in the world of commodity fetishism as well as reckon with political truth. Fashion is in negotiation between the collective and the individual. The dialectical image flashes as a mode of communication between the collective in the contemporary moment then displayed through an individual's sense of style (Kang 342).

#### 2.1.4. The Wish Image

'Wish-images' are the desires of the collective that sit in the unconscious, as a longing for a utopian, classless society. Wish images of the collective are revealed through fashion's reinterpretation of historical styles. To Benjamin, fashion is a material object with the potential to disrupt and awaken political unrest held by generations of the past and the present and to interrupt a dominant narrative of history. The wish image flashes only for a revolutionary moment that blasts the continuum of history. In other words, fashion can present a feeling of revolutionary change through a return of discarded styles, but how does

an aesthetic change actualise political change? Political change lies in the dialectical and potential of now-time, always keeping the future and past in mind simultaneously.

Benjamin's methodology concentrated on the discarded and historical commodity, revealing the past to improve the present moment, propelling the present generation into a revolutionary mindset and future (Horch 118). To Benjamin, the workers of his time lived in a dream world, but to "'read' the 'ruins' of their commodity culture" (Tobin 150) would awaken them from that dream state. Understanding and studying commodity goods and especially fashion can reveal a call to revolutionary action, wish images of past generations in this sense could summon a social utopia.

It is important to clarify that Benjamin did not rest his whole argument on the potential of wish images, or more specifically fashion's role in revitalising a revolutionary spirit. Wish images in Benjamin's writings maintain the motivation for future liberation. They are that of a "dream symbol", wish images do not liberate humanity entirely, but they are vital to the process (Buck-Morss 116). Benjamin's goal is not nostalgic in nature; he does not want to restore the foundations of the past, but instead acknowledge a collective feeling of past generations, conjured through the materiality of a commodity object (Buck-Morss 116).

Cultural history is an important element in the waking of the working classes, materialist knowledge and education is accessible through cultural commodity products. The connection between cognitive images and its praxis, is that the images revaluated in the mind, drives the will for revolutionary change, Buck -Morss explains "There is no intact will without exact pictorial imagination. No imagination without innervation" (290). For Benjamin the dialectical image, and its potential presented throughout the fashion commodity is just the beginning, a moment that flashes in the mind before any action can be taken. The dialectical image is a tool to awaken the collective from a dream state and is the revolutionary

possibilities this project speaks to and argues for utilising. Fashion holds within it great revolutionary potential often overlooked, as a vehicle for wish images, reinforced by the process of the tiger's leap and the dialectical image.

## 2.2. About Time: Fashion and Duration Exhibition

To help materialise and solidify fashion's relationship with time and history, as made evident by Benjamin's understanding of the tiger's leap and dialectical image, the following is a description and analysis of an exhibition held in 2020 by The Metropolitan Museum of Art's Costume Institute named *About Time: Fashion and Duration*.

The Metropolitan Museum of Art's (MET) Costume Institute hosts a fundraising gala for the museum's collection and marks the opening of their annual fashion costume exhibit. Its opening night is a widely publicised red-carpet event attended by a guest list of favoured celebrities and fashion insiders. The 2020 gala event was cancelled due to pandemic related restrictions. However, the public could visit the exhibit in person or through an online video tour released by the Costume Institute. 2020 was the institute's 150th year since its founding, and to celebrate this milestone, the Costume Institute decided to commemorate its history with an exhibition exploring fashion and its relationship with time.

Fashion documents the passing of time, as trends and silhouettes slip in and out of style. Andrew Bolton, the exhibition's curator, explains, "I always thought that fashion is really just another name for time...so I wanted to do an exhibition that was a meditation on fashion and temporality" (qtd. in Nast). Fashion is a constant negotiation between ephemerality, change, endurance, and permanence. Change is at the core of fashion, and Bolton references a public

consciousness that criticises the economic, social, and environmental impacts of fashion's relentless cycles that produce products destined for obsolescence and eventually waste.

Fashion has a paradoxical relationship with the configuration of history and time, and Bolton explored this by the visual disposition of the exhibition.

In Bolton's exhibition breakdown, he quotes Peter Osborne's 1995 book *The Politics of Time: Modernity and the Avant-Garde*, which says, "Modernity is a culture of time" (Bolton et al. XII), and describes time as "rational, regulated, measurable and, above all, progressive" (Bolton et al. XII). Industrialised technology and a capitalist economy contributed to a culture where constant change and renewal are reflected in clothing and dress (Bolton et al. XII).

This idea is expressed by Bolton, who states: "Beating to the pulse of modern time, fashion is presented as relentlessly forward-moving and progress orientated, propelled by the endless pursuit of newness as an affinity with the present and the future" (XIII). We expect from this understanding of time a relentless forging into the future, echoing a version of modernity outlined by Charles Baudelaire. Baudelaire suggests fashion is a child of modernity due to its fleeting and temporal nature. To represent this notion, the exhibit presented one set of black garments expressing sartorial moments since 1870, in a traditionally chronological and linear manner that focuses on the progress and forward-moving orientation of fashion regulated by transience, novelty, and obsolescence. This display of time establishes a binary relationship between what is considered old and new and claims that what is included in the past or present are distinct and oppositional (Bolton et al. XIV).

To combat the dichotomies of the past versus present and old versus new, Bolton refers to the works of French philosopher Henri Bergson. Bergson insists that time is a continuous flow or what Bergson describes as "Duration (*durée*)", where Bolton explains: "The past and present collapse (are synthesised) into a singular experience, allowing for heterogeneous

multiplicity” (XIV). Bergson’s concept of time, in which the past and present exist alongside each other, contrasts with Baudelaire’s notion that time is the present succeeding the past, which positions time as a progression (Bolton et al. XIV). These two different concepts communicate throughout the exhibit, as the second timeline of fashion is inserted into the linear flow of the first timeline (Figure 1). Black and white garments are featured next to the chronological order and reflect a different historical moment. What is essential about these parallel timelines is that each garment, coming from a different moment in time, has an element of their garment that resembles the other. They mirror similar design features such as the silhouette, material, or decoration or, in other words, they display referential characteristics to previous moments in fashion history.

This content is unavailable. Please consult the figure list for further details.

Figure 1: “Cristian Dior 1947 and Junya Watanabe 2011-2012 jackets.” 2020. *Everything to Know About the Met’s ‘About Time: Fashion and Duration’ Exhibition*. 17 March 2022.  
<https://www.vogue.com/article/metropolitan-museum-of-art-costume-institute-about-time-fashion-and-duration>.

The visualisation of the exhibition compared a fashion moment in time with its interruption (figure 2). For example, Christian Dior's 'Bar' suit jacket and skirt combo was released among the prominent spring/summer collection 'Corolle' in 1947. With a dramatic departure from the conservatively manufactured and masculine silhouettes of the post war era, the cinched waist, round padded hips and soft shoulders demonstrated a specific and new standard of femininity that was followed into the 1950s and beyond (Bolton et al. LXVII). This silhouette was soon christened the 'new look' by Harper Bazaar's Carmel Snow (Bolton et al. LXVII). Its iconic stature in fashion history provided many opportunities to be reinterpreted. The interruption of time, shown to the right of the Dior's piece, was created by the Japanese designer Junya Watanabe. Shown in his autumn/winter 2011-2012 collection, was a silhouette similar to Dior's 'new look', but explored through the dimensions of a black leather, motorcycle jacket. Although working with the material and trimmings of a traditional motorcycle jacket, the garment's narrow waist and accentuated hips mimics the curved silhouette of Dior's 'Bar' Jacket. By using the detailing of the jacket like the pockets on the hips and dropped shoulder, it transformed a traditionally masculine garment, worn primarily on the fringes of society, into an elegant but subversive high-end fashion item (Bolton et al. LXVII).

This content is unavailable. Please consult the figure list for further details.

Figure 2: *Cristian Dior 1947 and Junya Watanabe 2011-2012 jackets*. 2020. About Time Selected Images. 17 March 2022. <https://www.metmuseum.org/exhibitions/listings/2020/about-time/selected-images>.

To explain the visual component of the exhibition, Bolton paraphrases Benjamin claiming, that Benjamin, like Bergson, contests the linear construction of time and modernity and insists that the past can never be entirely erased from our present. Fashion is born to die, but styles are revived and considered new within a different context of time and space. Therefore, fashion has a referential nature, with a fragmented and non-linear timeline. Fashion can be alive and dead, both an example of history and the contemporary. The garments in *About Time: Fashion and Duration* reflect Benjamin's dialectical image while providing a visual manifestation of fashion's cyclical nature. Their purpose in this exhibition is to interrupt the flow of time and to undermine, as a historical materialist method, the concept of history as linear, consistent, and progressive.

The 2020 MET exhibit celebrates fashion and its conceptual relationship to time, as illustrated by its material outcome (clothing). There is a juxtaposition here of events, as the



MET's costume institute memorialises fashion's expression of time as a physical and material object, at a moment when the public was unable to attend fashion events at all. This sentiment enabled fashion entities to embrace the accessibility of the virtual space. Benjamin inspires a unique materialist methodology for this research for approaching both fashion and virtual as temporal and material objects. However, one must understand where Benjamin is philosophically positioned within the discipline of materialism to realise where he aligns and deviates from a traditional Marxist pedagogy.

### 2.3. Walter Benjamin, Fashion and Radical Materialism

While fashion is a cyclical system influenced by cultural trends, it is also an industry built on the production of textiles and garments that is representative of the every-day (Lehmann 1). Fashion is a social structure and material structure simultaneously, and the dialectical negotiation between the two is what makes fashion, fashion (Lehmann 5). When one participates in fashion, they participate in a culture of status and identity while also participating in the globally connected clothing industry.

Materialism is a Marxist political and philosophical position that focuses on the concrete, physical and material conditions in which people live and how that affects and formulates cultural traditions and our reality (Lehmann 1). Traditional Marxist materialism might concentrate on the physical properties of the fashion system and its relationship with human subjects. The framework in which this research sits focuses on the likes of dialectical and historical materialism, stemming from a Marxist tradition. Dialectical materialism recognises that the material and the conceptual are in dialogue. That matter can influence cultural and religious ideas, which, in turn, will affect surrounding material conditions and reality. Historical materialism takes dialectical materialism and applies it to an understanding of

history and, therefore, our present (Lehmann 2). Our material conditions form our relationship with culture, shaping our understanding of history. Lehmann claims that economic analysis and structures are often “retroactively applied to fashion history across periods and used to curate costumes in museums” (3), rather than, for example, examining its influence over all aspects of the system. There is a conversation to be had regarding capitalism’s contribution to the materiality of fashion and to what effect its power has on the industry.

Benjamin’s flavour of materialism is greatly sympathetic to a Marxist dialectical and historical materialist ideology, but he did not follow an orthodox account of dialectics. Benjamin embraced an outlook that reflects a metaphysical side, influenced by a messianic past. His approach is not a direct reflection of Marx, which is evident throughout *The Arcades Project*, as Marx only became a prominent feature of Benjamin’s philosophy from 1934 onwards (Lehmann 60). Benjamin’s materialism is instead temporal in nature, which sets itself apart from traditional dialectical materialism and contemporary new materialisms. Bennett and Joyce see a limit to Marxist dialectical materialism because the material is positioned as always affected by a social order rather than a ‘thing’ with agency or influence (73).

Benjamin’s work developed throughout *The Arcades Project* is considered a radical interpretation of historical materialism, used to spark revolutionary potential in Marxist thought (Löwy 25). Löwy describes Benjamin’s relationship with Marxism as combined with an interest in surrealism and fascination in a romantic, gothic Marxism that separates itself from a dominant ideology of progress (Löwy 21). Löwy explains, “The gothic Marxism

common to Benjamin and Breton might be said, then, to be a historical materialism sensitive to the magical dimension of past cultures, to the ‘dark’ moment of revolt, to the lightning flash that illuminates the sky of revolutionary action” (21). That is not to say Benjamin does not take Marxist utopian ideals seriously or recognises class struggle and the potential of social revolution (Löwy 31). Benjamin formulated a type of materialism informed by theology and Jewish mysticism, resulting in “a reworking, a critical reformulation, of Marxism, integrating messianic, romantic, Blanquist, anarchist and Fourierist’ splinters’ into the body of historical materialism” (Löwy 31). Benjamin creates a materialist undertaking that diverges from the traditional Marxist historical materialism of the time (Löwy 25).

