

Course of Fashion Management

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ABSTRACT

The present dissertation has the aim of enriching the literature on the common territory between fashion and video games' industries by conducting an on-field research on consumer perception and future evolutions of virtual fashion. The term is intended to comprise all those projects, initiatives and digital creations that are set in extended reality (namely, virtual and augmented ones) and video games to promote a fashion brand or the concept of fashion in general. The objective of this thesis is to answer three research questions: firstly, investigate consumer's perception of virtual fashion initiatives; secondly, explore the importance of branded skins in the video games' world; lastly, envision possible evolutions of fashion and video games' collaboration. In Chapter 1, an overview of technological advancements in fashion is provided: artificial intelligent systems are able to bring efficiency and automatization in the supply chain, while virtual and augmented reality are useful tool to engage the audience. In Chapter 2, the evolution of video games and the rise of NFT technology are presented, and a simple framework is built in order to describe virtual and gaming projects that change the way consumers wear, buy and live fashion. In Chapter 3, a dual research based on consumers and industry experts is presented: it comprises a consumer survey with thirty-one respondents, ten consumer interviews and two interviews to professional in the field of video games, Professor Fabio Viola, game designer and author, and Dr Stefano Calcagni, Head of Marketing for Italy at Nintendo Europe. As a result of the research, fashion brands (especially luxury ones) are encouraged to encompass video games in their strategy, since consumers' perception and average spending are shown to be positive and remarkable. Moreover, fashion brands are offered a simple framework to build a successful strategy in this context.

To my amazing family, Who always asks me when I am graduating. Guys, I'm doing it.

Table of Contents

Introduction	1
Chapter 1 – Tech in Fashion: Efficiency and Engagement	3
1.1 Tech in Fashion: An Overview	3
1.2 AI for Efficiency	4
1.3 VR and AR for Engagement	11
Chapter 2 — Virtual Spaces and Gaming in Fashion	
2.1 Video Games' Evolution	19
2.2 WEAR	
2.3 BUY	34
2.4 LIVE	41
Chapter 3 – Research: Digital Garments in Video Games	49
3.1 Methodology	49
3.2 Analysis of Results	58
3.4 Limitations	86
3.5 Recommendations	87
Conclusion	92
References	96
Appendices	101
Executive Summary	121

Introduction

«Let this grisly beginning be none other to you than is to wayfarers a rugged and steep mountain, beyond which is situated the fairest and most delightful plain, which comes as pleasant to them as greater the hardship of the ascent and the descent for, like as dolour occupies the extreme of gladness.»

-G. Boccaccio, Decameron

In a world plagued by the global pandemic, fashion offers a chance to escape a hard reality: a bright, yet ephemerous, glimpse of a past life, which now seems light years away. While boutiques are temporarily closed and social distancing limitations destroy the magic of the luxury experience, brands are merging technology and design to reach customers in innovative, cutting-edge ways, to transform a brief contact into a pervasive, extraordinary experience. Virtual fashion, AR try-on, gaming skins and 3D design are only some of the trends that are rattling the traditional conception of fashion. Loud sustainability concerns and the increasing projection of the *self* into the digital dimension are only two of the several factors which are creating fertile ground for the creation of virtual garments, which exist only in the digital world. The trend to buy a garment and wear it once – for an event, or for posting it on social media – is the primary fuel of heavy-polluting fast fashion, which is far away from the new sensibility of the post-pandemic consumer. According to Bain Altagamma projections for 2021, the new persona embraces humanism, seeks nature and functionality, and is especially focused on self-expression and hybridization. The aim of this dissertation is, indeed, to study the impact of the so-called virtual fashion on fashion industry and its consumers. Along this paper, the term virtual fashion will encompass all the uses of extended reality, 3D imaging and digital goods by fashion brands, with a special attention to applications of these technologies inside video-game platforms. In particular, the study focuses on exploring all the possible uses that fashion is making of these powerful tools in order to potentiate brand experience, and on how the vast audience of fashion consumers is receiving these initiatives, taking into account the shifts in preferences brought by the COVID-19 pandemic. Existing studies on the matter are limited due to the relative newness of virtual fashion applications, which were present in a very limited quantity before the pandemic, and have exponentially grown since. Existing research focuses mostly on the importance of appearances and looks of avatars inside video games, as well as fashion styling of characters (Kim, Soon Kim, Mattila, 2012; Giri and Stolterman, 2020); in the past, moreover, the impact of 3D design and digital garment simulation on fashion industry has been investigated (Volino, Cordier, Magnenat-Thalmann, 2005). On the other hand, vast research has been performed on the effect of gamification on fashion retail (Insley, Hunan, 2013; Waydel-Bendyk, 2020).

The present dissertation starts with a literature review on the application of existing technologies in the fashion industry (Chapter 1) and about relevant project in the field of virtual fashion (Chapter 2); the review is enriched with an on-field research regarding consumers' perception of virtual fashion initiatives. The research design features two main primary data collection techniques: interviews (to consumers, and to experts in the field of video games) and a survey. The research objectives are stated in the following research questions. The first one is to study the perception of a related initiative in the context of customer experience with a fashion brand; secondly, the research aims at investigating the importance given to wearing a branded skin inside video games and studying consumers' willingness to purchase branded digital clothing; lastly, the possible evolution of fashion and video games is explored with the help of industry experts. Each research question will be answered with a different research tool, or a mix of multiple ones. Such tools are going to be presented, along with their analysis and results, in Chapter 3.

Chapter 1 – Tech in Fashion: Efficiency and Engagement

«I do not fear computers. I fear lack of them.» — Isaac Asimov

The word *technology* comes from the Greek *techne*, which means *art*. Indeed, technology can be defined as the art of making the future happen. In the last decades, innovative devices and platforms have been so intertwined with human existence that humans themselves could not imagine a life without: we are becoming more and more reliant on the effects of continuous advancements of innovation. The very idea of imagining what we could be able to do in a few years is thrilling, both in the sense of exploiting beneficial implications, and that of merely watching the future as an amazing movie. What a time to be alive, is probably one of the most pronounced sentences of the century. Between ups and downs - financial crises and geopolitical events included — technology is pushed to its limits on a hourly basis; actually, the more the challenges put in front of humanity, the more technology blooms as an evolutionary instinct. The more the world pushes individuals apart, the more technology aims at making humans converge: until some time ago, we had to drop inked paper in a mailbox to communicate, and write appointments on a calendar - now, we only need to hold a smartphone in the palm of one hand. Beside the great challenges coming from the endless hunger for innovation — especially environmental and ethical concerns arising from overproduction — technology is what pushes humanity ahead, to the limits of its knowledge. It is what will make the future a discovery, and the present — a fun story for the grandchildren.

1.1 Tech in Fashion: An Overview

Technology has been the biggest discerning factor to make COVID-19 either an irrecoverable disaster, or a tragedy with an opportunity in disguise. Although being a period of darkness for

humanity, it has been — and is continuing to be — a storm of sun rays and warm weather for the seeds of technology: while, in the last decade, artificial intelligence and extended reality were already flourishing, today they find fertile ground to get to the peak of their evolution. The great needs arising from pandemic consequences has made these technologies necessary to make the world go on with its ordinary business. For example, the lack of workers in factories has made the role of automation crucial to keep up with pre-COVID-19 production levels. Also, the peak in online traffic due to the impossibility of visiting physical stores has made plenty of data available to retailers and companies: with those, they could feed advanced artificially intelligent systems, which gave back in turn critical insights from the market that were not to be expected. Moreover, the great use of e-commerce made space for new ways of selling and entertaining at the same time, to enrich customer experience as never before. In this chapter, two types of technologies, artificial intelligence and virtual spaces (AR and VR), are to be analyzed, in particular in the way they are employed to improve efficiency and generate engagement, in a general sense and also in the fashion industry.

1.2 AI for Efficiency

Of all the disruptive technologies that are characterizing the 21st century, artificial intelligence (AI) is certainly one of the most powerful, considering its impact on a wide variety of industries. In a dynamic world which runs on endless strings of data, AI offers a new understanding of a wide set of phenomena, processing big, bulky data sets and returning meaningful patterns which were hidden to the human eye. Moreover, it constitutes the engine of a plethora of secondary technologies, such as Virtual and Augmented Reality. Although being on the mouth of everyone lately, no one is able to provide an exhaustive definition of what AI actually is. The word does not encompass a single type of algorithm or a unique technology, but rather covers a large number of disciplines, and it is a challenge to outline its complete meaning in a single sentence. Besides the absence of definition, the aim of AI is easily visible: scientists who are busy in its development have the precise objective of replicating human thinking in the form of machine. This means creating a computer — or, more generally, any artificial device — which is capable to perform tasks typically associated to human beings, such as playing chess or, as simple as it may sound, *learning*. This specific

feature is what concretely differentiates an artificially intelligent machine from an ordinary one: for example, an iPhone can learn user's habits and suggest at which time to get up in the morning, while a Nokia 3310 simply makes phone calls. Besides such common applications, artificial intelligence is currently employed in nearly any field of human creation, from financial operations to medical surgeries: as it is widely known, these two industries — as many others covered by AI — have the essential need of human thinking, being it the interpretation of medical data or financial trends, in search for a specific diagnosis or investment path to follow. While good, old computers are able to execute a great number of tasks with large capacity or fast pace — such as data storage or complex calculations — they do not possess any sign of intellect and perform their work mechanically, as previously "taught" by a group of humans. Differently, AI-powered machines can imitate one or more characteristics of Homo sapiens' mental agility: the very structure of neural networks (the synapsis-like shape of AI software) is analogous to that of the brain, where nodes (i.e., virtual neurons) are joined by connections (i.e., virtual synapsis). This allows the AI algorithm to not limit itself to apply pure logic to solve a problem, but also learn a specific approach to provide complex, ever-changing solutions, adapting itself to the surrounding circumstances. The early beginnings of AI in the technological field can be traced back to late 1950s, while its theorization sees the dawn in ancient times, with Greek myths and early attempts of automaton building in China and Egypt. However, it is in 1956 that, during a conference in Dartmouth College, that the term artificial intelligence was officially introduced and that a clear, bright future for the technology was envisioned. Seen as a game changer for human technological development, AI soon became an unfortunately abandoned project during what was called the "AI winter". Spring came when the first notable results of AI development were presented to the public: an IBM computer, in 1997, was able to beat one of the best chess champions at the time. As the interest about the matter grew in late 1990s and 2000s, AI "infected" multiple fields, far from its native one, although being just another piece in the toolbox of IT. It is just in the 2010s that this extraordinary technology finally meets its match: the accumulation of large amounts of data, facilitated by better-performing computers, allowed AI to express its full potential in every industry.

1.2.1 AI in Design Process and Trend Analysis

I need 10 or 15 skirts from Calvin Klein.
What kind of skirts?
Please, bore someone else with your questions.
Dialogue from "The Devil Wears Prada" (2006)

When one envisions the shiny, 3\$-trillion world of fashion, they usually cannot make up enough space between catwalks and embroidery laboratories for bulky, grey computers. However, the current state of the art of AI has found a great variety of applications along the endless supply chain of Fendi & Co., much more than it could ever be imagined by haute couture traditionalists and fans of needle and thread. The remote memory of satin drapes pinned to mannequins has left in favor of a much more efficient — although, much less romantic — way to design and prototype clothing collections: while the old methods were sustainable in case of one or two collections per year, the rhythm which fashion adopted since 2000s has made the adoption of a faster way to design collections necessary. In a time where trends are not set in professional fairs by eminent fashion experts, but rather on social media, the use of AI to capture a blooming fad has revealed to be crucial. To mention the imaginary fashionista Miranda Priestley, florals for springs are not groundbreaking any longer: the power to set a trend is in the hands of Tik Tok stars and Instagram influencers, capable of deciding which products are going to sell, and which are not. The power of artificial intelligence is to capture the latest vogue at its earliest stage, giving brands the possibility to exploit a business opportunity at the right moment, in the right place. Indeed, AI is capable to analyze a huge number of data — being it social media photos, videos or reviews — and highlight relevant characteristics of a fashion product which are particularly appreciated by the public in a certain time interval. While fashion weeks and street style were the main source of trends inspiration for both consumers and experts, nowadays key items and colors are dictated on digital platforms: a glaring example are certainly Bottega Veneta's Intrecciato sandals, which have become fashionistas' must-have thanks to million-post hashtags and endless aesthetically pleasurable photos from world-wide influencers. With the explosion of last year's COVID-19 pandemic, the growth of the already huge reliance on social media has

dramatically accelerated, since every event which involved crowded rooms and streets nearly any in the fashion industry — was inevitably cancelled. For this reason, it is crucial for fashion brands to exploit AI tools to monitor emerging trends, mainly to anticipate the timeto-market — namely, the period between the creation of a design and its arrival on retail shelves. This was already necessary before 2020, when the fluid, ever-changing approach of fashion consumers lead to a permanent change of their preferences, in a matter of weeks and not months, as before. The intricate pattern of fashion needs, especially in a world plagued by an ever-known catastrophe, needs sophisticated technologies to be disentangled in concrete, recurring factors, being them fabrics, patterns, fits, nuances or silhouettes. In the context of diffused national lockdowns in Europe and US, the analysis of social media usage — which rose significantly during the confinement — has allowed for brands to predict and anticipate consumer preferences for both 2020 summer and fall collections, which ended up looking completely different from what was predicted one year before. The immediate response to market is one of the huge advantages that AI can bring to fashion houses, which continually fight for the attention of a consumer who does not have any switching costs, in a highly competitive industry. In the context of speed and efficiency, data analysis is key in assuring smooth communication between different teams along the supply chain. Using tangible data to back the choices of the design team will — beside ensuring the success of the collection on the market — allow merchandising and marketing teams to "push" the products properly, in line with current trends. The pioneer of incorporating artificial intelligence in the design process is the American fashion house Tommy Hilfiger that, in partnership with IBM and New York's Fashion Institute of Technology (FIT). IBM's artificial intelligence platforms have been used to process millions of runway pictures, archive products images and fabrics, as well as historical data about the brand to preserve its own DNA and codes; by adding hints of new inspiration drawn from current trend forecasting, the software is able to suggest new combinations to enrich the creation of "mainstream" designers, giving out colour matchings and silhouettes which were not achievable to the human mind on its own.

1.2.2 AI for Inventory Control

Beside predicting trends and aiding design, AI is well suited to solve another great problem of fashion industry, that is inventory management. Apart from constituting a considerable cost for the single companies, leftovers at the end of product lifecycle are not easily disposable. The problem of sustainability has become too big to be ignored by both players in the industry and consumers: while the latter continue to practice greenwashing in most of the cases, the former are praising eco-friendly behaviors and still add fuel to consumeristic habits. According to research from SSRN, unsold merchandise for the value of over €500 million is burned every year, a widespread practice that regulates supply in order to keep prices of fashion goods high. Moreover, this imprudent disposal is used to keep the trend cycle going and ensure tax write offs, where possible. While this practice was kept secret since its adoption in 1980s, media rose the issue in 2017, when Burberry reportedly set fire to old collections' products for \$38 million — setting fire also to public opinion. According to Altagamma research and projections for the future, the ongoing pandemic has led consumers to buy fashion in different ways from the past: the fact that social events have become very limited (remote working, limitations in travel and social life, etc.) and the greater attention on human and environmental concerns have led to a different consumption of fashion, more considerate of its impact on the planet and of the actual need to follow "trends". In other words, the endless number of collections has lost its appeal on the final consumer, who prefers to buy "less" due to the previously stated reasons. Apart from the more or less correct behavior of fashion audience, the heavy impact of global textile production on Earth's health is a matter of numbers: according to the Ellen MacArthur Foundation, which invests in the promotion of circular economy, the repercussion of clothing manufacturing in terms of CO2 emissions (over 1 billion tonnes per year) is far higher than plane and ship transportation together. If the need of revolutionizing textile production was already obvious before 2020, the advent of COVID-19 was the ultimate shock that made a deep-rooted intervention utterly necessary. In particular, an accurate forecast for production quantities is needed to reduce wastage of precious resources. According to research from Capgemini, AI could allow retailers to save over around 340\$ billion each year in 2022 by making processes more

efficient. This technology could reportedly reduce inventory from 20 to 50%, exerting a huge impact on a broken fashion system. The combination of different tools, such as machine learning, computer vision and big data analysis, is able to make a significant difference in the downturns of fast fashion's business model. Among collateral effects, there are certainly improved working conditions for textile industry workers, which are often forced to work in inhuman shifts to guarantee a steady production of raw materials and finished products. Moreover, the use of AI impacts the number of returns, which are currently an average of 40% of total purchases on the Internet; a better understanding of consumer preferences, based on data analysis, is able to greatly shrink that percentage.

1.2.3 AI for Engagement

To quote the journalist Howard Mittman, "content is king, but engagement is queen and she wears the pants". Today, more than ever, consumers are involved in co-creation of brands, through a continuing interaction via social media and similar platforms: magazines and paper communication are not able to provide the instant and ever-changing connection that consumers seek and brands themselves need to thrive on the market. Although ultracompetitive, fashion brands have to get their hands dirty and "fight" on the most crowded and popular battlefield — the Internet — and get off shiny Vogue covers: this requires a constant transformation to adapt to the current needs and desires of potential clients. Racism awareness, LGBT+ rights and similar movements flooding Instagram and Twitter require brands to be up to date and take a stand, to avoid repercussions in terms of image and reputation. This is just one example of how social media and Internet platforms are doubleedged swords, and this is the reason why they must be accurately analyzed, not only to predict trends, but to offer an appropriate modus of communication for each type of audience. Another connotation that characterizes the ideal brand is the continuous presence on every channel: while boutiques are open during daytime and offer concierge service and "human" shopping assistance, e-commerce is functioning 24 hours and — at least until some time ago — lacking a satisfactory shopping assistance system. The situation has changed completely with the advent of AI, which enables the creation of virtual style assistants and chatbots to

accompany the customer in decision making and purchase phases. According to research (Ameen et al., 2021), a personalized and high-quality software based on AI is capable to inspire trust in consumers, who perceive less sacrifice in using a technology as a substitute of sales assistants (SAs). These tools are designed to mimic the answers of a SA in flesh and bones, answering the questions with a high level of accuracy and with their own personality - often using pictures, funny messages and GIFs that humans would use. One of the most relevant examples is Dior Insider, the brand's chatbot on Facebook Messenger that guide the user inside the vast product range, by making suggestions and offering further information. Chatbots usually work on text inputs, and respond in text form providing links, videos and other engaging media. Beside helping in online shopping navigation, virtual assistants are able to suggest the right size for garments according to customers' body type and fit preferences: the fashion retailer ASOS has developed a special solution, the Fit Finder, built in collaboration with the tech company FitAnalytics. Through a set of pre-defined questions about weight, height and size of the individual, the tool gathers data about the potential customer and compares it with the ones of thousands of people who have already purchased a said garment in a certain size. As a result, similar body types and fit preferences are matched to provide size suggestions with the highest accuracy. Other companies have developed analogous softwares to suggest products using sophisticated AI-powered recommendation engines, such as StitchFix, in order to enhance customer experience online. Although AI is the gateway that connects past and future, it is much more effective in improving process efficiency and data analytics, rather than build real engagement with the public. This technology is still perceived as a provider of a robot-like interaction, more than a human one, so it is hardly enough to bridge the gap between the brand and the final consumer. The current restrictions have hugely enlarge this gap, by depriving companies with relevant touchpoints, such as physical stores and human interaction in events and boutiques. It is in this dramatic moment for business that technologies such as Augmented and Virtual Reality come to rescue "queen" Engagement.

1.3 VR and AR for Engagement

Connecting has never been as hard as in 2020. Social limitations aimed at blocking the virus from diffusing have forced global population to come up with solutions as smart working, remote learning and social distancing in order to continue living the pre-COVID-19 life. While research and investments on AR and VR were already huge, demand for extended reality technologies has risen due to the pandemic. The combined market value of the two is expected to reach over 97\$ billion in 2025, ranging from healthcare to entertainment applications. Differently from AI, virtual and augmented reality are technologies based on images, better suited for entertainment and for the use of visual industries such as fashion. Extended reality, as the name suggests, is able to enrich human experience of the physical world, comprising endless applications.

1.3.1 AR

According to the Merriam-Webster, Augmented Reality (AR) is "an enhanced version of reality created by [...] overlay[ing] digital information on an image [...] being viewed through a device". In simpler words, it is a tool to modify physical reality with digital elements, introduced using computer vision and visualized on a screen, being the one of a smartphone or any other device. Although this might sound as an abstraction, most people have already used Augmented Reality at least once in their lifetime, coming across Snapchat or Instagram filters. Indeed, these apparently frivolous lenses are a simple application of Augmented Reality technology, which today can be created in a simple way by any social media user with a Youtube tutorial. The software underlying filters — called Spark AR — is able to detect visual data from the environment (captured through the smartphone camera) and recognize certain elements, such as faces, facial expressions and hands. As a result, the software virtually projects a specific element on the detected human feature — being that eye make-up or a funny mask — or even place objects in the surrounding environment, with the possibility to move them around, just as in physical reality. The engine behind such simple

11

and common software is, surprisingly, artificial intelligence, the mother of numerous subjects such as face detection and object localisation: it is thanks to smart algorithms that, even through "basic" devices, different elements are separated from the background and identified.

