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# **THE WORLD THROUGHOUT THE GAMEPAD: HOW VIDEOGAMES CONTRIBUTE TO SHAPING PLAYERS' BELIEFS.**

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# I. INTRODUCTION

Since the inception of videogames, their effect on the minds of players has been a widely debated issue. Controversies have often revolved around the appropriateness of explicit language, and violent and sexual content in games. These issues become even more delicate when the potential exposure of children and adolescents to said games is taken into consideration. Along with the steady growth of the videogames industry, games-related controversies have more and more acquired political and legal traits. From a political point of view, elected officials often have tried to introduce the issue in their programs, usually with the aim of censorship. One of the most notorious examples of this trend was represented by Senator Hillary Rodham Clinton who tried to halt the spreading of “lewd and violent” games which are “spiraling out of control”<sup>1</sup>, with particular emphasis on *Grand Theft Auto: San Andreas* (Rockstar North 2004), a game particularly criticized for its explicit content and its representation of criminality in the African American and Latino-American communities. From a legal point of view, across the years both public institutions and organized groups of private citizens have sued, with changing fortunes, videogame producers. A few recent examples include the colossus of sport simulation games Electronic Arts which was fined ten million euros by the Dutch gambling authority for introducing betting-related mechanisms in games available to an audience of children older than three<sup>2</sup>; or Epic Games, owner of the popular game *Fortnite* (Epic Games & People Can Fly 2017), which was targeted by a class action complaint filled by parents who accused the company of having created a marketing system which “makes it all but impossible for minors to determine the real cost of the virtual items they buy, fails to provide them with information about their purchasing history, pressures them to buy more and more virtual things, and cuts their parents out of their purchasing decisions.”<sup>3</sup>

However, the most notorious controversy regarding the effects of videogames on society is related to the infamous #GamerGate hashtag from 2013 onwards. This name indicates “a decentralized harassment campaign to keep women out of gaming while operating under the guise of being a crusade against unethical games journalism” (Butt & Appeley, 2016). As far as is possible to discern from the mess, the harassment campaign started targeting the game developer Zoe Quinn, accused by her ex-boyfriend on the imageboard 4Chan of having offered sexual performances to various

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<sup>1</sup><https://justfacts.votesmart.org/public-statement/112496/senator-clinton-announces-legislation-to-keep-inappropriate-video-games-out-of-the-hands-of-children>

<sup>2</sup> <https://www.gamesindustry.biz/articles/2020-10-29-ea-fined-10m-over-loot-boxes-as-dutch-court-sides-with-gambling-authority>

<sup>3</sup> <https://lawstreetmedia.com/news/tech/parent-sues-epic-games-over-minor-using-real-money-on-virtual-fortnite-items/>

journalists in order to obtain favorable reviews of her last game<sup>4</sup> *Depression Quest* (The Quinnspracy, 2013), and the feminist critic Anita Sarkeesian, who was at the time launching on the crowdfunding platform Kickstarter a web series in which she aimed to deconstruct sexist stereotypes in videogames. These stories were used to fuel the rage of the “Gamer community” on several other image boards, starting a harassment campaign with the (nominal) aim of protecting the videogame world from corrupted journalists, feminists, and, more generally, the so-called “Social justice warriors”. While some of the initial concerns of the “Gamergaters” were not totally devoid of fundament (news of fraudulent connections between game companies and game journalists were indeed exposed at the time<sup>5</sup>), the movement soon adopted ideas from the extreme right-wing to fight the phantom menace of “Cultural Marxism” which was threatening videogames. The movement created an impressive amount of conspiracy theories about Jews, Muslims, and progressive elites collaborating in order to subvert the status quo of the “western world” and the “white men” by encouraging politically correct digital games. The movement employed violent and dangerous harassment methods towards their enemies, including trolling, threats of death and sexual violence, doxing<sup>6</sup> and even swatting<sup>7</sup>. The situation became so tense that the two aforementioned victims were forced to move into a secret location for a while due to their concerns for their physical safety. The movement also directly attacked the academic community, and in particular the DiGRA (Digital Games Research Association), by spreading misinformation about game studies as a field, trying to discredit game scholars, and even stalking female game scholars like Mia Consalvo and Adrienne Shaw. As Chess and Shaw later remarked:

“Several DiGRA members [...] became the targets of harassment for the seemingly unforgivable offense of writing about sexuality, gender, race, or other categories of difference and video games. DiGRA as an organization and feminist games scholars around the world were suddenly mired in a surprising and unnerving kind of infamy that they were not prepared for.” (Chess & Shaw, 2016, pp. 2)

However, the seriousness of the event could easily lead to rash misinterpretation of the phenomenon. As Mortensen (2018) suggests, Gamergate’s structure was not a monolithic block, but a swarm-like phenomenon in which most of the individuals often acted in accordance with the ones they perceived in their (online) proximity without being entirely aware of what was happening. These individuals did not have a real plan but only acted as a reaction of a few core individuals whose directions were

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<sup>4</sup> No compelling evidence of said accused was ever found.

<sup>5</sup> <https://www.forbes.com/sites/erikkain/2014/09/04/gamergate-a-closer-look-at-the-controversy-sweeping-video-games/>

<sup>6</sup> The act of publicly revealing private information about an individual through the Internet.

<sup>7</sup> The act of deceiving an emergency service into sending a police response team into a person’s domicile. The practice derives its name from the “SWAT” units of the US police forces, and it is extremely dangerous since the risk of use excessive violence either by the police or the victims is very high.

filtered and re-elaborated several times across forums and imageboards. On one hand Gamergate, even more than the other quoted events, indicates that analyzing an ideal-typical community of “gamers” as a homogeneous group has little chance of understanding reality; on the other, it warns us that the effects of the presence of videogames in our society are indeed very real, and they have to be studied by accounting for their complexities and contradictions.

The present research aims to deconstruct and understand part of said effects. By employing the theoretical framework of Cultivation Theory (Gerbner 1998), I try to identify how prejudices, stereotypes, and value judgments are encoded in videogames and the extent to which said interpretations of reality can permeate the judgments of players. I plan to reach these objectives with a two-step research design based on a mixed-methods approach. The first step focuses on the content analysis of a sample of videogames. These games are thoroughly analyzed in order to detect and isolate patterns in the representations related to violence and gender issues. The second step starts from the content analysis insights and attempts to discern whether the analyzed games exercise an influence on the audience through a quasi-experimental design.

The dissertation is organized as follows:

- The second chapter introduces all the relevant theoretical frameworks and concepts which are employed in the research. The chapter closes with a precise presentation of the research objectives and an overall presentation of the research design.
- The third chapter presents the design and the methods employed in the content analysis of games.
- The fourth chapter shows and discusses the results of the content analysis.
- The fifth chapter explains the design of the second step of the research, namely the quasi-experiment.
- The sixth chapter delves into the results of the quasi-experiment and discusses them.
- The seventh and last chapter gathers the conclusions drawn from both the research’s steps and tries to organize and comment on them.

## II. THEORETICAL FRAMEWORK

### 2.1 Introduction

In this chapter of the dissertation, I try to recapitulate all the necessary information in order to understand what I did in my research and why I did it. In particular, I focus on introducing the two main relevant thematic fields for this research, Cultivation Theory and Game Studies, and in attempting to link each other. The chapter is organized as follows: the first paragraph introduces all the main tenets of Cultivation Theory. The second focuses on the more recent developments brought by research which positioned itself within this theoretical framework. The third paragraph introduces the multidisciplinary field of Game Studies. The fourth paragraph underlines the meeting points between Media Effects research and Game Studies and presents the previous studies which tried to apply Cultivation Theory to the study of videogames. Once all the relevant frameworks and concepts are introduced and discussed, the last paragraph closes the chapter by presenting the overall design of my research.

### 2.2 Media Effects Research and Cultivation Theory

This research aims to delve deeper into the exploration of media texts and their impact on viewers' perceptions. It emphasizes the influential role of media exposure in shaping individuals' understanding of social reality and behavior, highlighting an interactive process rather than a passive one:

“The creation of meaning through the interaction of texts and readers is a struggle, a site of negotiation between two semi-powerful sources. Each side has different powerful strategies, each has different points of weakness, and each has different interests” (Livingstone 1990, p. 23).