What is known as new materialism takes a crucial step away from social totality and the linking of history with progress (Bennett and Joyce 83-84, Löwy 20). Benjamin laid a foundation for the new materialist scholars of the 1980’s, 1990’s and today (Boscagli 38). Through his critique of material culture, he was able to highlight the way objects can empower and articulate desire and pleasure both on an individual and collective level. Boscagli explains that; “By taking the phantasmagoria of the commodity fetish seriously, Benjamin reimagines a new relationship between the subject and object against, and not outside, the logic of reification” (Boscagli 41). Instead of asserting fixed binaries or categories that separate a subject or object, Benjamin was able to rework the subject-object relationship to accentuate its flexibility and open-endedness. Value, if reduced to an exchange, is restricted to the buying, and selling of a product, which reduces the subject to “endless alienation” (Boscagli 38). Benjamin reclaimed materiality from a mere consumption model and outlined an alternative narrative where the object and subject relationship is blurred and intertwined rather than hierarchical.

There are two distinct themes in Benjamin's writing: a dedication to politically activate the collective and a recognition of a particular force in discarded commodities. Benjamin recognised a "lifespark" in matter, which was seen to be left over by a type of mysticism, mythical or religious thinking, different from scientific narratives at the time (Boscagli 40). Benjamin is interested in what to do with things, and what things can do, rather than in how the subject simply consumes and is consumed by the fantasies they circulate (Boscagli 40). Boscagli claims Benjamin is playing with the idea of a vitalist materialism: "He aims to reappropriate the power of phantasmagoria and its relation to the unconscious away from commodity fetishism, to use it instead to realise collective and individual desires, and for social change" (Boscagli 40). Here, Boscagli is suggesting that Benjamin intends to use the discarded junk of the arcades; like a tiger's leap, a jump traces back to a moment of time, unlocking the memory of the collective. It is Benjamin's specific temporal materialism and his desire to understand how matter can embody a 'life spark' that sets his model apart from a traditional Marxist understanding.

Benjamin shows how the leaping to and from temporal planes enact a type of political revolution. Benjamin is not fixing a specific collective desire to a time and place. Instead, he leaves space and realises that the collective's dream memory or wish image must be brought to the threshold of consciousness, but it is never fully realised and always in the process of becoming. The conception of the dialectical relationship between the subject and object is in a constant state of revolution (Boscagli 41). Benjamin developed a new, creative materialism that was not limited to the critique of material conditions and capital; he sees the commodity for what it can be outside economic exchange constraints. To use new materialist terms, he saw the vibrancy of matter or thing-power (Bennett 2) and incorporated its spectacle outside

of the economy it is produced. In this respect, embracing the fetishisation of the commodity is a way of channelling their revolutionary potential (Boscagli 45).

Benjamin aligns a critical understanding of time and history and applies it to discarded commodity culture to develop a radical, temporal materialism crucial to a specific political and revolutionary pedagogy. This framework is significant to fashion as it is an object of material culture and a fetishised commodity that practices the same revolutionary potential Benjamin speaks of. Virtual fashion is not automatically afforded its significance as a material product as it is presented as only existing in virtual spaces. This is not to say virtual fashion's immateriality assigns itself to an idealist framework, but rather this research by using Benjamin's temporal materialism, will reveal the materiality inherent in the virtual.

## Chapter 3. Case Study: DRESSX Website Walkthrough

Fashion studies traditionally call for a mixed-method approach fashion case studies that occupy multiple disciplines, such as virtual fashion (Sikarskie 5). If anything can be attributed to fashion studies, it is the commitment to studying a subject that thrives on contradiction and ambivalence (von Busch 181). Tailoring and mixing methods to suit the object and subject in question are standard practices in fashion studies (Jenss 2). Fashion studies borrows from museum and curatorial studies, and the humanities, creating a path that unites both a theoretical context and acknowledging the object's materiality. With the emergence of material culture studies and the broader uptake of the material turn, the acknowledgement of objects and their agency has clear relevance to fashion studies (Scaturro 22). Fashion historians based in museum and curatorial studies significantly benefit from the move away from a limited cultural and semiotic understanding of clothing and fashion. Focusing on material items reaffirms their already informed practices that focus on examining and displaying the garment in and of itself. The material turn directly responds to the cultural turn cultivated by the humanities and social sciences, which neglected descriptive and structural elements that can provide a critical understanding of material culture. The material turn adds a new materialist insight into a cultural and material phenomenon by highlighting the agency of objects and their entangled relationship with humans and non-human actants (Scaturro 22).

Giorgio Riello insists that object and theory-based approaches to studying fashion must be balanced to not overpower and drown an object with theory or limit analysis of said item to what can be touched and seen (6). As this thesis acknowledges fashion as both a material object and a cultural phenomenon, a methodology that allows for both is essential. To elaborate on a fashion studies approach to research, Riello uses an example of the

development of the bikini swimsuit for women. For example, the bikini is not limited to cloth that women wear at the beach or to swim in, but was created and adopted at a time (latter half of the 20th century) that allowed women certain freedoms to display their bodies that coincided with a new lifestyle of leisure (for the middle and wealthy classes) (Riello 6). To Riello, what is appealing about the study of material culture, which includes cloth, thread, applique, and objects, is that its physicality can ground and centre the theory and concepts surrounding the material object (6). This research reiterates that while virtual fashion is produced, disseminated, and analysed through screens, it is still an object of material culture and a legitimate way of facilitating and retrieving essential data and information about fashion in general.

### 3.1. Methodology

‘Applied theory’ is an approach to studying fashion, as exemplified by Francesca Granata in her research investigating the work of fashion brand and designer Maison Martin Margiela (142). The applied theory framework derives from critical theory, including but not limited to media, material, and cultural studies (Sikarskie 95). This approach frames fashion as an active subject that can dialogue with and influence theoretical thought and culture (Granata 142). Granata notes that, with an applied methodology, object-based research is not prioritised over other theoretical based methods (147). Sources can include mediated images and videos alongside physical items, which needs multiple methods of investigation within her applied theory framework. Granata explains that “Garments, photographs, exhibitions, catalogues, press releases, and look books are all important sources, which often need to be examined together” (157). Granata’s conclusion, which references the work of Margiela, highlights fashion’s relationship with history and time as being constructed, repetitive and nonlinear and promotes a model of studying fashion that recognises this.

Theory and practice, object and subject, must be in constant dialogue, and methodologies must be fluid enough to broadly study the outputs of the fashion industry (Granata 157).

The methodologies and frameworks presented throughout this thesis are indebted to Walter Benjamin. His unique thinking provided this research with the flexible scope needed to study commodity objects and, more specifically, fashion. The methodology chosen for this research is a combination of the applied theory, inspired by Granata's multidisciplinary approach and the walkthrough method. The walkthrough method is a research methodology grounded in science and technology studies and cultural studies. The methodology aims to provide a researcher with a guide to collecting data and executing a critical analysis of a software application (app) (Light et al. 881). The DRESSX website experience, while not a traditional smartphone app, is a tool that provides active consumer engagement online and therefore has interactive elements that can be 'walkedthrough'.

The walkthrough method recognises that computational technologies need to be understood as socio-cultural artefacts and that computer technology alone cannot be used to answer social science questions (Light et al. 885). This methodology involves interaction with an app's interface to analyse its technological tools and outputs, to acknowledge subtle semiotic references, and how its cultural meaning might shape a user's experience with the device and the application itself (Light et al. 882). It establishes the app's expected market and usage by recognising its "vision, operating model and modes of governance" (Light et al. 881). The vision is the app's purpose, or what it is trying to achieve. The target market answers: Who is the app targeting and what is the app providing for the user? Its operating model highlights where the apps creators and company get their revenue sources, which might indicate a specific political and economic interest, and governance is how the provider will regulate user activity, by establishing rules and regulations to follow (Light et al. 881). While



interrogating an app's vision, operating model, and mode of governance might be integral for some research outputs, it is not necessary for this project. The information and data that are gathered from the described prompts are irrelevant to the scope of this research. The technical walkthrough itself will provide more fundamental insight, as it allows a description of the interaction with the physical properties of technology itself.

The technical walkthrough is a method of collecting research data by engaging with the app's interface, from the beginning of use to the discontinuation and deletion of the app itself. The method is grounded in new materialist frameworks such as actor-network theory (ANT) and cultural studies that allow for the study of technological mechanisms that shape and are shaped by cultural contexts (Light et al. 886). ANT draws on the notion of mediators, and the meanings they invoke through interactions and relationships with other actors inside and outside the app. Characteristics of mediators include how the app guides users through its intended activities and the arrangement of the interface; a mediator could also be the functions and features of the app itself. To help explain further, mediators "are transformative- they can alter meaning or circumstances within a system" (Light et al. 886). Mediators can be human and/or nonhuman therefore digital imagery and interfaces can be understood as non-human actors that can be mediators, due to their transformative output and meaning. Additionally, affordance theory is another way of interpreting technologies' influence over app interaction. Affordances are a way of acknowledging the potential uses of an object or technology and doing this as a researcher opens the imagination to the range of ways technology could be used, regardless of first instinct (Light et al. 886). This method allows for integration with other frameworks alongside technology and system studies or actor-network theory and integrating commonly used fashion methodologies such as applied

theory introduced by Granata will add to the overall strength of the DRESSX walkthrough analysis.

The walkthrough method generates a body of data that can later be used to build a more detailed analysis of an app including its “intended purpose, embedded cultural meanings and implied ideal users and uses” (Light et al. 881). This method invites the researcher to activate the app and walk through its various screens, activities, buttons, and menus to understand how it would guide its intended user (Light et al. 888). The walkthrough method encompasses ethnographic elements, as the researcher is acting as and observing the movements of a user throughout the research, making notes of the interaction along the way (Light et al. 886). By stepping through the app, and assuming a user’s position, the researcher collects detailed data such as notes, screenshots, and video and audio recordings of the process, detailing the actions made by all actants including the participant, computer hardware, software and the website itself. To clarify, the walkthrough method is not deployed to test an app’s design functions, but rather to trace the material objective of the app and determine its workings as a sociological artefact (Light et al. 886). The researcher also draws on relevant cultural research analysis that investigates textual, semiotic, and cultural discourses, which acts much like Granata’s applied theory methodology.

Combining theoretical frameworks of material culture with ANT, preconises the fluidity of actants, positioned and ordered along flattened lines rather than fixed categories or stemming from a singular position of power. This is important to a new materialist methodology so that all actants that include non-human actants are recognised as active participants in an object-subject interaction. Although there are limitations to new materialist methodologies such as the walkthrough method, for example power has a central role in understanding the difference

between a Marxist materialist and new materialist. The use of ANT suggests that power can be dispersed, not concentrated, and that power is relational, not coming from a single system but possibly working from multiple points (Castree 121). Each network is unique and qualitatively distinct and should be treated as such. A critique of these notions is that, with the flattening out of structures, all things are expected to have the same level of influence over the other, ignoring the potential domination of specific institutions and power structures. In addition, each assemblage in a network needs individual engagement and analysis to understand to its fullest potential, meaning no general theory can be applied to different networks (Castree 134). Another concern is that revealing the entangled encounters between non-human and human actors can only be explored through a description of their relationship. However, illuminating the lives of matter is quite different from understanding its potential. Some actants might have a more considerable influence than their related actants and thus undermine the agency of the latter (Castree 135). While these are potential issues, I argue that the combination of the walkthrough method, applied theory, and a Benjaminian framework provides this research with an adaptable and comprehensive methodology for a well-rounded analysis of the DRESSX website and virtual fashion.

### 3.2. DRESSX Website Walkthrough and Analysis

On the first of November 2021, outside my home, my friend Max Wilson took various photographs of me using his Oppo A49 smartphone. I wore bike shorts, a crop top, beige coloured socks, and black Dr Martens shoes. The bike shorts and crop top were worn to be covered with a virtual fashion item, and the socks and shoes, I thought, could complement almost any dress style. I tried twenty or so slightly different poses, and as the sun came out from behind the clouds, I did my best to avoid creating any unwanted shadows. Max sent the images to me via Facebook Messenger, and I selected a final pose and downloaded it to my

Macbook desktop. The pose (figure 3) features my arms stretched out with one hand on the wooden bannister on my deck, one hand on my hips, and my left leg placed out in front of my right straight leg. When selecting the pose, I was aware of the clarity, appropriate lighting, and type of pose needed to continue with the virtual fashion purchase.

This content is unavailable. Please consult the figure list for further details.

Figure 3. Wilson, Max. Photograph of author, before image manipulation. 1st Nov 2021.

In this section, following Light et al.'s walkthrough method, I document the walkthrough of my case study, the DRESSX website, including my mental and physical state where appropriate. On Saturday, 13 November 2021, almost two weeks after Max took the image of me on my deck, I typed in my password to log in to my 2015 MacBook Pro to begin the website walkthrough process and purchase a virtual fashion item. I went to my applications and double-clicked on Zoom to open the application, connected my Beats Flex headphones to the input and output sound, and started screen recording my session. At this point of the day, after some technical difficulties, my voice is tired, my eyes are sore, and I am low energy.