Brief History

The history of AR has begun in the late 1960s, when the computer scientist Ivan Sutherland has developed the first head-mounted display, which he used to show a series of simple wireframe drawings. Several years laters, in 1974, the American computer artist Myron Krueger built the Videoplace, a laboratory of artificial reality where visitors were surrounded by an interactive environment, constructed with the use of projectors and cameras. Only in 1990, the tech researcher of Boeing, Tom Caudell, finally creates the term "Augmented Reality" to describe the already experimented technology. Few years later, the Virtual Fixtures AR system has been created for Air Force military to remotely control virtually guided machinery, and the AR theater production Dancing in Cyberspace, where acrobats danced on a physical stage interacting with digital objects. It is only in 1998 that AR is employed in entertainment, with the introduction of 1st & Ten system, which draws the typical yellow lines on sports fields to mark downs and offsides. In 2000, professor Hirokazu Kato has created the ARToolKit, an open source library that employs video tracking to overlap digital graphics to videocameras; it is still widely used nowadays in AR experimentations. In 2009, AR lands on Internet browsers with ARToolKit and is used for the first time by printed media — as a pioneer, the magazine Esquire — to make covers come alive. This is the first step that brings AR to a wider audience: in 2014, Google has made wearable AR a trend by commercializing Google Glass devices. Since then, investments dedicated to augmented reality has grown exponentially, as tech big players and even "external" industries have smelled the great potential of AR. Already in 2017, Apple CEO Tim Cook has made a powerful statement about AR in fashion industry, claiming that fashion events such as runways will be revolutionized by this technology. It was in that year that the British brand Burberry has launched a series of augmented illustrations inside its iOS application, that could be admired and shared by its users; also cosmetic producers such as Rimmel have been using AR to allow potential customers to try on make up before buying it, or without the need to test it in-store. This advantage has revealed to be particularly precious since 2020, when

temporary store closures have kept make-up users far from physical touch-points for a long time: the possibility of overlaying a simulation of what a lipstick could look like on one's face has helped significantly during purchase decisions in that period. Also, even with fully functioning stores, the use of testers has been limited, and the installation of large displays equipped with virtual try-on has become a powerful tool. The same need — although not so obvious — has arisen even for fashion consumers, which were seeking a more concrete impression of the garment or accessory they were intentioned to buy, and also seeking a brand connection which was lost with closed boutiques. Augmented reality is a disruptive instrument to be applied to retail, as well as to engagement and entertainment. Among retailers, the British ASOS is certainly one of the most innovative. In 2019, it has introduced the so-called *Virtual Catwalk*: by clicking the feature button on a product page of the mobile application, AR generates a virtual image of the product on the body of a model. When it detects a flat surface such as the floor, the model starts walking around the room just as in a real runway. Beside not necessarily lowering the rate return — which ASOS fights with the Fit Finder, mentioned previously in the chapter — the *Virtual Catwalk* certainly gives a much better and effective image of the product with respect to what a picture or a video can do. Moreover, projecting the product in the potential customer's living room means giving a concrete impression of possessing that piece, and makes the retail experience much more fun. On the other hand, among fashion brands, Gucci is probably the one who has been experimenting more with newest technologies. The emblem of incorporating AR inside brand experience is the official Gucci app, where users can "decorate spaces and virtually try-on eyewear, sneakers, masks, lipsticks and hats" (as to the description in the iOS App Store). Users can change instantly the model or colour of the product chosen, and they can move freely with the virtual projection smoothly transitioning along with body movements. In particular, the try-on of sneakers has gained widespread success, as numerous screenshots of users wearing their virtual sneakers have flooded social media.

«You read a book; your brain reads letters printed in ink on paper and transforms that into a world. You watch a movie; you're seeing imagery inside of a rectangle while you're sitting in a room, and your brain translates that into a world. And you connect to this even though you know it's not real, but because you're in the habit of suspending disbelief. With virtual reality, you're essentially hacking the visual-audio system of your brain and feeding it a set of stimuli that's close enough to the stimuli it expects that it sees it as truth. Instead of suspending your disbelief, you actually have to remind yourself not to believe.»

- Chris Milk, VR Pioneer

According to the Oxford Dictionary, Virtual Reality is a "computer-generated simulation of a 3D image or environment that can be interacted with [...] using special electronic equipment". In simpler words, Virtual Reality is the cool cousin of Augmented Reality: although several people still confuse the two technologies as a unique one, they are quite different in terms of usage and development, even though their applications can be similar. First of all, VR is used to entirely substitute the physical reality, while AR intends to enrich it. The former replaces completely the experience of reality, by building a whole new environment to surround the user. The latter adds further layers to what users experience, where it overlays images on the device screen or any viewer connected with a camera. Otherwise stated, Virtual Reality does not need any existing "surface" to exist or lean on, but only a human and a device. A further difference between the two technologies is the instruments needed to enjoy them: while AR needs a simple smartphone, VR makes necessary the usage of more sophisticated tools, the so-called VR headsets. The user, indeed, has to be deprived of visual stimuli from the outside world to fully enjoy the virtual one "inside".

Brief History

Beside being the most amazing feature inside futuristic movies, Virtual Reality is a real technology used in our times, especially in cinema and video games. However, it has been employed also in education, professional training and for scientific purposes. Its birth dates back to 1950s, as its relative AR: in 1956, the earliest VR system, called Sensorama, was invented. It took 30 years for the term "Virtual Reality" to be coined by the computer scientist Jaron Lanier — but still 10 years earlier than AR. In the 1990s, the technology was beginning to be employed in training and simulations of NASA and American military: it is at this time that the mass commercialization of VR takes place. However, the real take off happened in 2010, when the first Oculus Rift prototype has been produced: the first one was connected to PC, and only in 2018 independent VR platforms and devices were commercialized. As to 2019, Sony has sold over 4 million headsets around the world and, according to projections from PwC, more than 85 million VR devices will be used in China in 2021. In 2030, it is forecasted that VR alone will be a 28\$-billion market. According to the research findings reported in the Altagamma-Bain Monitor 2020, luxury brands have been subject to great acceleration in a disruption that was already taking place: from being mere producers of an output, brands have now the responsibility to be broadcasters, meaning that they have undergone a fast-forward evolution towards being content creators - more than just designers. Such transition requires modern brands to shift their focus on making an interaction with its audience, creating meaningful content in an accessible, entertaining shape. This means abandoning traditional way of communicating - univocally, on printed media or TV commercials — and embracing an innovative, more effective type of technology that allows anyone to walk in and participate actively. The power of a brand of creating a dream in the mind of the consumer has become crucial now more than ever: in a time where dreaming is the only pleasure left for fashion lovers, locked down in their house and wrapped up in a night robe, an engaging communication is a ray of light in the middle of darkness. Real life has been transposed into virtual life. Indeed, the most relevant advantage of virtual reality is to bring the user to a different place — or better, to a new place — without moving from where they are. Even before COVID-19 restrictions, traveling to Paris to attend Saint Laurent's show was a delight of a few, lucky personalities: today, anyone can open Instagram at a set time and enjoy the YSL SS21 runway in the middle of the desert. Tomorrow, a tailor-made 3D

environment will be the background on which virtual models will wear digital copies of Saint Laurent's new collection, and anyone owning a VR headset will have a front row seat. The world is going towards the so-called democratization of luxury, an over-used term that describes the phenomenon for which an Hermès bag, once the dream of an elite, is now the dream of millions. In particular, the point is not the Hermès bag anymore: it is the positive emotions and amazing experiences the purchase of a Kelly can grant to its owner. The challenge, of course, is to keep the perception of the experience exclusive and maintain the "mirage effect" around the brand. In fact, bringing more customers inside events that would otherwise be elitist is a double-edged sword to grasp carefully, because it could increase sales in the short term, but damage brand image in the long term. However, enlarging the audience and, at the same time, enriching the experience with a new technology — especially if capable of wonders as VR — can be effective to get the best of both worlds. Another key advantage of Virtual Reality is reducing costs. It is straightforward to understand how the organization of a runway in physical reality impacts much more heavily a balance sheet with respect to a virtual one; even though developing a virtual environment is still a complicated matter which involves a large set of professional figures (graphic designers, fashion designers, developers, etc.), the cost of a traditional fashion show is much higher, also proportionately to the audience it can actually reach. Also, the use of virtual reality inside offline stores, for example for trying on products, is able to reduce the cost of managing physical spaces, such as dressing rooms: even without going to a flagship store, the customer can try on the whole collection from the brand, or the complete set of collections available on the market. Moreover, going virtual means going touch-free: browsing physical clothes and sensing fabrics using hands has become a great limitation for traditional shopping, since no one wants to buy publicly exposed clothes, which can be touched by anyone. The hard challenge of VR, at this point, is giving a sense of the garment by generating a loyal digital duplicate. Considered static images from e-commerce platforms, VR and AR are certainly a step ahead in customer experience, because they can "evoke a more tactile and sensory experience" (Silvestri, 2020). The ideal virtual environment is the one that can guarantee two main factors, immersiveness and presence. The first regards the possibility of moving around the environment, seeing coherent colors and sizes and interacting with surrounding objects. Presence, on the other hand, is a psychological state where the individual does not perceive the role of technology in the experience. This means that, even though the individual is

conscious to be inside a "fake" environment (that is, external to the physical reality to which they are used), they are so engaged that they forget the fictionality of the experience: this is due to "illusion" elements such as a stable place, embodiment of an avatar and interaction with surrounding objects and individuals. With a virtual environment worthy of this name, online fashion retail is revolutionized. On a more practical side, issues related to the perceived distance between a static product image and user's reality is bridged by inserting both inside the same environment, where the customer becomes an avatar and the garment its skin. On the engagement side, instead, the experience acquires another taste: there are no limits to the creativity of fashion brands, who can enrich their virtual e-commerce environment with any feature that can capture the user's attention. For example, in 2020, Versace has exploited a VR immersive festival, ComplexLand, to launch the new Trigreca sneakers: the event, set in virtual reality, featured the avatar of Chief Creative Officer, Donatella Versace, as a guide through the presentation of the new shoe model of the brand, which could be purchased exclusively through the platform. Another characteristic of VR that makes it the best friend of fashion brands is the possibility to make anything viral, being it a new collection launch or a digital festival. The low barriers to access will make anyone want to participate to a grandiose event such as a fashion show, if it is set in an immersive environment and offers an out-of-theworld experience. Also, virality makes fertile ground for data gathering: monitoring an online virtual event is easier and less costly than monitoring an offline store, a fashion show or an exhibition. This leads to more efficient decision making when it comes to aesthetic features — such as environment design — as well as to flows inside the environment, for example the one that leads from showcasing a product to its purchase: thanks to artificial intelligence, analyzing this type of data is available in real time and is useful to reshape the experience continually. High-level analytics are required to make Virtual Reality as effective as possible: beside being the best match for fashion industry, it also needs special attention to be shaped. Indeed, to create a seamless omni-channel experience, designers must keep in mind the concepts of presence and immersiveness: the implementation in a virtual setting of creative director's idea of a show must be executed just as for a traditional one, with a crazy attention to detail. A gross or approximate representation of garments' features or models' movements may lead to a disaster, as easily as a high-quality execution may lead to extreme success. This is the reason why investment is needed to get outstanding professionals to collaborate with

brand's designers, capable of using advanced software and especially to merge two different fields such as fashion and technology.

Chapter 2 — Virtual Spaces and Gaming in Fashion

«Tell me and I will forget; Show me and I will remember; Involve me, and I will understand.»

- Confucius, 450 BC

The second chapter of this dissertation will be divided in two sections. The first one will encompass a special environment, powered by extended reality, both in a technological and a broader sense: video games, one of the most widespread forms of entertainment. After exploring their evolution in history, the role of fashion inside gaming virtual economies will be investigated, as well as the use of the NFT technology as a further evolution of virtual clothes, across different platforms. After having described all the possible environments and technologies involved in the digital and virtual strategies of fashion brands, real cases of application will be analyzed. Their distinction will not be based on different technologies employed — since very often they are so intertwined that their boundaries are blurred — but rather on the nature of the *experience* offered to the consumer. The second section will encompass how new consumers *wear*, *live*, *play* and *buy* fashion, as a consequence of current technological trends and socio-cultural transformations.

2.1 Video Games' Evolution

«Go play your video game.»

- Lana del Rey (2012)

Virtual Reality, in a broader sense, is something that most people have already experienced thanks to video games. Without the use of modern VR devices, Generation X has grown up with video game consoles — such as Nintendo's bulky, grey *Game Boy*, released in 1989 — playing in fictional worlds like the one of *Super Mario Bros*: even with very limited

possibility of interaction and visual graphics, these video games were able to transport players in another world, making them forget about "real" life. Younger generations have seen the examples of Second Life and The Sims, which were created to conduct a parallel life, with the possibility of having a house and socializing with other players: due to a better representation of the real world on digital devices, people tend to spend more time and even real money to have a "nice" virtual life, purchasing fancy pixel-made furniture and wearing cute pixel-made outfits. This trend was pervasive across different types of video-game platforms (online, console, etc.) and generations: for example, the online game Stardoll, started as the personal website of a paper-doll creator, Liisa Wrang, has become one of the largest fashion communities online, with over 0.4 billion users in 2016. The online game was created to give voice to a target which was often ignored by other video-game creators, the one of teen girls: users, indeed, could express their personality through their *avatar* by wearing and designing clothes, as well as socializing with other users and playing mini-games. The virtual "fashion world" featured a shopping center, called Starplaza, where players could purchase clothes and accessories (as well as furniture and other items) by spending their stardollars, a fictional ingame currency. Also, they could acquire different statuses using real currency, for example the



Figure 2.1: Example of a branded boutique in Stardoll (Source: stardoll.com)

Superstar and *Royalty* ones, which granted premium activities and items to the *dolls*: for instance, players could design their own clothes and sell them to others. An interesting trend arising on Stardoll was the one of replicating real-life branded items inside the game: few users could create loyal copies of Gucci t-shirts and Fendi monogrammed bags, and they went

rapidly sold out in their personal marketplace. Even today, trending dolls on Stardoll wear Dior caps and other luxury pieces, created by themselves to emulate real influencers. The need to express individuality inside the digital world is not surprising news, since it is the engine that pushes ahead social media since over a decade, and blogging since two: publishing pictures and text posts about one's life has become the norm for everyone, especially in a time where self-expression is bound to a small circle of family, friends and colleagues. As a consequence of current restrictions, global population reportedly makes more use of social media and similar platforms — including video games — as a place to express their individuality and making connections, in a way that otherwise would be impossible. Moreover, this phenomenon was already present way before 2020, and is just facing an increase due to geopolitical factors. According to research, fashion in video games is indeed a vehicle to express personal storytelling and one's status (Giri and Stolterman, 2020). Individualization inside the so-called synthetic worlds of video games has a correspondence with the emotions that a status distinction provokes in the real world: in simpler words, the prestige of wearing a certain type of garments (in terms of qualitative or quantitative value) is similar to the one an individual can experience by choosing their avatar's apparel inside a video game platform (Castronova, 2005). This is the reason why game designers (and, more recently, fashion brands) have an important role in producing virtual garments that fit users' personality and desires in terms of in-game performance. Indeed, just as it happens for technical sports apparel, video game skins (that is, clothing for avatars) must have aesthetic qualities as well as being functional to the game activities (i.e. fighting, running, etc.).

At this point, a significant opportunity field opens up in front of fashion brands: video gamers do have the need to differentiate themselves from their "play mates" as they would do in real life with colleagues and friends. The possibility to launch virtual *skins* for avatars inside video games is a challenge that several brands have already exploited (as it is going to be explained in Chapter 3), as long as the activity is pursued after a thorough study of the game itself. Indeed, the virtual transposition of an already-designed physical garment inside a video game must be performed taking into account the *function* of said item in players' environment; unfortunately, the simple 3D design of a t-shirt is not necessarily going to be successful just because it makes the wearer an "ambassador" of the brand itself — it takes much more than that.

2.1.1 Brief History of Video Games

Differently from what could seem, video games are not child's play. As to 2021, the industry is worth approximately 140\$ billion, reportedly surpassing 200\$ billion at the end of 2023. In America, two-thirds of the households have gamers among their members. China, on the other side of the world, counts 484 million players — one third of the entire population; here, famous singers and influencers are avid gamers with huge fanbases. However, such a popular phenomenon started in research laboratories, where computer scientists experimented with computer-based games: the first was from Professor A.S. Douglas, replicating the renowned tic-tac-toe in 1958, followed by an early version of "virtual" tennis from the nuclear physicist William Higinbotham. In 1962, the first combat game, Spacewar!, was created by MIT's Steve Russell, which could be played on multiple computers. The first commercial home console, called The Brown Box, was developed by Sanders Associates, Inc., as a TVconnected device that allowed two users to play against each other: it included various games, such as checkers, ping pong and other sports, but did not have a huge success, since Americans still did not consider having a game device at home. The first companies to pioneer video game industry have been the Japanese Sega and Taito, focusing in arcade gaming — that is, games usually found in public locations and playable by inserting a coin. In 1972, Atari was the first company to plant the seeds for a large community of gamers referred to as *gaming* phenomenon: the very nature of a game put every player in competition, so that anyone wanted to beat their own and other's record scores. In was in 1973 that Atari began selling the first electronic video game, Pong, that was slowly conquering bars and shopping centers world-wide. In the 1970's, multiplayer games became a reality more than just an ideal, with Gunfight arcade game and Intel's invention of the first microprocessor. Also, home gaming rose thanks to Atari VCS, a TV-connected console with pre-set games (such as Pong) and external slot for other game cartridges: it sold 2 million units only in 1980, also thanks to the publishing of the most-famous Space Invaders. After a period of market saturation in the early 1980s - too many consoles, and too few interesting video games the industry flourished again thanks to the commercialization of personal computers, such as Commodore 64 and Apple II. These more powerful devices allowed for more complex games, and also allowed for developers to create their games from scratch using BASIC coding. Also, as a grand-dad of online multiplayer gaming, different computers could be connected by cable to play together. Since 1993, when CERN made the World Wide Web accessible to the public, the first attempts to create online gaming were executed: however, the Internet was still too slow to host successful games. Only in 2000, with the Sega Dreamcast, online gaming became a core feature of a console, not just an add-on for a small number of users. Also, games shifted from cartridges to CDs. Starting from the new millennium, the constant enhancement of computers' capabilities and the cost decrease of Internet access have made online gaming the norm, arriving to more than 1.5 billion players of video games on the Internet in 2015. Even the advent of new consoles, such as Microsoft's Xbox and Nintendo Wii, made Internet connection a necessary feature, revolutionising the act of buying a video game with their online stores. This is the era in which million-dollar budgets are allocated for game development: the shooting game Destiny, for instance, costed around 500\$ million. One of the most famous online multiplayer game, Call of Duty, is the example of how gaming can create connections among users: even though the aim of the game is to virtually kill as many players as possible, gamers use to chat with friends and interact with new people from around the world, adding the important element of gameplay experience to the connection that can be made through social media. Also, according to an ESA report from 2015, 45% of gamers feel that playing video games helps connecting with their friends. This is far away from the widespread perception of playing video games as an isolating activity. As smartphones market took off in 2007, video games quickly landed on cell phones in the form of applications, making them part of the pop culture as never before. Compared to its online counterpart (over 23\$ billion), mobile gaming is making almost four times the revenues in 2021 (over 100\$ billion). This great shift from computers to smartphones has revolutionized video-game industry, especially gaining field in Southeast Asia: it made video games accessible to a wider range of demographical groups, as well as bringing them to the attention of the public (and of companies external to the industry). A great example of this success is certainly Pokémon Go, that reached over 1\$ billion in revenues: the mobile game featured Augmented Reality as the engine of a "treasure" hunt all around the world. On the other hand, console gaming is still going strong after the advent of mobile: for instance, Animal Crossing: New Horizons, the well-known video game for Nintendo Switch, has reached 31.2 million players worldwide.

2.1.2 NFT, the Immortal Art

If, up to this point, technologies such as VR and AR, and forms of entertainment such as video games were described as powerful ways to engage users, there exists a silent desire from a not-so-small niche to use virtual worlds as means for monetization, as well. As mentioned previously, video games in which players could spend some currency — being it a fictional one or real money — exist since the early 2000s: examples of virtual economies can be found in the so-called real-life simulators (such as The Sims and Second Life) and MMORPGs (Massive Multiplayer Online Role-Playing Games, such as World of Warcraft). Across different platforms, the rules of virtual economies vary significantly, depending on guidance and flexibility allowed by game developers; however, several virtual economies are conceived to connect a fictional universe with the real world, by allowing players to spend real money inside the game, usually by first converting it in a fictional currency. At this point, the user is able to acquire some kind of virtual property - agricultural land, a house, a pair of shoes, a weapon — which can have different characteristics. According to Fairfield (2005), virtual property is "rivalrous, persistent and interconnected". This means that, first of all, the said resource is owned by one individual, or a group, and not by each player of the game, to determine some kind of scarcity. Moreover, the object must persist more than just one play session, meaning that the user can store it in time. Last but not least, said object must be capable of generating some effect on the owner and the surrounding environment. Also, since it is part of a virtual economy, it should be tradable in a secondary market, so the owner could sell it to another buyer for a sum of money (in-game or real); the value of such item could be increased by the owner by changing some part of it, being it through customization or other actions. The extent to which virtual economy has developed has arrived to the emergence of virtual crime, related to stealing, virtual prostitution and mafia. Virtual economies inside video games count millions of participants. For example, as to May 2020, the video game Fortnite counted 350 million players across the globe, and over 5\$ billion revenues in the same year; being it a free-to-play mobile game (meaning that there is no need to pay to download it on the App Store or Play Store), the total amount of revenues are coming exclusively from in-app purchases, mostly regarding aesthetic features for characters. The same happens with other video games, different in nature (played on console, mobile or PC) but similar in the functioning of its virtual economy. However, the pace at which the popularity of living a second life inside video games has grown has not been reciprocated by a greater effort from gaming platforms to make gameplay more connected to real life, especially when it comes to virtual economies. Indeed, most games require users to convert their money into a fictional currency, and the objects they can acquire in the game environment are exclusively enjoyable there. This means that, if the provider decides for any reason to shut down the platform, any amount of money and possessions related to the character are lost by the user. Such inconvenience is certainly a barrier that discourages spending inside video-game environments.

A bridge that connects real money and virtual goods, however, already exists: it is called cryptocurrency. The term has been notorious in the latest years, due to widespread speculation on Bitcoins, which allowed several individuals to make significant financial gains. Cryptocurrency, indeed, is a fully-fledged type of money used as a form of payment in the online world, which however allows the trade of goods and services; different entities have created their own token to purchase specific products. Crypto-money is powered by blockchain technology, which ensures for decentralized transactions: in such a way, data is not stored in a single place, making transactions safer and free from banking system's control even in terms of money value. In simpler words, cryptocurrency is digital cash, since it is not bound to the identity of its possessor. However, blockchain technology is able to track transaction and certify the ownership of a certain good: the specific tool that allows for this magic to happen is called NFT. A Non-Fungible Token (NFT) is a set of digital information stored in blockchain that confers the property right to a specific subject (an individual or another entity). The encrypted token is usually associated to a digital good — for example, an artwork or a dress — and, once it is purchased, it becomes proprietary certification of the good itself. Differently from ordinary cryptocurrency tokens, a NFT is said non-fungible since it is not interchangeable with another token of similar nature: while a Bitcoin (just like a one-Euro coin) is equal to any other, each NFT is unique of its kind and irreplaceable. Indeed, it can be attached to any kind of media: from pictures to video, from music to text - even GIFs and memes, such as the Nyan Cat, a GIF that sold for almost 600,000\$. Moreover, NFTs are applicable to several fields that need a greater regulation in terms of ownership and identification, such as the sale of concert tickets, which are renown for being under-regulated.