This process is composed of several different moments starting from the exposition to the text and culminating in the comprehension and interpretation of the message. Hall (1973) explains that this is not a univocal process, but it may be performed in different ways by potential readers. Hall distinguishes between a “conformist” decoding, a “negotiated” decoding, and an “oppositional” decoding according to the extent to which the reader accepts or refuses the “dominant ideologic code”



inscribed in the text by the author. In this process the active role of the user is threefold (Losito 2009): firstly, they are selective in deciding which texts are read and which level of attention is kept during the process; secondly, they express semantic autonomy by negotiating the meanings of the text during comprehension and interpretation; lastly, they have the chance of collectively re-elaborating the texts' meanings during social interactions. In my research, I am mainly interested in the last two aspects of the active role of the reader in their negotiation with the texts aiming to understand to what extent some of their conceptions of reality are influenced by said texts. In order to accomplish this goal, the research adopts the framework of the so-called Cultivation Theory (Gerbner 1969); however, before delineating the core tenets of said theory I believe it is important to delineate the evolution of media study which led to its formulation. The first branch of research that took into consideration both the reader's reception and acceptance of a text's message was the research on persuasion conducted by Hovland and his collaborators starting from the Fifties' (Hovland, Lumsdaine & Sheffield, 1949; Hovland, Janis, & Kelley, 1953; Hovland et al., 1957). Their theory considers persuasion (or any other communication process) as the cumulative result of an ordered group of steps and the success of every step is seen as a necessary condition for continuation of the process. Said steps are ordered as follows: exposition to the message, attention, comprehension, acceptance of the conclusions, memorization of the conclusions, and conversion into action. Even if every step is necessary, "comprehension" is considered the most important one and it is the result of a correspondence between coding and decoding of the message embedded in the text. This correspondence may be facilitated by simplifying the message in the text in order to reduce the cognitive effort required by the reader. It is important to notice that, even in this early conceptualization of comprehension, the social background of the reader was already taken into consideration. Their experiments showed how the simplification of a message must include some elements that are already familiar to the reader and therefore the need to adapt the content and the form to the communicative skills, educational level, and plausible life experiences of the targeted audience<sup>8</sup>. At the end of the '60s, the focus shifted from the comprehension of a text by a single reader towards long-term effects created by "consumption paths" developed by readers in engaging different types of texts (books, newspapers, movies, TV shows, ...) and genres<sup>9</sup>. These effects do not influence only the individual readers but the

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<sup>8</sup> With "Audience" or "Public" I indicate "loose aggregations of people who share some common consciousness of how things work, what things are, and what ought to be done-but never meet face to face." (Gerbner 1998, pp. 176-177). The shared knowledge possessed by a public is created and continuously reshaped by the common access to one or more specific mass media.

<sup>9</sup> In this research genres are considered as systems of rules which are referred in the realization of communicative processes. In the long term these set of rules tend to institutionalize on the communicative level and therefore they are usually kept in consideration both in the creation and the reception of a text. They became at the same time model of production for the text creators and systems of expectations for the users (Wolf 1988).

broader extent of what a determinate audience knows and understands: in other words, the “social construction of reality” (Berger & Luckmann, 1966).

One of the first theories developed with this scope is the “Agenda-setting theory” (McCombs & Shaw 1972). This theory postulates that media influence the audience even before comprehension of texts just by the fact that they focus the attention of the readers towards specific issues and, in doing so, they increase the importance of said issues. In other words, media indicate the list of issues, people, and events regarding which the average reader must have an opinion (or at least some knowledge) in order to meaningfully engage with the texts. The extension of this idea leads directly to the Cultivation theory, developed by Gerbner and his collaborators after an extensive research project called “Cultural Indicators” (Gerbner 1969; Gerbner & Gross, 1976; Gerbner et al. 1979). Gerbner reflects on the idea that television, like religion before the Industrial Revolution, is a daily ritual shared by every level of society from the elites to the working class. The ritual presents an incessant repetition of patterns (ideologies, truisms, expectations regarding societal order, life goals, etc.) which, across the long period cultivates shared conceptions of reality among otherwise diverse publics. Due to the commercial necessities of the shows, television provides a relatively restricted set of choices for a virtually boundless variety of interests and publics, and it usually vehiculates moderate messages that serve to describe the “correct” society and legitimize the social order.

The original Cultural Indicators research demonstrated that significant and consistent exposure to television over time tends to cultivate a relatively limited and skewed perception of the real world. Some of the primary outcomes included:

- Age Misrepresentation: television drama often underrepresents older people. Despite the over-65 age group being the fastest-growing segment in the United States in the sixties, heavy viewers<sup>10</sup> were found to believe that the elderly were in decline, in worse health, and did not live as long, which is contrary to the demographic surveys of the time.
- Violence Perception: it was found an exaggerated perception of violence among heavy viewers. While less than 1% of the U.S. population were victims of criminal violence each year at the time, heavy television viewers tended to greatly overestimate this statistic due to the frequent portrayal of violence on screen.
- Sexism and Gender Roles: The underrepresentation of women on television and their depiction in narrow, stereotyped roles can lead to the cultivation of sexist views. Heavy viewers often scored higher on a "sexism scale" and their understanding of gender roles tended to conform to traditional and conservative stereotypes.

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<sup>10</sup> The term employed by Gerbner to define the segment of the audience who spend the most time watching television.

- The Mean World Syndrome: long-term exposure to television, where violence is often portrayed, cultivates an image of a mean and dangerous world. This can lead viewers to believe that they need more protection, that people are untrustworthy, and that most individuals are selfish.
- Political Views: heavy viewers are more likely to identify as being "moderate" rather than either "liberal" or "conservative".

In sum, the Cultural Indicators research suggests that television significantly influences diverse audiences' perceptions of social realities across a range of domains. This is a process known as "Mainstreaming", where television's portrayals become the accepted version of reality for heavy viewers. Regardless of their specific subcultural or social group, these viewers tend to develop a homogenized perception of social realities that mirror the most consistent and overriding messages of the TV world. The name comes from the convergence of disparate groups towards a common "mainstream" perspective, mediated by the most prevalent images and themes.

The concept itself though, has been perceived as one-sided, not accounting for the interpretive power of the audience or the fact that watching habits and context of viewing could affect the way media messages are absorbed and internalized. It implies a somewhat passive audience, when in reality, audience engagement with media content is often active and complex (Newcomb 1978, Potter 1993). Other authors dismissed the concept as spurious since their analysis suggested that fear of crime and heavy viewing were most prevalent among those living in high-crime areas (Doob & MacDonald 1979), or just empirically weak postulating that Mainstreaming could be a proxy of other social factors (Hugues 1980, Hirsch 1981).

On the other hand, the concept has been successfully applied in several studies like the one conducted by Appel (2008) which found that television violence made the world less mean and scary for German and Austrian viewers, as it was mostly found in narratives where justice is restored. Additionally, Kolbeins (2004) found a similar dynamic in Iceland, where violence no longer taught viewers across the board that the world is a scary place. These studies demonstrate how the concept of mainstreaming has been applied to understand the impact of television violence in different cultural contexts.

Ruddock (2011) also successfully employs the concept in his analysis of the Afghanistan war coverage from conservative press, noting that Mainstreaming was observable in how the viewers reacted to the shows. These viewers sought more complete accounts of the war, demanded better logistical support for the soldiers, reflected a desire for increased government action, and were critical of those protesting against the war. This collective reaction suggests a consolidation of views towards a 'mainstream' stance, influenced by the narratives depicted in the show.

Ruddock points out that in order to fully and empirically demonstrate the concept of Mainstreaming, a study would generally involve a sizeable and diverse sample of participants, measurement of their

television viewing habits, and quantitative analysis of their perceptions of various social realities, factoring in various sociodemographic variables, making thus the concept very difficult to measure fully.

A more recent critique of Mainstreaming does not target the concept itself but rather the changes that happened in the world around it in the last decade. Morgan et al. (2015) point out that the homogeneity of viewing demographics is starting to break down, and audiences have fragmented into a vast array of distinct and shifting splinters, which raises questions about the continued persistence of mainstreaming as a viable key to investigating process who invest society as a whole. They suggest that the implications for the concept of "mainstream culture" and the process of mainstreaming need to be assessed conceptually and empirically in the rapidly evolving media landscape. The rate of technological progress can change completely the functioning of media every handful of years, therefore the concept of mainstreaming can be employed as long its validity is checked and assessed in each new scenario.