I clicked the Google Chrome internet browser from my toolbar and typed the term 'dressx' in the google search engine. I clicked on the first result under 'All' on Google, which took me to the homepage of the virtual fashion retail website DRESSX. I selected the 'ACCOUNT' button in the right-hand corner, next to 'MY CART', auto-filled my details, including my first name, last name, and email, typed in a password, and selected 'Create'. I opened a new tab and typed in Gmail to access my email account. In the promotions tab, I found the DRESSX account confirmation email. I selected the 'Activate your account' button, which took me back to the DRESSX website.

The homepage of the DRESSX website featured promotional material for new collaborations and collections, and a banner on the top of the website advertising for the DRESSX augmented reality application, where a consumer can try on virtual fashion items. As I scrolled down the homepage, images of various people wearing virtual garments were displayed. Some appeared to be professional models, while others were social media influencers or everyday customers. Some images were photographed in white studios, and

some were shot in everyday public spaces, for example, in a park or front of a public building. By displaying these photos, DRESSX is demonstrating the scope of their services. For example, their product could be used for a high-end editorial shoot or used by everyday social media users, which highlighted that DRESSX is a professional service that can cater to clean-cut, high-end fashion buyers and underground do-it-yourself fashion experimentalists. While still on the homepage, DRESSX promotes various aesthetics, as each brand they stock brings its distinct style to the DRESSX platform. Some virtual fashion brands present virtualised ready-to-wear that can replicate material clothing. Others are otherworldly, sci-fi, and posthuman designs that would be difficult or impossible to produce materially.

### 3.2.1. Drag METaverse Collection Analysis

Advertised on the homepage was the virtual fashion collection called the Drag METaverse. The banner dedicated to the collection presented three tall, thin models of varying ethnicities. Their expressions emotionless and coy, with a minimal hair and make-up look and dressed in gowns of various colours and silhouettes. I click 'Discover' and am taken to the DRESSX Drag METaverse collection page a selection of their collection is shown in figure 4.

This content is unavailable. Please consult the figure list for further details.

Figure 4: *Overview of Drag METaverse collection.* Drag METaverse limited collection overview. Author's screenshot. 10 December 2021. [https://dressx.com/collections/vendors?q=DRESSX%20Drag%20METaverse\](https://dressx.com/collections/vendors?q=DRESSX%20Drag%20METaverse)



Steven Panoncillo is a New York-based fashion designer, drag queen known as Andrena Lin, and the virtual designer of the DRESSX collection Drag METaverse. The collection consists of 10 outfits that feature a cohesive colour palette of browns, reds, blues, and pink. The silhouettes and garments available include short party dresses, pantsuits, and gowns. Some long gowns and dresses have a surrealist quality, displaying retro-futuristic and sci-fi inspired design influences. In contrast, others are reminiscent of material garments, with specific historical references prevalent to the queer community.

A blurb on the website demonstrates how Steven Panoncillo and their identity as a drag queen are deeply connected to this collection's outcome. It states: "DRESSX introduces Drag METaverse - a 100% digital collection celebrating love, individuality and freedom of self-expression" (DRESSX "Drag METaverse"). This collection is "reflecting both triumphs and horrors of being part of LGBTQ+ community in the modern society" (DRESSX "Hanky Code Baby Doll"). One example is the pink and short party dress called the 'Hanky code baby doll' (figure 5). As suggested by the name, its silhouette is characterised as a baby doll dress with a sweetheart neckline and bow-tied shoulder straps. The skirt flares from the empire waistline 'hemmed' just below the knee. Paisley handkerchiefs or bandanas of various colours are virtually tied on the waistline. The bandanas are reminiscent of a historical and political symbol associated with gay and queer communities known as the 'hanky code'.

This content is unavailable. Please consult the figure list for further details.

Figure 5. Steven, Panoncillo. *Hanky code baby doll*. Virtual fashion photograph, DRESSX. 17 March 2021, <https://dressx.com/products/hanky-code-baby-doll>

The handkerchief, specifically in the American gay community, was a dress code that men wore in the back pocket of their pants or jeans. How the hanky was worn, and which colour would indicate their romantic interests and sexual proclivities. Although its origins are debated, by the mid-1970s, wearing a handkerchief code while cruising for sexual partners was a common practice within queer communities (Cornier 22). Queer experiences were not the dominant narrative shared and displayed throughout early 1970s America. Although you will always have voices and communities coming from the margins, the dominant narrative of America at this time was white, cisgender and heterosexual (Batza 2). The criminalisation of homosexuality throughout the recent past caused gay men to peruse their romantic partners in secret in fear of being persecuted by police or targeted for violence. Cruising and dress codes became a protective mechanism for gay men to meet and socialise with romantic partners (Cornier 1). Although the hanky code is commonly noted as a 20th-century practice, it is not uncommon for marginalised groups functioning on the fringes of society to use dress codes as a way of signalling messages to others in their community. For example, BDSM and kink communities are still known to practice certain coding's (Geczy and Karaminas 99).

Panoncillo's collection reminds us of the political potential of fashion itself. We see the re-emergence of previous styles or codes through fashion's constant reproduction and drive for novelty. The hanky represents a recent history where queer identities were forced to create codes to disguise their relationships and sexual encounters. Benjamin maintains that the re-emergence and recycling of historical trends can capture a politically charged moment of history. The past being recalled into the present, as exemplified by Benjamin's concept of the Tigersprung, creates a moment of productive, revolutionary potential (7). Interpreting past images by referencing fashions transforms the memory of a lived experience into the actuality of the present (Meek 12). Using a hanky as a historical reference while also in the

context of an openly queer virtual fashion collection, the hanky itself was able to flash a dialectical image in the present moment to entice a revolutionary break outside of the continuum of traditional linear history. The hanky dress embodies an uncompromised version of history that overcomes the ideology of progress.

The hanky dress is taking a tiger's leap into the past. The observer is actively or unconsciously reminded of a recent history where it was common to see the prosecution and discrimination of queer identities. To look at the coded handkerchief as a purely historical statement ignores the people and communities that continue to be discriminated against for their sexual orientation or gender identity today. Some countries still criminalise same-sex relationships (BBC), and the use of politicised garments or accessories will continue to be utilised. Furthermore, while the decriminalisation and legalisation of consensual encounters between same-sex couples, and the more recent legalisation of same-sex marriage in the United States and New Zealand, only occurred due to constant pushback from queer communities and activists. This historical connection is a signification of the unique way fashion functions as it reinterprets items from the past for the present moment. Utilising history and time can be powerful and effective in awakening the public from their commodified dream state, distracted by technological progress.

An additional design motif Panoncillo explored throughout the Drag METaverse collection was gowns with applique that replicates features of a disembodied human face (figure 6). The design attributes are transgressive as they firstly allude to the art of the grotesque, and secondly, display design features that cannot be recreated in the physical world. The Drag METaverse collection is queering the body through design features that symbolically

reconsider the body's imitations (disembodied face) and uses virtuality to transgress bodily limitations set by the physical world. There is an aesthetical disembodiment through the facial detailing of the gowns, but also a separation of the body created by the virtual medium itself.

This content is unavailable. Please consult the figure list for further details.

Figure 6. Steven, Panoncillo. *Two faced dress*. Virtual fashion photograph, DRESSX. 17 March 2022, <https://dressx.com/products/two-faced-dress>.

Lips and eyes can be coded as sensual elements of the human face. They feature throughout the collection as enlarged, over the top facial features, dismembered from the human face and body. Grotesque style is often used as a marker of marginalised subcultures or identity groups such as punks and, in this case, drag queens. Calefato (29) describes the grotesque in fashion as an exaggeration and defying bodily boundaries and openings. The eyes and mouth are portals that transgress bodily boundaries, from the inside to outside, through the production of bodily fluid (saliva, tears). Such bodily functions that are often concealed from public spaces are largely displayed through fashion applique, decorating, and hiding the natural body with exaggerated appendages. In an aesthetically camp fashion, the excessive facial features are playful expressions of sexual innuendo and this collection transgresses boundaries as set by heteronormative culture.

Virtual fashion allows for subversive and transgressive design features that transcend the physical world. For example, design features in figures 6 and 7 appear to float mid-air, unattached to the garment or body. The applique and garment itself do not fall and drape in the way it would on a physical body and, in this respect, the garment purposely does not reflect the boundaries set by the physical world. This design feature is specific to virtual fashion because, for material fashion, there needs to be a consideration of wearability and comfort. This element is something the virtual fashion outlets such as DRESSX emphasise. As announced in their brand vision, DRESSX aim to “show that some clothes can exist only in their digital versions” (“OUR VISION”). Indeed, some clothes could only exist in their digital versions, but this statement also speaks to a major component of their ethos and philosophy to exceed the limitations set by the body and conventions of dress itself via virtual spaces. A DRESSX brand that embodies these ideas is Auroboros, who are known for their sci-fi and otherworldly virtual fashion aesthetics.

This content is unavailable. Please consult the figure list for further details.

Figure 7. Steven, Panoncillo. *Serving face*. Virtual fashion photograph, DRESSX. 17 March 2022, <https://dressx.com/products/serving-face>.



### 3.2.2. Auroboros: Nature-Tech Collection Analysis

Auroboros is an example of a DRESSX brand whose design aesthetic is otherworldly, alien, and purposely defiant of physics. Founded by Paula Sello and Alissa Aulbekova, Auroboros is a virtual ready-to-wear and physical haute couture fashion house. Their aesthetics merge science and technology and their ethos and brand identity promote sustainability and design innovation. As expressed by their collection blurb on the DRESSX website, Auroboros are exploring a utopian ideal of what fashion's connection with nature, technology, and the human body can be, through their biomimicry digital collection called Nature-Tech (DRESSX "Auroboros Nature - Tech Couture.")

Biomimicry is a design method to create products and processes that imitate nature. It is a practice of mimicking and learning from nature and how it functions in the world to inspire innovative and sustainable designs (DeLuca 459). Auroboros and their DRESSX collection mimic elements of botany through ornamental features that replicate flowers, vines, stems, roots, and pollen in a vibrant metallic colour palette of blues, pinks, green and silver. As shown in figure 8, is the ensemble called the 'Biomimicry Bodysuit'. The garment features an under suit with vines and roots draping around the body and detached from the body floating pink and purple particles that resemble petals or flowers. Auroboros describes its colour as opal crystals, moon shine silver folia, and xenopeltis unicolor and is 'made' of sharp folia and biomimicry crystal. The bodysuit product description claims that the item can grow on the wearer in real time, stating to the customer that they can "[m]etamorphose with our classic growing crystals and become one with our innovation of real time growing clothing" (DRESSX "Biomimicry bodysuit"). This description creates an embodied feeling for the virtual wearer, even though the garment could not exist in the physical world.

This content is unavailable. Please consult the figure list for further details.

Figure 8: Auroboros. *Biomimicry look*. Virtual fashion photograph, DRESSX. 10 December 2021, [https://dressx.com/products/biomimicry-look?\\_pos=4&\\_sid=2c8095348&\\_ss=r](https://dressx.com/products/biomimicry-look?_pos=4&_sid=2c8095348&_ss=r).

Auroboros are transcending traditional elements of fashion design with their virtual fashion collection and physical fashion couture projects. As part of London fashion week September 2021, Auroboros presented a concept dress made from salt and recycled plastic that appeared to be growing and living. An AI (Artificial Intelligence) robot on display at the Victoria and Albert Museum is wearing the physical dress called Biomimicry. It changes its colour and silhouette according to the conditions but will eventually disintegrate, meaning the viewing experience will differ daily (Finney). The growing dress evokes a feeling of movement and mimics the ephemeral life cycle of nature, which Auroboros claims to remind us “to cherish the beauty of the burgeoning life before its eventual end” (Finney). Their physical and digital couture relate via similar themes and aesthetics. Both of their projects are a representation of ecological time that coincides with the process of life, death, and renewal. As expressed previously in chapter one and chapter two section 2.1.1, this idea is not uncommon to fashion, as fashions live and die in a representation of the present moment, as Simmel (547) and Benjamin (62) indicate.

While Auroboros and the aesthetics of their digital collection are rooted in biomimicry, they appeal to a sense of time grounded in nature that is recognisable to the human experience while also transcending the constraints of time and space as via the digital medium. Their reference to nature makes their digital collection distinctive; they apply a sense of ecological time to a virtual space that is conceptualised as always in the present. Rather than highlight this contrast as seeped in binary ideologies, their collection is instead formulated by a new materialist framework that acknowledges the significant relationship between the natural world and technology. That said, Auroboros and their brand philosophy are imbued in the ideology of technological progress and accompanying cyber-fantasies. Their brand vision is ambitious and optimistic as they wish to reinterpret fashion and its relationship to the

physical body by using technology. Two elements of the Auroboros brand and ethos need unpacking by using a Benjaminian framework: firstly, their ideology of progress and, secondly, the cyber fantasies promoting the transcendental experience of the virtual body found prominently in their promotional material.