Instinctively, the average internet user may be confused when reflecting on the real utility of a NFT: the aforementioned dynamic image of a pixel feline has been circulating for years, and will keep doing so independently from whoever owns it. So what is the use of spending such a serious amount of cash? The answer is simple: *because* property rights. Any NFT-related media will be inevitably replicable and available to any Internet user, but its intellectual property will always pertain to its owner, who will collect any monetary compensation for its use; the "real" artwork will always be in the hands of the NFT's proprietor. To make a parallelism, an analogous situation is represented by possessing a Picasso painting: the collector cannot impede the use of the painting's image anywhere — on the web, inside art books and for "fake" replicas — but she will always have the original, and gain all the value from it (by lending it to museums, gaining the surrounding prestige, etc.). Moreover, any digital artwork will be elevated by being paired with a NFT: since today the intellectual property problem for digital creations is huge, non-fungible tokens can be the solution to this dilemma. Every digital creator can claim the ownership of their pieces and avoid incurring in



Figure 2.2: "Everydays: the First 5000 Days" from the artist Beeple, sold for over \$69 million (Source: <u>nytimes.com</u>)

stealing and overcoming credits; also, digital art collections can be established, since each piece will be unique. Many are the examples of artists that are exploiting the NFT technology; so many that, at this moment, several platforms specialized in selling NFTs have been created, and are reportedly making millionaire revenues. For example, the Canadian singer Grimes has

made available ten NFT digital artworks (pictures, videos, music) on the platform Nifty Gateway: after 20 minutes from opening the sale and announcing it with a brief *tweet*, the artist has been able to sell out and generate \$5.8 million. Even the auction house Christie's has been selling NFT artworks, such as *Everydays: the First 5000 Days* from the artist Beeple, which sold for over \$69 million (the most expensive NFT ever). When it comes to fashion, NFTs are in the crosshairs of several brands — often, the same that are interest in merging with gaming and extended reality. Some, like Gucci, have already stated that they are already contemplating the issue of NFTs, and will be out in a relatively short time. According to a blockchain platform owner, Marjorie Hernandez, the fact that luxury fashion brands were already late in the exploitation of e-commerce makes them eager to dive inside new technology trends, especially in this moment of "chaotic" experimentation. While they have already created digital fashion *skins* for video games (as will be explained more deeply inside this chapter), NFTs can be a powerful evolution in terms of monetization, since such skins do have a price but are not traceable in terms of ownership (i.e., they exist only in-game): as it is prestigious to own an exclusive, leather-made Chanel 3.55, so it will be for a pixel-made one.

However, the state of the art of fashion NFT is still far away from its climax: currently, NFT clothes are merely sold as art, not as functional objects — they cannot be worn anywhere, and can only be admired on a virtual hanger. Still, there are some examples of digital fashion houses that have already sold unique, traceable pieces (as it will be explored later on). Regardless, the associated customer experience is light years away from a luxury one, and awaits to be enhanced at the level of a virtual boutique; video game platforms such as Decentraland, where NFTs are sold in form of digital clothes and accessories, do not offer realistic graphics and are more a set of different partnerships and experimentations from cryptocurrencies, brands, etc. Also, the appeal of cryptocurrency shopping is still too low to catch the interest of a luxury consumer. Hence, fashion sense in the NFT world is still in its embryonal state. Nonetheless, startups around the world, together with fashion houses, have come up already with interesting applications of NFT technology to the luxury fashion world, in a way that is consistent with this new target — a shiny, elegant, surprising way. For example, the Australian startup Neuno wants to make NFT fashion universal, so that it can be used across any platform, being it social media, video games or a digital mirror; Snapchat filters and Fortnite skins will become one thing, just as a unique garment can be worn in endless places in the real world. Once the customer buys a pair of Zanotti sandals, they will be able to wear them while shooting enemies on a video game, or in a video-story on Instagram — all without ever purchasing the physical accessory. Also, the NFT certification gives fashion brands full control of their intellectual property rights, since any other digital creator — such as Animal Crossing independent "stylists" — will not be able to duplicate their collections: the brand itself will be the only provider of its own creations inside any platform. Moreover, the startup Neuno plans to make the experience even simpler by removing the cryptocurrency barrier: luxury consumers will not need any Bitcoin wallet to buy NFTs, just as they do not when buying online physical clothes. Another approach is the one adopted by the retailer Clothia, which sells a physical dress together with its duplicate in form of NFT. Available after winning a bid, Clothia garments are unique, just like the NFT to which they are connected. As the retailer's CEO Elena Silenok reportedly claim, duplicating physical products in a digital form is not the only approach to blockchain-powered fashion. Indeed, according to her opinion, brands should treat designer NFTs as, for example, an entryprice line to boost sales and get in touch with new customer audiences. As suggested by Amber Jae Slooten, one of The Fabricant's founders, NFTs can be used by designers in order to extend a real life product, by adding features that could not be possible otherwise — she mentions "flaming shoes" in an interview. Also, according to Cathy Hackl from Futures Intelligence Group, virtual clothing production will be essential for fashion brands, since in the future it will comprise a large revenue stream.

2.2 WEAR

«Playing dress-up begins at age five and never truly ends.» — Kate Spade

Fashion system has been under the radar since several years due to an endless vicious cycle that led it to be, as many claim, "broken". The moral correctness of fast fashion and questionable anti-sustainable behaviors have been followed by the terrible effects of nothing less than a global pandemic: numerous collections, designed to satisfy insatiable consumers, have been left inside warehouses and carton boxes, leading to huge inventory mismanagement; the need to drain overstock has led to great markdowns, with almost half of

the total production to be sold at less than full price; disruption of supply chains has been, in many cases, devastating, with a vast percentage of orders cancelled by brands, and factories emptied of their workers; the already declining faith of physical retail has received the *coup* de grace, with the closure of around 20,000 stores only in the US¹. For these reasons, and many more, fashion as we know it has come to an end. Overproduction is meant to be replaced by circularity — meaning that more and more garments will be recycled to make new ones — and the "less is more" philosophy, with fewer collections but of higher "value" - of whatever nature. In parallel to physical "clothes" - those who need sewing and stitching, that humans wear in their earthly activities — a growing number of brands has been experimenting with virtual clothes, the ones with digital threads and pixeled fabrics: now that instagrammers are left with reposting shiny party pictures on "throw-back Thursdays", the digital dimension needs tailored designs for its population of avatars — us, but in the cyber world. At this moment, the possibility to splurge nice clothes and show off designer pieces is confined to social media and digital platforms in general - video games for example, as explored previously in this dissertation. The dichotomy of fashion industry - physical on one side, and digital on another — has not posed fertile ground for the conciliation of these two dimensions, which have always remained separate in the preservation of craftsmanship and, contemporarily, the pursuit of a digital-savvy consumer. Physical and digital have been merged, in some way, at the retail level: an example is the Burberry Social Store in Shenzhen, but it is still a rare case.

2.2.1 Digital Fashion Garments

«Our bodies are becoming fluid, our money decentralized, new powers are being formed.» - Amber Jae Slooten, co-founder of The Fabricant

While some fashion producers have encored 3D product design in their processes, digital models of clothing are not so common as final products of fashion designers. Indeed, only few firms are adopting a business model based on virtual fashion as the main output: the

¹ The State of Fashion 2021, Retail ROI, pg. 83

outbreak of COVID-19 pandemics, however, has given a big boost to this phenomenon. The most successful example is that of The Fabricant, a Dutch fashion house, which is "leading



Figure 2.3: "Iridescence" dress from The Fabricant (Source: thefabricant.com)

the fashion industry towards a new sector of digital-only clothing", according to their website description. The firm starts from a project based on digital design, production styling and fitting that was originally conceived as an art initiative. The distinctive trait of The Fabricant is certainly that to pursue two different directions of the virtual fashion phenomenon: that of creating a fully-fledged brand based on purely digital fashion, and also that of creating pieces outside any common logic subject to the constraint of the physical world. Indeed, the brand's philosophy is that of challenging the traditional conception of clothing and accessories — based on fabric cuts, standardized sizes, fashion catwalks — in order to dress up avatars in what is considered the "next" dimension of human life. Regarding the very product designed and "sewn" by The Fabricant, it is completely created from three-dimensional modeling software and conceived to behave just as a physical garment, moving with the body and obeying the laws of physics. Indeed, the brand's clothes and accessories perfectly adhere to the human body thanks to special fitting techniques, which merge the purely digital uniform with the body as it appears physically. The application of such technological item is meant to be fit for any platform: social media, video games and any kind of virtual universe. Moreover,

the aim of the company is that to prevent any harm of fashion dynamics — overproduction, for example — onto the Earth's natural environment, by promoting a more sustainable way of being fashionable. While, initially, The Fabricant produced garments only as "made to order", it also designed a collection of digital pret-a-porter pieces meant to be worn by avatars, available on the specifically made platform Leela. The rationale behind is offering a product that makes individuals able to express all the sides of their personality, which changes according to the chosen mean of expression, for example a tracksuit for a video game (Animal Crossing) or an elegant dress for a social media (LinkedIn). Also, in an interview, the cofounder Amber Jae Slooten mentions how millennials may still see a difference between physical and digital worlds, but younger generations do not see any boundaries between the two: a further reason to pursue such strategy. The most famous accomplishment that resulted from the company's business is the sale of the first-ever exclusively digital dress in 2019: the transaction has been executed using blockchain technology, which allows the piece to be resold and its owner to have a property certification. The Iridescence dress has been sold for \$ 9500 and is stored in the digital closet of a woman called Mary, whose pictures wearing the garment are available online. Nonetheless, she has claimed to have the desire of wearing the dress not only in photographs, but also in popular platforms such as Tik Tok. Another pioneer of digital fashion has been the launch of a digital collection by the Scandinavian brand Carlings, which was the first fashion actor to issue an exclusively virtual one. The retailer, which was already selling physical clothes, has undertaken the project with the aim of exploring new ways of experiencing and consuming fashion, and serve as an example for the industry as a whole. A remarkable influence has been made also by video games, since the CEO Ronny Mikalsen had reportedly bought Fortnite skins as an inspiration. The collection, when commercialized, was sold for a price range between 10 and 30 euros, with the proceeds donated to an NGO. Customers could get their digital garment and wear it by submitting a photograph on Carlings' website: at that point, the brand's team proceeded by virtually fitting the clothing piece on the user's body. In Italy, the startup IL3X is laying the foundation for Augmented Reality clothing, by launching Ardrobe, the first digital platform to wear virtual fashion pieces "on social media and livestream channels", as reported on the company's LinkedIn description. The brand's clothes are sold for affordable prices (less than 10 euros) and can be worn by opening a link sent via e-mail after the purchase; each item has personalization sliders to get the best fitting with the user's image and body, and it is possible
to register videos and take pictures wearing it. Among traditional fashion brands, Gucci is the one that is making the greatest effort in the virtual world. In 2021, the Italian *maison* has issued its first ever digital sneakers, with fluorescent colors and retro style: the shoes can be purchased on the brand's app for around \$10, and can be worn using augmented reality. In this way, users can see them on their feet as an adaptable "filter", similarly to what happens with



Figure 2.4: Gucci sneakers in augmented reality (Source: theverge.com)

Instagram and Snapchat. Moreover, the innovative feature is the possibility to get tailor-made versions of the trainers for platforms such as VRChat and platforms such as Roblox. Moreover, in this virtual world, an exclusively digital version of Gucci Dionysus bag has been auctioned for over 350 thousand Robux (Roblox in-game currency), an equivalent of over 3000 euros — an amount that exceeds the price for the physical version of the accessory. While the starting price of the digital item was as low as six dollars, the secondary market's price grew quickly. As noted by Reddit founder Alexis Ohanian, the virtual bag in question has no possibility to be transferred in any other platform, and had not property certifications such as NFT. It is interesting to notice the power of a brand over an item with nearly any value.

2.2.3 Avatars and Gaming Skins

The declination of virtual fashion acquires a more practical application in the video games' world. As explained previously in the chapter, the phenomenon of wearing digital replicas of clothing is widespread in the gaming environment, long before the experimentation made by virtual fashion brands. However, fashion firms are understanding the potential of this dimension and are slowly exploiting a large audience of fashion lovers who also happen to be passionate gamers. The most famous example is that of Louis Vuitton, the luxury brand which has established a partnership with the video game League of Legends: besides creating a tailor-made skin for in-game avatars, the brand has designed a special capsule collection, which is loyal to the aesthetic and full of referrals to characters' style and personality. In 2019, LV designer Nicholas Ghesquière has reportedly taken inspiration from the game narrative to create both the physical collection — available to wear for gamers' physical bodies — as well as a "prestige garment" for LoL character Qiyana. The skin was sold for around 30 euros,



Figure 2.5: Qiyana's skin designed by Louis Vuitton (Source: louisvuitton.com)

converted in the in-game currency, and was available to those who possessed a special pass; it enriched the character both in its appearances and in the gameplay, since the skin contains a new weapon for Qiyana. Moreover, for 2019 League of Legends Worldwide Championship, the brand has specifically designed the enclosure where the prize cup was stored, fully printed with the well-known LV monogram. Louis Vuitton has always been famous for designing trophies' cases for the world's most important sports competitions, and now has entered the world of esports, namely competitive multi-player video games. A similar project was undertaken by Burberry in collaboration with the video game Honor of Kings: the British brand has designed skins using typical color and pattern codes, applied to the traditional Chinese setting of the video game. However, due to external implications that involved trade agreements between Burberry and Chinese suppliers, the collaboration has been cancelled. The Italian maison Gucci has created an ad hoc strategy for video games as well: a remarkable initiative is that in collaboration with Tennis Clash, a mobile game that replicates the namesake sport's experience. Players could have access to in-game special outfits, created specifically for virtual tennis players: garments have been created by innovating traditional tennis clothing in the key of Gucci's monogram and aesthetics, as well as with a touch of sportswear style. Additionally, garments could be purchased in their physical version by accessing Gucci's e-commerce right from the mobile game. Lastly, the example of Moschino's collaboration with The Sims 4 is worth to be mentioned among gaming partnerships with fashion brands. Initially, in 2019, the Italian brand has created a special physical collection that took inspiration from The Sims' aesthetic: designer Jeremy Scott reportedly wanted to transpose the game's characters into the physical world, giving players the means to live the game experience also in real life. Months later, the same brand has created the so-called Moschino x The Sims Stuff Pack, an extension of the video game containing designer pieces from the well known fashion brand. Some examples are dresses, jackets, swimsuits and accessories, as well as hints that create new game dynamics. Besides being the first fashion brand ever launching into the game, it is also the first one that adds to the narrative, by giving the possibility for characters to undertake new career paths.

2.3 BUY

«I like my money right where I can see it... hanging in my closet.» — Carrie Bradshaw, from "Sex and the City" Along with projects related to aesthetic elements of virtual fashion, new ways of managing sales' channels have been experimented and created by brands to take their digital strategy to the next level. Due to the fact that is has become the most growing (and in some case the main) channel during the latest pandemics, e-commerce has developed the need to evolve in order to entertain customers, beside being a mere digital shopping window. In this section, the most notable actions undertaken by fashion brands and retailers in the context of gaming and extend reality have been collected and described.

2.3.1 e-Commerce Platforms

Due to blocked tourist flows and widespread closures, fashion retail has shifted heavily on ecommerce, leaving the physical channel with huge downturns and the digital one with an accelerated growth rate. Also, in online shops where purchase processes are often standardized, a greater need for personalization has arisen among audiences, as well as the desire to be entertained as if the customer is inside a boutique — or even more. One effective way to do so is the creation of special e-commerce strategies that encompass extended reality and gaming models. One example is ASOS AR SeeMyFit, which is an innovative augmented reality feature from the British retailer that allows users to see a garment's fit on different models, each with a different body type and size. At the moment, the feature is being tested on several garments and platforms, in order to perfect customer experience with the new tool. The British retailer is not new to similar innovations, having employed augment reality in its mobile app to get a virtual catwalk projected in customers' houses and surrounding environments. At the moment, different e-commerce platforms and retailers are experimenting with extended reality, in order to make the experience as similar as possible to the physical one. Another pioneer in the field of e-commerce transformation is the Italian YOOX, with its YOOXMirror feature, that allows each customer to become their own personal stylist: by choosing among the retailer's catalogue, users can style their own outfits on an avatar by mixing and matching clothing and accessories on a virtual model. Moreover, different themes and model options are offered, in order to create shareable stories for users to post on social media. As a special guest of YOOXMirror, the virtual avatar Daisy has been created to be one of the models available, as well as to take over of YOOX's Instagram account: she becomes one of the first non-human brand ambassadors, existing only in the digital world. Additionally, YOOXMirror is powered by artificial intelligence, with the purpose of reaching a high degree of personalization in the retailer's customer experience: the feature, indeed, is



Figure 2.6: The virtual model Daisy on YOOXMirror (Source: fashionnetwork.com)

aimed at encouraging each individual in expressing their own style using YOOX's product catalogue. A full degree of freedom in self expression is, however, accompanied with particular algorithms that suggest recommended products for an outfit based on its aesthetic features. Moreover, using Virtual Reality, clothes and accessories are shown on the 3D avatar's body, in the setting of a dynamic background. On the other hand, some leading e-commerce platforms are using tailor-made video games as a way to revolutionize online shopping: the most relevant ones are Drest, in collaboration with Farfetch, and MOD4, created by LuisaViaRoma. The first platform mentioned has been conceived by Lucy Yeomans, a British former fashion editor, as a smartphone app specifically made for women who want to style their personal avatar with the latest trends: her idea is to mix the desire for styling with a game experience, by offering players a selection of fashion items and a virtual model to dress up. The app has its own in-game currency and reward system based on

activities, such as shootings and participating at events, but it has been enriched with the possibility of purchasing each piece in real life through a collaboration with the retailer Farfetch. Moreover, available avatars are inspired by real personalities among top models. As Vogue defined it, Drest is "paper dolls on algorithms", a technological and innovative evolution of what was already done by kids with paper and scissors before, and after using platforms such as Stardoll. The game is meant to enrich player's experience by adding the community dimension - by sharing outfits with others directly in the game - and the ecommerce one, giving the possibility to replicate the avatar's outfit in real life. The second app mentioned is MOD4, a simulation dress-up game that merges interaction and online shopping. Similarly to Drest, users become stylists and can fill up their wardrobe with digital garments and accessories: avatar personalization is allowed in terms of clothing as well as hairstyle, makeup and body features. Players can have access to digital replicates of LuisaViaRoma's catalogue, by making up outfits and possibly purchasing digitally-worn items on the retailer's website. It is worth to mention that a reward mechanism has been created in connection with the e-commerce: playing is incentivized by the awarding of bonus points — the so-called LVR Points — which grant some advantages to the customer, such as free shipping or the access to exclusive shopping clubs. Also, special rankings are created in order to see who "performed" better in the game and voting the user's favorite ones.

2.3.2 Physical stores

Innovative technologies such as extended reality and artificial intelligence, together with the gaming phenomenon, have been encored by brands also in the physical retail channel, by creating what can be defined as the *store of the future*. One example is certainly the Burberry Social Store in Shenzhen, in China. The store is located in the center of Chinese technological innovation, where the multinational tech company Tencent has its headquarter. It is with this firm that Burberry has collaborated in order to create the perfect integration between the traditional outlet with digital channels and tools. The objective of the Social Store is to arrive to younger generations, namely Generation Z and Millennials, through the typical mean used by these groups to communicate: social media. In China, the top platform is certainly WeChat,

which is used to get to the chosen target through special features, employed to create a "phygital" brand and shopping experience. Specifically, Burberry has developed a Mini Program, which can be defined as an application inside the application: indeed, it is a tool used to enrich WeChat users' experience by letting each brand create a special section inside the platform. According to the consumer perception in China, a Mini Program can be compared to a mobile application as intended by a Western audience. Through Burberry Mini Program, specifically, users can also interact with the physical store by booking personal appointments with sales' assistants, try on products, contact assistance and get updates on new collections. The physical store has been equipped with QR codes in different locations, so that each visitor can get insights on the brand's history and heritage, as well as information about showcased products. Additionally, they can adjust lighting inside the shop, book a fitting



Figure 2.7: Nike Reactland shopping experience (Source: jarrodwhite.com)

room and choose the background music. A specific game feature has been added, that is the equivalent of in-game money, called *social currency*, that can be collected to unlock special contents and experiences; points are assigned to an avatar, represented by a stylized deer, and redeemed by its possessor in terms of coffee meals and exclusive content. Another example of futuristic store is Nike *Reactland*, opened in 2018, which revolutionizes in-store product trial. More than a physical shop, Reactland was an immersive experience created in several Chinese retail locations of the brand, in which each visitor could embody an avatar and

physically control its movements. The setting is a video game in a fantasy world, where the virtual version of the visitor can move by running on a treadmill and using a remote controller. The surprising feature of the experience is the possibility of customers to have an avatar with their physical appearance (generated by taking their photograph) and playing the game while wearing a pair of Nike React running shoes. Indeed, the installation has been specifically created for the launch of this product in China. Reportedly, 48% of the visitors that have played the Reactland game, showing that a shopping experience that encores video game elements is able to generate a significant conversion rate.