The formulation of Cultivation Theory also includes some directions regarding the ideal research design which could be used to assess the presence of a Cultivation Effect. In Gerbner's idea (1998) Cultivation-inspired research should be based on a "three-pronged" strategy. The first prong, called Institutional Process Analysis, aims to investigate the editorial policies of the television networks that direct the flow of media messages. It involves examining the processes within media institutions that shape the creation and distribution of mass-produced messages. By studying the institutional processes, it seeks to uncover the influences, needs, values, and ideologies that drive the creation and distribution of media content. However, Gerbner himself believed that, while still useful, this prong was not as focused on the objective of detecting a Cultivation Effect as the other two (Gerbner 1998, p. 179). The second prong, called Message-System Analysis, focuses on the systematic content analysis of television shows with the aim of delineating their features and trends. Gerbner believes that the more pervasive patterns (formats, type of characters, language registers, etc...) transcend the single texts and are shared among the shows of a determinate network in order to reinforce the cultivated messages. In the classical installments of Cultivation Research, this analysis usually involves recording annual week-long samples of television drama and subjecting these systems of messages to content analysis. The approach allows the gathering of consistent data and reliably delineates selected features and trends in the world television presents to its viewers. By identifying the most pervasive patterns common to many different types of programs but characteristic of the system of programming, it should allow us to uncover the potential lessons television cultivates.

The results of the second prong are the basis of the third part of the research, called Cultivation Analysis in which the proper hypothesis testing happens. Starting from the identified patterns, the

researchers devise a questionnaire for the viewers with the aim of examining the varying conceptions of social reality across those with varying amounts of exposure to television. This prong aims to determine whether heavy viewers of television are more likely to answer these questions in ways that reflect the potential lessons of the television world, compared to those who watch less television but are otherwise comparable in terms of important demographic characteristics.

The goal is to assess whether prolonged exposure to television content cultivates specific perceptions and beliefs about social reality. By comparing the responses of heavy viewers to those of light viewers, it is possible to identify potential differences in conceptions of reality between these two groups. In considering this research, it is important to keep in mind that, even if this sequence of prongs has logical and methodological benefits, the theory does not postulate that Cultivation Effect happens in this chronological sequence. Television neither simply creates nor reflects beliefs, but it is an aspect of a dynamic process in which identifying “what comes first” is an irrelevant endeavor. As the author puts it:

“Institutional needs and objectives influence the creation and distribution of mass-produced messages which create, fit into, exploit, and sustain the needs, values, and ideologies of mass publics. These publics, in turn, acquire distinct identities as publics partly through exposure to the ongoing flow of messages” (Gerbner 1998, p. 180).

## 2.3 Recent Trends in Cultivation Theory

Cultivation Theory tries to make sense of the effects of a field, the one of mass communication technologies, which has gone through several massive revolutions in the last century. However, literature warns to not interpret all changes too hastily:

“Spoiler alert: There’s nothing particularly “new” about new communication technologies.

Modern media have been in a near-constant state of transformation and evolution for at least 100 years. Any apparent “Golden Age” of media stability is quickly upended in terms of media technology, institutions, and programming, the communication environment is never *not* changing and is always “new” and “emerging” [...].

Yet, while some changes in media technology may be merely cosmetic, trendy, short-lived, and gimmicky, others may be more profound, requiring us to re-examine (and perhaps revise, refresh, or relinquish) long-standing theories underlying communication research” (Morgan et al. 2015, p. 2).

Cultivation Theory's relationship with these changes is almost as old as the theory itself. As far back as the 1980s, cultivation theorists delved into the repercussions of contemporary technologies of their era, such as cable TV and VCRs. They scrutinized the extent to which these emerging avenues for user interactivity and choice might alter, moderate, or mediate the impacts of television viewing (Morgan & Rothschild 1983, Morgan & Shanahan 1991). That research found that technological advancements of the 1980s tended to magnify cultivation rather than diminish it. This example shows how advancements in the way in which stories are produced, delivered, and enjoyed can either be harbingers of real change or just novel "delivery vehicles" for delivering "more of the same" content. Cultivation Theory has endured both types of technological advancements and, according to some researchers (Morgan & Shanahan 2010) can now be considered a scientific paradigm, in the sense intended by Kuhn (1962). The authors believe that cultivation theory has become a scientific paradigm for three key reasons. First of all, the theory introduced a revolutionary shift in the traditional research questions regarding media effect and achieved a new perspective by focusing on stabilizing audience beliefs and conceptions rather than attitude or behavior change. Secondly, despite facing regular criticism and attacks, the theory managed to be widely accepted in the scientific community as a starting point for further explorations. To this day, the theory has been used to explain a wide range of media effects and has persisted as a relevant and influential concept in mass media effects research. Lastly, the theory has grown so much that it is difficult to conceive of how cultivation could be fundamentally restructured without completely dismantling the very nature of the theory itself (and therefore through a new revolution).

Cultivation Theory is facing a period of what Kuhn would call "normal science", namely a time in which the researchers investigate issues and problems that can be considered outgrowths of the basic paradigmatic research question.

In the last twenty years researchers, rather than try to attempt long and expensive efforts like the original Cultural Indicators project, narrowed the scope of their studies in order to emphasize single aspects of the cultivation effects. Examples of these studies include:

- Analysis of diverse cultivation effects of specific genres: Woo & Dominick (2001) studied the effect of talk shows on the ideas regarding conjugal devotion; Kubie & Chory (2007) the effect of make-up programs on viewers' self-perception and acceptance of their own body.
- Analysis of the cognitive processes underlying Cultivation Effect: Shrum (2004) analyzed both short and long-term cognitive mechanisms underlying cultivation effects. He concludes that Cultivation can work in two different ways, namely through first-order and second-order effects. The former pertains predominantly to size or probability judgments. They usually involve estimating the number or percentage of instances of a particular event or phenomenon. Examples include audience

judgments related to their likelihood of being robbed or assaulted in their neighborhood or to the frequency of deaths due to certain illnesses. Second-order effects involve attitude and belief judgments. They include forming, updating, and strengthening general beliefs towards society. Examples are inferences about the link between gender or skin color and traits like crime propensity or unemployment, or beliefs about whether the world is a mean and violent place.

- Analysis of narrative mechanisms: Busselle, Ryabalova, and Wilson (2004) outline a theory of the mechanisms that induce the viewers to accept television narratives as realistic and bring them to normalize and trust the reality represented in the shows. Successive iterations of this line of research conclude that audiences perceive realism as a “default condition” of fiction: when watch a show we perceive it as realistic unless there are specific and explicit reasons not to. Therefore, even content explicitly categorized as fantasy or science fiction can carry messages that influence the audience’s understanding of the real world (Buselle & Bilandzic 2012).

- Multiculturalism: Gerbner in the initial formulation of the theory stated that in TV shows minority groups are usually forced to see their image reflected through the perspective of messages designed by and for the majority. Ward (2004) & Dixon (2007) use this reflection as a starting point to analyze the effect of the portrayal of racial minorities in TV shows.

- Social Background: Salmi et al. (2007) examined cultivation with reference to social capital.

- Shanahan, Scheufele, Yang, & Hizi (2004) examined perceptions of the prevalence of smoking using a combination of Cultivation and the Spiral of Silence Theory. The spiral of silence theory, situated at the boundary between the fields of political science and mass communication, posits that an individual's inclination to express their opinions is influenced by their perception of the prevailing distribution of opinion in their social group. Individuals are more likely to confidently articulate their opinions when they observe a consensus within said group that aligns with their own views. Conversely, if an individual perceives their opinion to be divergent and unpopular within the group, a tendency toward reservation and silence becomes more pronounced (Garth 1982, Glynn et al. 1995). Shanahan and colleagues explain how television works as a surrogate social milieu individuating links between Spiral of Silence and Cultivation Theories.

- Diefenbach & West (2007) focused on the active role of the audience in the process of Cultivation. They drew upon the Third-Person Effect<sup>11</sup> in their analysis of the relationship between the amount of television viewing and attitudes toward mental health. Jeffries et al. (2008) took that one step further, using the Third-Person Effect to integrate cultivation and Agenda-Setting<sup>12</sup>. They found a larger third-

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<sup>11</sup> The idea that people perceive that media are having a stronger effect on others rather than on themselves (Davison 1983).

<sup>12</sup> Another communication theory that posits that media, especially news media, by determining which information receives more attention affect how important social issues are perceived by the public opinion.

person effect with cultivation-related issues than with agenda-setting and argued that this suggests that audiences recognize differences in how media affect them.