Firstly, the ideology of progress and the idea that historical progress is assumed and considered automatic is one of Benjamin's persistent critiques throughout his writings (Buck-Morss 71). As demonstrated by Auroboros, their brand values narratives of infinite expansion, narratives of technological progress and social liberation. In their brand description, Auroboros claims to be "creating a romantic premise for the near-future" (DRESSX "Biomimicry bodysuit"). Under the guise of innovation, cyber technologies and the development of virtual worlds are not only framed as inevitable, but even natural (Brians 122). Progress prescribes innovation as an automatic response to history and, more importantly, as promoted by Auroboros, as happening now or in the imminent future. The critique of progress is focused on the way historians and writers would gaze back through a chronological version of history and equate technical and technological progress with social and political progress. The myth of progress can allow for an inaccurate account of history as formulated and used by the ruling classes, that actively ignore the advanced social structures that prevent the emancipation of the working and oppressed classes. While virtual technologies can promote ideas regarding innovation and transcendence of social and economic constructions, I argue we must consider the actual material conditions of people, specifically that of the oppressed at the time of so-called technological innovation and progress.

Critiquing the guise of progress under capitalist modernity is not a reactionary stance but, rather, is specific to the aim of revolution (Löwy 6). Where a traditional Marxist maintains that the fall of capitalism and rise of a socialist and eventually a communist society as an automatic or unavoidable process, Benjamin claims it is not through technological progress that revolution is inspired, but in the interruption or halting of progress. One of Benjamin's most memorable comments on this idea is: "Marx says that revolutions are the locomotive of world history. But perhaps it is quite otherwise. Perhaps revolutions are an attempt by the passengers of the train—namely, the human race—to activate the emergency brake" (Benjamin 402). It is not through progress that revolution is enabled, but instead through a reinterpretation of history and an interruption of the collective dream state through dialectical images.

There is a rich philosophical history of the virtual which is beyond the scope of this thesis, but analysing the virtual in regards to digital media technologies, fashion, and the body is essential to understanding the materiality of virtual fashion. In cyber discourses, 'the virtual' is considered intangible or non-material, and commonly used to refer to screen technologies, and virtual worlds (Shields 2). Shields explains that virtual contrasts the real in an everyday sense of the word and describes a lack of a tangible presence (2). For example, virtual reality is a combination of images and objects projected and simulated through headsets, but the objects themselves do not exist concretely, hence the name virtual reality. DRESSX, who host Auroboros as a brand, reinscribe the virtual and real dichotomy through the idea that if one is producing digital items, they are not producing anything of substance at all. Their mission statement reads, "We share the beauty and excitement that physical fashion creates, but we believe that there are ways to produce less, to produce more sustainably, and not to

produce at all” (“OUR VISION”). DRESSX and how they communicate their product inscribes a dissonance between their virtual product and the material world that fabricates it.

A binary approach to the virtual versus the real cyber discourses reveals some philosophical weaknesses. Firstly, virtual simulations are always responding to or affecting experiences of the real and, secondly, the virtual is as real as the technologies that enable them (Meek 5).

The presence of information and communication technologies demonstrate how the virtual and virtual fashion is dependent on its material counterpart, to not only produce, but maintain its image. For example, Auroboros as shown in figure 8, still design their virtual clothing to the contours of the physical body, and the DRESSX service itself is limited by the image their customers provide. Additionally, DRESSX and Auroboros could not produce their businesses, brands, and collections without the appropriate hardware such as computer monitors, hard disk drives, and data storage. Their success also relies on their customer base to obtain hardware such as laptops, internet modems and smart phones.

Fashion is conceptually attached to the body and, in post humanist and cyber discourses, the site of the body and its possible transcendence via the virtual is pertinent. Ella Brians explains two common themes when discussing the posthuman virtual body. One camp argues for “careful and creative thinking through our embodied relationship to technology” (Brians 118). The second camp describes those who anticipate total body emancipation or, in other words, want to “escape the confines and limitations of the human body” (Brians 118).

Auroboros and their dedication to otherworldly aesthetics, so far demonstrates their inclination toward the latter. Auroboros and their design aesthetics that transcend the limitations of the physical world, perpetuate a “technofantasy” (Brians 122) that endorses a

loss of the tangible and alongside it a loss of social contracts that are restricted by our material conditions. They also lack any sort of previous or historical fashion references, which is a significant element to the definition of fashion and illudes to the idea that the virtual exists only in the present and without history.

There is the potential for virtual fashion with its otherworldly aesthetics to alienate fashion consumers, to the point that they do not recognise the image or virtual clothing as fashion, but rather an example of costume or wearable art. The distinction here is subtle, entwined and debated in fashion studies. As established in the first chapter of this thesis, Simmel explained that fashion thrives in a society where a community prioritises both collective unity and individual expression. People dress to align themselves with a particular social standing, group, or identity but they still want to be considered an individual with their own sense of style or taste. For example, Auroboros' biomimicry bodysuit diverges dramatically from wearable everyday material clothing. The item is distinctive to the point where it sits outside of a traditional trend cycle. Its aesthetics and references are not tied to a specific collective and group or history and the potential of imitation reduces due to its overt eccentricity and ease of reproduction. Therefore, I would argue, that for the likes of the Auroboros brand that their virtual products do not resemble the qualities of a fashion item at all.

As outlined by Brians (124), during the early development of cyber-theory, scholars were optimistic of the internet's role in potentially transcending material constraints, as in developing 3D immersive worlds and, therefore, the social restrictions that come with the material world. Cyber optimists hoped that the ability to perform varying identities or experience an identity that isn't fixed to our physical world, whether through 3D immersive

worlds or social media, would “increase empathy and understanding” among users (Brians 124). The idea was that if there was a democratisation of communication technologies and access to information, people could enter into a bodiless network and be freed of our cultural categories; no longer would a human being be limited to a single body or identity (123). Auroboros align themselves with the promise of conceptual and social emancipation through the likes of virtual and digital media culture. For example, through the use of virtual fashion, Auroboros claim to provide “limitless freedom and accessibility in terms of gender, body and size” (Zhang) and to provide limitless freedom of expression is to provide a service that transcends material worlds and the limitations and restrictions that come with it.

Cyber discourses reproduce a misunderstanding of the virtual as both a description of media technology and a metaphysical concept. The founders of Auroboros in their Business of Fashion talk claim to “establish a new form of luxury that is entirely free from the constraints of the physical world” (auro.boros “Establishing a New Form of Luxury”). This rhetoric places the virtual in opposition to the physical and real world. Their use of language and transformative aesthetics that promote a transcendence of bodily constraints is misleading and misunderstands the potential of the virtual. The virtual is always in a complex network with the real and cannot transcend materiality.

### 3.2.3. The Virtual Fashion Purchase and Social Media

The first section of the walkthrough addresses the aesthetics of virtual fashion brands Drag METavers and Auroboros, presented on the DRESSX website. For the remainder of the



walkthrough what will be described is the purchasing of a virtual fashion product and subsequently posting the image to social media.

After I clicked the shop now button, I chose ‘all collections’ and changed the search filters to ‘jackets’ and sorted the items from highest to lowest cost. I scrolled through two pages of jackets and found one with dress features, as it comes to below the knees and has large flounces that go around the arms and waist. It is all black with a high neckline and a loose fit around the body. I uploaded my saved image from my desktop and clicked ‘add to cart’. The item total is \$69.21 AUD. The site itself is in AUS currency with the closest conversion rate to NZD, but there are also options to spend crypto currencies such as bitcoin and ethereum. I clicked the checkout and my computer autofills my billing address to Wellington, New Zealand. The payment option I chose is PayPal. My account password autofilled and I click a checkbox to prove ‘I’m not a robot’. I reach for my phone and receive a confirmation text from Paypal, and I type in the confirmation code. The cost of the item converts to \$75.09 NZD. After my order is processed, the website takes me back to my cart, and I click ‘continue shopping’.

The next day I woke to an email in my inbox from DRESSX containing my virtual fashion superimposed image. In just under 12 hours since I bought the virtual item, I received the image at 3:04AM. The email reads like a standardised message crafted for every customer. The email included a marketing consent form for DRESSX to have the option use my image in their promotional material, which I complete and sign. Moving from my Macbook to my iPhone 7, I went to the Gmail app, and downloaded the virtual fashion purchase to my camera roll.

That day, I crafted an Instagram post that I shared to my Instagram and Facebook accounts. The first image I arranged is a cropped version of myself in the dress, that highlights my face and provides a close up of the virtual dress, and the second image, once you swipe left, reveals the full-size photograph and dress. My caption reads: “This is a #dressx TEST. For my masters research on virtual fashion and (in short) its relationship with materiality and time. Designed by IV & Ruzalina & VADIM TISHIN. I cannot say what the future looks like for virtual fashion or NFTs, but it’s definitely something” (tyla.stevenson, “This Is a #dressx TEST”). Over the following 24 hours I received approximately 150 likes and 14 comments on Instagram, with individuals praising the image, the dress, and the idea of virtual fashion itself. Some were from friends and others from bots looking for brand ambassadors. I engaged with my friends’ comments by liking them and ignored the brand bots. On Facebook, I received around 100 likes for the image and four comments, all from Facebook friends.

### 3.3. The Materiality of Virtual Fashion

The virtual fashion purchase is superimposed over my original pose and image with the jacket digitally altered and edited to the image of my body. As shown in figure 9, DRESSX edited shadows under the skirt and the arm of the dress is folded and draped to allow for my outstretched pose. The items ‘fabric’ resembles a flexible neoprene, which would typically allow for the structure and volume presented in this garment. Although realistic, the virtual fashion image does not accurately resemble an in-person garment, as elements of the editing specifically around my hair is not entirely smooth or integrated. But the overall virtual fashion purchase was straightforward and final result captivating.

This content is unavailable. Please consult the figure list for further details.

Figure 9. Stevenson, Tyla (tyla.stevenson). "Photograph of author after image manipulation." Instagram. 15 November 2021, <https://www.instagram.com/p/CWSBQgdPyVE/>

I enacted a similar selection process to my in-person shopping experience when purchasing the IV & Ruzalina & VADIM TISHIN jacket. While shopping for a virtual item, I was considerate of varying factors such as cost, style, and the potential outcome of the final image itself. As a student with limited disposable income, and a virtual fashion novice, spending a considerable amount on a virtual item that I will not own and wear for a variety of occasions was intimidating. I continuously weighed up the cost of the item against the outcome or final image I desired. Like most clothing purchases, there was a compromise between the final cost of the item and the style I gravitated toward. The item I purchased was under the budget I set of \$100 NZDs, but also reflected elements of what I consider my fashion sense or style. The dress reflects my taste in several respects. It's all black and not overly revealing, covering my upper body, neck and arms. It has an element of ease and comfort but also flamboyance and extravagance. Due to the nature of this study, I was aware of the aesthetics that I aligned myself with and their associated social connotations. Between the social media captions and the virtual fashion image, I revealed clues related to my education level, age, class, gender, interests and even values. The image and dress itself suggest I might be a postgraduate student in her mid-twenties with an interest in high fashion and culture. The experimental nature of a virtual fashion purchase might suggest that I have a disposable income and whether these traits are representative of who I am as a person, it is what this image alone can present to my platform.

What the Auroboros garments lack, which is a connection between the individual and collective and the relationship with the past, is what The IV & Ruzalina & VADIM TISHIN purchase embodies. The historical representation and reinterpretation of linear time gives the concept of fashion its definition and, as Benjamin claims, its revolutionary value. The IV & Ruzalina & VADIM TISHIN jacket not only references historical features but also exists

within a contemporary trend cycle, observed by the popularity of designers such as Molly Goddard and Simone Rocha. Their collections are traditionally voluminous and overtly feminine, featuring tulle, lace, gathering, pleating, and contrasted proportions. Such features are reminiscent of the IV & Ruzalina & VADIM TISHIN jacket and collection. As stated by their collection briefing, IV & Ruzalina & VADIM TISHIN's virtual fashion collection is inspired by the dress accessory called the jabot and aesthetics of the 17th Century in general (DRESSX "Black Jacket\_JABOT.LAYERS."). A jabot is a frill or gathering of fabric, arranged on the breast or falling from the neck of the wearer. More generally, the jabot, or voluminous accessories and silhouettes, are not specific to the 17th century and can be seen through centuries of fashion history. Oversized ruffles, voluminous sleeves, and high pleated necklines are common historical references, ranging from Elizabethan eras, the French revolution, and 1980s power dressing for women (Edwards 71). The garment and its silhouette, regardless of its virtual medium, reflect a contemporary moment through a reinterpretation of the past. A combination of representing an established trend cycle and historical influence situates this virtual fashion item within a (material) fashion system.