2.3.3 Other

Besides physical stores and e-commerce platforms, other ways to generate conversion related to extended reality and gaming have been developed to catch the interest of the audience. While the phenomenon is already at its embryonal stage, some interesting initiatives have been undertaken by fashion brands, which are merging their creativity and business with the most varied use cases. A remarkable example, which has generated a lot of buzz, is that of Versace taking over the digital festival Complexland. At the end of 2020, in occasion of the launch of Trigreca sneakers' new model, the brand established a collaboration with the street culture virtual festival with the aim of letting participants discover the new product of the Italian maison. The digital event has taken place for four days in December 2020, with free participation: the setting is an immersive virtual reality environment, where numerous initiatives have taken place, such as cultural conversations, artistic performances and projects related to fashion and music. Versace has chosen Complexland in order to drop the new sneakers and lead potential customers along the display and purchase of the shoe. Indeed, the Chief Creative Officer of the namesake brand, Donatella Versace, has transformed into a digital avatar with her appearances, that has guided Complexland participants in the Trigreca drop. The brand has reportedly participated to this one-of-a-kind festival in order to involve younger audiences and organize an avant-garde launch for the product, being it in line with the brand's aesthetics as well as its strategy. Indeed, the brand has ridden the wave of virtual reality projects related to the pandemics, since also the very Complexland festival was once a



Figure 2.8: Donatella Versace's avatar in Complexland (Source: <u>mr-mag.com</u>)

physical event, the Complexcon. As well as Donatella Versace, even participants could have their customized avatar and explore the virtual show of each engaged brand. Also, the choice to set the drop in this virtual environment has build an aura of exclusivity around the Trigreca sneakers, since they could be purchased solely through this process.

2.4 LIVE

«It's not about the dress you wear, but it's about the life you lead in the dress.»

- Diana Vreeland

In the latest year, the way people lives fashion has deeply changed. Front rows are not swarming of fashion editors and influencers, they are empty instead. Some may say that front rows do not even exist anymore: now, fashion is shown to the mass and is experienced by anyone, not only few elected individuals. Also, the way fashion brands communicate goes more and more towards an interactive conversation, where the consumer feels seen and involved.

2.4.1 Digital Campaigns

It was 2012 when — way before the pandemics and the explosion of gaming — that fashion magazine Arena Homme+ has shown that year's Prada collection on extraordinary models: Final Fantasy characters. In 2016, the same video game's lead figure, Lightning, was chosen by Louis Vuitton as the model for its campaign: besides portraying LV's collection, the digital soldier has also gave an interview to the Telegraph. The origin of such initiative is probably the popularity that cosplay (from *costume play*, that is dressing up as a fictional character), which at the time was the main source of interest in fashion from video games. While the practice is not exclusive to video games, but also to movies and manga, this is where the public interest for video games and fashion merged has started. Lightning, on her regard, was accurately styled even before the Louis Vuitton campaign, as video game designers behind her character say that looks are crucial for the identity of a video game star. More lately, in 2020, Gucci has launched its own sustainability campaign "Off The Grid" on The Sims 4, featuring the American actress Jane Fonda, whose avatar was shown fully dressed in Gucci.



Figure 2.9: GG Island on "Animal Crossing: New Horizons" (Source: CompassUniBo)

While promoting the brand's effort for sustainability, the campaign dynamics also allowed each player to gain "environmental" points in the game, since the virtual products created for this purpose have a positive impact on nature even in The Sims' setting; in other words, players are rewarded for their good choice towards the environment. Also, a special treehouse was designed by the creator Harrie, only using recycled materials and conscious processes.

Another remarkable trend is the one that is taking place on *Animal Crossing: New Horizons*, the real-life simulator from Nintendo: many brands, from fashion and other industries, are exploiting the vast audience of the game by building special "islands" in its virtual world, to promote a collection or the brand in general. This is what Gucci did for the Animal Crossing's community: the *GG* island has been created by "talented members of the community", as reported on Gucci's related Instagram post, by taking inspiration from the brand's heritage and style. The strategic meaning of the initiative is to launch the #ForeverGuilty perfume's campaign: it is interesting to notice that a beauty product such as a scent is promoted in an environment where users cannot "smell" fragrances. However, creators have tried to encore Gucci Guilty's main olfactive notes in form of ingredients on the island (mandarin, lilac and patchouli), to give an idea of elegance and exclusiveness. Additionally, the island is composed of evocative settings such as a laundromat, a hair dresser and a supermarket, inspired by the campaign and revisited in the game's style. Players are welcomed by an avatar of the American actor Jared Leto, brand ambassador of Gucci: he guides visitors around, showing a

"paparazzi zone" to take pictures of themselves, an orchard with the perfume's scents, and a set of mini-games to involve the player (among which, a fashion show). Creators who have built the island have also made a live stream on Twitch to show users how to exploit fully the island, and also shared some tutorials on Youtube.

2.4.2 Virtual Fashion Shows

«Walk, walk, fashion baby.»

- Lady Gaga, "Bad Romance" (2009)

Even fashion shows, those grandiose events that involved thousands of people meeting and sitting together on catwalk rows, are destined to be translated in another dimension. After the disruptive lockdowns and social limitations, many brands have experimented with virtual reality and video games' settings, as well as streaming on unusual platforms for the fashion world. For example, Burberry has shown its Spring Summer 2021 collection live on Twitch, Amazon's live streaming platform with a prevalent audience of gamers: this is the result of a partnership between the brand and the platform, aimed at involving the community by letting



Figure 2.10: Balenciaga's "Afterworld: The Age of Tomorrow" (Source: wwd.com)

users interact and express their emotions live. Moreover, Gucci has created GucciFest, a seven-day long festival where the Italian brand has issued a TV series and hosted shows from emergent fashion brands: one, that of Collina Strada, has a video game setting, where models are fighting climate change. The brand's designer, Hillary Armour, has said that building a show in a video game is a difficult matter, that she "wouldn't recommend for the faint of heart". The maison that took the practice to its climax is certainly Balenciaga: in order to release the Fall 2021 collection, the brand has created a fully-fledged video game, and the show is a video of the gameplay along different "zones" of Afterworld: The Age of Tomorrow. The setting is ten years from the present, in 2031, in a post-apocalyptic environment, constituted by a city, industrial buildings, woods and a party. The player has to pass each of the five levels, first by hopping on a fluid bus and then by participating to a rave. Special car models from Polestar and references to video games' history have been added, as well as, obviously, the whole Balenciaga collection. Clothes are worn by game's characters, spread around different levels and performing various activities — showing hologram maps to the player and dancing to techno music, for example. Everything in the video game has a "destroyed" look, as defined by Demna Gvasalia, Balenciaga creative director. The brand's idea has been to catch the interest of the present version of customers, who play video games and buy luxury fashion pieces: Balenciaga wanted to give a special environment where they could translate themselves in a "parallel world". The game is reportedly the most voluminous video project created up to now, since characters are designed with avant-garde techniques and with astonishing detail. Also, while the video game has been available to the public in a Youtube video, it was tested beforehand on a restricted group of people using Virtual Reality headsets: they were also asked to interact, for example by participating to a meditation at the end of the runway. Another example of video game show is that of the Italian streetwear brand GCDS, which has built a video game environment to host its Spring Summer 2021: differently from Balenciaga, the brand has kept the traditional structure of the runway show, by letting models parade on the catwalk, surrounded by celebrities on front rows. Indeed, the creative director Giuliano Calza has ideated the show just as it would have been in its traditional form, by recreating — together with the tech firm Emblematic Group — the full ensemble of hosts, models, scenography and lighting equipment. At the moment, applications of virtual reality and gaming in the context of fashion shows are still limited to a few players

in the industry, but the phenomenon is taking hold and is certainly destined to grow in the years.

2.4.3 Virtual Exhibitions

Unprecedented events need unprecedented ways to communicate brands' identity and philosophy. For this reason, fashion Maisons have come up with unique experiences to substitute social events and exhibitions that were possible before 2020. Long queues outside museums and crowds strolling in special venues are to be replaced by individual experiences based on latest technologies, able to convey the dreamy atmosphere of art-related initiatives. A great example is the Roman brand Valentino, which has always been on point in terms of involving audiences in this context — even before the outburst of COVID-19 pandemics. Already in 2011, Valentino Garavani has shown to the world a Virtual Museum, which comprised a set of spacious three-dimensional rooms, each with a different theme and content: the digital building, which would have been 10 thousand square meters large in real life, is framed on a database of videos and thousands of images with artworks and sketches from the designer. The big advantage of a virtual museum was already visible ten years ago, due to the possibility to reach a greater audience with proportionally lower costs; however, what was a deliberate choice at the time is now an obligatory path for brands, who have always used to create their exhibitions in the physical dimension - for example, the successful Dior's Designer of Dream in 2017 in Paris. Four years later, in the midst of a period of turmoil, the same Valentino has created a one-of-its-kind villa to access in virtual reality, called Valentino Insights, in order to show the place where creative director Pierpaolo Piccioli lives and designs. It is inspired by the real-life residence of Piccioli, located in Nettuno (Italy), which conveys the exotic image of an Italian house in the countryside, with vintage furniture and decorations. The house is full of interactive elements, containing a music player connected to a Spotify playlist, as well as a telephone with audio recordings. Spread around the house, the inevitable presence of Valentino signature accessories, such as those of the Rock Stud collection. A surprising feature that enriches the original idea of the Valentino Garavani Virtual Museum is the incorporated exhibition of NFT artworks from the



Figure 2.11: Valentino Insights' villa setting (Source: lofficielitalia.com)

artist Matthew Stone, which will be available to be purchased in Valentino *Insights* since June 2021. The pieces will be shown in one of the rooms of the very same villa, together with other spaces dedicated to Rome and the brand, as well as special content for visitors.

2.4.4 Video Games

As it was outlined several times in the previous pages, and as it will be explored deeply in the research chapter, people has never played video games as much as in the latest year. The hard consequences of COVID-19 pandemics has been an acceleration to an already growing trend that pushed consumers towards gaming, led firstly by Asia, and especially China. For this reasons, fashion brands have already come up with interesting interpretations of the gaming world, by creating their own versions. Some have created games from scratch, while others have participated to the trend of WeChat mini-games. One example is Fendi, that in 2019 has created the first-ever game of this kind among luxury brands: the game is an adventure set in Rome, the brand's native city, where players can virtually visit the city and perform typical activities such as running, jumping, collecting objects. The interesting feature is the reward system built in the game: three lucky winners are sorted out the top player ranking to win a trip to Rome; moreover, those who can discover special game details have the possibility to

win a small prize. Other brands, such as Burberry, have built their own video game: in 2019, the British brand has launched B Bounce, which has the same main character of Burberry Social Store (described in the previous paragraph), a small cartoonized deer. The character has to jump on virtual floors in order to reach the moon, while wearing one of Burberry's puffer jackets from that year's collection. Indeed, the reward mechanism of the game consists in giving out one of said jackets to top players in several countries, as well as gifting others with digital elements such as GIFs and pictures. B Bounce has been an effective way for the British brand to promote its new collection, and also to get closer to a younger audience. The game was available to play on Burberry's website, as well as in its flagship store in London. Gucci is also becoming a game producer: in its flagship app, a full section — called Gucci Arcade — has been dedicated to games inspired to typical aesthetics of 1980's. The first two were Gucci Ace and Gucci Bees, while at the moment 13 different games are available: for example Gucci Bloom has been dedicated to the namesake perfume of the brand. Each game contains special symbols and references to Gucci's aesthetics, which are sometimes hidden in the game as collectable badges: players can gather and admire them in the dedicated "Trophies" section of the app. Also, they are shareable on social media and messages.



Figure 2.12: Screenshots of Burberry's "B Bounce" mobile game (Source: wwd.com)

Starting from 2018, many luxury brands have entered the gaming industry by creating branded video games in different forms — temporarily accessible, web-based or mobile-based. This strategy was initially conceived especially for the Chinese audience, while often games are made available for a global audience. For example, Hermès has created the mobile game H-pitchhh, based on throwing horseshoes and hit the target, together with a mini movie campaign. Also, Dior has issued a video game for the purpose of its new opening in Shanghai: the final prize is the possibility to attend the unveiling event of the venue. This strategy has revealed to be particularly effective for brands to create awareness first, and then involve its customer base: among the reasons, a Goldman Sachs research mentions, gaming in China is seen by young generations as a way to entertain themselves, as well as shaping their personality: especially Generation Y individuals has made heavy use of video games to pass the time, due also to Chinese "one child policy" that lead them to be only children.

Chapter 3 – Research: Digital Garments in Video Games

After offering an overview on extended reality technologies, video games' industry and virtual fashion's current state of the art, an on-field research has been build in order to study consumers' perception of different initiatives in the context. Specifically, the objective of research is the field of video games, which was chosen among others for its newness and importance for fashion industry. In this chapter, the research process is explained, shown and analyzed. The methodology is outlined in its two declinations (survey and interview), and each is described in the process of data collection. Subsequently, results are shown and analyzed for each of the three data collection stages (Survey, Consumer and Experts' Interviews). After, limitations of the research are explained, and recommendations for future actions by fashion brands are formulated.

3.1 Methodology

The present research has the aim to contribute to the current state of the literature regarding the union of fashion and video games' worlds. In particular, the objective of this dissertation can be divided in three research questions:

Q1: Study the perception of a virtual fashion initiative in the context of customer experience with a fashion brand;

Q2: Investigate the importance given to wearing a branded skin inside video games and study consumers' willingness to purchase branded digital clothing;

Q3: Explore how the evolution of fashion and video games will continue in the future.



Figure 3.1: Visual representation of the research design (Source: Author)

The research has been conducted using two methodologies, namely the survey (in the form of a questionnaire), and the interview (to both consumers and experts of video games' industry). From another point of view, it can be stated that the research has been executed adopting two different approaches: listening to the *consumers' voice*, and collecting the *experts' point of* view. The former expression refers to the investigation of consumers' impressions on the matter, which has been performed in two different ways — by sending a questionnaire and interviewing a sample of consumers. The latter has the purpose of involving personalities in the video game industry that are able to provide meaningful perspectives on the phenomenon of virtual fashion in the context of video games, both in general (as for Professor Fabio Viola) and relatively to a video game in particular (as for Dr Stefano Calcagni for Animal Crossing: New Horizons). To enrich the framework used to analyze the main practices in the field of virtual fashion (see Chapter 2), an on-field qualitative research has been executed to inquire the consumer perception of such initiatives, in particular those that regard the merge of fashion and video games' worlds. Specifically, the use of skins inside video games and of virtual fashion has been investigated among two samples of consumers, one that has completed a questionnaire, and one that has answered an in-depth interview. The two samples, however, do share some members, since in-depth interviews have been performed on survey participants that were willing to share more information. Moreover, to answer the third research question Q3, professional figures of the video games' world have been involved in the research: the Italian Marketing Team of Nintendo Co. Ltd., lead by Dr. Stefano Calcagni,

and Prof. Fabio Viola, video game designer and producer. Their interviews have been structured in a similar fashion, adapting the single questions to the experience of each respondent and to the specific context of interest of the present dissertation. The global results of the research have the objective to enrich the current literature on virtual fashion, which aims in its turn to offer a helping hand for fashion firms in developing their strategy in terms of digital marketing and virtual garments' production. This is why the consumers' side of the coin has been questioned, as well as that of video games' experts: the intersection of the two offers useful insights on the possible initiatives to undertake on one hand, and on the other concrete developments of fashion inside video games.

3.1.1 Survey

The survey questionnaire has been sent to a selected sample of fashion consumers and gamers, comprising 31 individuals in total. The discriminants that have been used to build the sample are three: being Asian, a luxury fashion consumers or a video gamer. The necessary condition to be part of the sample has been to have at least one of these three characteristics. This segmentation has been made after a thorough study of the diffusion of the object of the research — i.e., the consumption of virtual fashion — which is mainly diffused in the gaming community and luxury fashion clientele. A special attention was given to Asian individuals, since the phenomenon is much more widespread in this geographical area of the world. The same has been dedicated to a younger audience, from Generation Z and Millennials, mostly. The former, specifically, is the peak segment for luxury fashion at the moment, according to Altagamma Bain Monitor, and is avid consumer of video games. The limited quantity of respondents to the survey has resulted from the need to have a balanced number of individuals from Eastern and Western countries, in order to have an even quantity of answers from both the groups. The answers have been obtained by promoting the questionnaire using social media (such as Instagram) and popular forums on the web, paying attention to the coherence of content of such platforms with the research subject. Specifically, potential respondents have been contacted on Instagram via Direct Messages (DM), using thematic account profiles as proxy to have a list of suitable individuals. In addition, forums and similar platforms

related to gaming have been used - first and foremost, Reddit, a discussion website where users with similar interests interact in thematic posts and channels. A rough analysis of Reddit channels has been performed, in order to select the ones where users discussed the most about video games, skins and virtual fashion, and post authors (as well as commenters) have been contacted in private through the in-site chat. Another portion of the sample has been gathered with the help of LUISS International Development Office, which has diffused the questionnaire among the Asian exchange students, currently studying at the university. The sample of respondents have undergone a preliminary interview to make sure their profile actually fitted the purpose of research; unsuitable candidates (i.e., those who did not have any connection or interest with fashion and video games, or that were not Asian) have been omitted beforehand to ensure the sample reflected the actual object of the study — that is, luxury fashion consumers, video gamers and Asian individuals. The choice to have a controlled sample has been made to discard *a priori* possible respondents that were not in the three segments of focus of the research. Only a portion of total suitable individuals that were contacted has actually responded to the questionnaire. However, some of the respondents have offered their help to propose additional candidates for the sample by suggesting friends and acquaintances with suitable characteristics. The questionnaire has been written in English to allow respondents from an international provenience to fully understand the given questions. The platform used to build and share the questionnaire is Google Forms: the obtainable link has been sent in the previously mentioned modalities to sample members. The questionnaire has been available for one month throughout April and May 2021. It comprises 15 questions, and a final slot to leave a contact in case the respondent was willing to share anything in addition. The questionnaire, as anticipated in its introduction (visible to all respondents), is quite short and informal, as it is intended to encourage individuals to answer honestly and offer their knowledge to the study. Also, to avoid any misunderstandings or barriers for non-gamers, the definition of "skin" (intended as digital entity that changes the appearance of an avatar inside a video game) has been clearly reported, and respondents have been invited to read it before proceeding to the completion.

Questions 1 and 2 have been used to obtain demographical information, namely age and world area of origin. Regarding Question 1, three possible answers indicated three

Question 10: "If so, why?"				
Respondent profile	Answer	Motivation		
#12: Gen Z, Asian, regular gamer	Yes	"Majorly my friends have lots of, we		
and regular LF consumer		always buy them as birthday gifts."		
#18: Gen Y, Asian, regular gamer	No	"I play it for entertainment, not for fashion		
and non-LF consumer		show."		
#22: Gen Y, EU/US, occasional	Yes	"Individuality and it's hella cool"		
gamer and occasional LF consumer				
#25: Gen X, EU/US, occasional	Yes	"Because I'm egocentric"		
gamer and occasional LF consumer				
#30: Gen X, Asian, occasional	No	"I don't use social media much, and simple		
gamer and occasional LF consumer		video games (don't use much skins)"		
#31: Gen Y, Asian, regular gamer;	No	"I don't think it would improve my gaming		
non-LF consumer		experience"		

Table 3.2: Reasons for respondents' willingness to wear virtual fashion.

corresponding generations of belonging — Generation Z, Millennials and Generation X. For what concerns Question 2, available options comprised Western countries ("Europe / America"), "Asia" and Rest of the World ("Other"). Question 3 has the objective to identify the first segment of interest in the sample, that are video gamers: a respondent is considered a regular gamer when she or he has answered "Regularly", and an occasional gamer whether the answer was "Sometimes". Question 4 and 5, instead, are built to classify luxury fashion consumers, firstly with a subjective classification (i.e., frequency of shopping of luxury fashion) and secondly with an objective one (i.e., annual expense). The discriminant value chosen to recognize a luxury consumer is 2000 euro as the yearly total spending on luxury fashion products; the value has been chosen arbitrarily, since data on the matter are scarce. As an hypothesis, to be a luxury fashion consumer — that is, to show some propensity to luxury brand appreciation — is necessary to buy 1-2 luxury fashion products each year: counting entry price lines and best sellers, 2000 euros can be considered a good proxy as average spending in luxury fashion for the scope of research. The value has been specified also in renminbi (RMB) to facilitate understanding for an Asian audience. Consumers that answered "Around 2,000 euros (15,000 RMB)" are considered occasional luxury fashion consumers,

while those that answered "More than 2,000 euros (15,000 RMB)" are considered regular luxury fashion consumers. Subsequently, Question 6 has been added to test the sample's awareness regarding the research object. Awareness is tested for both the dimensions of virtual fashion that the study is intended to analyze: "virtual fashion" intended as digital clothes in a broader sense (to be used on social media, or for artistic purposes), and "fashionbranded skins" as digital clothes employed specifically inside video games. As specified before, it is assumed that the respondent knows the definition of "skin", so the awareness can be tested more clearly. At this point, Question 7 is dedicated to regular and occasional gamers - non-gamers are to be necessarily excluded. The reason why the question does not encompass the word "skin" is because it is aimed at investigating a broader context: some examples — Animal Crossing and League of Legends — are mentioned to make the respondent understand what the question is talking about. In fact, as it is explored in Chapter 2, these two video games do not encompass only "skins" in the game environment, but also designer digital clothes at the use of players (such as the Qiyana Louis Vuitton skin in League of Legends and independent creators' replicas of real-life designer collections in Animal Crossing). Also, accessories are not mentioned alongside clothing since the word could be misunderstood by respondents for weapons, objects and other digital entities that could be purchase in the game play that, however, are not in any way related to the aesthetic function of a fashion piece. The following item, Question 8, goes deeper by asking the brand of the digital clothing worn in-game: the question is open-ended as the brands are too numerous to be put in a list. For those who do not wear (or have never worn) branded digital clothes or skins, Question 9 is aimed at understanding if there is a willingness to try such phenomenon, both on video-game and social media platforms. In Question 10, the reason for the previous answer is asked to the respondent. Question 11 is relative to the monetization of virtual clothing: the respondent is asked if the piece of digital clothing worn has been bought or obtained for free. In Question 12, the respondent is asked to indicate the approximate expense, specifying if the purchase has been made using real money or any kind of in-game currency. To avoid any misunderstanding, "real money" is intended as any kind of purchase using physical and digital money that can be spent for other goods in the physical reality, while "in-game currency" indicates any amount of fictitious money that can be spent inside video games or similar platforms only. It is not excluded that in-game currency has been purchased in bundles with real money, but in that case the appropriate answer is "real

money", since the question is aimed at understanding the willingness to pay of consumers for purchasing digital clothing. Question 13 investigates whether the presence of a fashion brand in a game environment, or the purchase of a related item in the same context, is an incentive for the consumer to become a customer of said brand in real life. Beside "Yes" and "No", the answer "I did became a customer of a brand I saw in a video game" has been added, to test whether this circumstance has some evidence of being already happened. In Question 14, the respondent is asked to provide an opinion, in an open-ended question, about the actual utility of encompassing video-game skins inside the marketing strategy of a fashion brand. Question 15, finally, tests the opposite circumstance, that is the creation of a physical piece of clothing inspired from a video game. The underlying initiative that inspired this question is, among others, the Louis Vuitton physical collection inspired by League of Legends.