## 2.4 Game Studies: Why is it important to study games?

In contemporary society, we are used to conceptualize our life as divided between work and rest. At the foundations of work, there are material (and nonmaterial) needs, self-sufficiency, and well-being; with work, we identify all the human activities whose goal is to satisfy these needs by means of the production of goods and services. Around work developed the set of structures of society we identify as the economy. The same can be argued regarding rest. Even though its foundations can be the same of work, material (and nonmaterial) needs, self-sufficiency, and well-being, with rest we mean that period of time in our lives in which we engage in a set of activities that consume time unproductively (Veblen 1899). Thus, rest is more an element comprehended in the “cultural sphere” of society.

Of course, this distinction between work and rest is not complete and it is not free of critics. It distinguishes on the basis of an economic criterion, productive or not productive of goods and services, ignoring that rest and recreative activities produce other resources, symbolic, social, and cultural capital, besides being a source of individuals’ pleasure (Bourdieu 1986).

However, this first distinction is crucial to contextualize the importance of games. Rest, recreative activities, leisure time (Veblen 1899), and *divertissements* (Touraine 1969) must be understood as core elements of human societies: resting as much as working is a manifestation of the culture and the nature of human relations.

Nevertheless, the study of leisure time in social sciences has had a minor role, at least until recently. After the coming of computers, the growth of mass consumption of technologies, and the beginning of the third industrial revolution (Touraine 1969), we witness a renowned interest in leisure time activities. The growing interest in leisure time has its roots in modern social changes, especially the ones related to work organization. During the twentieth century, the scheduling and the functioning of jobs and workplaces changed radically (Polanyi 1944) and the time dedicated to work gradually began to decrease. As a reflection, also how the modern person spent his leisure time after work changed (Zahn 1960).

The reduction of working hours made it possible to have free weekends, the growth of tourism, and the mass consumption of *divertissements* and recreational activities, stadiums, amusement parks, cinemas, and so on, a process still ongoing today. It was already clear during the half of the nineteenth



century: in the future people would have worked less and consumed increasingly more time in entertainment and ludic activities (Zahn 1960).

This vision has not been proved wrong. Working hours decreased even more since the eighties, accompanied by a fragmentation and flexibilization of the time dedicated to work. New technologies made physical jobs less efficient and demanded (Schwab 2017), on one side fueling the discussion on the future of “work” and of a society and an economy becoming less human and more robotic (Ford 2016), on the other side pushing the demand toward job activities with a high content of human capital and soft skills.

People nowadays have more free time to dedicate to recreational activities and rest compared to what they had in the past. This overall societal tendency was at the same time accelerated and fragmented by the advent of digitalization (Van Djik 2019).

This process made possible unlimited access to every form of entertainment, in every moment and context, by means of portable devices connected to the internet. We can watch a film, listen to music, watch a football match, or read a book from our smartphone, everywhere: at home on the couch, in the subway, or in the office while at work.

The boundaries between work and rest are becoming thinner and more permeable and often the two spheres of our lives overlap. Our leisure time is in fact as fragmented as much as modern working time and their permeation and fusion only increased after the Covid-19 pandemic which forced workers (at least the lucky white-collar ones who could perform their activities without risking exposure and contagion) to execute both activities within the boundaries of the domestic space (Putri & Amran 2021, Shirmohammadi et al. 2022).

Besides the availability and accessibility, also the form and contents of leisure time activities changed. The consumption of divertissements is increasingly more personal and attuned to individuals’ tastes, differentiated (e.g. the many formats of the TV series) and dynamic. Through a single device, we have access to an infinite number of experiences among which we only have to choose from, following our tastes and preferences (Kelly 2016).

Without noticing, maybe, today we spend more time unproductively than in the past. The term “unproductively” is not accidental: even the first sociological analyses of games explained that gaming is possibly one of the clearest expressions of the unproductiveness of leisure activity (Huizinga 1938). The first academic definition of a game reads as follows:

“A free activity standing quite consciously outside “ordinary” life as being “not serious”, but at the same time absorbing the player intensely and utterly. It is an activity connected with no material interest, and no profit can be gained by it. It proceeds within its own proper boundaries of time and space according to fixed rules and in an orderly manner. It promotes the formation

of social groupings which tend to surround themselves with secrecy and to stress their difference from the common world by disguise or other means” (Huizinga 1938, p. 13).

The same elements also return in Caillois’ conceptualization (1958), which states that a game is an activity that is essentially free (voluntary), separate (in time and space), uncertain, unproductive, and governed by both rules and make-believe.

These contributions, somehow idealistically, depict games as an activity temporally and spatially isolated from ordinary reality, free of consequences, and on a voluntary basis. However, the relationship between the partially overlapping worlds of gaming and gambling, and the existence of entire economic sectors based on the broadcasting of games (sports and e-sports) pushed game scholars to give a more conservative and punctual definition of game.

Crawford (1988) perceives “four common factors: representation (a closed formal system that subjectively represents a subset of reality), interaction, conflict, and safety (the results of a game are always less harsh than the situations the game models)”.

Juul in an attempt to tackle the issue concludes that:

“Taking a step back, we can see that the notion of separate and the notion of games being unproductive are quite similar in two respects, 1) both specify what interactions are possible (and allowed) between the game activity and the rest of the world and 2) both are clearly not perfect boundaries, but rather fuzzy areas under constant negotiation. When Caillois claims that a game played involuntarily is not a game, we need to make a distinction between a given game and a given playing of a game. All copies of Quake III do not suddenly cease to be games because someone is making money playing it. And since all games are potential targets of betting and professional playing, I suggest that games are characterized by being activities with negotiable consequences: a specific playing of a game may have assigned consequences, but a game is a game because the consequences are optionally assignable on a per-play basis. That games carry a degree of separation from the rest of the world follows from their consequences being negotiable” (Juul 2003, p. 34).

However, what all these efforts of defining games have in common is also the reason why it is important to study and understand games. Even single-player games that are played alone imply a cultural background on which rules are set and understood. Games, with their inherently social nature, are a cultural expression of society, and gaming trends always tell us something about society itself (Caillois 1958). They do it either by the values and meanings they carry in their ritualized reproduction of a fictional reality or by their role within the universe of leisure activities proposed by our society, which, as said before, are steadily growing in importance in everyone’s life. Games create synthetic realities where we project our dreams, fears, and narratives, but also our interpretations of the past

and our visions of the future. They embody fantasies that cease to be just thoughts and words and become tangible realities, reproduced more and more vividly with each generation of software and gaming consoles.

The study of games is a highly interdisciplinary research field that has evolved greatly over time. After the initial philosophical efforts of Callois, Huizinga, or Henriot (1969), the field expanded to different disciplines and nowadays it brings together scholars from literary disciplines, cultural studies, social sciences, and computer sciences. Coavoux et al. (2017) performed a scientometric and lexicometric analysis of the field based on all the publications of the two most important thematic journals (*Games and Culture*<sup>13</sup> and *Game Studies*<sup>14</sup>) and the proceedings of the conference organized by the Digital Games Research Association<sup>15</sup> (DiGRA), the preeminent organization in the field. The authors group the papers written in the last decades into 20 topics which can be ulteriorly grouped into a few big themes:

- “- Descriptions of the specificities of games: War Simulation, Everyday Life (Simulation), Virtual Worlds, Rules Elements, Mechanics;
- Descriptions of the specificities of players and play: Play Motivations, Gender, Media Consumption, Situated Play, Experience/Agency, Social Interaction Online;
- Descriptions of the specificities of devices: Systems & Devices, Music/Ambient/Aesthetics;
- Theoretical languages of game studies: Framework & Theory, Game Studies Theory;
- Theoretical imports from other fields: Media Effects & Representations, Cultural Industries, Narratology;
- Applied research fields: Education, Design Methods” (Coavoux et al. 2017, pp. 576-577).

Starting from the nineties the field has seen a division between the “ludologic” and “narratologic” perspectives on games. Narratologists are scholars who focus on narrative in various media, including film, literature, and videogames. They employ theories of narrative that are independent of the medium of representation and seek to understand the structure and characteristics of narratives. This includes examining elements such as plot, characters, point of view, and storytelling techniques. On the other hand, ludologists focus on game mechanics and the study of games as interactive systems. They are interested in understanding the rules, structures, and dynamics of games, as well as the player's interaction with the game system. Ludologists seek to analyze games as games, rather than as narratives, and emphasize the unique characteristics of games as a form of interactive entertainment.