The DRESSX platform is a virtual space in constant negotiation between the virtual and real. The virtual is not a free-standing entity separate from our materiality and if anything, it is limited to its material affordances. The website and virtual fashion service are an example of a mixed reality, where there is a relationship between the body, the virtual, our identities, and material forces that are interrelated and affect our overall experiences. For example, the desired outcome of DRESSX and their product is for the consumer to post their image to social media outlets, share their virtual fashion outfit, and promote DRESSX itself. Social media provides a representation of the user's real-life experiences but coordinated for online consumption. While this may seem obvious, DRESSX and their service require an image of a

material body in which to superimpose their product, there is not virtual fashion without the image of a body. Once the image is posted to an online forum, the experience can transcend and affect people in the material world. The user can engage with that image by tagging and using hashtags that is mediated by the social media platform. Their friends and family can comment and react to the image or comment in person, therefore not limiting the interaction to a virtual space at all. As Brians describes, “though the identities produced online are not reducible to biological bodies, they are formed in relation to them” (138). In other words, online identities are produced via the constant negotiation between the physical body and virtual space and its outcome is limited to the constraints provided by the technology itself. The internet and digital media technologies are not open, free, and non-material, but require significant material resources to produce and project (Brians 125).

### 3.3.1. Virtual Fashion and Sustainability

The DRESSX brand and its vision for the future is virtual. One of their objectives is to provide an alternative for material fashion, specifically what is known as fast fashion. While the sustainability of virtual fashion or digital products is not a primary concern for this thesis, its sustainable potential is vital for DRESSX’s marketing brand philosophy and ethos. Their vision statement that sits at the bottom of each of their webpages reads as follows:

We strongly believe that the amount of clothing produced today is way greater than humanity needs. We share the beauty and excitement that physical fashion creates, but we believe that there are ways to produce less, to produce more sustainably, and not to produce at all. At a current stage of DRESSX development, we aim to show that some clothes can exist only in their digital versions. **Don’t shop less, shop digital fashion** (DRESSX “OUR VISION”).

When DRESSX emailed my virtual fashion look to me, it featured an advocacy statement for virtual fashion that demonstrates the brand's commitment to sustainability. It features information that acts much like prompts, ready-made statements and facts that I can recite when advocating for virtual fashion:

And just some facts to keep in mind when you advocate for digital fashion:

A men's white t-shirt is responsible for emitting 6.5kg of CO<sub>2</sub>e into the atmosphere.

Production of a digital garment emits 97% less of CO<sub>2</sub> than production of a physical garment and, on average, saves 3300 liters of water per item, which is enough for one person to drink 2 liters per day during 3,5 years. Polyester dress takes 200 years to decompose - to decompose a digital dress, you just need to archive its picture in your feed. Traditional fashion accounts for 20 to 35% of microplastic flows into the ocean. At DRESSX, we donate 1% from all our sales to No More Plastico Foundation to help raise awareness about plastic pollution (Orders DRESSX).

In 2020, DRESSX released a sustainability report explaining how virtual fashion is more sustainable than its physical counterpart and outlining the company's dedication to establishing and meeting their sustainability goals. DRESSX acknowledge their contribution to CO<sub>2</sub> emissions as a virtual fashion brand but states that virtual fashion still contributes less than the traditional industry. For example, just like the email I received after my purchase, their report claims that digital garments admit "97% less CO<sub>2</sub> than production of a physical garment" and that digital fashion "on average saves 3300 liters of water per item" (DRESSX "Sustainability"). Their environmental impact was measured on the energy used to create digital garments, placing them onto client photographs and sending them via email, but does not include the energy used to archive their files on the cloud. Part of their 2021 goals was to

measure all CO2 emissions, including the storing data in data centres, but this information is yet to be published at the time of writing.

Due to virtual fashion being a recent development in the industry, there is very little data to substantiate its individual contribution to greenhouse gas emissions. Nevertheless, the information and communication technology sector, which powers the virtual fashion industry, contributes 2% of the global greenhouse gas emissions due to its high energy demand.

According to a 2016 UN study, it is on par with the aviation sector (“ICT sector”). Virtual fashion contributes to very material and severe environmental outcomes. Virtual fashion does not just exist in virtuality; it is not simply an image. Instead, it will have lasting effects on our environment through energy usage and ICT industry hardware waste, many years to come.

Helsinki Fashion Week partnered with the company Normative to report the carbon footprint of their digital-only fashion week compared to their physical fashion week. As reported by Chan, Normative claimed the carbon footprint dropped from 137 kg to 0.66 carbon emissions per attendee. However, Morten Rosen of Normative explained that the significant drop of carbon emissions per person was due to more people being able to attend the event and, in actuality, the overall carbon footprint for the event was higher than their physical events (Chan). There are trade-offs for virtual fashion and sustainability; more people can attend virtual events, like HFW, for example, but it can come at an environmental cost.

Sustainability is one of the primary marketing tools used to promote virtual fashion, but it is essential to acknowledge that ‘virtual’ does not automatically mean ‘sustainable’. What is often missing from the conversation or hype about virtual products is that the virtual world does not exist without its material world counterpart, the tangible hardware that creates these



virtual spaces. On a practical level, e-waste, such as laptops and mobile phones, is one of the “world’s fastest-growing domestic waste streams” (“E-Waste”) caused by high rates of electronic equipment consumption with short life cycles and few repairing opportunities and programs. Virtual worlds, in this sense, will always be linked to our material world.

Suppose virtual fashion were to replace fast fashion. In that case, proponents argue that excessive emissions would be cut from major elements of the supply chain, such as at the design and toiling stage to the production of materials and the construction of garments. Virtual fashion will limit emissions to the ICT industry, such as data storage and hardware. However, regardless of the adoption of virtual fashion, consumers will continue to wear and purchase clothing and participate in physical fashion. The rise of virtual fashion does not equate to the decline of physical fashion, and at this moment in time, it is impossible to assess the claim that virtual fashion will be a solution to the fashion industry’s environmental impact. Virtual fashion and DRESSX’s overall brand communications are steeped in cyber utopian ideology and techno-optimism, which continue to push the so-called progressive and positive outcome of technology continuously into the near future.

### 3.3.2. DRESSX Augmented Reality App

The rhetoric displayed in a 2021 Vogue article about the DRESSX AR app claims that “AR clothing try-on is nearly here” (McDowell). This headline is misleading and does not accurately describe the technology available to everyday users. Although the article acknowledged that there are improvements to be made (McDowell), typical cyber fantasies are enhanced by only discussing the possibilities of AR technology and virtual spaces in

general. In this sense, the same technology said to revolutionise online fashion retail is always, on the way.

The overall experience of the DRESSX website was accessible and intuitive but contrasted with the experience I had with their secondary DRESSX AR application. The DRESSX app is an augmented reality virtual fashion try on software and a space where you can buy virtual fashion available on the DRESSX store. It works much like other AR filters offered by social media websites like Instagram and Snapchat, layering graphics over a user's image as they move and pose in real-time. There is a dissonance between what DRESSX is offering and the technological capabilities of the AR feature itself. DRESSX states that the user can "expand beyond the boundaries of the physical world, and join the pioneering movement of the digital fashion future" (DRESSX META CLOSET). As shown in figure 10, the technology is unconvincing and far less immersive than I would anticipate as a user. The AR app and its fragmented qualities are not representative of DRESSX and the quality of technology they have to offer, but rather a demonstration of the overall quality of the AR technology that is available to smartphone users. This is shown via the Snapchat try on filter demonstrated in figure 11. Compared to the DRESSX app, the handbag try-on is a better representation of a in person product but there are still issues surrounding the placement and tracking of the users body. Although the technology will continue to improve with updates and new versions becoming available, try on capabilities for clothing and accessories via AR technology right now are not indicative of a material experience.

This content is unavailable. Please consult the figure list for further details.

Figure 10: “Digital versions of designer Clara Daguin’s couture” *Vogue Business*, Maghan McDowell. 2021.

<https://www.voguebusiness.com/technology/why-ar-clothing-try-on-is-nearly-here>

This content is unavailable. Please consult the figure list for further details.

Figure 11: “Snapchat boots AR try-on tools: Farfetch, Prada dive in” *Vogue Business*, Maghan McDowell.

2021. <https://www.voguebusiness.com/technology/snapchat-boots-ar-try-on-tools-farfetch-prada-dive-in>

To conclude, the walkthrough method provided an opportunity to complete a material analysis of virtual objects, describe the complex interactions between human and non-human actants, and highlight the inherent relationship between the material and virtual. The DRESSX website demonstrates a material and virtual interaction by reiterating the production of material properties. For example, the DRESSX website promotes brands and design styles that are indicative of physical fashion items. There are also examples of DRESSX virtual brands that continue to utilise historical fashion design elements and references. As expressed by a Benjaminian framework, the calling back of previous or historical styles is reminiscent of temporal materialism specific to fashion. Not understanding or acknowledging the material and the environmental impacts of participating in virtual spaces leads to problematic ideologies that associate the virtual with sustainability. It is crucial to highlight individual's significant interaction with technology and its material consequences when traversing online and virtual spaces.

## Chapter 4. Discussion

Virtual fashion reinforces fashion's intrinsic relationship to materiality and time. As the walkthrough of the DRESSX website reveals, virtual fashion demonstrates a relationship with materiality through new media and ICT hardware, and their environmental impact. Virtual fashion furthermore maintains a relationship to time as there are examples of brands like DragMETavers and IV & Ruzalina & VADIM that continue to utilise historical design references in their virtual garments. As a result of virtual fashion's unlimited design potential in the virtual space, brands such as Auroboros are designing beyond the limitations of the body and typical physical fashion outcomes. Designing virtual garments with no reference to previous fashions or history, however, disconnects their design outcome from the definition of fashion as defined by this thesis. Demonstrating no historical features also disconnects fashion's relationship with a temporal materialist framework, highlighted by Benjamin and therefore its political and revolutionary potential.

To reiterate some of the points highlighted throughout the walkthrough and analysis, the virtual shopping experience was reminiscent of a physical shopping encounter. I considered a lot of the same variables that I would when purchasing a physical item such as its cost, colour, style, fit and how the garment will represent me and my identity. The active interaction I had with the website, including the browsing and shopping experience itself and associated ICT hardware such as laptops and personal devices, reiterates the relationship between the material and virtual fashion. The walkthrough demonstrates that virtual and material fashion share common qualities and experiences for the customer and therefore it is unhelpful to position the virtual in opposition to the material.

While virtual fashion might not exist as a piece of clothing or a physical accessory, it is still bound to material outcomes. Virtual fashion consists of a virtual product but is produced using the matter and hardware of the ICT industry, which has its own complex but tangible relationships to our bodies and the environment. While participants will not feel virtual fashion against their skin, nor will the item deteriorate with wear and age (time), there is still a physical interaction with personal devices that are touched and worn out. The walkthrough identified a map of interconnected actants and material properties, from the act of physically scrolling and clicking a computer mouse to how that translates and interacts with the virtual images on a screen. From the first photograph taken to when it was uploaded to social media, multiple phones, computers, social media sites, email addresses, and internet connections, even excluding those on the side of the DRESSX company, all contributed to the purchase of a virtual fashion item.

To understand DRESSX's intended purpose, analysing the website design, copywriting rhetoric, and brand aesthetics provided further information and data for this research. Brand rhetoric displayed by DRESSX positioned virtual fashion as a potential solution for the environmental issues presented in the fashion industry. However, as explored in section 3.3.2. Virtual Fashion and Sustainability, the ICTs needed to produce virtual fashion, have a significant environmental impact, as they contribute 2% of the global greenhouse gas emissions. Although this is acknowledged by DRESSX, they claim virtual fashion still contributes significantly less (97%) carbon emissions in comparison to physical fashion (Orders DRESSX). Other than the fact that this claim cannot be backed up by any academic studies, other than reports produced by DRESSX themselves, it is not the intricacies of their sustainability project that this research is concerned with. Rather, that the virtual is automatically equated to an idea of sustainability due to its visual lack of materiality. As

reiterated throughout this project, there will always be material outcomes attached to virtual spaces and products, even when they are invisible to us.

DRESSX minimise the material outcomes of virtual fashion, which upholds certain techno-fantasies about the possibilities of the virtual. Similar to techno-fantasies upheld by DRESSX, Auroboros reproduces discourses that encourages ideas surrounding the transcendence of bodily boundaries. They advocate for transcending limits set by bodily and material boundaries through their design ethos, otherworldly aesthetics, and the use of the virtual medium itself. The idea of transcending bodily boundaries through virtual commodities is a techno-fantasy that encourages consumers to put faith into a pure transcendental online, virtual space that leaves behind the material and social constraints of the physical world. The results of this research however highlight that material conditions and therefore structures of power developed in our physical world or society, are not disconnected from a new virtual world. The design aesthetics of Auroboros demonstrate to consumers that their digital products only exist in a virtual space, eliminating or hiding their material outcome from the conversation all together.