3.1.2 Consumers' Interviews

In order to have deeper insights from consumers' side, individual interviews have been executed besides the standard questionnaire survey. As mentioned previously, some of the interviewees are part of the sample of the questionnaire as well, as they have shown the willingness to share further insights on the topic. The methodology employed to question candidates has been that of semi-structured interviews, meaning that the interviewer is not able to predict exactly which topics will arise in the process, but rather set a partial expectation on them and design a framework for data collection (Schmidt, 2004). The aforementioned framework is composed of three main topics, aimed at investigating different variables each (see Table 3.1). The first question wants to explore if and how respondents purchase virtual fashion: multiple variables are analyzed, such as the average spending, brands and platforms of provenience of digital garments. In particular, spending habits are investigated: due to the limited size of the interview sample, any average spending could be calculated, also since not every respondent is a regular consumer of those. Indeed, as expected before executing interviews, the practice of buying virtual fashion is not so widespread and is quite new to most part of the audience. The second question has the objective of investigating regional differences in the consumption of virtual fashion, as well as the consumer habits of each respondent. If the respondents themselves are not direct consumers of digital garments, they are asked also if their acquaintances are: the necessity of this part of the question has arisen from the fact that some survey respondents have shown the willingness to share further

Framework for Consumer Interviews						
	Questions	Variables				
Q1	- Do you and/or your friends buy	- Purchase				
	virtual clothes?	- Spending habits				
	- How much do you/they spend?	- Brands				
	- From which brands? On which	- Videogames / platforms				
	video games / platforms?					
Q2	- Is buying virtual clothes in video	- Regional differences				
	games a common practice in your	- Consumer habits				
	country or in your circle of					
	friends?					
Q3	- Why would you say that the	- Consumer perception of fashion				
	exploitation of video games by	brands' initiatives inside video				
	fashion brands is a good	games				
	marketing strategy?					

Table 3.1: Variables used to analyze consumers' interviews (Source: author)

information while not being themselves users of video-game skins and goods of similar nature; however, they were able to provide useful insights on the experience of other people belonging to their contexts. Lastly, the third question explores consumer perception of fashion brands' initiatives inside video games related to the topic of research, both in terms of existing collaborations and future possibilities of merging the two industries. This question is particularly useful to explore in which direction brands should move to catch the interest of potential direct consumers of virtual fashion. Responses (which can be found in the Appendix in their entirety) have been collected using different means, mostly from Reddit chat, Whatsapp calls and Instagram Direct Message function: such ways of contacting respondents

has proven to be effective in reaching the desired audience in an informal manner, letting each individual choose the channel by which she or he was willing to be contacted.

Findings		
1	Regular gamers are the most spending segment, followed by luxury fashion consumers.	
2	Regular gamers spend sensibly more with respect to luxury fashion consumer (+22%).	
3	Regular gamers spend almost 5 times more with respect to occasional gamers.	
4	The Asian segment spends more than the European/American one (+4.7%).	
5	Generation Z spends on average the double of Generation Y.	

Table 3.4: Summary of findings arising from the analysis of sample's spending habits.

3.1.3 Experts' Interviews

In order to have a complete view of the research topic, the present research has been enriched with the point of view of two experts in the field of video games, who have been available to explore the connection between fashion and their industry providing useful insights. The experts in question are Dr Stefano Calcagni, Head of Marketing for Italy at Nintendo of Europe, and Professor Fabio Viola, game designer and producer, author and professor. Their interviews have been conducted by choosing meaningful questions for their area of expertise. Specifically, Dr Calcagni and his team have been questioned on the recent success of the Nintendo video game Animal Crossing: New Horizons which, as explored in Chapter 2, has attracted independent digital fashion designers and fashion lovers due to the great in-game personalization allowed to each player. On the other hand, Professor Viola has been questioned on the current and future possibilities of fashion inside video games, considering the need for personalization, self-representation of the user, and the challenges that brands have to overcome to build a successful in-game strategy. The interviewees have been contacted on LinkedIn, and the interview has been executed telematically. The interviews have been conducted in Italian, as both the interviewee are native Italian speakers as well as the interviewer. However, the transcripts have been translated to English to make the fruition

easier in the context of this dissertation, fully written in English. The translation has been made faithfully to avoid any mismatch in the meaning intended.

3.2 Analysis of Results

3.2.1 Consumers' Voice

This section of the research shows and analyses the results of the two research methodologies enacted in order to collect meaningful data on the consumers' sample, namely the survey and the interview.

Survey

As mentioned in the research methodology, the survey has received 31 answers in total. The sample demographic composition can be observed from the results of Questions 1 and 2, namely those that explore the sample's age and geographical area of origin. As observed in Figure 3.2, the majority of the sample (over 93%) is part of the under 40 generation;



Figure 3.2: Age composition of the survey sample (Source: Author)



Figure 3.3: Geographical composition of the survey sample (Source: Author)

specifically, Generation Z counts for the 41.9% and Generation Y for 51.6% (the majority). Therefore, the sample studied through this survey is in line with the population of potential users of virtual fashion. Such set of individuals, indeed, is the one that makes most use of social media and video games, as well as being the ones that growingly purchase luxury fashion products². As long as the geographical aspect is concerned, respondents have been categorized using a broad geographical division, which encompasses Western countries ("Europe / America"), Eastern countries ("Asia"), and the rest of the world ("Other"). For the purpose of the survey, the single country of origin of each respondent is not necessary to know, since the aim of the question is to separate the two great areas of the world in which the





Figure 3.4: Segmentation of the sample based on gaming habits (Source: Author)

² Altagamma Bain Monitor 2020; Westcott, K, Arbanas, J., 2021, "Gen Z gamers are poised to shake up the media and entertainment industries for good", *Fortune*

Q4: How often do you buy luxury fashion?



Figure 3.5: Segmentation of the sample based on luxury fashion consumption habits (Source: Author)

use of video games is quite different: in this way, the behavior and perception of the single consumer is associated only to the type of culture related to virtual fashion and video games. It can be observed from the graph (Figure 3.3) that the majority of the sample (58.1%) is composed by Asian individuals, followed by Europeans and Americans (38.7%) and individuals from other countries (3.2%). The aim of Question 3 is to segment the sample in three behavioral categories, namely *regular* gamers, *occasional* gamers and non-gamers. It can be observed that being a *regular* gamer is the most occurring characteristic inside the sample, since the value appears 15 times; it is followed by being an *occasional* gamer (13 individuals) and being a non-gamer (3). The characteristic has been attributed subjectively by



Figure 3.6: Yearly spending habits of the sample on luxury fashion products (Source: Author)



Q6: Have you ever heard of virtual fashion and fashion-branded skins inside

Figure 3.7: Awareness of the sample regarding virtual fashion and branded skins

respondents, since any indication of frequency has been provided in the question: the choice was made based on the fact that being a regular gamer is intended, as a widespread belief, to be playing one or more video games with a certain habituality, especially for the very nature of a video game itself. Moreover, the exact frequency of playing is not useful for the purpose of the study. In Question 4, the sample's consumption habits regarding luxury fashion have been explored. It can be observed that the most recurring answer has been "Sometimes" (frequency of 22) when the respondent is asked how often she or he purchases luxury fashion products. Only a small part of the sample (2 respondents) has claimed to be part of the regular luxury fashion consumers' group. In order to have a more precise overview in terms of consumption habits, respondents have been asked which is the annual expense in this product category, since an arbitrary evaluation cannot be made, differently from the gaming habits segmentation. As explained previously, the discriminant value of 2000 Euros has been employed to distinguish different categories of luxury fashion consumers (regular, occasional, non-consumers). Coherently with the answers provided in Question 4, most of the respondents (18) have reportedly spent less than 2000 Euros in the last year on said products. It can be observed that most of the *occasional* luxury fashion consumers' average yearly spending is around or below the discriminant value chosen: it can be inferred that they usually

purchase few luxury fashion pieces, and mostly from entry price lines. Said behavior is typical of Generation Z, and must be considered in the creation of virtual fashion collections³. In Question 6, the awareness about virtual fashion and branded skins is studied among respondents. Most of them (80.6%) has answered positively: as expected, the totality of regular gamers is aware of the phenomenon, as well as 7 occasional gamers out of 11 (63.6%). Although virtual fashion as a standalone phenomenon is not so widespread, survey results show that, in relation to video games, it is well-known to both occasional and regular gamers. For what concerns the actual consumption of virtual clothing in the context of video games (Figure 3.7), Question 7 offers useful insights on the behavior of regular and occasional gamers. Among them, the majority (61.3%) has answered "Yes". As expected previously, most of the interviewed gamers have never possessed a designer skin, due to the main reason that they are often available for a short time on selected platforms (i.e., usually one that has a partnership with the fashion brand). Additionally, an investigation on the designer skins' brands has been performed. The most recurrent answer has been Louis



Vuitton: as explained in Chapter 2, the fashion brand's collaboration with the video game League of Legends has been the first successful initiative of such kind, certainly in terms of marketing and awareness (as results from this survey). Other brands mentioned (Atari, Vans and Apex) are less common and purchasable on different platforms; due to the structure of the survey, the individual context of use has not been specified by respondents. Question 9 aims at studying the opinion of the group that has answered negatively to the consumption question

³ Altagamma Bain Monitor 2020

("*If you play video games, have you ever worn a branded piece of clothing in a video game (such as Animal Crossing or League of Legends)?*"), in order to observe whether non-users of designer skins (19) were keen to consume branded digital clothes, either in video games or on social media. The second platform option (*social media*) has been provided to study the



Figure 3.10: Willingness of consumption of virtual clothing. (Source: Author)

interest of non-gamers as well, that may want to use virtual fashion as detached from any fictional world. The majority (71.4%) has given a negative response, while the residual portion has answered positively. Of the total respondents that have chosen the option "Yes", it is interesting to note that they were all of Western provenance ("Europe / America") and

Question 10: "If so, why?"				
Respondent profile	Answer	Motivation		
#12: Gen Z, Asian, regular gamer	Yes	"Majorly my friends have lots of, we		
and regular LF consumer		always buy them as birthday gifts."		
#18: Gen Y, Asian, regular gamer	No	"I play it for entertainment, not for fashion		
and non-LF consumer		show."		
#22: Gen Y, EU/US, occasional	Yes	"Individuality and it's hella cool"		
gamer and occasional LF consumer				
#25: Gen X, EU/US, occasional	Yes	"Because I'm egocentric"		
gamer and occasional LF consumer				

Question 10: "If so, why?"				
Respondent profile	Answer	Motivation		
#30: Gen X, Asian, occasional	No	"I don't use social media much, and simple		
gamer and occasional LF consumer		video games (don't use much skins)"		
#31: Gen Y, Asian, regular gamer,	No	"I don't think it would improve my gaming		
non-LF consumer		experience"		

Table 3.2: Reasons for respondents' willingness to wear virtual fashion.

around 50% is composed by luxury consumers (in equal parts, occasional and regular ones). This is a useful insight for fashion brands, meaning that there could be a significant part of potential virtual fashion customers in the West that are already luxury fashion ones. Moreover, the reason behind such response has been asked as an open-ended question (Question 10). Of a total of six respondents that decided to provide a motivation, exactly half answered "Yes", and the other half "No". It can be observed that all the respondent profiles related to a positive answer tend somewhat to the consumption of video games and luxury fashion: indeed, all three both play video games and purchase luxury fashion products at least occasionally. The reasons related to their willingness to wear virtual fashion are all related to a juxtaposition of the individual with society. The reasons related to their willingness to their willingness to wear virtual fashion are all related to a juxtaposition of the individual with society. Respondent #12 mentions their



Figure 3.12: N. of respondents that has purchased or received virtual clothing for free. (Source: Author)

circle of friends possessing virtual fashion pieces as a valid reason for consumption, claiming also that skins are socially accepted as a birthday gift; moreover, Respondent #22 mentions individuality as the main argument for wearing a digital garment, specifically for being "cool" - which, according to Cambridge Dictionary, means "fashionable in a way that people admire". Lastly, Respondent #25 peculiarly says that would be part of the virtual fashion phenomenon for their "egocentricity" - indicating the willingness to be at the center of one's and others' attention. For what concerns negative answers, the main reasons are the apparent uselessness of virtual garments, which would only be aesthetic decorations in the game environment, rather than functional elements. This is a useful insight for a fashion brand that is taking into consideration to enter in a video game by producing skins: said fashion piece should not only have an aesthetic purpose, but also have some function in the game experience that is able to change the way characters play their match. It is interesting to notice that most of the respondents (14) that possess a piece of virtual clothing have purchased it in exchange of a sum of money, while only a small minority (5) has received it for free. This is a meaningful insight on the current direction that the diffusion of digital fashion is taking, which is already set not only as a way to promote the brand from the marketing point of view, but also to create a new revenue stream from the sale of virtual products. Also, the results of the present survey show that there exist an audience of gamers and luxury fashion consumers that are willing to pay in exchange for a piece of a branded virtual collection, being it associated to a game environment or not. In order to dive deeper in the matter, Question 12 offers to the respondents the possibility to indicate the exact sum that they have spent on virtual clothing, intended as global all-time spending. Since the question was structured as open-ended, each survey participant has chosen its preferred way of expressing the amount: this has allowed the numerical research variable of "average spending for virtual fashion products" to be enriched also with other dimensions, such as spending for a single piece in different video games or platforms, different payment means and spending habits. The total number of responses (11) has been harmonized to a unique currency (Euro) and processed to obtain an average value, which is around 285 Euros ("average spending for virtual fashion products"). Such value is to be intended as the average of the total amount of money that each respondent in the sample has spent on digital clothing. Data for building two different variables (average spending per year and per purchase) is too scarce, since the available sample of virtual fashion consumers is too limited, and more in general, there are not existing

studies on the total population to give any indication on the matter. However, since the present research is set on a qualitative approach, it is considered enough to have a general overview of the spending habits of the sample (whose raw data is available in the Appendix D).

Average spending on virtual fashion goods (Q12)			
Respondent profile	Value		
Asian individuals	282€		
European and American individuals	270 €		
Regular gamers	401 €		
Occasional gamers	76 €		
Luxury fashion consumers	329€		
Generation Z	363 €		
Generation Y	181 €		
Average of the sample	285 €		

Table 3.3: Average spending on virtual fashion for each segment of the sample. (Source: Author)

According to processed data from the survey, the segment that spends more on average on virtual fashion is that of regular gamers, with a value of \in 401. The highest reported value in this segmented sample is \in 1290, originally indicated by the respondent as "RMB 10000+" (meaning that the actual expense of the individual is even larger). For a further specification, said respondent has spent this amount on a variety of brands (originally reported as "too much") and is also the most spending individual in the luxury fashion consumers' segment (specifically, a *regular* one). The second highest-spending segment in the sample is that of luxury fashion consumers, with an average value of \in 329. In data processing, any distinction has been made inside this group, since the almost totality is composed of occasional luxury fashion consumers. For what concerns the geographical segmentation of the sample, the segment with the highest average spending is that of Asian individuals with \in 282, relatively to \in 270 of European and American ones. Given the premises about Asia being an early mover in the context of video games' usage and game-related spending⁴, a larger difference

⁴ Statista Research Department, 2020, "Gaming industry in Asia Pacific - statistics & facts" (retrieved from <u>statista.com</u>)



Figure 3.14: Summary of findings arising from the analysis of sample's spending habits. (Source: Author)

was expected between the average spending value for Asia and that of Europe and America: indeed, the value for Eastern individuals is higher of only 4.7% with respect to that of Western ones. On the other hand, a significant difference has been found between the spending value of occasional gamers and regular gamers in the sample: the segment of individuals that play video games with regularity reportedly spends over 5 times than the one of non-habitual players (€ 401 versus € 76). Moreover, regular gamers are also bigger spenders for virtual clothing with respect to luxury fashion consumers: while the latter have an average expense of \notin 329, the former reportedly spend almost 22% more (\notin 401). For what concerns different age segments, a significant variation has been observed in the average spending of Generation Z sample members ("13-23 years old") with respect to that of Generation Y ("24-40 years old"). Indeed, the younger age segment has a higher reported spending of \in 363, compared to that of \in 181 of the older one. This is not a surprise if the current trends in terms of consumer segments are considered, both in terms of luxury fashion and gaming. However, the older segment still possesses a remarkable level of spending in virtual fashion, and is not to be undervalued by fashion companies. Nonetheless, Generation Z is the perfect target for any virtual fashion related initiative, since its spending is double that of Millennials (Generation Y). After studying spending habits for each segment and for the sample as a whole, Question 13 aims at collecting useful data about the willingness of becoming a fashion brand's customer after seeing it in a video game or after the purchase of such designer's skins. While the majority of the sample has answered "Yes", a surprising
22.6% has already purchased a brand's product after its appearance in a game environment. As a result, a total of almost 68% of the sample has a positive response to the brand's presence inside video games, which is an encouraging insight for fashion companies to undertake initiatives in the gaming industry. Lastly, Question 14 explores consumer perception of a fashion brand's strategy inside video games related to the development of a virtual clothing product or collection ("*Do you think that creating skins for video games is a successful marketing strategy for a fashion brand?*"). The question has been set as open-ended in order to collect useful, complete impressions from the sample, even though several



Figure 3.15: Overview of open-ended answers for Question 14 (Source: Author)

respondents have left the slot empty or answered with a brief "Yes" or "No". However, many did explain their reasons, as reported in Table 3.3.

The main reason against the hypothesis of "video games being a successful marketing strategy for a fashion brand" is that of the misalignment of consumer target between fashion and gaming industries. Indeed, the only consumer that has given an explanation to their negative response claims that, in their opinion, such incoherence would make a strategy centered on video games fail. Moreover, a motivation that has been brought up by two individuals who gave "uncertain" responses is that of property issues. Indeed, a good that is not regulated by a certification of ownership or an economic model that governs supply may not be considered attractive by a customer. At the moment, in most video games, scarcity of skins is regulated using in-game mechanisms, which are not valid outside that specific environment: the suggestions collected using the survey is to encore NFT technology (which

has been described in Chapter 2) in order to provide virtual fashion with an external validity certification, that makes it a fully-fledged digital good associated to a certain owner. Given the great interest of such kind of technology — which is currently revolutionizing art auctions and similar contexts — some members of the sample are convinced that it could also be widely applied to the video games world. Also, the idea of "cross-game" virtual fashion has been mentioned, meaning that a certain skin in a certain video game can be used also inside other platforms, being it another game or even a social media. On the other hand, one of the respondents observed that platforms called "NFT worlds" already exist, but that their quality in terms of graphics and design is significantly below the standard that an acceptable virtual fashion good would require. However, these ones still constitute a good experimental measure of how the NFT mechanism could work in a video game environment. Also, an interesting insight from both the survey and the consumer interviews (that will be analyzed later on) is that some gamers already use digital, blockchain-related currencies to purchase their skins: one of the respondents has spent 0.2 Ethereum (a well-famous digital currency) in order to purchase a skin, probably exchanging them using cryptocurrency wallets with another gamer, or inside one of the "NFT worlds". Main reasons for positive answers to Question 14 are related to the right target choice (completely opposed to that of negative responses), the similarity of the skin market to that of fashion and the popularity of video games among younger generations. For what concerns the consumer target, an Asian millennial claims that a strategy in video games would work especially for female players, reporting that for her personal experience. Moreover, another respondent mentions the fact that, among school-age children, the popularity of game-related merchandising is huge, so that in their opinion it would not be very different for what can be defined "virtual" merchandising to wear inside the video game. Also, another respondent mentions the fact that entertainment brands (such as Marvel, from data collected in the survey) are already implementing such strategy is a good sign for its success. Finally, one respondent mentioned the similarity of the skin issuing dynamics with that of fashion collections, using a certain regularity in time and some scarcity mechanism.

marketing strategy for a fashion brand?"				
Respondent	Answer	nswer Motivation		
profile				
#6: Gen Y, Asian,	Yes	"Yes, but depends on what kind of games."		
occasional gamer				
and occasional LF				
consumer				
#9: Gen Y, Asian,	Yes	"Yes, what I've seen before are always basically for		
regular gamer and		female players, and as a female player, I did pay a lot for		
occasional LF		skins."		
consumer				
#13: Gen Y, Asia,	No	"Maybe not, cause now the video games target audience		
regular gamer and		is not correct customer groups I think."		
non-LF consumer				
#19: Gen Y, EU/US,	Yes	"If the target audiences overlap, sure, why not? Walk		
regular gamer and		into some school (if possible again) and count		
non LF consumer		Minecraft/AngryBirds/Fortnite shirts on the little dears		
		that still get away with throwing a tantrum if their		
		parents don't by them the merch. Why not the other way		
		around?"		
#25: Gen Z, Other;	Yes	"Of course, it is already a good strategy for		
regular gamer and		entertainment brands, so fashion can gain much from the		
occasional LF		gaming community in my opinion. Most gamers already		
consumer		purchase skins for a relatively high price — this is a		
		very good opportunity for fashion brands to collaborate		
		(like LV for example did)."		
#26: Gen Z, EU/	Yes	"For people like me that buy more skins than clothes,		
US, regular gamer,		this is."		
occasional LF				
consumer				

Question 14: "Do you think that creating skins for video games is a successful marketing strategy for a fashion brand?"

marketing strategy for a fashion brand?"				
Respondent	Answer	Motivation		
profile				
#27: Gen Y, EU/US,	Uncertain	"It may be, since skins are issued like fashion		
regular gamer and		collections. People are willing to spend a whole lot on		
occasional LF		them, the rarest they are, the more they cost for players.		
consumer		Probably brands need some type of property certification		
		like NFT, to create scarcity across games, might be an		
		interesting idea."		
#28: Gen Y, EU/US,	Uncertain	"I don't know at the moment, but in the future for sure.		
regular gamer and		Video games are already selling skins with a certain		
occasional LF		quality, but lack real value outside the game itself.		
consumer		Instead, NFT worlds have terrible graphics but still are		
		blockchain related. Once the two merge, there will be		
		the right opportunity for fashion brands to create virtual		
		clothing."		
#29: Gen X, Asian,	Yes	"Yes, my children are very interested in clothing fashion		
occasional gamer		for games. They spend also money. It will surely work		
and occasional LF		for younger generations."		
consumer				

Question 14: "Do you think that creating skins for video games is a successful marketing strategy for a fashion brand?"