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<sup>13</sup> <https://journals.sagepub.com/home/gac>

<sup>14</sup> <https://gamestudies.org/2303>

<sup>15</sup> <http://www.digra.org/>

This opposition, however, was partially based on incomprehension between the two perspectives and it is largely considered as overcome with the acknowledgement that an integration of both perspectives is necessary to fully understand games and their impact on society (Frasca 2003).

On the other hand, Coavoux et al. found in their analysis another relevant opposition within the field, namely the division between social sciences and humanities approaches. This methodological divide has already been noted and criticized by Williams in his assessment of Game Studies' situation (2005). Williams identified three main issues that Game Studies need to face. The first is the division between social science and humanities approaches. Social scientists tend to focus on understanding the effects of games on users, often employing quantitative methodologies to measure and analyze these effects. On the other hand, humanists seek to understand the meaning and context of games, often using qualitative approaches to explore the cultural and social aspects of gaming experiences. This division has led to a lack of synthesis and collaboration between the two groups, potentially limiting the overall understanding of video games and their impact on culture and society. This issue is further exacerbated by the lack of methodological understanding between the two groups of researchers who usually have very different backgrounds and struggle to understand and employ methods alien to the scientific tradition they studied and employed in their careers. This lack of understanding hinders the potential for synthesis and advancement of knowledge in the field of Game Studies. By acknowledging and addressing these methodological differences, researchers can work towards a more integrated and comprehensive approach to studying games, leading to a deeper understanding of their effects and meanings. The last issue noted by Williams is the fact that, especially in social sciences, researchers often do not actually play the games they are studying.

The paper highlights the importance of researchers actually playing games as part of their study. This lack of direct game experience can impact the researchers' ability to understand games' context and cultural significance, and negatively impact the generalizability of the findings. Games are complex systems based on the interaction of several human and non-human actors which are extremely difficult to understand without any firsthand experience (Konzack 2002, Consalvo & Dutton 2006). This research aims to follow Williams' invitation and study games with a mixed methods approach, ranging from content analysis to experiments and qualitative observation, which also includes a direct and rigorously planned interaction of the researcher with the complete corpus of considered videogames. Cultivation Theory, with its multi-pronged analysis structure, is the ideal theoretical framework to integrate all these methodologic perspectives within a single research effort.

## 2.5 Games and Cultivation

This research aims to bridge the gap indicated by Williams (2005) by conducting both content analysis of videogames and analysis of media effects on the audience. However, videogames (and games more in general) are a very specific kind of media which implies a greater amount of interaction between audience and text in order to properly function. Due to this reason, some important concepts need to be introduced before outlining the overall design of this research.

As explained at the beginning of the chapter the reception and meaning-making process of a text is not a univocal process in which sense is imposed on the audience by the authors but rather a bargaining process. Hall (1973) explains this relationship as a process of coding and decoding a message. The authors of the message (in the case of this research videogame developers) propose a “dominant” or “preferred” meaning of the text. On the other end, the final users (the players) can decode the message in three main ways. They may accept the dominant reading and decode the message as it was intended when it was coded, or they can adopt an oppositional reading and decode the message in a completely opposite way. The third option, which Hall assumes happens most of the time, is a negotiated reading that involves a mix of preferred and adversarial readings. Hall also explains that the social background of the users influences their power during the decoding process and the kind of approach they will eventually adopt. While he considered this caveat to be mainly related to social class, successive studies propose a more comprehensive view of users’ positioning. Said positioning might explain the acquisition of cultural codes, whose availability then influences the decoding process (Morley 1992). An example of the traits that influence the process may be represented by the experience of a player within the context of a competitive online game. While casual players tend to follow the guidelines proposed by the developers, more competitive, or even professional players, use their thousands of hours of experience to exploit specific gameplay interactions that the developers may have not initially foreseen. This example introduces the concept of imaginary affordances (Nagy & Neff 2015) which, according to Shaw (2017), are the key to adapt the original coding/decoding model to the study of new media like videogames. The term “affordance” was introduced by the cognitive psychologist James Gibson (1979) to indicate the action possibilities that were available to people in their environment. Nagy & Neff adapt this concept to the field of new media by taking into account the interplay between designer, users, and the material specifics of the involved technology:

“Users may have certain expectations about their communication technologies, data, and media that, in effect and practice, shape how they approach them and what actions they think are suggested. These expectations may not be encoded hard and fast into such tools by design, but

they nevertheless become part of the users' perceptions of what actions are available to them. This is what we define as *imagined affordance* [...] Imagined affordances emerge between users' perceptions, attitudes, and expectations; between the materiality and functionality of technologies; and between the intentions and perceptions of designers" (Nagi & Neff, 2015, p. 5).

The adjective "imagined" refers to both the designers and the users since both plan and/or discover affordances within the context of the same media. This allows to recover Hall's model of coding/decoding: a dominant use may happen when designer and user imagined affordances align, while an oppositional one happens when users imagine affordances that the developers did not originally foresee. A negotiate use is the result of the fact that designers create affordances but do not imagine them as actually usable for the players; it is the case for example of entire sections of gameplay written in the source code of a game which are then excluded from the final version. Players with an IT background may rediscover these sections which were not supposed to be available.

The concept of imaginary affordances introduces in the research the fact that while videogames may have a narrative aspect, they are also intrinsically an activity. While these two aspects may be more or less harmonized in the game, they need to be considered both in the content analysis and the analysis of players' reception of games. Again, in Shaw's words:

"Understanding their reception, thus, must interrogate what actions these texts invite and how players actually use them. And to do *that*, we need to start with an affordances perspective. All interactive media technologies can be looked at in terms of what they allow users/audiences to do. What types of uses do they lend themselves to? What types of interaction do they encourage?" (Shaw 2017, p. 579).

The concept of imaginary affordances allows this research a more conscious approach to both the analyzed games and the involved players. On one hand, it provides a guide for the content analysis of games (or Message-System analysis if we consider it within the framework of Cultivation Theory). This kind of content analysis effort should aim to follow closely the dominant use foreseen by the developers for their videogames, in order to try to grasp the meanings they are trying to cultivate. On the other, it gives a key to interact with the players during the Cultivation Analysis data gathering and understand how they approach the same games. It creates a framework where is possible to compare the experience of the researcher with the player's negotiation of the original message.

In the context of videogame content analysis exploring the imaginary affordances happens by focusing not only on the narrative aspects but also on the interactions allowed by the “gameplay” qualities of titles. Malliet (2007) gathers the effects of the dual nature of videogames which should be kept in mind in drafting a research project under the umbrella concept of “irreducibility”.

“Unlike films or television programs, where the ‘text’ presented to the spectator is the same every time it is being played, video games have the property of not being reducible to a predefined sequence of signifiers [...]. Juul (2005) coins the term irreducibility in order to describe this methodological difficulty: Although the rules of a game system provide a specification of the actions that are possible, the activity that takes place can never be reduced to these rules only” (Malliet, 2007, p. 6).

In videogame-related research, several practical difficulties related to irreducibility are usually encountered. The biggest one is represented by the fact that each player approaches the game with different objectives. Some may want to master the flow of gameplay and become able to beat flawlessly the game challenges, other may be completists who want to explore every corner of the game world and discover all its secrets. Others may be merely interested in having some fun with the game and following what gives them enjoyment without too much reflection. The different expectations and desires of players create different game experiences which should be kept in mind when studying games. Different game scholars have addressed this issue. Bartle (1996) proposes a typology of possible players: *socializers*, who are mainly interested in peculiar the social contacts that are created in games; *killers*, who prioritize fighting and hunting down other game characters; *achievers*, who enjoy above all the competitive dimension of games; and *explorers*, who enjoy discovering all the mysteries of virtual game worlds.

Aarseth (2003) faces the issue in a more sophisticated way by arguing that, ideally, researchers should play the games they are studying game several times, each time employing a different profile, and observe what happens during gameplay as a consequence of the chosen approach. It is important to keep in mind that replaying several times the same game is a very time-consuming process. When this is not possible, it is very important to be aware that the “playstyle” chosen by the researcher is but one among the possible alternative strategies that could have been chosen.