The combination of DRESSX's and Auroboros' discourse surrounding virtual fashion, or rather their assumptions of the virtual lacking in materiality, perpetuates the virtual and material binary that this thesis aims to deconstruct. Part of virtual fashion's allure to the public and fashion industry, is its proximity to new media and technology. Virtual fashion is presented as new and novel, especially due to its perceived immateriality as presented by the DRESSX vision statement referred to in section 3.3.2. But virtual fashion is not an immaterial product; rather, its materiality is integrated into everyday life, via inconspicuous



devices that are used day to day, that blend our virtual and physical worlds. When the virtual is seen as an immaterial, expansive space (Shields 2), it can trivialise its material by-products. What the walkthrough methodology does is make those material outputs obvious, which can shift the common understanding of what virtuality actually involves and that is the material.

This thesis aims to understand fashion's relationship to materiality and time when represented in virtual spaces. While virtual fashion doesn't share the same embodied characteristics as material fashion, it still has a strong relationship to the physical. Next to be addressed is virtual fashion's relationship with time. There are examples of virtual fashion that can demonstrate a connection to history and time, similar to physical fashion, and there are other examples that I argue do not. Similarly, there are elements of the physical fashion experience that cannot be replicated in the virtual. For example, virtual fashion loses the embodied connection to the 'dress' element of fashion and cannot be worn down or present the same sign of aging or patina that physical fashion can. However, virtual fashion can be rendered or designed to look aged, and these techniques are used in new physical fashions too, with Levi's etching patterns of wear into their newly produced jeans (Insider).

The analysis of the brand Auroboros in section 3.2.2. demonstrated that virtuality allows designers to create beyond the parameters of time and space, meaning they can design clothing that has never been seen before, due to limitations of physicality. Auroboros' designs are visions for the future reminiscent of a sci-fi fantasy, their silhouettes fit the scale of a human body, but they do not adhere to the laws of physics and therefore do not illustrate historical references to previous fashions. Auroboros and the Serving face and Two faced dress shown in the DragMETaverse collection, are examples of an otherworldly aesthetic that

virtual fashion allows, but ultimately does not share the same connection with time that material fashion demonstrates.

According to the definition of fashion developed throughout this thesis and reiterated by a Benjaminian framework, time is conceptually bound to fashion. As discussed in chapter two Framework: Walter Benjamin and Time, Benjamin, highlighted that fashion is an example of a reconceptualisation of time. He explains that fashion does not present itself as a progressive linear model of history and time but rather a non-linear cyclical model. Referencing previous styles and reconceptualising and presenting them as ‘new’ is crucial to the fashion process. Through the *Tigersprung*, leaping between different historical planes, fashion can reference itself and seize a previous moment expressed by the collective as being important for the present. The collective power is specific to the oppressed and working classes. The dialectical image that flashes in the present unconsciously announces a wish image of a previous collective to those of the contemporary moment. This process is what Benjamin argues disrupts the dream state or phantasmagoria of the present working classes, to inspire them to revolutionary action. The *Tigersprung* and dialectical image interrupts and reveals alternative histories to those written and disseminated by the elite, disrupting the continuous and linear flow of history and progress.

Virtual spaces are often positioned as always being in the present moment and even without a history or sense of time (Shields 50). Virtual worlds and spaces themselves, as stated by Shields, is assumed to “neither has [have] a history nor a future” (50). This idea can seem accurate, because virtual spaces are continuously updated, and changes are invisible to the user and virtual spaces themselves do not necessarily age or die. The same can be assumed

about virtual fashion. However, it is not through the literal embodiment of time that fashion is connected to history, but through its stylistic references that are adopted for the contemporary moment. It is through a reiteration of history, and a flashing of dialectical images through this process of reference, that we see fashion and virtual fashion have a relationship with time.

Virtual spaces and specifically virtual fashion are not independent from previous events and historical forces, and when virtual discourses are preoccupied with the ideology of progress it can foster a calculated misunderstanding of the past (Meek 6).

As previously stated, Benjamin rejects time as homogeneous, and the past is cited as Now-Time or Jetztzeit, which “flashes up in a moment of danger” (Benjamin 3). The danger that Benjamin speaks of is twofold: that the “true image of the past threatens to disappear forever if its value for the present is not recognized in the present moment” (Meek 10), and that the same image of the past is used by the powerful for their own interests (Meek 10). For Benjamin, revolutionary and political progress comes from a reinterpretation and stripping down of history. Therefore, when virtual fashion does not utilise the unique interaction that fashion has with time and previous moments of history it loses its revolutionary potential. Auroboros, does not demonstrate any connections with fashions of the past due to the way that they have prioritised and utilised the transcendental elements of the virtual. Auroboros consequently lacks a connection to the political collective, that Benjamin hopes to conjure a revolutionary spirit within.

When fashion’s associations with history, its ability to be imitated or referenced are lost clothing’s ability to become fashion is also lost. Fashion is produced by tensions between the collective and individual. Highlighted in chapter one Defining Fashion, for clothing to

become fashion it needs to be occupied, disseminated, and popularised by the collective for it to become part of a trend cycle. Imitation is an important process for the dissemination and uptake of styles. If a style is too eccentric to firstly imitate and then popularise, it doesn't enter the fashion system. When virtual fashion occupies a design style that cannot be reproduced in the physical world it loses the ability for it to be imitated and, I argue, loses the ability to transcend from dress or garment into a fashion item. That is not to say there is no potential for eccentric and other-worldly trends to be imitated and reproduced in virtual spaces. But this idea further accentuates that the definition of fashion relies on its ability to be adopted and discarded by a community.

Benjamin provided a dialectical framework that was able to critique fashion in the way that it reproduces the new in different configurations or represents "the eternal return of the same" (Buck-Morss 108), which perpetuates the ideology of progress. While critical of fashion, Benjamin also highlighted fashion's unique revolutionary potential. He reveals a revolutionary impulse via a reinterpretation of the past using the aesthetics of material culture. Benjamin sees revolutionary potential through an acknowledgement of not only the past, but a version of history not yet manipulated by the ruling classes. In contrast to the Auroboros brand, DRESSX's collection DragMETaverse and, more specifically, the Hanky Dress shows that virtual fashions can still utilise historical and political references. However, as a virtual product, historical links and revolutionary potential are limited due to ideological assumptions of transcendence and progress. Virtual fashion tools allow designers to persue unlimited creative directions. However, despite that possibility, virtual designers still return to historical fashion elements like silhouettes and garment styles. Therefore, virtual fashion can reiterate fashion's revolutionary potential via a relationship to history and time, as shown

by the IV & Ruzalina & VADIM TISHIN black jabot jacket I purchased, as well as depart from fashion's referential nature, as seen in the brand Auroboros.

What is lost when historical references are not utilised is what Benjamin understood as fashion's revolutionary potential. Revolution does not come out of insistent forging forward of progress, but the halting of the locomotive ploughing continuously forward and a recognition of a history that sits outside the dominant narrative as established by the elite. When a version of history can be revealed through a commodity product, like fashion, this is where the revolutionary potential resides. If virtual fashion is not only able to maintain its relationship to time, but to history through its referential nature, then its revolutionary potential can be realised. The DragMETaverse Hanky dress references an historical moment specific to the marginalisation of the queer community. The hankies virtually tied to the waist of the garment refer to a discrete code executed by queer communities (more commonly practiced) in the recent past. Executed in this manner, the hanky brings forth, in the viewers consciousness, a reminder of the political action, resistance and protest involved for the advocacy of LGBTQIA+ rights. Marriage equality (in some countries), for example, were not automatically offered to these communities but rather actively taken.

DRESSX demonstrated that virtual fashion itself functions much like material fashion does. Fashion is bound to excessive newness, change and obsolescence. DRESSX does not want consumers to stop participating in fashion but to instead participate in virtual fashion, replacing the material with the virtual. But what this research uncovers is that, firstly the material can never fully be replaced by the virtual and, secondly, virtual fashion, because of its association with 'revolutionary' new media, is bound by an ideology of progress Benjamin

warned of. This ideology of progress assumes that political progress will automatically develop out of technological progress, which distracts individuals and the collective with the promise of eventual social progress. An alternative tool presented by Benjamin, is not through a rejection of commodity culture, but through its utilisation; if we were able to recognise these historical elements in our commodity products, we might be able to recognise the voices or visualisations of our collective past. The Hanky dress is not only an example of this phenomenon but a symbol and reminder of the continued discrimination and marginalisation of queer communities. If anything, a reference of an historical moment through fashion, is a tool to highlight and remind us of the revolutionary action and energy that needs to be upheld. Benjamin reminds us “As long as there is still one beggar around, there will still be myth” (400). If there continues to be an oppressed class, group or community there is work to be done, dismantling ideologies of automatic progress and power. It seems counter intuitive to speak of revolution through commodity culture, rather than rejecting it fully, but if we should take anything away from the extensive work of Walter Benjamin, it is that aesthetics and specifically fashion are highly political but can and should be utilised in a revolutionary way.

## Conclusion

Fashion is defined and reiterated by this thesis as an ambivalent phenomenon. The system of fashion can embody the likes of clothing, dress, style, and adornment. It can be both a decorative expression of self and a protective layer. It can be high end and low brow, fast and slow, or even an image and an object simultaneously. It is an example of material culture, bound by social contracts and is a way for individuals to uniquely express themselves and align aesthetically with a group or crowd. However, one of fashion's most reliable features is its commitment to change and renewal. It is alive and new yet always in the process of dying or going out of style. It is a phenomenon that exists as both a commercial industry and public forum and operates in an intimate, personal, and private capacity. Fashion teeters on the border of a subject and object and, as described in chapter one, *Defining Fashion*, does not fit into a neat characterisation or definition. These properties are reminiscent of new media. Speaking generally, new media have material and immaterial properties; they can connect individuals via screens and seemingly disconnect them from in-person relationships. Virtual fashion is where fashion and new media intersect. This project attempts to embrace, accept, and understand fashion and virtual fashion's ambivalent nature while examining its material properties and outcomes.

This research specifically set out to understand fashion's material and conceptual properties and how fashion's relationship to materiality and time can shift when represented in virtual spaces. To address this aim, this research first limits the scope of fashion to two of its fundamental properties: materiality and time. These ideas act as a conceptual thread throughout the thesis. By employing a materialist framework focused on time and history, developed by Walter Benjamin, this project synthesised a revolutionary temporal materialism

unique to the product of fashion. Benjamin dissects the fashion commodity and highlights its nonlinear expression of history through his vision of the tiger's leap into the past. The leap identifies collective desires or wish images for a classless society and repackages and presents that desire for the present. Fashion produces what Benjamin describes as a dialectical image when it references and reinterprets designs and styles of fashion history. The image can flash for a moment and act as a political reminder to pull people out of a collective dream state. Fashion is a conversation between the oppressed collective of the past and the collective of the present through a seemingly individualised expression of style and fashion. Fashion will always demonstrate this tension between the collective and individualistic expression, and it is this dialectic expression that drives the process of fashion forward. The collective can then realise that progress and historical narratives are not natural but are rather produced by the ruling class for their own benefit and power.

Benjamin provided a framework that enabled a critique of fashion and its illusion of progress while also highlighting its revolutionary potential when elements of history are reconceptualised and harnessed for the present. This methodology encapsulates dialectical thinking, a type of thinking well suited to the multidisciplinary nature of fashion studies and the concept of fashion in general. Benjamin inspired a new materialist thinking and approach to studying material culture, which highlights the unique interactions between human and non-human actants (objects) that undermines a traditional subject-object divide.

In this thesis, I combined the walkthrough method and applied theory to traverse and analyse the DRESSX website and the virtual fashion displayed as objects of material culture. This combination of methodologies not only dissected virtual fashion and how it is portrayed in a



virtual media space, but also highlighted virtual fashion's connections to materiality that often goes unseen or is purposely concealed. Although an analysis of specific virtual fashion aesthetics and rhetoric added to the discussion, these techniques on their own would not have given this project the scope it needed to analyse the interactions and connections of actants when negotiating the DRESSX website. A website is not simply an image on a screen, but rather its own complex maze of material interactions and the methodology I chose for this research directly revealed these material elements. The findings of this research suggest that existing conceptualisation of fashion can apply to a virtual product. It is not the intention of DRESSX, DragMETaverse, IV & Ruzalina & VADIM TISHIN or Auroboros to enable or inspire political action through virtual fashion. However, as exemplified by Benjamin, fashion has a political and critical quality inherent to it. Therefore, virtual fashion can enable the same revolutionary potential that material fashion embodies.