Table 3.5: Reasons for respondents' willingness to wear virtual fashion. (Source: Author)

In order to give a meaningful overview of the survey's results, a clusterization of the sample has been performed, using consumer segments as a baseline. Two compelling clusters have been identified as the most interesting for the purpose of the research: those of luxury gamers and regular gamers. *Luxury gamers*, in this context, are defined as all those individuals that have subjectively described themselves as *gamers* (meaning that they either play video games at least sometimes) and that have reportedly spent an amount greater or equal to \in 2000 in luxury fashion products in the last year. On the other hand, *mainly gamers* are self-defined as individuals that play video games regularly, with any other specification taking second place.



Figure 3.16: Clusterization of luxury gamers (Source: Author)

Each of these clusters has been ulteriorly segmented, as seen in Figures 3.16 and 3.17. From Figure 3.16, the composition of luxury gamers' cluster according to behavior is clearly visible. On the total group (12, which means around 39% of the sample), 67% of individuals is aware of virtual fashion: the great majority of luxury gamers, indeed, have heard of digital clothes or fashion-branded skins inside video games. The 58% (intended on the total group as well, as all the percentages shown in the graph) are users of virtual gaments, and 42% have purchased these items in exchange for money. The fact that a significant portion of the so called luxury gamers already spends money on virtual fashion — and that the great majority (58%) already wears them — is a good proxy for fashion companies in order to roll out a



Figure 3.17: Clusterization of mainly gamers (Source: Author)

strategy in this field. For what concerns *mainly gamers*, an analogous reasoning has been performed: starting from the total sample, it is observed that individuals that are mainly video game players are 32% (in absolute numbers, 10 respondents). Although apparently meager, the number is significantly high, taking into account that almost one in three sample members are regular video game players. Moreover, on the total portion of *mainly gamers*, 100% is aware of virtual fashion projects and collections: it can be stated that, in the context of video games, such initiatives are already well known and have a good resonance. Also, 70% of regular gamers already use some virtual garment that they have purchased using real money: it can be extrapolated that the habit of spending is already widespread among gamers, and that the majority has bought virtual fashion before.

Consumer Interviews

As mentioned in the Research Methodology paragraph, ten interviews have been performed with as many respondents, whose participation has been obtained both using the contact form in the survey and using platforms such as Instagram and Reddit.

Framework for Consumer Interviews					
Questions		Variables			
Q1	- Do you and/or your friends buy	- Purchase			
	virtual clothes?	- Spending habits			
	- How much do you/they spend?	- Brands			
	- From which brands? On which	- Videogames / platforms			
	video games / platforms?				
Q2	- Is buying virtual clothes in video	- Regional differences			
	games a common practice in your	- Consumer habits			
	country or in your circle of				
	friends?				

Framework for Consumer Interviews						
	Questions	Variables				
Q3	- Why would you say that the	- Consumer perception of fashion				
	exploitation of video games by	brands' initiatives inside video				
	fashion brands is a good	games				
	marketing strategy?					

Table 3.6: Variables used to analyze consumers' interviews.

Based on the interview's three main questions, different qualitative variables have been created in order to analyze the answers, specifically the ones reported in Table 3.4. First of all, consumers are asked if they buy virtual clothing, the amount they spend and which brands and platforms they have purchased (Q1). For what concerns the variable "purchase", the majority of interviewees reportedly bought virtual clothes (70% of the total sample), while the remaining portion has given information on spending habits of friends and acquaintances. In terms of "spending habits", respondents who have purchased digital garments in first person have provided amount spent, as well as frequency and currency used. Since the research methodology for interviews has been set as qualitative and due to the limited size of the sample, average spending has not been calculated; also, the uncommon nature of such consumption makes it difficult to draw a regular pattern on existing data. However, interesting insights on spending habits have been collected, which are useful for fashion professional in order to shape successful initiatives in the field. For example, several respondents have mentioned the fact that their friends use their pocket money in order to buy video games' skins, and also they are used as gifts between playmates. Also, the main driver of purchase and spending amount in this context seems to be the exclusivity of skins, which are described - according to the single video game's lexicon - as "legendary", "rare", etc. This type of classification is very similar, in the meaning, to that of luxury brands, which aim at creating a dream halo around their products and image. First of all, the skins' value reportedly increases with their popularity and, on the contrary, decreases (as in the interviewee's reported case of Louis Vuitton Qiyana's skin). Also, the very possession of a skin which is considered "special" by players is both a sign of "coolness" (as claimed by one of the interviewees, a status symbol) as well as a sign of experience and high-level playing abilities. Specifically, as

reported by a League of Legends player, the fact that a team wears matching skins is a sign that these players have practiced their gameplay and are more likely to beat the enemies (or, at least, to intimidate them). Indeed, differently from luxury fashion products, skins seem to acquire a functional dimension which is, if not necessary, very important for a player. This is an aspect that must be considered as critical by fashion companies when building an in-game strategy. As suggested by one of the interviewees, virtual clothing creation and



Figure 3.18: Strategy recommended to fashion brands (Source: Author)

commercialization in the context of video games is better suited for luxury fashion brands, rather than fashion brands in general: the main motivation is the fact that gamers' desire when wearing a skin is that to emerge and possess a distinctive sign with respect to other players. Also, the same respondent claims that, in her opinion, if the reputation of a brand grows in the game environment, it will correspondently grow in real life. The same vision, in different terms, was brought up by a different interviewee (a Taiwanese fashion editor) who claimed that, in his experience, video games and real life are so intertwined that they are not so easily distinguishable: as a consequence, a fashion brand does not have to choose whether to undertake a strategy in one or both — it is required to do both in any case. In terms of spending habits, almost every interviewee has used real money (only one reportedly having spent in-game currency), ranging from a total expense of \in 34 to \in 300. The so-called "top

players" in two Asian video games (Perfect World and Audition Online) are reportedly required to spend thousands of dollars in order to maintain their position in the rankings. Also, it is notable to underline the fact that one respondent has purchased a skin using a portion of his cryptowallet, i.e. using cryptocurrency (specifically, using Bitcoins). When it comes to frequency, five interviewees said that they buy video-game skins with a certain regularity, according to the game's structure and skin market. Also, regularity is underlined in several sentences: one interviewee's friends are reportedly "addicted" to buying skins, so much that they "get bored" and need a new one in a short period of time, making a parallel with bloggers and the well-known fast fashion chain Zara, which issues a large number of collections yearly. Moreover, the connection between a real life brand and video games' skins has been traced in one respondent's sentence: "If I like some brand, I want to have their skin": this stresses the fact that there exists a transposition of a brand's importance also in the video game environment. When it comes to platforms, all respondents have mentioned video games: any other type of virtual fashion "environment" has been used by the interviewees. This is mainly due to the fact that other use cases, such as Augmented Reality clothing, NFT pieces and similar, are still not common the consumer audience, but rather at the beginning of their evolution. The most recurring video games are League of Legends and Fortnite, whose skin markets appear to be quite active. The former, mentioned by three respondents, has been the video game of choice for Louis Vuitton's first skin creations (those for the characters Sienna and Qiyana). Other video games mentioned are Valorant, Grand Theft Auto, Perfect World and Audition Online. The only brands mentioned are Louis Vuitton and Marvel, with the former being the only fashion name. This is a clear indication of how the evolution of fashion brands in such platforms is still at the embryonal phase. For what concerns respondents' demographical data, we have the majority of them belonging to Generation Y (six) and the remaining to Generation Z (four). Moreover, seven are from Europe and America, two from Asia and one from Australia. In terms of "regional differences", it was previously expected that Asian individuals would be virtual fashion consumers, even more than individuals from Western countries: however, it was not so, since the Chinese respondent has never been, and the Taiwanese one has been only in the past. However, their vision of video games has been the most interesting insight: they both claimed that video games are deeply connected to real life. The Chinese respondent, specifically, has used the word "mirror", in order to describe how a "rich" individual in the real world may have the need to show their wealth also in the

virtual dimension of a video game. She also mentioned the need of emerging among the mass of players. Similarly, the Taiwanese respondent has mentioned the blurred boundaries between video games and real life, meaning that the importance of designer clothes is equivalent in both the virtual and real dimensions. Regarding "consumer habits", there are different elements arising from interviews that are worth to be mentioned. For example, several respondents have reported the fact that skins are a mean to express one's personality and style inside the game. Reconnecting to what has been explained in the context of buying frequency, consumers are apparently used to buy skins following a *fashion*, which is by definition "the prevailing style [...] during a particular time"⁵, and also "social standing or prominence especially as signalized by dress". This means that a transposition of consumer habits in terms of fashion products and behavior can be already observed in the video-game environment. Skins are, according to results, a multi-dimensional object: they have aesthetic, social and functional dimensions. Besides enhancing the appearances of player's avatar (the bodily visual representation inside the game environment), the skin is a mean of self expression, through which the individual can bring out their inner personality and style. As a social element, the skin acquires the meaning of a *status symbol*, distinguishing the "skilled" player from average ones, both in terms of abilities and appearances. Indeed, the skin is also a functional element, meaning that it can affect in some way the player's behavior and actions: as noted by some respondent, a video game is not a fashion show, and avatars are not models. To make a forced parallel with fashion, a skin is more of a *streetwear* look than a catwalk one. Continuing on the wave of "consumers' perceptions", interviewees have been asked whether they consider a strategy inside video games appropriate for fashion brands. Those that have shown to be contrary to such initiative have shown surprise and confusion when discovering a designer skin (such as Louis Vuitton's) as it was considered "absurd" to merge the two worlds. Also, even individuals who have shown approval have despised some aspects of fashion such as the need to show-off: for example, one respondent has mentioned the fact that the diffusion of virtual clothes may incentivize a common behavior among Instagram influencers and similar figures, who post pictures showing a distorted reality in order to appear wealthier than they actually are. Such behavior is disdained by some interviewees, that are more interested in the genuine dynamics of the game. Skin dress-up has been considered by one respondent more like "kids on a playdate communicating through their dolls", rather

⁵ Merriam-Webster Dictionary, Definition of "fashion" (Retrieved from merriam-webster.com)

than showing off wealth to acquire some status. However, the majority of interviewees have recognized the power of a skin in such sense. Nonetheless, brand-related social dynamics in real life have to be necessarily adapted to the gameplay (as a respondent funnily worded it, "I do not think you could wear high heels in Fortnite"). More in general, the majority of individuals in the sample have declared a positive vision on the matter (six out of ten), while three have shown uncertainty or some conditions on it, and one total disapproval. It can be stated that generally a fashion initiative in a video game environment is perceived well, but at the conditions stated above, resulting from the opinions collected. In conclusion, it can be observed that the almost entirety of insights collected have been centered on video games' skins, which are the most commonly available form of virtual clothing at the moment. This is why the present research has, as a general suggestion for fashion companies, to firstly conquer the video game industry and only secondarily undertake "purely" virtual fashion initiatives (intended as production and creation of virtual clothing outside of a gaming environment). This is probably due to the fact that most non-gaming platforms are not structured to host virtual clothing: while Snapchat and Instagram (among others) have experimented with Augmented Reality filters, they still have not created a specific mechanism to let users change their style in the social platform. This constitutes one of the limitations for the diffusion of virtual clothing and accessories at the moment.

3.2.2 Experts' Point of View

Interview with Nintendo Italy's Marketing Team, lead by Dr Stefano Calcagni

Nintendo Co. Ltd is a Japanese company specialized on video game and console production and sales, considered as one of the most famous firms worldwide in the industry. It was founded in 1889 by Yamauchi Fusajirō as a card game company, which evolved in the years as a producer of electronic games — among the most popular, the *Game Boy Advance*. In over thirty years, the company sold almost 600 million consoles and over 3 billion video game copies, one of the most famous being *Super Mario Bros*, with the protagonist Mario being the mascotte of Nintendo. Dr Stefano Calcagni is working for Nintendo since 2012 and leading the Marketing Team of Nintendo Italy since March 2020. In over fifteen years of experience, he has worked in several markets as well as in different multicultural environments, always finding new needs to satisfy and challenges to overcome.

Importance of Fashion Brands and Video Games' Collaboration

As arisen from the very first question, Nintendo considers brands important to enrich the user experience in Animal Crossing: New Horizons (which will be shortened to ACNH from now on), since they promote independent creation of each player and sharing of such creations among different users. Indeed, each digital garment in the game, created by amateur designers, can be attached to a code, that allows every player to wear it in her or his own "world". Therefore, the advent of brands on ACNH helps in making the experience more similar to real life, but still their presence is not considered as fundamental for the purpose of the game. Also, the interviewee underlined how brands themselves have taken direct action to be featured inside ACNH, since they have noticed the great success among players. Brands, indeed, have used the game to promote their products and send a message to their audiences; it is interesting to notice that the coincidence of ACNH publication with the beginning of the pandemics has been a great opportunity for brands to communicate with their targets even when other channels (such as physical retail and events) have been shut down. As mentioned by the interviewee, ACNH has proven to be a highly versatile virtual platform, not only a video game: the vast audience and the gameplay design have therefore allowed ACNH to be appreciated beyond expectations. For example, the interviewee mentions the great bond developed between game and culture, since several museums worldwide have shown interest by making their collections available to players in the game — such as New York's MET and Los Angeles' Getty Museum. Also in Italy, the National Museum of science and Technology "Leonardo da Vinci", headquartered in Milan, has transformed its artworks in digital items, so that ACNH players could be able to download them and decorate their personalized exhibition inside the game. Remarkable, according to the interviewee, is also the advent on ACNH of the University of Macerata, the first academic institution worldwide to join the game. The university has created its own island inside the game, giving all the students a further, totally new possibility to communicate with the academic reality: this has created a brand new

approach to create a bond with younger generations, in line with their passions and interests. The interviewee also mentions the singular choice of the newly elected US President Joe Biden, who has executed an electoral campaign inside the game: beside the positive results, this has proven the fact of getting closer to younger generations successful.

Importance of Self-Expression through In-Game Fashion

The question concerns the importance of self expression inside the game using fashion clothing and accessories as means to achieve it. In order to offer his point of view on the topic, the interviewee has made a parallel with real life, where people do have the need to show their own personality with different means, also using clothes and accessories. The importance of brands is also underlined: the interviewee sees designer garments as a consequence of self-expression through fashion. Moreover, the parallel has concerned the physical self and the avatar, which is a projection of needs that are present also in real life. This is the reason why the gamer should be able to create a fully-fledged "self extension" of its real persona also in the game environment.

Fashion Shows and Social Events inside Video Games

The interviewee is offered the quote "Video games are the new social media", a mantra that many experts in the field are adopting to describe the growing importance of video-game platforms as substitutes of Instagram and similar social media. The question asks whether, in the future, official fashion shows and social events (which now are organized on Twitch, Instagram, etc.) are going to be set inside video games, or at least the so-called *real-life simulators*. The interviewee starts his answer by stating that Animal Crossing: New Horizons has reached, as of the time of the interview, more than 31 million copies sold. This serves as a proxy to understand the audience that a video game can potentially reach in such a short time; a growing number of brands are noticing this phenomenon and are trying to exploit it as much as possible. The interviewee also does not exclude that the virtual fashion market will become an additional channel for sales' revenues and for communication, as it is able to provide a further link between the brand and its fans. Also, specifically dedicated collections are mentioned as a useful tool to reach this new objective.

Monetization of Virtual Fashion

The interviewer starts by stating that, at the moment, ACNH players can access "unofficial" (that is, independently created) designer collections by searching for free related codes on the Internet. The question aims at exploring the possibility of monetizing the use of virtual clothes, and more in general virtual goods, inside video games. The interviewee answers by stating that different business models that have the objective to make revenues on the sale of digital goods already exists, and mentions titles such as Fortnite and Hearthstone. These two, among many others, are *free-to-play* games, meaning that they do not get revenues by the sale of the game copy itself, but rather from the sale of virtual goods, that can sensibly enrich the game experience. As suggested, fashion brands are surely interested in such business models, by expanding their horizons and conquering these virtual worlds. However, the interviewee points out that Nintendo does not produce any of these video games, since its mission is to create unique game experiences able to "put a smile on people's faces worldwide". Also, it is noted that product placement and advertising banners are not in Nintendo's style: they do constitute an additional revenue stream, but their absence is also what makes Nintendo's video games (ACNH included) so loved by their audience.

Evolution of Fashion and Video Games' Union

The interviewee is asked about his point of view on possible future evolutions of the merge between fashion and video games. The answer is based on two guidelines already expressed by the interviewee, that are video games as a reciprocal mean of communication to the masses and, in the cases in which it is possible, the creation of a new sales channel in the appropriate business models. The former, in line with Nintendo's mission, has been inflected also in the possible creation of physical fashion collections related to the video game brand, which are useful for the game producer in terms of awareness, promotion and engagement.

Interview with Prof. Fabio Viola

Professor Fabio Viola is a game pioneer with over seventeen years of experience, who worked for several game companies (such as Electronic Arts Mobile and Vivendi Games). He is a gamification designer who supports both public and private entities in the application of such powerful tool. He is also the author of the books "Gamification - I Videogiochi nella Vita Quotidiana" (2011) and "L'Arte del Coinvolgimento" (2017). Professor Viola has also been recently interviewed by the Italian newspaper La Repubblica about the matter of fashion and gaming.

Importance of Video Games' Exploitation for Fashion Brands

The interviewee has been asked about how critical it is for fashion brands to enter the videogame world, considering the fact that some brands, such as Louis Vuitton and Gucci, have already partnered with big players in the gaming industry. His answer starts with useful insights on the video game world, which is one of the main dimensions used relatively to time and money spent on the platforms. Also, he mentions that, besides these quantitative metrics, video games can evoke "imaginary worlds" and influence the audience. This dimension is considered to be useful to reach a portion of the public that would otherwise be left behind in the brands communication strategy. Also, firms are required to create a special language for this purpose, that the interviewee has resumed in the framework of the 3 P's: protagonism, personalization and participation.

Brands' Approach to Asian Audiences

The interviewer suggest some statistics about the wide use of video games in the Eastern world: in particular, "around one third of Chinese population plays video games, and many idols of the younger generations are gamers". The question aims at exploring the ways in which brands could successfully approach Eastern audiences in order to enrich the consumer experience. The answer is clear: three factors are offered to design the experience, namely *culture, expectations* and *desires*. Also, the interviewee gives a hint on the platform to be

used: not every video game is appropriate, and the multitude of gaming platforms must be accurately analyzed in order to select the most suitable ones. The most important has been mentioned as top-of-mind choice of the professor, that is WeChat. Also, he suggested that it is not straightforward for the Western outlook to build such strategy; however, he noted that related initiatives are starting to grow more and more.

Video Games and Fashion Initiatives in the West

The next question is aimed at exploring whether the Western audiences are ready to receive fashion products and strategies on gaming platforms. The question has been formulated in accordance with the current state of video-game usage worldwide: in 2019, revenues from video games' market in the Asia-Pacific region totaled over \$72 billion, which is over the double of North America's revenues in the same market. The total amount of gamers in Asian countries is 1.33 billion, which is almost one half of the worldwide total. Based on these statistics, the interviewee states that the Western market is certainly "some years" in delay with respect to the Eastern one. However, in his opinion, it is equally ready to receive initiatives related to gaming, and the potential of its community in this region. Also, new strategies in the field of video games is useful to cover the under 40 target, using a communication mean which is typical of this generation. Moreover, the early diffusion of esports in the United States with respect to other Western regions is highlighted, also as a driver of acceleration for the propagation of video games' usage in the Occident.

Importance of Self-Expression through In-Game Fashion

The very same question, about how critical it is for game players to be able to express their personality in the game environment by wearing designer pieces, has been subject to both interviewees. Professor Viola has begun his answer by mentioning self-expression as the "one of the main drivers of video games' escalation", meaning that the need to growingly enrich the game experience to reach the level of detail typical of real life mainly passes through the individual desire to disclose one's inner personality — in this case, by making it explicit through aesthetic factors, such as clothing. Moreover, the direction in which video game

production is going is clearly the one that encores hyper-realistic graphics, which leave fertile ground to replicate with astonishing detail garments and accessories. In addition, this enhances the importance for the player to create an avatar that reflects both the personality traits and the looks of the physical *persona*, which the Professor names as "identification of the video-game self". In order to achieve such objective, the combination of fashion brands' contribution to the skin market and the so-called "user-generated content" is considered as a great tool to potentially grow sales for both game and fashion industry, as well as sensibly enhancing the aesthetics of video games.

Fashion Shows and Social Events inside Video Games

The question about video games being the new social media was subject to both interviewees. Professor Viola, when asked if fashion shows and social events would move to video game platforms, answered positively, stating that this phenomenon is not only potential, but it is already happening. He has mentioned the convergence of physical and digital dimensions, using the term "phygital" to refer to all those initiatives in which these two aspects — which have always been clearly distinct — are closely connected, so much that one cannot distinguish whether a particular activity takes place in real life or on the web. This merge allows for "unique experiences", where the connection between the consumer and the brand is tangible, due to the high interactivity which is obtainable in a video-game environment: this is the point in which one of the 3 P's mentioned previously — *protagonism* — is fully realized: the consumer is not subject to the brand's storytelling on different platforms as a passive character, but has an active role in taking action in the gameplay.