Other important aspects of irreducibility stem from the “physical” traits of games. The most often quoted ones are related to the existence of different game modules, modifications, conversions, and add-ons of the original software and hardware-software relationships. The expression “game modules” indicates the fact that videogame software is usually composed of different modules, and

each one may contain a more or less deep alteration of the fundamental game rules. The most easily explainable example is represented by the implementation of different levels of difficulty which are usually arranged in a hierarchical fashion ranging from very easy to very hard (for a usual total of 3-5 levels). However, the differences between these levels are not always elaborated in a similar way. Some games may simply deal with the issue as a matter of quantity (e.g. the program spawns a larger number of stronger enemies or the resources available to the player are decreased). Still, some other titles may include more advanced game modes which are believed to be too complex for new players or hidden snippets of the plot. As Schmierbach (2009) explains, the most analytically challenging modular structure is the one that foresees a single-player and a multiplayer mode for the same game, since the difficulties in examining and comparing the latter mode are considerable. In a multiplayer setting, the game stops focusing only on the main player since they are present only in a fraction of all the actions happening simultaneously. This creates obvious difficulties in having a precise record of what happened in each session. Moreover, the presence of a different group of players in almost every session further complicates the situation introducing a significant amount of variation.

The second issue is related to the inclusion of modifications and add-ons to the source code of a game. There are different kinds of alteration which a title can receive over time varying from simple graphical patches in a game's code to total conversion. This variety of possible modifications complicates the effort of distinguishing clearly whether a title has been only marginally modified or the number of changes has created a new and distinct artifact that should be considered worthy of separate analysis.

The last aspect is related to the fact that the performance of gameplay is strongly dependent on the hardware it is intended to be played on. Different versions exist of most games, each version designed to be played on a specific platform. This may have several consequences since different hardware sport different controllers which require different kinds of inputs from the player. Another consequence may be related to the fact that game software is often developed keeping in mind a single type of hardware and it is subsequently modified in order to be played on other physical supports. This process is not an exact science and sometimes some versions of the same title may play worse than others due to a mismatch between the objectives of the game and the capability of the hardware. In order to be as methodologically correct as possible a researcher should specify which modules and versions of a game are analyzed and adjust their research plan accordingly to challenges presented by each title.



The concepts expressed in these pages have been the foundation of a relevant wealth of Game Studies research on various topics close to the traditional core issues analyzed employing Cultivation Theory. Some of these studies analyzed the systematic representation of violent acts in adult-targeted games, (Thompson et al. 2006, Lachlan et al. 2005) while other identified patterns of sexist representations (Knowlee et al. 2011, Dietz 1998, Beaseley & Standley 2002) or the issue of racism and multiculturalism in games (Hackney 2018, Russworm 2018, Rajeevan & Rekha 2021, Kunzelman 2022, Ramirez 2022).

However, only a few studies tried to apply the full structure of Cultivation Theory to the analysis of games. Mierlo & Bulck (2004) attempted a Cultivation Analysis effort with a correlational study of school children based in Flanders. The starting point of their argumentation was that video games have become realistic enough to resemble social reality, making thus a Cultivation Effect possible. They found evidence of Cultivation Effect even if said effect proved to be weaker than the one caused by television exposure. They also concluded that cultivation happens in videogames with different mechanisms compared to more passive mediums, as the active role of players in the representation of violence complicates the analysis.

Williams (2006) attempted a more elaborate design and attempted to register a Cultivation Effect by employing a longitudinal experiment. This design choice should allow to separate precisely the Cultivation Effect from the myriad of variables that could intervene in the relationship between media and audience. In the words of the author, it guarantees the following traits:

“[...] falsifiability, precise and continuous exposure measures, a clear separation between the media answers and the real-world ones, and control over subject variation through random assignment” (Williams 2006, p. 81).

Contrarily Mierlo & Bulck’s conclusions, he started from the assumptions that videogame effects on the audience may actually be stronger than the ones caused by television due to the higher immersion provided by the ludic interaction. The design was a “two-wave, field-based panel study with a control group” based on the online role-playing game *Asheron’s Call 2: Fallen Kings* (Turbine Entertainment Software 2002). The Participants never tried the game before the study and those in treatment group played it for one month. The data were gathered through a pre-treatment and a post-treatment survey. Williams also performed a 2-month participant observation in the game’s multiplayer environment as Message-System Analysis. However, he did not perform a comprehensive content analysis of the game and used the data mainly to justify the game’s choice in the subsequent part of the study.

William presents two relevant results for the analysis of games’ Cultivation. The first is related to the cultivated topics:

“The study’s central finding is that there is a cultivation effect from playing this particular online game. Contrary to expectation, this effect is the targeted and specific one predicted by central processing rather than the more heuristic-based spreading activation.

[...] In the treatment versus control comparison, first-time players had a large and precise fear effect in which their perceptions of real-world events were directly impacted by their in-game experience. Tests of real-world perceptions that had no in-game parallels were insignificant, making the finding particularly robust” (Williams 2006, p. 81-82).

These results confirm Mierlo & Bulck’s idea that Cultivation in-game is present but happens through different mechanisms compared to television.

The second relevant implication is directly related to the first. If the Cultivation Effect is not broad-based but varies from game to game, what are the implications for the Mainstreaming effect?

The author suggests that mainstreaming may still be possible within the same genre or game worlds with a similar architecture, and even in this case, it would be rather difficult to demonstrate. Rather than attempting to find an overall Mainstreaming effect it could be more fruitful to “measure and isolate common themes, occurrence, and patterns” in order to have a complete and holistic understanding of each game in order to create something similar to Eveland’s “Mix of attributes” approach (Eveland 2003).

Chong et al. (2012) conducted a similar study with a laboratory-based experiment aiming to examine potential cultivation effects resulting from playing a violent video game over a period of three weeks. In this experiment, participants were randomly assigned to either the experimental group, where they played the gangster-themed game *Grand Theft Auto IV* (Rockstar North 2008), or the control group which did not foresee any game-related stimulus. The participants played a total of 12 hours of the game and, since they all had no previous experience with videogames, the effect was registered only through a post-test survey.

The analysis was centered around detecting and isolating first-order and second-order judgments related to violence, following Shrum’s conceptualization of Cultivation mechanisms (2004). The research found evidence for first-order judgments, namely those that refer to estimates of chances and frequency of specific events in the real world. Coherently with Williams’ results (2006), those effects were strictly related to events and situations depicted in the game (in this case mainly car thefts and accidents). On the other hand, the study found limited support for second-order judgments, namely general beliefs regarding the functioning of society, and these judgments worked in the opposite direction of the one foreseen by Cultivation Theory. In this case, the players, who were exposed to a game where stealing a car is extremely easy, were more likely to think that stealing a vehicle is difficult. The authors offer a tentative explanation of this seeming “counter-Cultivation Effect”.

“Second-order effects such as attitudes and beliefs are formed in an online fashion, i.e., as the information is encountered, in this case while playing the game. Therefore, factors such as the level of engagement in the narrative may influence information processing during the viewing experience and hence affect the extent to which second-order cultivation effects are observed. In this instance, the environment of the game, and consequently the attitudes that the game is attempting to cultivate (i.e., it is very easy to steal a car), are likely to be jarringly discordant from players’ experience and beliefs living in a low crime environment like Singapore. We suggest that these elements in the game narrative are likely to be perceived by most people as unrealistic and illogical, thereby reducing the players’ involvement in the game. In turn, this could reduce cultivation effects (Shrum et al., 2011) and possibly reinforce and strengthen players’ existing attitudes about car theft in their own environment” (Chong et al., p 966).



*Figure 1: Frames of the quick animation shown by GTA IV when the protagonist steals a car.*

It must be kept in mind that this is a tentative explanation, and the effect was registered in only one of the five second-order measures employed. Therefore, what this study actually suggests is the fact that, while some form of Cultivation Effect is likely to happen when playing videogames, it does not happen as a straightforward transference process as it is conceptualized in the classic version of the theory.

In the next paragraph, I explain how I am trying to delve deeper into this topic with the design of my research.

## 2.6 Overall Research Design

In this last part of the chapter, I introduce the overall design of this research. The aim of my dissertation is to analyze videogame effects on players through the framework of Cultivation Theory. This framework is relevant for the chosen topic for two reasons:

“Firstly, studying the effects of playing video games through cultivation theory affords a long-term perspective which the current body of research into video games emphasizing short-term effects lacks. Secondly, there appears to be a single-minded focus on aggression and aggression-related effects of playing video games. While cultivation theory has indeed generated a vast literature on the effects of watching violent television programs, its implications extend far beyond aggression and therefore provide a more holistic perspective on studying the impact of video games” (Chong et al. 2012, p. 953).