Fashion provides the tools for its own critique; this is not surprising because fashion is produced out of a series of contradictions. Due to the fashion industry's close associations with capitalism and commodity fetishism, it can seem inappropriate to employ fashion as a mechanism to enact political resistance or action. However, this thesis provides a framework that embraces the fetish quality of the fashion commodity. I demonstrate that it is not the immateriality and novel nature of virtual fashion that is revolutionary, but rather the process of fashion itself. Instead of our attention gravitating to changing new media technologies, we should instead utilise the collective images of our past to invoke revolutionary action. I argue that it is not through the blind adoption of new technology and upholding the myth of progress that will improve the material conditions in which our working and oppressed classes live. Rather, by actively looking at our past, identifying significant historical

moments, and bringing them forth into our present consciousness, we can establish how we want our communities and society to function moving forward.

There is a defined scope to this thesis and, consequently, certain limitations regarding research outcomes. Firstly, I wrote this thesis as the virtual fashion industry gained momentum and media coverage, meaning that much of the information gathered came from online articles and reports rather than academic texts. Furthermore, as a topic of inquiry, virtual fashion felt at times like researching a moving target, as new developments in this area continued to emerge throughout the year. Secondly, there is a specific temporal scope. The type of virtual fashion particular to this research started to gain media attention in mid-2019 and coincides with the emergence of the COVID-19 pandemic in early 2020. There are historical examples of virtual fashion that existed before the scope set by this research associated with games such as Second Life and The Sims. However, these instances are specific to gaming spaces and distinct from the virtual fashion service specific to DRESSX as my case study. Thirdly, this research is firmly sitting within a fashion studies field investigating the definition of material fashion and how its relationship with materiality and time might shift in a virtual space. Therefore, first and foremost, this is a fashion studies project that utilises fashion discourses that happen[s] to overlap with new media studies.

This project's interest in virtuality focussed on how it might change our conceptual understanding of fashion itself and, specifically, fashion's relationship to materiality and time. Its goal was not to attempt to predict or address virtual fashion's success in a commercial space. In fact, the outcome and results of this thesis can be applied to other areas not specific to virtual fashion, such as new media and ICT technological advancements in

general. Its intention is not to discourage innovation in these spaces but rather to confirm that the potential we see in new media products is not due to their novelty and their attachment to the ideology of progress. Instead, my intention is to encourage a material perception of the virtual and highlight that there should be an element of social and political progress that coincides with technological progress.

What this study provides to the fashion studies discipline is a framework to define and understand fashion as a phenomenon in both material and virtual spaces. This study addresses a gap in the fashion studies field and investigates the effect the virtual has on the metaphysical properties of fashion as a concept closely connected to materiality and an expression of time and history. To do so, this project attempts to wrestle with metaphysical discussions surrounding materialism, idealism, history, time, and political revolution. Understanding fashion at a conceptual level is essential as it integrates with new media spaces. By dissecting how fashion functions, this project was able to identify theoretical similarities between fashion and new media industries. They are both material industries preoccupied with the ideologies of progress, continuous renewal, and speed. What synthesises new media and fashion is their production of novelty that demands the attention of consumers and society at large. Understanding the fundamental elements that create and drive fashion and new media provides the insight needed to address the material issues caused by both industries, such as their environmental and social impacts (e.g., labour exploitation).

The outcome of this research is a framework that can act as a springboard for supplementary virtual fashion research. A deeper investigation into the philosophical tradition of the virtual

and real would be beneficial for this area of study. In addition, an in-depth understanding of the representation of time in virtual and cyberspaces, which are unrelated to historical fashion references, would complement and add to this area of study. Following this line of thinking, an area in which I am interested in developing is a methodology for future fashion researchers. There is space in this field of research for a more integrated and fashion specific methodology that is consistent with the dialectical properties of fashion as a material object and social concept, especially as fashion continues to utilise and develop in virtual and cyberspaces. Various elements of virtual fashion need to be studied from the vantage point of materialism and not limited to semiotic representations. Therefore, a methodology guided by a materialist or new materialist framework that allows for the study of virtual fashion as objects of material culture would be advantageous.

There are many inspiring attributes accredited to virtual fashion generally and to DRESSX as a virtual fashion brand and platform. DRESSX's vision for the future of fashion is ambitious but sincere. Virtual fashion is staking its claim in the industry, with no indication of slowing down. If anything, the virtual fashion industry is demanding and making space for their virtual outcomes, with the emergence of Crypto Fashion Week (CFW) and Metaverse Fashion Week held in March of 2022. CFW featured brand appearances from the likes of Auroboros and DRESSX, with DRESSX establishing a new element of their virtual fashion brand by selling NFT versions of their digital garments. Metaverse Fashion Week was hosted in Decentraland, a virtual reality platform, and offered digital fashion shows and virtual parties alongside virtual pop-up retail stores. Although these new virtual fashion weeks demonstrate a recent consumer interest in new crypto markets and currencies, they are yet to prove the ability of these digital currencies and markets to revolutionise the industry and fashion as we know it.

DRESSX's goal of presenting an alternative for the problematic material fashion industry and what we understand as a fashion product is laudable for many reasons. When the technology improves, I hope virtual fashion can be utilised to reduce the industry's wasteful practices. The idea that virtuality could provide more accessibility for a range of people and perhaps democratise the fashion industry is an example of one of the ideals that inspired this research. Unfortunately, these goals do not align with the structure and power dynamics determined by capital. Unless we can use the commodities of our time to induce and inspire class consciousness and revolutionary action, insistent technological innovation and the myth of progress will not be compatible with a revolutionary praxis.

This thesis sits theoretically in between two positions often portrayed in new media studies. The first position is that virtual fashion (new media) will change everything we know about fashion (media) and the industry and provide a democratised and sustainable space for consumers to explore. The second is that virtual fashion (new media) offers nothing new or valuable to the consumer and is just a reproduction of the material fashion industry (old media). Nevertheless, as made explicit by this research, what virtual fashion offers are all of the captivating qualities present in the concept of fashion already. Fashion embodies an ambivalent and contradictory conceptualisation. Fashion connects the individual and collective by expressing developments of style and trends that borrow from different classes, genders, and subcultures and is a fetishised commodity with political and revolutionary potential. These elements are the most compelling and integral components of fashion itself, all of which can be demonstrated in a virtual realm. Commodity culture has always been political, but it is up to our virtual designers to recognise and harness that political potential.

## Works Cited

- “A-Line Dress Guide: Explore the A-Line Silhouette.” *MasterClass*, 11 Aug. 2020, (<https://www.masterclass.com/articles/a-line-dress-guide#what-is-an-aline-dress>).
- “DRESSX META CLOSET.” *App Store*, <https://apps.apple.com/us/app/dressx-meta-closet/id1567024810>. Accessed 27 Mar. 2022.
- “E-Waste — a Toxic Waste Stream Where Valuable Finite Resources Are Lost.” *TCO Certified*, <https://tcocertified.com/e-waste/>. Accessed 27 Mar. 2022.
- Allaire, Christian. *Tribute Is the Cyber Fashion Brand Making Digital Clothes* | *Vogue*. 3 Aug. 2020, <https://www.vogue.com/article/tribute-virtual-clothes-digital-fashion>.
- auro.boros. “While #fashion Brands Have Contended.” *Instagram*, 10 Dec. 2021, [https://www.instagram.com/p/CXRKAXJNT\\_E/](https://www.instagram.com/p/CXRKAXJNT_E/).
- Barnard, Malcolm. *Fashion as Communication*. Routledge, 1996.
- Bateman, Kristen. “I Attended Helsinki Fashion Week as an Avatar.” *Teen Vogue*, 28 Aug. 2020, <https://www.teenvogue.com/story/i-attended-helsinki-fashion-week-as-an-avatar>.
- Batza, Katie. *Before AIDS: Gay Health Politics in the 1970s*. 2018.
- BBC. “Homosexuality: The Countries Where It Is Illegal to Be Gay.” *BBC News*, 12 May 2021. [www.bbc.com](http://www.bbc.com), <https://www.bbc.com/news/world-43822234>.
- Benjamin, Walter. *On the Concept of History*. [https://www.sfu.ca/~andrewf/books/Concept\\_History\\_Benjamin.pdf](https://www.sfu.ca/~andrewf/books/Concept_History_Benjamin.pdf).
- . *Selected Writings*. Edited by Marcus Paul Bullock et al., Belknap Press, 1996.
- . *The Arcades Project*. 1st paperback ed, Harvard University Press, 2002.
- Bennett, Jane. *Vibrant Matter: A Political Ecology of Things*. Duke University Press, 2010.
- Bennett, Tony, and Patrick Joyce. *Material Powers: Cultural Studies, History and the Material Turn*. Taylor and Francis, 2013. *Open WorldCat*,

<http://public.eblib.com/choice/publicfullrecord.aspx?p=1195777>.

Blumer, Herbert. "Fashion: From Class Differentiation to Collective Selection." *The Sociological Quarterly*, vol. 10, no. 3, 1969, pp. 275–91.

Bolton, Andrew, et al. *About Time: Fashion & Duration*. The Metropolitan Museum of Art, 2020.

Boscagli, Maurizia. *Stuff Theory: Everyday Objects, Radical Materialism*. Bloomsbury, 2014.

Brevik-Zender, Heidi. "Let Them Wear Manolos: Fashion, Walter Benjamin, and Sofia Coppola's Marie Antoinette." *Camera Obscura: Feminism, Culture, and Media Studies*, vol. 26, no. 3 (78), Dec. 2011, pp. 1–33. *Silverchair*, <https://doi.org/10.1215/02705346-1415416>.

Brians, Ella. "The 'Virtual' Body and the Strange Persistence of the Flesh: Deleuze, Cyberspace and the Posthuman." *Deleuze and the Body*, edited by Laura Guillaume and Joe Hughes, Edinburgh University Press, 2011, pp. 117–43. JSTOR, *JSTOR*, <https://www.jstor.org/stable/10.3366/j.ctt1r218r.9>.

Buck-Morss, Susan. *The Dialectics of Seeing: Walter Benjamin and the Arcades Project*. MIT Press, 1989.

Calefato, Patrizia. "Fashionscapes." *The End of Fashion: Clothing and Dress in the Age of Globalization*, edited by Adam Geczy and Vicki Karaminas, 1st ed., Bloomsbury Publishing Plc, 2019. DOI.org, <https://doi.org/10.5040/9781350045071>.

Calefato, Patrizia. *The Clothed Body*. 2004, <http://www.bloomsburyfashioncentral.com/bfccoll/encyclopedia-chapter>.

Cambe, Pameyla. *Fortnite Players Can Now Use Balenciaga Sneakers as a Weapon*. 21 Sept. 2021, <https://www.lifestyleasia.com/sg/style/fashion/fortnite-balenciaga-collaboration-sneakers-video-game-merchandise-singapore/>.

- Carter, Michael. "Georg Simmel: Clothes and Fashion." *Fashion Classics from Carlyle to Barthes*, 2021.
- Castree, Noel. "False Antitheses? Marxism, Nature and Actor-Networks." *Antipode*, vol. 34, no. 1, 2002, pp. 111–46. *Wiley Online Library*, <https://doi.org/10.1111/1467-8330.00228>.
- Chan, Emily. *Are Digital Fashion Shows Better For The Environment?* | *British Vogue*. <https://www.vogue.co.uk/fashion/article/digital-fashion-week-sustainability>. Accessed 3 Apr. 2022.
- Cornier, J. Raúl. *Hanky Panky: The History and Cultural Impact of the Hanky Code*. University of Rhode Island. *ProQuest*, <https://www.proquest.com/docview/2150207484/abstract/5146D6F55EFF4534PQ/1>. Accessed 9 Mar. 2022.
- Crewe, Louise. *The Geographies of Fashion: Consumption, Space, and Value*. 1st ed., Bloomsbury Publishing Plc, 2018. *DOI.org (Crossref)*, <https://doi.org/10.5040/9781474286091>.
- Crook, Lizzie. *The Fabricant Studio "Allows Anyone to Become a Digital Fashion Designer."* 3 Nov. 2021, <https://www.dezeen.com/2021/11/03/the-fabricant-studio-digital-fashion-dezeen-15/>.
- Davis, Fred. *Fashion, Culture, and Identity*. University of Chicago Press, 1992.
- DeLuca, Denise K. "Biomimicry: Nature Inspiring Design." *Routledge Handbook of Sustainable Design*, Taylor & Francis Group, 2017. *ProQuest Ebook Central*, <http://ebookcentral.proquest.com/lib/vuw/detail.action?docID=4930883>.
- DRESSX. "OUR VISION." *DRESSX*, <https://dressx.com/pages/about>. Accessed 1 Mar. 2022.
- . *Auroboros Nature - Tech Couture*. <https://web.archive.org/web/20211015104535/https://dressx.com/collections/vendors?>