Evolution of Fashion and Video Games' Union

As Dr Calcagni, also Professor Viola was questioned about the future possibilities of video games and fashion merging together. He claims that, in his opinion, such combination will allow the creation of a hybrid industry, which will cover the production of virtual goods specifically meant for game environments and the ideation of effective strategies to extend the brand experience in-game. Also, such industry will cover new markets and will need new types of professionals, creating new demand for *esports* project managers and similar figures,

as well as new academic specializations. Also, existing job roles will merge between the two industries, since creatives from fashion houses (such as fashion designers, for example) will be demanded to work for video game developers, and vice versa, since gaming initiatives and applications will begin to be developed inside fashion companies. Finally, the very shape of each fashion company's supply chain will be subject to a deep transformation, since it will be changed starting from the production phase: firstly, because physical clothes will be produced with the aid of 3D models (the same adopted by video game designers to shape characters), and secondly, because virtual clothes will be produced in parallel to the physical ones (obviously, without the need of traditional production methods). Also, the way each brand will propose its storytelling to the audience will change, since univocal communication will be less and less appreciated: finding their favorite brand inside game environments will be the norm for game players, and also for luxury fashion consumers. Last but not least, the ultimate usage that consumers will make of the product will be quite different, since virtual clothes will not be worn physically, but only in the digital dimension.

Monetization of Virtual Fashion

The last question made to the interviewee is about the possibility for a fashion brand to make money from the consumption of branded virtual goods. The response is absolutely positive, underlining that monetization is an imperative for brands, since the "creative act becomes an asset to let circulate and monetize". It is explained how this practice has a double advantage for a brand: firstly, the enhancement of the existing physical channel (i.e., the sale of physical clothes) through an advanced marketing strategy, and secondly, the creation of an independent channel for the sale of virtual clothes. The latter, indeed, becomes a fully-fledged pipeline with different and unique dynamics, as well as different business models. For example, Professor Viola mentions how the so-called "pay in advance" business model is transformed by the advent of the "peer to peer" one, in which each user becomes an active agent in the circuit and skins can become an exchanged good. This dynamic is allowed by the NFT technology (as previously explained in Chapter 2) which regulates the scarcity and certifies the uniqueness of a digital good. Scarcity, indeed, is the main characteristic to set an economic model for skins' sale. Also, the interviewee mentions the "try and buy" value

generation, in which the digital replication of the physical garment serves as a try-on in augmented reality, to make the purchase of the physical version easier and more engaging.

3.4 Limitations

The present research, as conjectured priorly, has some limitations in the results collected. The main one is the limited size of the sample (30 respondents for the survey, 10 interviewees from consumers and 2 from experts). The reasons for the low sample size is mainly the objective to have a precise structure for the sample itself: indeed, the goal of the research for the consumers' side was to collect data from a well distributed group of respondents, in terms of geographical, demographical and behavioral factors. An open survey would otherwise lead to imprecise results, as the target of the research has been built according to specific trends in the field of virtual fashion. Moreover, another limitation of the research is constituted by the actual scarcity of data on the matter: case studies, for example, can be counted on one hand, and data available on the success of initiatives from fashion brands in the field of virtual fashion are almost non-existent. The present study, indeed, is centered on the consumers' perception of such, which is a significant factor to be studied in order to guide fashion companies in future evolutions of virtual fashion. This can be considered a pioneering study in the field, aiming to combine consumers' view with experts' useful insights on the industry of video games. However, future researchers could be able to perform a similar analysis on a wider sample, allowing in this way to have better insights on variables such as average spending, which is crucial for brands to position products in virtual platforms. Also, it would be useful to perform a more extensive interview process, including a combination of different demographic, geographic and behavioral segments, in order to study the different nuances of perception according to specific target groups: the present research structure suggests, as a segmentation, the one used in the sample structuring — Eastern and Western, Generations Y and Z (mostly), luxury fashion consumers and gamers. A deeper study of these groups is needed for further results in the evolution of virtual fashion. Moreover, the present research could be enriched by merging the views of different types of experts, not only from the videogame industry: for example, it would be interesting to perform an interview process on a group of virtual fashion designers and traditional fashion companies' professionals in order to compare the two different points of views — and possibly find a meeting point, with the aim to enhance the strategies of fashion *maisons*. Differently, video game researchers could perform an in-depth research regarding specific in-game dynamics related to the addition of fashion elements in the environments, by studying players' reaction in different types of video games.

3.5 Recommendations

The concrete scope of the present research is to give fashion companies a useful tool in order to enter meaningfully a blue ocean — namely, that of digital garments' creation and commercialization. The strategy guidelines that follows strictly apply to video-game platforms, since these are the ones that have shown to be the most used among consumers interviewed and surveyed, as well as those that have some examples and concrete acknowledgements in practice. Any initiative that concerns purely virtual fashion (that is, the creation of garments intended to be worn on social media, using augmented reality and other technologies or platforms outside video games) is to be undertaken, according to results, in parallel or secondarily with respect to one in video games' environment.

Step 1: Choose the appropriate video game

It is crucial for each brand to choose the appropriate video game, first and foremost in terms of coherence with its reputation and image, and then in terms of philosophy and shared values. Moreover, it is necessary to match the right type of audience, based on the brand's existing target and possible repositioning strategies (intended as any change in the segment(s) targeted due to a different overall strategy). Additionally, potential video games are to be selected in terms of activity and evolution of the skin market: if skins are already created by game designers, if users can generate new skins, if the market is active and such products are issued regularly. These factors are a direct consequence of the game's evolution in terms of graphics and realisms, which has been observed as critical factors for both consumers and

experts. Finally, the ideal game must have a specific business model, appropriate to the brand's chosen strategy, whether it is based on communication or sales.

Step 2: Create the skin

Once appropriate research has been performed and the aforementioned factors are all in line with brand's purpose, the very strategy has to be planned and executed. As a result of the research performed in this dissertation, a simple framework has been created in order to guide fashion companies in the creation of such strategy (see Figure 3.16).

Actors in question are luxury fashion brands, since it is emerged from consumers' perception that they are the best fit for the very nature of skin markets and consumers' desires. Moreover, the identified target is that of Generations Z and Y, which are the ones that have shown the greatest interest for the matter, and those that were indicated by experts according to the industry trends. For what concerns the means to achieve the strategy's set objectives, the chosen ones are video games, the native digital environments of skins. As explained in the introduction to the paragraph, other platforms or use cases for virtual fashion have been excluded for lack of data collected. The chosen product to conceptualize, design and create is the *skin*, intended as any piece of virtual fashion that is able to change the appearances of a player's avatar. As arisen from consumers' interviews, a simple framework for the creation of the ideal skin has been defined. Three, basic dimensions have been outlined in order to obtain a product with the best fit for its use environment: aesthetic, social and functional factors, which are going to be independently and concurrently developed. The skin should be aesthetically pleasing, as well as coherent with the game's design, graphics and mood; moreover, it should constitute a valid mean for the consumer to express their style and personality, while feeling fashionable at the same time (that is, keeping up with current trends in the traditional fashion environment). Regarding social declinations, the skin should give to its wearer some particular feature that is able to distinguish him or her from the mass; for this purpose, the brand should create some scarcity mechanism that regulates the skin's diffusion, in order to make the virtual piece exclusive and accessible only to a limited number of users. Also, besides pricing the skin (in real money or via in-game currency conversion), it could be interesting to set a meritocratic dynamic so that only players with certain skills and experience can have access to said skin. For this reason, it is crucial to provide some functional



Figure 3.19: Variables used to analyze consumers' interviews.

dimension to the skin, namely provide the wearer with some additional powers or actions that can affect gameplay, besides affecting appearances. This will catch the interest of a wider audience, i.e. the large segment of affectionate players, who are less interested in fashion and more in video game dynamics.

Step 3: Shape the strategy

At this point, the single product must be encored in a larger strategy, that takes into account several factors, not only the product itself, but also a series of initiatives aimed at merging the fashion world and the video game's one. First of all, such strategy has to be inflected in two direction: geographical area and scope. In terms of regional differences, a double action has to be planned for each of the world's sides. Namely, for Western countries, the chosen target is more specific — namely, that of brand's existing customer base combined with the chosen video game's users; moreover, the conceptual base for the strategy is that of the so-called 3 P's — protagonism, personalization and participation. On the other hand, for Eastern

countries, the strategy must be reassessed due to deeply different cultural aspects as well as a more developed gaming industry and audience. Indeed, the basing pillars become culture, desires and expectations, meaning that the strategy has to strictly follow local cultural patterns and satisfy the Asian consumer's desire, that is emerging from the mass and get a distinctive feature with the skin itself. Also, one of the preferred means to apply the strategy in all its nuances is WeChat, which encompasses gamification features already employed by fashion brands. However, what is common to both strategies is the declension of virtual events, which are going to be irreversibly set in what is called the "phygital" world: official fashion shows and social events will not take place exclusively in the physical dimension or in the digital one, but always in a mix of the two, in endless combinations of platforms and technologies that each brand will shape accordingly. For what concerns in-game content, the brand should create its own - starting from the skin collection - and then encourage, where possible, the creation of user-generated content (such as, for example, in Animal Crossing: New Horizons). For this purpose, the fashion company should be careful in avoiding any cannibalization between the two content types: indeed, users may independently create duplicates of the skin or similar concurrent items that could mine the success and monetization of branded content. Talking about monetization, in-game branded goods should be sold in exchange for real money, since the present research shows that there exists a positive, consistent willingness to pay in the gamers' segment, as well as in that of luxury fashion consumers. Brands should harmonize their pricing strategy with that of the game, in order to use in-game currency and "payment methods", for example special passes and achievements needed to unlock certain features. As a further development, NFT technology could be encored to the skin commercialization in order to trace each single product and possibly export it to different platforms: the very same design could be worn in different video games, as well as in social media and AR applications. For this reason, the existing use of cryptocurrency by skin buyers acquires a different meaning and utility. The theme of monetization is strictly related to that of the business models on which the game is based (whether, for example, free-to-play with ingame purchases, or *pay-to-play*). Also, new dynamics can be established, such as peer-to-peer (exchange between two players and, in general, skin possessors) and "try and buy", meaning that the product is tested in the video game and then purchased in the physical dimensions (some examples are Drest and MOD4). As a broader consequences of different brands undertaking said strategy, the merging of fashion and video games' worlds will give life to a new hybrid industry, which will need new professional figures as well as new supply chains, production methods and business models.

Conclusion

"That's all."

- Miranda Priestly, "The Devil Wears Prada"

Could anybody imagine Super Mario in Prada overalls? No, probably not before 2020. However, such outfit for the most famous plumber in history is not science fiction, but likely the next Vogue cover. Video games were surprising news for Baby Boomers, are a funny hobby for Millennials and an alternate reality for Gen Z: each generation is accustomed to having some Nintendo Switch around the house or Candy Crush on the smartphone, and this fact has been neglected for a long time by fashion brands. Possibilities are infinite, as Animal Crossing's users have shown: it takes a blink of an eye to put up a virtual fashion show with an amateurish reproduction of a Spring Summer collection. It takes even less to take out a credit card and cut enemies' heads in full Louis Vuitton on League of Legends. To play or not to play: this is not a choice anymore. Embarking in an *ad hoc* strategy fully dedicated to gaming is an imperative for fashion brands, and useful insights in order to to create one are offered in this paper. In conclusion, an answer to the research questions stated at the beginning of this dissertation has been provided. Consumer perception on virtual fashion has been extensively probed, first in the survey and then in consumer interviews; it can be stated that, overall, consumers have a positive perception of virtual fashion projects undertaken by brands, with some restraints from gamers regarding the methods used and the rationale behind. Indeed, this segment is more sensible to the actual functionality of a virtual garment, and less in the exclusiveness of the brand. For what concerns the second research question about the importance of wearing and purchasing a branded skin in-game — consumers have manifested their interest and willingness to pay (on the base of average spending), with Asian ones reporting great enthusiasm from their fellows, as well as a particular, intertwined vision of real and game life. Once the consumers' point of view has been scrutinized, the opinion of two great experts in the industry of video games has been offered, in order to have a complete frame of reference for fashion brands' strategists. According to industry professionals, gaming and fashion are destined to thrive together, both in envisioned developments (described in detail throughout the dissertation) and future, unexpected outcomes.

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Appendices

Appendix A - Consumer Interviews

Subject 1, Ziyou, Female, Chinese student, 23 years old [survey respondent]

1. You said that you do not buy skins or virtual clothing inside video games. Do your friends buy them? If so, how much they spend, which skins or virtual clothes do they buy?

- They do buy skins, like for example in the game League of Legends. They may spend their pocket money to buy skins for their characters. Usually, they may consider if it is valuable enough, like the so-called *legendary* ones may cost a lot relatively to others. However, if it's their favorite one, they may buy it. Some of them will buy those skin if it's made by a brand, but it is not so common at the moment to have branded skins.

2. Would you say that the exploitation of video games by fashion brands is a good marketing strategy?

- Yes, I do. However, I think this strategy works only for luxury goods. It could work as a "mirror" for real life: if you are rich enough to buy expensive fashion, then you probably would like to buy digital goods from luxury fashion brands. Also, people would buy luxury fashion in video games to emerge among other players, just as it already happens with clothes in our society. Finally, the virtual world of video games is getting bigger and bigger. In the coming years, if the brand can get a good reputation in it, it can probably help to grow the brand reputation in the real life.

Subject 2, Alucard, Taiwanese fashion editor, 27 years old [survey respondent]

1. You said that you are not new to buying virtual clothes inside video games. In which platforms did you purchase skins?

- I am not. In the past, I used to buy virtual clothes for my characters inside online games, called "完美世界" (Perfect World) and "勁舞團" (Audition Online). The first one is a fantasy game in 3D, of the MMPORG type. It is set in Chinese traditional places and is free-to-play. However, you can use the in-game shop to buy both skins (in general, outfits and accessories for your avatar) and different kinds of "weapons" [i.e., the game is *pay-to-win*].

2. And how much did you spend approximately?

- I was not an avid gamer, but still I managed to spend around 5,000-10,000 NDT in total [150-300 euros]. I know people that spent way more than that. Usually, top players in game rankings are required to spend thousands of dollars to arrive to that milestone.

3. Would you say that buying virtual clothes in video games is a common practice in your country or in your circle of friends?

- Yes, I would. Most of my friends are used to play video games, and a majority of those has spent any money for purchasing additional items in the game environment. I know some of them even sell or buy their own game account when they reach a certain amount of items (skins and accessories), because they are seen as a way to monetize a hobby. Indeed, it takes a lot of time and money to "grow" in the game, as I have seen personally and in the experience of my acquaintances.

4. Would you say that the exploitation of video games by fashion brands is a good marketing strategy?

Yes, I do. I can say that on the basis of LoL Louis Vuitton skins, since I do not have any more examples in mind. Although not common already, I think it is already fashionable to have designer clothes inside video games too, as well as in real life. Video games are themselves a part of "real" life, aren't they? They are somehow intertwined. So you cannot make up a marketing strategy without considering both.

Subject 3, Nikki, 26 years old, French student

- 1. Would you consider yourself a video game player?
- Yes, I do.
- 2. Have you ever bought clothes (or skins) inside video games? How much did you spend?
- No, I haven't.

3. Do your friends buy them? If so, how much they spend, which skins or virtual clothes do they buy?

- I did not buy [skins] myself, but some of my friends did purchase the Louis Vuitton skin for their League of Legends character, called Qiyana.

4. And how much did they spend approximately?

- They spent around 30 euros for each skin. It was a limited edition you could buy by converting your money in in-game currency. Another way to get it was buying a special pass that granted the right to buy the skin.

5. Would you say that buying virtual clothes is a common practice in your country or in your circle of friends?

Yes, I would. I think it is perceived exactly as other luxury goods, but its value goes up or down basing on the champion that got the skin [namely, the League of Legends character for which the skin was created]. For instance, Qiyana at that time was very popular, so it got bought by many people. Now, however, the champ is relatively weak, so the value of the skin went down a bit.

6. Would you say that the exploitation of video games by fashion brands is a good marketing strategy?

It was great and, quite frankly, absurd that Louis Vuitton got in touch with esports and I'm glad that happened. Yet, I would not like the brands to take over the League [of Legends] skins market. It just feels wrong and off context! However, I know that many of those who purchase the LV Qiyana skin would buy any item related to a brand they like in real life.
Most players seek distinction in this type of games. Yes, it is obtainable with existing skins in many ways, but this could be an additional feature. For the brands' side, as well, it is a big deal to enter the League of Legends world. The opportunity is real.

Subject 4, Paul, Czech, Industrial mechanic, 30 years old

- 1. Would you consider yourself a video game player?
- Yes, I do.
- 2. Have you ever bought clothes (or skins) inside video games? How much did you spend?
- No, I haven't.
- 3. Do your friends buy them? If so, which skins or virtual clothes do they buy?
- I do not, but my girlfriend usually does. She has taken over my Grand Theft Auto personal profile just to purchase cosmetic items (mostly clothes) for the avatar. I am not really interested in appearances, but rather on gameplay. On the contrary, she got involved in the game mostly for that [buying virtual looks for the player].
- 4. And how much did she spend approximately?
- Thousands of dollars. Actually, not real money, because in GTA you can earn money only by completing missions (such as helping people, giving lifts, doing tasks). I am always out of [in-game] money due to her habit of spending it to style my avatar.

5. Would you say that buying virtual clothes is a common practice in your country or in your circle of friends?

- In my circle of friends certainly. In my country, just like any other. Clothes are not a basic need for players, but still they are important. Often, they indicate the level and experience of the player, or just its coolness. Almost anyone wants to upgrade the standard appearance of their character, but probably only a few (not the majority) will spend real money for that.

6. Would you say that the exploitation of video games by fashion brands is a good marketing strategy?

Probably. To actually get any revenue, they should exploit games that allow in-game currency conversion, so that they can monetize in some way. In Grand Theft Auto, maybe, they can start collaborations with game creators to at least exploit the vast audience in terms of advertising. That alone would justify the choice to get onto video games. Also, in my experience, females are surely keener to spend money on clothes.

Subject 5, Giorgio, Italian, 19 years old student.

- 1. Would you consider yourself a video game player?
- Yes, I definitely do. I play video games every day.
- 2. Have you ever bought clothes (or skins) inside video games?
- Yes, I did and still do. My favorite game is Fortnite and I usually buy skins for my avatar player. The last one I got is the *Raptor* skin. I paid it 0.003 Bitcoins, since I have exchanged a small part of my crypto-wallet for that skin [the equivalent of around 141 Euros at the time of the interview].

3. Would you say that buying virtual clothes is a common practice in your country or in your circle of friends?

- Definitely yes. My team mates are spending their money in the game to have the latest skins, and it is considered normal, a widespread habit. I do not know precisely their expense, but certainly they possess different skins, costing around 30 Euros each.

4. Would you say that the exploitation of video games by fashion brands is a good marketing strategy?

- I do not know, in Fortnite you do not have branded skins, and I do not know how it could work if fashion brands landed in the game. However it may be effective as a strategy if a brand can apply it properly. I mean, people is crazy about skins, and often collaborations with non-fashion brands, such as entertainment and movies, are quite successful. Fashion is quite far from this world, so it will probably be that effective.

Subject 6, James, Australian student, 22 years old

- 1. Would you consider yourself a video game player?
- Yes, I am a quite passionate gamer.
- 2. Have you ever bought clothes (or skins) inside video games? How much did you spend?
- Yes, for the game Fortnite *Battle Royale*. I bought two Marvel skins recently. Each costed around 2,500 V-bucks [the Fortnite in-game currency], which is around 25 dollars. I try to buy one each two or three months.

3. Would you say that buying virtual clothes is a common practice in your country or in your circle of friends?

- Yes, it is. People I know playing the game see it as a status symbol, but I do mostly because I need to express my style in the game. Also, if I like some brand I want to have their skin.

4. Would you say that the exploitation of video games by fashion brands is a good marketing strategy?

Yes, of course. For "normal" brands I have already experienced that, like TV series, movies, etc. But for fashion ones it can work similarly, depending on the video game. I do not think you could wear high heels in Fortnite, so some kind of adaptation is needed for sure.

Subject 7, Conor, American student, 17 years old

- 1. Would you consider yourself a video game player?
- Yes, I do.
- 2. Have you ever bought clothes (or skins) inside video games? How much did you spend?
- Fortnite skins, mostly. I have been playing the game since three or four years and I usually buy one skin per month, roughly estimating.

3. Would you say that buying virtual clothes is a common practice in your country or in your circle of friends?

- If you mean skins inside video games, certainly yes. My friends have lots,

4. Would you say that the exploitation of video games by fashion brands is a good marketing strategy?

 Yes, I would. There actually is no supporting data for my opinion, but still I would rush to buy the skin of one of my favorite clothing or shoe brands. It would be nice if my avatar could wear the very same clothes in my "real life" wardrobe, you know? And also, if it could wear some pieces I could not afford otherwise.

Subject 8, Paulo, English PhD student, 26 years old.

- 1. Would you consider yourself a video game player?
- Yes, I do.

2. Have you ever bought clothes (or skins) inside video games? How much did you spend?

- I have, of course. My favorite game is called Valorant, a free-to-play game where you shoot your enemies. You can get different types of guns, as well as different "clothes" for your character. I have recently bought a very cool skin for 40\$. They usually cost a little less, but it was really valuable and hard to find. I would say I spend around 300\$ per year, in total.

3. Would you say that buying virtual clothes is a common practice in your country or in your circle of friends?

- Yes, definitely. My team mates spend way more than me, they are kind of "addicted" to buying skins. To get an idea, they say that they get easily bored as soon as they buy a new one. You know, just as fashion bloggers with Zara clothes. They usually buy the latest one issued in the game.

4. Would you say that the exploitation of video games by fashion brands is a good marketing strategy?

I don't know, I would say yes because the pairing of fashion and video games sounds cool.
 However, it really depends on the game. I would go for those that attract a female audience mostly, and with the best graphics. Brands should find a game environment which is suitable to their philosophy, also. I don't know, but it could work.

Subject 9, Nicolò, Italian corporate worker, 28 years old.

- 1. Would you consider yourself a video game player?
- Well, I do play video games sometimes. Not an avid player but still I do.
- 2. Have you ever bought clothes (or skins) inside video games? How much did you spend?
- Sometimes. I like skins and I have spent some money on them, but very few in total. Around 50 euros per year.