However, as shown earlier in this chapter, previous studies that tried to link Cultivation Theory and the world of videogames found mixed results, and at times even contradicting ones. In this research, I try to overcome this impasse by attempting a complete Cultivation research design rather than focusing only on the analysis of the audience as it happened in previous studies.

The case study I propose for this research focuses on the subsequent titles: *Uncharted 2: Among Thieves* (Naughty Dog 2009), *The Last of Us* (Naughty Dog 2013), *Uncharted: Lost Legacy* (Naughty Dog 2017), and *The Last of Us Part II* (Naughty Dog 2020).

The decision to select Naughty Dog was motivated by several reasons of methodological and social relevance nature. From a methodological point of view, this decision follows the example of Morley (1980) and Gerbner (1998), in focusing on a single organization of text creators. This is relevant because the more pervasive patterns (formats, type of characters, language registers, etc...) tend to transcend the single product and are shared within a company's portfolio in order to reinforce the cultivated messages. From a social relevance point of view, I chose Naughty Dog because the company has a preeminent position in the world of Western blockbuster mainstream videogames both in terms of critical reception and overall popularity among the audience. The studio won several awards as best developer, and the selected games sport a very high average critic score (all more than 85/100 on the review aggregator Metacritic.com). These games are notorious not only for their economic success, but also for the numerous debates and controversies they have created among the community. The *Uncharted* series, centered around the adventures of the treasure hunter Nathan

Drake, has been accused of orientalism for its stereotypical depiction of Middle-Asia landscapes and history. On the other hand, the post-apocalyptic *The Last of Us* franchise has been at the center of “review bombing” and boycott campaigns from groups of conservative players due to its representation of queer persons across the series. The very existence of these controversies indicates the existence and the relevance of different decoding approaches in the audience.

The research aims to reach the following objectives:

- 1) Explore the representations of violence and gender relationships coded by Naughty Dog in its portfolio of games across the long term by analyzing *Uncharted 2: Among Thieves* (2009), *The Last of Us* (2013), *Uncharted: Lost Legacy* (2017) and *The Last of Us Part 2* (2020).
- 2) Explore how players decode narrations and gameplay experiences of the aforementioned games.
- 3) Assess whether or not the messages decoded by players who experienced the considered games contributed to shaping their beliefs regarding violence and gender relationships.
- 4) Assess whether the levels of belief permeation vary among the players according to their individual background (gender, age, ethnicity, ...), their playstyle (habitual gamers, casual gamers, ...) and their knowledge of Naughty Dog portfolio.

The first objective represents the Message-System Analysis of the research. As suggested by the classical formulation Cultivation Theory I preferred to focus only on one developer in order to detect and isolate the messages cultivated by the same company over the long term. While this choice of case study may hinder the generalizability of the research it is also cognizant of the results obtained in previous research. As suggested by Williams (2006), it is very difficult, and probably also not particularly meaningful in the context of contemporary videogame consumption, chasing the idea of recording a Mainstreaming effect. Similarly, to the choice of games the cultivated topics were chosen in adherence to the literature. On one hand, violence representation the most classical theme for Cultivation Theory; on the other gender representation is a very important and problematic topic in the world of videogames, as it was shown by the studies previously quoted. This phase of the research consists of a comprehensive mixed methods content analysis of 4 different videogames, the specificity of its design and the employed methods are exposed in Chapter 3, while the results of the analysis are shown in Chapter 4.

The results of this first phase are the basis for the Cultivation Analysis step of the research where I try to reach objectives from 2 to 4. Following the example of previous attempts to register a Cultivation Effect in games (Williams 2006, Chong et al. 2012), this second part consists of a quasi-

experimental design called “non-equivalent control group design” (Campbell & Stanley, 1963) in which the participants play two different videogames according to their belonging to either treatment or control group. Similarly, to the first phase of the research, the experiment allows to gather both quantitative and qualitative data. The quantitative data are collected through two surveys (administered before and after the experimental stimulus). The idea is to use this information to reach goals 3 and 4, which are the most oriented to traditional Cultivation Research. Following the steps of *Cultural Indicators Project* (Gerbner 1969), I try to detect the effect and then ascertain if it is stronger among the heavy viewers. During the experiment, I also collect qualitative observations of the gameplay sessions of the participants. These observations are used to try to reach objective 2 and shed light on the inner mechanisms of Cultivation Effect’s functioning. Similarly, to the first part of the research, two chapters cover this step. Chapter 5 covers the design and the methods employed, while Chapter 6 presents and discusses the obtained results.

### III. MESSAGE-SYSTEM ANALYSIS DESIGN AND METHODS

#### 3.1 Introduction

“Cultivation analysis begins with message system analysis identifying the most recurrent, stable, and overarching patterns of television content. These are the consistent images, portrayals, and values that cut across most types of programs and are virtually inescapable for regular (and especially the heavy) viewers. They are the aggregate messages embedded in television as a system rather than in specific programs, types, or genres” (Gerbner 1998, p.181).

This chapter exposes the research methods and the data-gathering procedures employed in this dissertation Message-System Analysis effort. As exposed in the previous chapter the goal of this first research step is exploring the representations of violence and gender relationships coded by Naughty Dog in its portfolio of games across the long term. In doing so this research follows the steps for content analysis proposed by Krippendorff (2004): unitizing, sampling, recording/coding, reducing data, drawing inferences, and narrating the result. The primary focus of this chapter will be the first three steps:

- 1) Unitizing: the methodical recognition of portions within text, images, sounds, or other perceptible elements that warrant examination.
- 2) Sampling: narrowing down the observations to a workable subset of entities that is either statistically significant or conceptually reflective of the entire collection of possible entities, the population, or the target universe.
- 3) Coding/recoding: connecting the divided text portions and an individual's comprehension of them, between individual visuals and the interpretations people derive from them, or between individual observations and their contextual meanings.

The tools employed for gathering information are three different data sheets. This allows to keep in account both the narrative and gameplay aspects of these products and how these two aspects combine in the player's experience. The complete text of the data sheets is available in Appendix 1 and a brief recap of each data sheet's specifics is shown in Table 1.

Table 1: Datasheet specifics recap.

	Contextual unit	Unit of Analysis	Type of questions	Number of questions
Data Sheet A	One videogame	One Videogame	Open questions	24
Data Sheet B	One videogame	One character	Closed questions	91
Data Sheet C	One videogame	Five minutes sequences of playthrough	Closed questions	32

Data sheet A aims to understand the general properties of each game; therefore, the unit of analysis is the game itself. It is composed of a series of open questions arranged in two macro-categories, borrowed from the scheme for the content analysis of violence in games proposed by Malliet (2007). The first category is called “elements of representation” and it aims to identify the general themes of the games and their leanings towards violence and gender relationship representation, both from a narrative and a graphical point of view. The second category is called “elements of simulation” and it analyzes how the structure of the game’s rules guides and rewards the player. This scheme is particularly useful because it allows an efficient way of grouping what Fernandez-Vara (2019) calls formal elements or “building blocks” of a game along two well-differentiated axes. The two categories and subcategories are shown in Table 2.

Table 2. Categories and sub-categories of data sheet A

### Elements of Representation

Audiovisual style	Description of the audio-visual elements of the user interface. Regarding violent or sexual behavior, it focuses on the level of graphical explicitness and graphical detail.
Narration	Analysis of the plot, overall moral themes, and moral justifications that are given for characters’ behavior.



## Elements of simulation

Complexity of controls	Within this section, the mental and physical efforts are analyzed that are required of a player to interact with the game program successfully and efficiently. Included here are the commands a player disposes of, and the out-of-game information that is given about the goals and missions of the game.
Character and objective structure	Within this section, there is a focus on the character and objective systems that have been elaborated. More specifically, the complexity of these systems is investigated, as well as the ideology that is hidden in the rewards a player is given.
Balance between user input and pre-programmed rules	This section addresses the issue of how much freedom of action players are granted, or in other words, to what degree players are obliged to follow a pre-programmed sequence of events, and to what degree they have the liberty to exercise an influence on the action that takes place.

On the other hand, data sheets B and C are composed mainly of closed questions which are designed in order to allow a statistical analysis of the answers. Both the data sheets are organized following the principles expressed by Losito (2003) in his presentation of the “content analysis as an inquiry” model. This model proposes to consider relevant elements like characters of a piece of fiction as respondents to a standardized survey. The data gathering tools employed are superficially similar to the survey questionnaire but do not need to take into account problems created by the interaction between humans like social desirability. This allows more freedom for the researcher to create categories of items related to the analyzed themes and organize them in a logical order.