- q=Auroboros%20Nature%20-%20Tech%20Couture. Accessed 27 Mar. 2022.
- . *Biomimicry Bodysuit*. [https://dressx.com/products/biomimicry-look?\\_pos=4&\\_sid=2c8095348&\\_ss=r](https://dressx.com/products/biomimicry-look?_pos=4&_sid=2c8095348&_ss=r). Accessed 10 Dec. 2021.
- . "Black Jacket\_JABOT.LAYERS." *DRESSX*, [https://dressx.com/products/black-jacket\\_jabot-layers](https://dressx.com/products/black-jacket_jabot-layers). Accessed 3 Apr. 2022.
- . "DRESSX Drag METaverse." *DRESSX*, <https://dressx.com/collections/dressx-drag-metaverse>. Accessed 27 Mar. 2022.
- . "Hanky Code Baby Doll." *DRESSX*, <https://dressx.com/products/hanky-code-baby-doll>. Accessed 27 Mar. 2022.
- . "Sustainability." *DRESSX*, <https://dressx.com/pages/sustainability>. Accessed 27 Mar. 2022.
- Edwards, Lydia. *How to Read a Dress: A Guide to Changing Fashion from the 16th to the 20th Century*. Bloomsbury Academic, An imprint of Bloomsbury Publishing Plc, 2017.
- Ekardt, Philipp. *Benjamin on Fashion*. Bloomsbury Academic, 2020. *Open WorldCat*, <https://go.openathens.net/redirector/umoncton.ca?url=https://ebookcentral.proquest.com/lib/umoncton-ebooks/detail.action?docID=5997018>.
- Fairs, Marcus. *Virtual Fashion Will Allow People to "Go Completely Crazy."* 23 2020, <https://www.dezeen.com/2020/10/23/virtual-fashion-amber-jae-slooten-the-fabricant/>.
- Financial Fox. *#FinancialFox The Digital Universe of Fashion: Blockchain, NFTs & Metaverse with Dematerialised*. 2021. *YouTube*, <https://www.youtube.com/watch?v=ol-oGsbzTak>.
- Finney, Alice. "Auroboros' Biomimicry 'Living' Dress Crystalises and Changes Shape in Real Time." *Dezeen*, 15 Nov. 2021, <https://www.dezeen.com/2021/11/15/auroboros-biomimicry-dress-crystalises-transforms-real-time/>.

- Fischer, David. "Dr. Martens 1460 'Worn' Collection." *Highsnobiety*, 31 Mar. 2010, <https://www.highsnobiety.com/p/dr-martens-1460-worn-collection/>.
- Geczy, Adam, and Vicki Karaminas. "Walter Benjamin: Fashion, Modernity and the City Street." *Thinking through Fashion: A Guide to Key Theorists*, edited by Agnès Rocamora and Anneke Smelik, I.B. Tauris, 2016.
- Geczy, Adam, and Vicki Karaminas. *Queer Style*. 1st ed., Bloomsbury Publishing Plc, 2013. *DOI.org (Crossref)*, <https://doi.org/10.5040/9781350050723>.
- Gerrie, Vanessa. *Borderless Fashion Practice : Contemporary Fashion in the Metamodern Age : A Thesis Submitted in Fulfilment of the Requirements for the Degree of Doctor of Philosophy, School of Design, Toi Rauwhāngi College of Creative Arts, Massey University, Wellington, Aotearoa. EMBARGOED until 30 July 2023*. Massey University, 2021, <http://hdl.handle.net/10179/16802>.
- Granata, Francesca. "Fitting Sources—Tailoring Methods: A Case Study of Martin Margiela and the Temporalities of Fashion." *FASHION STUDIES: Research Methods, Sites and Practices*, edited by Heike Jenss, Bloomsbury Publishing Plc, 2016. *DOI.org (Crossref)*, <https://doi.org/10.5040/9781474220163>.
- Hall, Jake. "What Happened at Vetements' Couture Debut." *Dazed*, 3 July 2016, <https://www.dazeddigital.com/fashion/article/31880/1/what-happened-at-vetements-couture-debut>.
- Harris, Clare. *The Fundamentals of Digital Fashion Marketing*. 1st ed., Bloomsbury Publishing Inc, 2017. *DOI.org (Crossref)*, <https://doi.org/10.5040/9781474220873>.
- Hitti, Natashah. *Balenciaga's Afterworld Video Game Takes Players to a Rave in the Forest*. 9 Dec. 2020, <https://www.dezeen.com/2020/12/09/balenciaga-afterworld-the-age-of-tomorrow-video-game/>.
- Hoang, Limei. "How Burberry Is Operationalising 'See Now, Buy Now.'" *The Business of*

- Fashion*, 17 Sept. 2016, <https://www.businessoffashion.com/articles/news-analysis/how-burberry-is-operationalising-see-now-buy-now/>.
- Hroch, Petra. "Fashion and Its 'Revolutions' in Walter Benjamin's Arcades." *Walter Benjamin and the Aesthetics of Change*, edited by Anca M. Pusca, Palgrave Macmillan UK, 2010, pp. 108–26. *DOI.org (Crossref)*, [https://doi.org/10.1057/9780230277960\\_6](https://doi.org/10.1057/9780230277960_6).
- ICT Sector Helping to Tackle Climate Change | UNFCCC*. <https://unfccc.int/news/ict-sector-helping-to-tackle-climate-change>. Accessed 27 Mar. 2022.
- I-D. *Will You Be Wearing Digital Fashion In The Near Future? | i-D - YouTube*. 1 June 2019, [https://www.youtube.com/watch?v=44p44FnOKE8&ab\\_channel=i-D](https://www.youtube.com/watch?v=44p44FnOKE8&ab_channel=i-D).
- Idacavage, Sara. "The Development of Fast Fashion." *Berg Encyclopedia of World Dress and Fashion.*, edited by Joanne Bubolz Eicher and Phyllis G Tortora, 2010. *Open WorldCat*, <https://doi.org/10.2752/BEWDF/EDv10>.
- Insider. *Laser Makes Levi's Jeans Look Vintage*. 2018. *YouTube*, <https://www.youtube.com/watch?v=UplfNVGMI5k>.
- Jenss, Heike, editor. *Fashion Studies: Research Methods, Sites, and Practices*. Bloomsbury Academic, an imprint of Bloomsbury Publishing, Plc, 2016.
- Kang, Eun Jung. "The Dialectical Image: The Redemption of Fashion." *Fashion Theory*, vol. 18, no. 3, June 2014, pp. 341–59. *Taylor and Francis+NEJM*, <https://doi.org/10.2752/175174114X13938552557925>.
- Karaminas, Vicki. "Image: Fashionscapes- Notes Toward an Understanding of Media Technologies and Their Impact on Contemporary Fashion Imagery." *Fashion and Art*, edited by Adam Geczy and Vicki Karaminas, Bloomsbury Academic, 2013.
- Kawamura, Yuniya. *Fashion-Ology: An Introduction to Fashion Studies*. Second edition, Bloomsbury Academic, An imprint of Bloomsbury Publishing Plc, 2018.

- Lehmann, Ulrich. *Fashion and Materialism*. EDINBURGH UNIV PRESS, 2019.
- . *Tigersprung: Fashion in Modernity*. MIT Press, 2000.
- Light, Ben, et al. "The Walkthrough Method: An Approach to the Study of Apps." *New Media*, p. 20.
- Löwy, Michael. "A Historical Materialism with Romantic Splinters: Walter Benjamin and Karl Marx." *(Mis)Readings of Marx in Continental Philosophy*, edited by Jernej Habjan and Jessica Whyte, Palgrave Macmillan UK, 2014, pp. 19–33. *Springer Link*, [https://doi.org/10.1057/9781137352835\\_2](https://doi.org/10.1057/9781137352835_2).
- Mackinney-Valentin, Maria. *Fashioning Identity: Status Ambivalence in Contemporary Fashion*. Bloomsbury Academic, 2017.
- McDowell, Maghan. "Why AR Clothing Try-on Is Nearly Here." *Vogue Business*, 26 July 2021, <https://www.voguebusiness.com/technology/why-ar-clothing-try-on-is-nearly-here>.
- Meek, Allen. *Walter Benjamin and the Virtual: Politics, Art, and Mediation in the Age of Global Culture*. Edited by Grayson Cooke, no. 15, 2007, p. 19.
- Moore, Gwyneth. "Digital Fashion." *Fashion Promotion: Building a Brand Through Marketing and Communication*, 2nd ed., Bloomsbury Publishing Plc, 2021. *DOI.org (Crossref)*, <https://doi.org/10.5040/9781350090293>.
- Nast, Condé. "See the Costume Institute's New (Though Postponed) Show 'About Time.'" *Vogue*, 28 Apr. 2020, <https://www.vogue.com/article/costume-institute-about-time-preview>.
- Orders DRESSX. "[DRESSX] Order #2130 Placed by Tyla Stevenson - Your Picture Is Ready." Received by Tyla Stevenson, 14 Nov. 2021, <https://mail.google.com/mail/u/0/#search/orders%40dressx.com/FMfcgzGlksCSxsvSPtjMNjBtDsMLDNnM>.

- Pruitt-Young, Sharon. *Here's How Fast-Fashion Brands Can Legally Copy Indie Designers* : NPR. 20 June 2021, <https://www.npr.org/2021/07/20/1018381462/why-indie-brands-are-at-war-with-shein-and-other-fast-fashion-companies>.
- Riello, Giorgio. "The Object of Fashion: Methodological Approaches to the History of Fashion." *Journal of Aesthetics & Culture*, vol. 3, no. 1, Jan. 2011, p. 8865. *Taylor and Francis+NEJM*, <https://doi.org/10.3402/jac.v3i0.8865>.
- Scaturro, Sarah. "Confronting Fashion's Death Drive: Conservation, Ghost Labor, and the Material Turn within Fashion Curation." *Fashion Curating: Critical Practice in the Museum and Beyond*, edited by Annamari Vänskä and Hazel Clark, Bloomsbury Publishing Plc, 2017. *DOI.org (Crossref)*, <https://doi.org/10.5040/9781474287135>.
- Semic, Sara. *What Is Digital Clothing? And Will We All Be Dressing Virtually In The Future?* 7 Feb. 2019, <https://www.elle.com/uk/fashion/a28166986/digital-fashion-dressing-virtually/>.
- Shields, Rob. *The Virtual*. Taylor & Francis Group, 2002. *ProQuest Ebook Central*, <http://ebookcentral.proquest.com/lib/vuw/detail.action?docID=240438>.
- Sikarskie, Amanda. *Digital Research Methods in Fashion and Textile Studies*. Bloomsbury Visual Arts, 2019. *DOI.org (Crossref)*, <https://doi.org/10.5040/9781350042537>.
- Simmel, Georg. "Fashion." *American Journal of Sociology*, vol. 62, no. 6, 1957, pp. 541–58.
- . "The Philosophy of Fashion." *Classic and Modern Writings on Fashion*, <https://www.bloomsburyfashioncentral.com/products/berg-fashion-library/book/classic-and-modern-writings-on-fashion/the-philosophy-of-fashion>. Accessed 5 June 2021.
- Tobin, Robert. "The Dialectics of Seeing: Walter Benjamin and the Arcades Project (Review)." *Philosophy and Literature*, vol. 15, no. 1, 1991, pp. 149–50. *DOI.org (Crossref)*, <https://doi.org/10.1353/phl.1991.0058>.

tyla.stevenson. *This Is a #dressx TEST*. 15 Nov. 2021,

<https://www.instagram.com/p/CWSBQgdPyVE/>.

von Busch, Otto. "Action! Or, Exploring Diffractive Methods for Fashion Research."

*FASHION STUDIES: Research Methods, Sites and Practices*, edited by Heike Jenss,

Bloomsbury Publishing Plc, 2016. *DOI.org (Crossref)*,

<https://doi.org/10.5040/9781474220163>.

Ware, Asia Milia. *Hanifa's 3D Digital Fashion Show Just Changed the Game* | *Teen Vogue*.

23 May 2020, <https://www.teenvogue.com/story/hanifa-3d-digital-fashion-show>.

Watstein, Sarah Barbara, and Kelly Czarnecki. "Virtual Worlds, Dress, and Fashion." *Berg*

*Encyclopedia of World Dress and Fashion.*, edited by Joanne Bubolz Eicher and

Phyllis G Tortora, 2010. *Open WorldCat*, <https://doi.org/10.2752/BEWDF/EDv10>.

Wilson, Elizabeth. *Adorned in Dreams: Fashion and Modernity*. 1985.

Wollen, Peter. "The Concept of Fashion in The Arcades Project." *Boundary 2*, vol. 30, no. 1,

2003, pp. 131–42.

Zhang, Tianwei. *Auroboros to Debut First Ready-to-Wear Collection at London Fashion*

*Week*. [https://www.yahoo.com/lifestyle/auroboros-debut-first-ready-wear-](https://www.yahoo.com/lifestyle/auroboros-debut-first-ready-wear-140048396.html)

140048396.html. Accessed 10 Mar. 2022.