3. Would you say that buying virtual clothes is a common practice in your country or in your circle of friends?

- No, not at the moment. Some buy clothes in video games but I would not define that as "virtual clothing". In the future, I think everyone will wear some kind of device, such as Augmented Reality glasses or contacts, and that will make possible to wear almost anything. People could wear basic white clothes, that will look like whatever you want through the glasses or contacts. The expression of status and personality will be translated to a virtual dimension. At that point, probably it will be common practice.

4. Would you say that the exploitation of video games by fashion brands is a good marketing strategy?

- According to what I said before, probably yes! Video games are the step before virtual reality, in some way. It could be an obligatory passage to get to the more futuristic idea I explained previously. The power of brands is high in any "dimension", I think it should be

adapted to the environment. Like, not only transferring the brand logo in-game, something more complicated than that.

Subject 10, Jascha, German railway worker, 32 years old.

- 1. Would you consider yourself a video game player?
- Yes, I play video games every day for at least two hours.

[The subject has answered all questions at once.]

- Full disclosure, I am not, in any sense, fashionable. I am a guy who buys his pants and hoodies in a shop for work clothes and everything else in packs of 5-10. So you have a very simplified background for my views [about fashion].

The idea that you buy, from "luxury" brands and presumably for luxury prices, a digital asset with the sole purpose of adding it to your social-media persona, to make it look like you own a physical item, is absurd to me. I would draw parallels to the numerous and by now proverbial Instagram filters, but instead of pretending you have freckles or tattoos, you pretend you have a wardrobe full of clothes you don't own. The only thing I can imagine already happening is guys taking pictures with supercars they find parked on the street, or influencers renting parked private jets for photo-ops. All of this is, if caught, considered tacky, "cringy", negative, and I don't see that shifting in the near future. Ingame skins, to me at least, are slightly different, in that you have an Avatar that does, to a degree, represent you to interact with the digital world around you, but nobody is under the illusion that this avatar does, indeed, look like you. It is more like... kids on a playdate communicating through their dolls, which they also dress up. This represents an expression of what you consider aesthetically pleasing or interesting or appropriate for interaction with others, but a faithful recreation of your person is rare. I think that in this optic, any virtual fashion project is going to find huge success, as long as it does not take into account only the looks of a character — that is not the reason why we play games.

In the "League of Legends" I bought the Skins "PROJECT: ASHE" [costing 1820 Riot Points on LoL, around 14 Euros] and "Marauder Ashe" [costing 750 Riot Points, around 6 Euros] for my most-used character, which is an athletic, bow-shooting woman — while I

used to have a bow, that is where my similarities end. I also received "Cosmic Queen Ashe" [costing 1350 Riot Points, around 10 Euros] as a gift from a friend and gifted a couple skins to a friend I regularly play with, "Dark Cosmic Lux" [costing 1820 Riot Points, that is 14 Euros per each skin], which is a rather beautiful match to my Cosmic Queen among them. If you are unfamiliar with the game play, teams of five battle each other. In the beginning, your characters have distinct roles and placements on the map, only the "ADC" (my role) and the "Support" (Lux, for example) have roles that require them to work as a team from the very beginning. If those two characters turn up in "matching outfits" you are often in for a bad time, because it often means those two players are "premade", so they entered the game as a pair and are likely to have practiced their teamwork and/or are connected via Voicechat, giving them an advantage if you play with random people.

Appendix B — Interview to Professor Viola

- 1. Fashion brands, such as Louis Vuitton and Gucci, have collaborated with video games of the calibre of League of Legends and Tennis Clash. Considering the popularity of such games and the effects of the current pandemic, how critical it is for a fashion brand to use these forms of entertainment?
- This means understanding the natural evolution of generations, and bringing content in places and times that they mostly use. In this historical period, gaming is the main medium in terms of budget and time spent, but especially for the influence of imaginary worlds. It becomes a communication, marketing and licensing lever, decisive to penetrate audiences that are "impermeable" to traditional ways to narrate a fashion brand. The language is changed, but mostly the registry of dialogue, that we can summarize in the 3 P's: protagonism, personalization, participation.

- 2. In Asia, playing video games is the norm around one third of Chinese population plays video games, and many idols of the younger generations are gamers. In which way should brands approach the Eastern world to expand consumer experience?
- By understanding their culture, expectations, desires. It is necessary to select video games that generate appeal to [Asian] markets, and also select the right platforms I am thinking of WeChat, which is widely used. It is not easy for Western societies, but successful cases studies and projects are on the rise.

3. In your opinion, is the Western world ready for the advent of fashion on this platform?

- With some years of delay with respect to the Eastern market, the Western one as well is fully understanding the potential of gaming community, experimenting with penetration strategies with the reference medium for the under 40 generation. For example, the growth of the esports market in US before, and then in the whole West, has given a huge acceleration to this process.

4. How much do you think is important for video game users to express their personality by wearing designer clothes and accessories, similarly to real life?

Self-expression is one of the main drivers of video games' escalation. We are going towards
a growing realism in next-generation video games, and accuracy in designing clothes and
accessories is playing an increasingly great role in the identification of the "video-game
self". The admixture between skin catalogues designed by grand Maisons and user
generated content from players is a powerful lever, both in terms of aesthetic and
economics, for both the industries [fashion and gaming].

5. According to experts, video games are the new social media. In your opinion, will official fashion shows and social events (now organized on Instagram, Twitch and similar) be set inside video games?

- Yes, and partly it is already happening. The direction we are taking is towards "phygital" convergence, namely physical and digital are not going to be treated as two distinct channels, but as two strictly correlated ones, to create unique experiences. Interactive spaces in which the direct contact between the brand and the consumer is accelerated; spaces in which the consumer, just as in a video game, becomes an active protagonist.

6. How do you think the combination of video games and fashion worlds will evolve?

- It will become more and more hybridized in the next years, giving life to new markets and professional figures. An increasing number of fashion designers will begin to work inside video game houses bringing their know how, aesthetics and sophistication in enhancing video game worlds; on the other hand, video game technologies and spaces will become testing ground for fashion houses, which will rethink their production methods, storytelling and fruition of their products.

7. In your opinion, is it possible for a fashion brand to monetize the usage of designer virtual goods inside video games?

- Absolutely possible. An imperative, I would say. The creative act becomes an asset to let circulate and monetize. On one side, this can help in reinforcing sales in the physical channel; on the other, the digital one acquires its own independency, which needs peculiar professionals, dynamics and economic models. By overcoming the mere logics of "pay in advance", digital skins could benefit from the certified uniqueness of NFTs, possess "peer to peer" circuitry logics with forms of value generation for the brand, or even more "try and buy".

Appendix C — Interview to Nintendo Marketing Chief, Dr Stefano Calcagni

1. Fashion brands, such as Valentino and Marc Jacobs, have collaborated with independent creators to bring their collections on Animal Crossing: New Horizons. Do

you think it is important to collaborate with fashion brands in order to enrich user experience in ACNH?

- Not only brands, but all players can enrich the experience in ACNH in their own way, thanks to the possibility of creation and sharing. Hence yes, brands are important because they help players live Animal Crossing under different nuances, but are not essential to the game's purpose. It is important to underline that, moreover, the Animal Crossing phenomenon is so disruptive that many brands, not only fashion ones, took action spontaneously and used the video game as a communication channel for their products and messages. In the coming months, Animal Crossing: New Horizons has transformed from a simple video game into a fully-fledged virtual platform with high versatility, overcoming the concept of video-game medium. For example, the game has developed a strong bond with culture, so much that several museums worldwide, such as New York's MET and Los Angeles' Getty Museums have decided to make available their collections inside the game. In Italy, the National Museum of Science and Technology "Leonardo da Vinci" in Milan has even translated its artworks in digital form, allowing all players to download them and create their own personalized in-game exhibition. It is Italian the first academic institution to enter the video game, establishing indeed a worldwide record. It is the University of Macerata, which has decided to create its own digital island inside the game, giving to all of its students a further tool to connect with their atheneum in an avant-garde way and in line with passions and needs of new generations. Even political figures of a certain thickness [play ACNH]: US President Joe Biden has decided to make his electoral campaign in the game. A choice that, no doubt, has brought him good luck, besides the favor of new generations, that do love gaming in all its shapes.

2. How much do you think it is important for video game players to express their personality by wearing clothes and accessories inspired by real brands?

- As in real life, people have the need to affirm their personality by communicating also through their clothing and, as a consequence, through the brands they choose. Certainly, the same concept is applied to one's avatar, as the extension of the player's self.

3. According to experts in the field, video games are the new social media. In your opinion, in the future, will official fashion shows and social events (now organized on Instagram, Twitch and similar) be set on "real life simulators" video games?

- Video games are a mean that is growingly able to reach important achievements: it is enough to consider the number of Animal Crossing: New Horizons' copies sold that, at the moment, are 31.18 millions worldwide. A growing number of brands are understanding this dynamics and are trying to exploit it. We shall not exclude the fact that, in the future, fashion brands will see the "digital" market as a possible channel or touchpoint with fans, both through events and dedicated collections.

4. As of today, ACNH players can access designer collections through free codes on the web. Do you think that it is possible to monetize the usage of virtual clothes (or in general virtual goods) inside video games?

- Going back to the previous answer, there already exists monetization means of virtual goods. It is enough to think of business models of titles such as Fortnite or Hearthstone, that do not monetize the copy's sale but, instead, virtual goods available in the game experience. Fashion brands, as game developers, could certainly be interested at expanding in this context. Nintendo's mission, however, is not making profit from product placement or advertising banners, but instead creating unique experiences capable of putting a smile on people's faces around the world. This is the true DNA of the Japanese company, and this is probably the reason why it makes our games so unique and appealing, as Animal Crossing: New Horizons.

5. How do you think the union between fashion and video games' worlds will evolve?

- According to the two guidelines [expressed] previously: as a reciprocal mean of communication (it is a promotional action for video games to get onto physical collections, as a mean of awareness and engagement) and, in some cases, as a business model.

Appendix D — Survey Results



Virtual Fashion & Gaming

Hi there! My name is Francesca Pompili and I am currently developing my master thesis in Gaming and Virtual Fashion. I would love to know your opinion on the matter. Don't worry – it will take only a couple of minutes.

Please, read this before answering if you're not a gamer: "A skin is an item that changes the appearance of a player's avatar in a video game (clothing, weapons, etc.)."

If you would like to share your experience or ask me any question, please feel free to contact me at <u>francesca.pompili@studenti.luiss.it</u>.









Appendix E — Survey Results' Tables

List of spending values reported by respondents (converted in Euros)				
1	25€			
2	24 €			
3	30 €			
4	1.290 €			
5	300 €			
6	25€			
7	40 €			
8	500€			
9	5€			
10	408 €			
11	327 €			
12	490 €			
13	500€			
14	24 €			

Table 1: Spending values reported by respondents, in Euros

Table 2: Average spending per segment, in Euros

Segment	Average Spending
Asian	282€
European / American	270€
Gamers (total)	285€
Regular gamers	401€
Occasional gamers	76€
Luxury fashion consumers	329€
Asian gamers	282€
EU / US gamers	270 €
Generation Z	363 €
Generation Y	181€
Global Average	285€

	Absolute Number	Percentage
Luxury Gamers	12	100%
- that are aware of virtual fashion	8	66,67%
- that use virtual fashion	7	58,33%
- that have spent money on virtual fashion	5	41,67%

Table 3: Luxury gamers' cluster data on total sample

Table 4: Mainly gamers' cluster data on total sample

Mainly Gamers	Absolute Number	Percentage
- on total sample	10	32,26%*
- that are aware of virtual fashion	10	100,00%
- that use and buy virtual fashion	7	70,00%

* This percentage is to be intended on the total sample of 31 respondents.

Executive Summary

Introduction

Among others, AR try-on, gaming skins and 3D design are only some of the trends that are rattling the traditional conception of fashion, to transform it in the so called *virtual fashion*. Due to change in consumer habits — accelerated by COVID-19's social limitations — and sustainability concerns on overproduction, the trend of digitalizing garments and accessories is taking hold: it was already popular, in some way, in the field of video games, where players' outfits are considered to be important already by previous researches.

Chapter 1– Tech in Fashion: Efficiency and Engagement

1.1 Tech in Fashion: an Overview

Technological advancements in fashion industry have been significantly accelerated by the outburst of COVID-19 pandemics, which has disrupted in an unprecedented way the supply chain, as well as the way brands interact and communicate with their target audience. The crucial technologies that changed the way companies have approached coronavirus' consequences have been artificial intelligence, virtual and augmented reality.

1.2 AI for Efficiency

Artificial intelligence is a polyhedric technology that has been mainly used to bring efficiency into production processes, for example by solving the remarkable overproduction problem in the industry — which has reached its peak in the latest years with famous brands' scandals and news. Regarding the continuous production of collections, especially by fast fashion brands, current consumer trends show that the audience is losing appeal in such a quick

fashion cycle, both for sustainability concerns and due to the consequence of social limitations set in the latest year. Also, artificial intelligence is useful for engagement purposes, for example by helping brands being up to date with latest trends and interact with its audience in a growingly human way: some examples of artificially intelligent application are virtual sales assistants and chatbots, that are capable to substitute human actors in the process of pre-purchase and purchase. These tools can help users in looking for their size (as the FitFinder) and obtain information on the products (as Dior Insider).

1.3 VR and AR for Engagement

New technologies used in the field of engagement, which have been developed in the latest years, are Virtual and Augmented Reality: these two have revealed to be particularly useful in pandemics time, when social limitations and lockdowns have prevented customers to live the traditional shopping experience, as well as fashion events in the way they are typically conceived. Differently from AI, virtual and augmented reality are technologies based on images, better suited for entertainment and for the use of visual industries such as fashion. Augmented Reality, in particular, is the technology that overlaps visual information on an image, that can be a scenario or a person (as seen in real life): some examples of AR are Instagram and Snapchat filters, which are used in order to enrich users' image with make up and special features. The technology was developed originally in 1960s, but has reached entertainment only at the end of 1990s and, in 2014, became a consumer technology thanks to Google Glass devices. In the latest years, especially beauty brands have been using AR for make up try on, which revealed to be particularly useful after COVID-19 restrictions to avoid people touching make up testers; moreover, the retailer ASOS has exploited AR for its Virtual Catwalk feature, thanks to which users could see garments and accessories on a virtual model. On the other hand, Virtual Reality is a way to completely replace physical reality with a computer-generated version of a 3D universe, created from scratch. Virtual Reality has been created in the 1950s but, similarly to Augmented Reality, has reached its peak in 2018, when Oculus Rift models have been put on the market. According to projections from Altagamma and Bain, the power of this technology is set to expand in the next years, as the trend of luxury democratization is bringing exclusive events to broader audiences: indeed, fashion shows and exhibitions that were accessible to few participants can be, with Virtual Reality,

available to anyone in possess of a VR device. Also, the shopping experience is set to change as the need of touching and trying items on becomes completely digital. Exclusivity, in this sense, becomes vitality, and the digital brand experience evolves to reach unprecedented levels.

Chapter 2 — Virtual Spaces and Gaming in Fashion

2.1 Video Games' Evolution

A platform type that is particularly appreciated by the public (especially in Asia) is video games, which has recently captured the interest of fashion brands in terms of audience and content. Early examples of the merge of fashion and video games are numerous, such as Stardoll (a fashion video game for young girls, popular in the 2010s) and video games' skins, that are digital clothes and accessories which are worn by characters. Greater opportunities open up to fashion companies as the interest towards gaming grows, as a pre-existing trend accelerated by social restrictions of 2020. Particularly, in-game purchases are an opportunity for brands, since the market for skins is already well-developed and gamers reportedly spend both fictional currencies and real money on these items. For example, in 2020, the video game Fortnite counted over 5\$ billion revenues in the same year; being it a free-to-play mobile game, the total amount of revenues are coming exclusively from in-app purchases. For this purpose, another technology which is related to blockchain, said NFT (Non Fungible Tokens) is helpful to track ownership and create a property certification, which validates a digital good as a fully-fledged valued item: the adoption of NFTs would boost the market for virtual fashion by encouraging consumers and video gamers to buy virtual fashion. NFT technology is already used in art auctions (such as Christie's) and by a limited number of fashion designers. Virtual fashion initiatives are described by dividing them in three categories wear, buy and live — according to the experience of the user, and not classified by technology.

2.2 WEAR

For *wear*, digital fashion garments' collections are described, such as the ones from The Fabricant (notably, the Iridescence dress, which sold for 9000\$), Clothia and IL3X; moreover, gaming skins such as Louis Vuitton's Qiyana for League of Legends have been described, mentioning Gucci for Tennis Clash and Moschino for The Sims 4. These initiatives pose a solution for the problem of overproduction, which — as explained previously — is seriously harming industry's sustainability; also, they are in line with a growingly digital customer (especially for what concerns Generation Z) as well as a more humanist one, who seeks a "less is more" philosophy, as well as a circular economic model. While digital fashion garments are meant to be consumed in platforms such as social media and virtual worlds, gaming skins are specifically made for video games: both the clothing types, however, give the possibility to designers to express what is outside physical constraints of the real world, and to wearers to express fully their personality.

2.3 BUY

In the *buy* section, e-commerce initiatives such as YOOXMirror and ASOS SeeMyFit have been explained, together with LuisaViaRoma's mobile game MOD4 and the analogous version from Farfetch, Drest; also, the participation of a virtual Donatella Versace to the festival Complexland was described since it was aimed at launching and selling the namesake Trigreca sneakers. Also, physical stores examples, such as Burberry Social Store and Nike Reactland, are mentioned to show that brands have put effort in transforming also the brick and mortar channel, by utilizing elements typical of video games in order to engage the visitor. These are called the *stores of the future*, since the concept of boutique as a place of transaction is replaced by the idea of store as a touchpoint between the brand and the consumer, where the first offers an experience to the second.

2.4 LIVE

Last but not least, the *live* category gathers all the substitutes for social events and fashion shows, as well as exhibitions. Digital campaigns have been translated on virtual platforms, such as Animal Crossing: New Horizons, where Gucci Beauty has launched its own digital island to promote the perfume Gucci Guilty; fashion catwalks have changed their shape to become video games, such as Balenciaga's *Afterworld: The Age of Tomorrow*, and the closure of museums and palaces has given rise to virtual exhibitions, such as Valentino *Insights*, the virtual tour from the Roman brand in Pierpaolo Piccioli's villa (with the possibility of buying pieces from the brand and NFT artworks). Also, notable video games directly created by fashion brands to generate engagement have been reported, from as Fendi's first-ever WeChat mini game to Gucci *Arcade* section in the brand's mobile app.

Chapter 3 – Research: Digital Garments in Video Games

3.1 Methodology

Finally, an on-field research has been conducted, based on consumers and industry experts: it comprises a consumer survey with thirty-one respondents, ten consumer interviews and two



Figure 3.1: Visual representation of the research design (Source: Author)

interviews to professional in the field of video games, Professor Fabio Viola, video game designer and author, and Dr Stefano Calcagni, Head of Marketing for Italy at Nintendo Europe. The research design is shown in Figure 3.1.

3.2 Analysis of Results

As a result of the research, fashion brands (especially luxury ones) are encouraged to encompass video games in their strategy, since consumers' perception is shown to be positive and remarkable. The survey shows that average spending is relatively high, and gamers are observed to be the most spending segment among all. Also, a study on the segment of *luxury gamers* is performed to show that most members of this group are aware and almost four out of ten already spend money in virtual fashion (Figure 3.16). Consumer interviews, on the other hand, give a more three-dimensional view of consumer's perception, by highlighting



Figure 3.16: Clusterization of luxury gamers (Source: Author)

that most respondents are already skin consumers (that is, they are already used to make purchase inside video games for aesthetic items): the suggestion for fashion companies is indeed to undertake first the video games' world and then purely digital fashion, since the first one gathers more interest at the moment. Also, for what concerns the skin market, it is observed to have some features in common with the fashion one, showing that the two could be successfully combined as they are compatible in some way (as respondents have reported,



Figure 3.19: Variables used to analyze consumers' interviews.

skins are issued similarly to fashion pieces). From experts' interviews, interesting insights have arisen: from Dr Calcagni, the importance of Animal Crossing: New Horizons for fashion brands has been underlined, as well as the cruciality of business model compatibility with virtual fashion's monetization. From Professor Viola, a possible strategy for the evolution of fashion and video games has been extracted, highlighting differences between Eastern and Western consumers, as well as the differences between traditional and virtual fashion industries (in terms of business models and professionals).

3.4 Limitations

Some limitations of the research are underlined, such as the limited number of respondents collected, both due to the newness of the matter presented and the structured nature of the sample. Also, scarcity of data about fashion initiatives already in place makes it difficult to make precise forecasts on the future evolution of fashion and video games: lack of data in this sense is also due to the relative youth of these projects and the limited number of users.



Figure 3.18: Strategy recommended to fashion brands (Source: Author)

3.5 Recommendations

Fashion brands are offered a simple framework to build a successful strategy in this context: the action is based on the creation of a specific skin, which must have a triple function (aesthetic, social and functional), as well as a double objective (the creation of a new sales channel and boost of brand communication). At this point, the single product must be encored in a larger strategy, that takes into account several factors, not only the product itself, but also a series of initiatives aimed at merging the fashion world and the video game's one. First of all, such strategy has to be inflected in two direction: geographical area and scope. In terms of regional differences, a double action has to be planned for Western and Eastern countries, due to deeply different cultural aspects as well as a more developed gaming industry and audience in Asia.

Conclusion

In conclusion, an answer to the research questions stated at the beginning of this dissertation has been provided. It can be stated that, overall, consumers have a positive perception of virtual fashion projects undertaken by brands, with some restraints from gamers: this segment is more sensible to the actual functionality of a virtual garment, and less in the exclusiveness of the brand. For what concerns the second research question — about the importance of wearing and purchasing a branded skin in-game — consumers have manifested their interest and willingness to pay (on the base of average spending), with Asian ones reporting great enthusiasm from their fellows, as well as a particular, intertwined vision of real and game life. Once the consumers' point of view has been scrutinized, the opinion of two great experts in the industry of video games has been offered, in order to have a complete frame of reference for fashion brands' strategists. According to industry professionals, gaming and fashion are destined to thrive together, both in envisioned developments and future, unexpected outcomes.