In deciding the units of analysis for these two data sheets the research follows the direction of Gerbner et al. (1979) who suggest privileging the technical dimension of recognizability over articulation of the units’ definitions. In other words, an element of the text is considered a unit only if it can be recognized as such on the basis of precise predefined rules; these rules are devised in order to exclude the more ambiguous cases and thus to improve reliability. Gerbner and his collaborators employed

this principle in their research by deciding to consider only the actions of physical violence as a unit, thus excluding the more ambiguous identifiable instances of psychological violence.

The analytical units of data sheet B are the characters of each game. The characters are considered such only if they present two traits: a distinct polygonal model which is not used for any other role and at least one line of dialogue spoken during at least two different scenes of the game. On one hand, this division allows to consider significant characters who have an impact on the plot but mainly act offscreen; on the other, it helps in identifying and ruling out the walk-ins who may have some lines or do some meaningful actions but are not characterized enough to be useful for the analysis. Data sheet B includes 8 categories of items which are shown in table 3.

*Table 3: Categories of data sheet B*

Socio-demographic Traits	Race, gender, profession, and other basic traits of the character.
Narrative Traits	Role of the character in the plot, faction of belonging, and other information regarding the character's narrative arc.
Personality Traits	Information regarding the character's personality is usually expressed on a scale between one and four.
Character Appearance	Information regarding the aspect of the character and its potential sexualization.
Overall World Views	Information regarding ideas of the character regarding politics and other aspects of social life.
Violent behavior	Information regarding the character's potential use of violence as a tool to solve conflicts.
Sexist behavior	Information regarding potential sexist or homophobic behavior of the character.

Since several items refer to the overall behavior of characters who appear on screen for hours, they are designed in order to give an average idea of the overall tendencies of the character. An example of this approach is the following item:

*53) Character violence is portrayed as justified.*

*1 Never – 2 Occasionally – 3 Often – 4 Every time*

In this kind of item, I opted for 4 possible answers; “Never” and “Always/every time” represent the two possible extremes of characters represented with absolute and almost nondimensional consistency. “Occasionally” indicates that the trait registered by the item is at times shown but it is not preponderant in the character depiction. Conversely, “Often” indicates that the trait is very much associated with the character, but it does not define them completely. I preferred employing an even rather than an odd number of options because it forces the coder to reflect carefully on the answer rather than using the middle answer as a loophole to solve difficult cases.

Lastly, the unit analysis of data sheet C is represented by sections of the game. In the original draft of the research design research, I planned to differentiate between gameplay and cutscene sections. However, the distinction between the two is extremely blurred in Naughty Dog games, and some heavily scripted sequences of gameplay result in a problematic fit in this rigid dichotomic categorization. For this reason, I opted to decide on a fixed temporal size of the game sequences. In the first tests, I tried to divide the playthroughs of the games into ten-minute sequences; however, a ten-minute interval proved to be too long for the rhythms of the games and too many different events were crammed into a single observation. Therefore, I finally decided to divide the games into five-minute sequences. The questions in this data sheet C are divided into three main categories and revolve mainly around the kind of cast who appear, which actions are represented, and how violence or sexual content is represented. A brief recap of the categories of the data sheet is shown in Table 4.

*Table 4: Categories of data sheet C*

General information	Cast related information, a brief account of the main actions represented in the sequence.
Violence	Information regarding the potential presence of violent behavior and its characterization.
Sexual content	Information regarding the potential presence of sexual behavior and its characterization.

Contrary to data sheet A which is supposed to gather a broad amount of general information about every game in order to have a general exploration of its important themes, the more quantitative nature of data sheets B and C require them to be developed in order to verify a set of more specific falsifiable hypotheses.

In designing the data sheets, I used as a compass the following list of research questions:

1) Gender relationship representation

*R1: Does Naughty Dog games represent women as narratively marginal?*

*R1.1: Are female characters more likely to be shown as victims of violence or trauma?*

*R2: Do Naughty Dog games represent women as objectified bodies?*

2) Violence representation

*R3: Do Naughty Dog games employ moral disengagement strategies to represent violence?*

*R3.1: Among the moral disengagement techniques proposed by Hartman, which are the most employed by Naughty Dog?*

Using these research questions as a starting point three main concepts were operationalized: Moral disengagement, violence representation, and sexist representations.

While the words “violence representations” are instinctively easy to understand, it is much more difficult to create a precise definition of which behaviors are included within this definition. When a character shoots a gun or stabs someone with a knife it is easy to identify the episode as violent, but the borders of the category are extremely muddy. It is much more difficult to identify precisely the exact moments when systemic violence is happening or when subtle psychological violence is enacted. Due to this reason, these topics are faced in data sheet A where the open question format allows to reflect more broadly about what is going on in the game and to follow the example set by the *Cultural Indicators* (Gerbner et al. 1979) in focusing on explicit actions undertaken by the characters on screen. The concept of violence representation is divided between verbal and physical violence which are again divided into a few sub-properties according to the scheme presented in Figure 2.

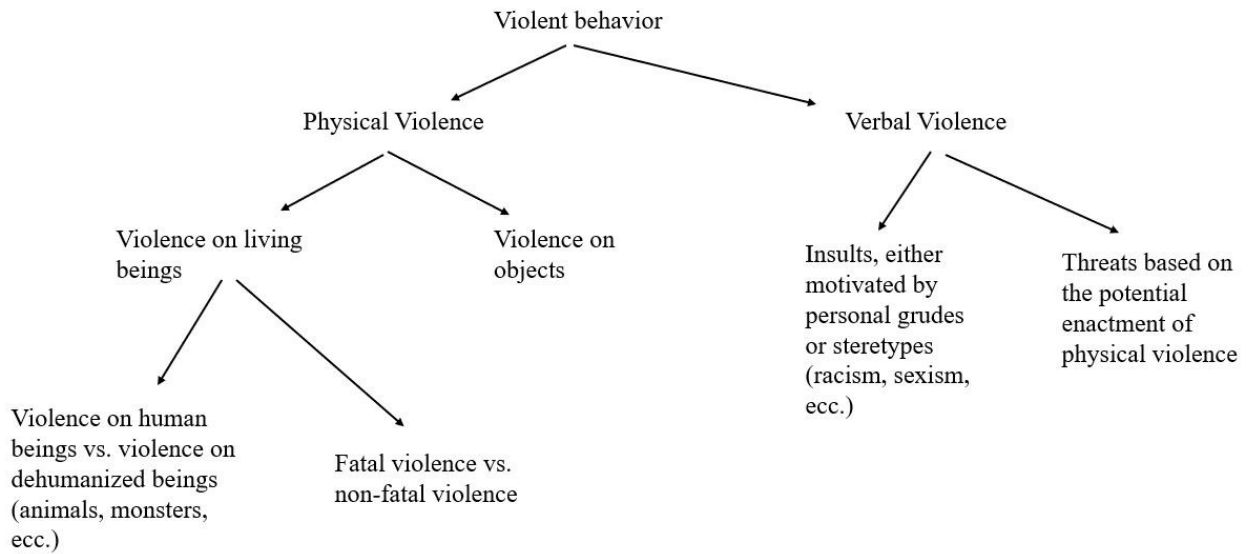


Figure 2: Violence representation sub-dimensions.

All the sub-dimensions shown in the figure are at the basis of the items in the “Violence behavior” category of data sheet B in order to create a profile for each represented character. On the other hand, in datasheet C is registered whether physical and/or verbal violence is present in each five-minute sequence and whether or not the consequences of physical violence on living beings and objects are portrayed.

Moral disengagement is a concept closely linked to violence representation and it refers to a model which attempts to explain why the enactment of virtual violence is enjoyable for the audience (Hartmann et al. 2014, Hartmann 2017). Starting from Bandura’s social-cognitive theory of moral thought (Bandura 1991) the model explains that virtual violence is enjoyable not because the players know that “it is not real” but because the structure of the games teaches them that what they are doing is not a moral transgression. Hartmann explains the functioning of the model in 4 steps:

- “1) Despite knowing otherwise [...], players automatically or intuitively perceive videogame characters as social beings who have "a mind of their own" while playing.
- 2) In general, the moral socialization of individuals involves the idea that social beings are deemed worthy of proper moral treatment. Accordingly, while playing, users may tend to automatically perceive videogame characters as beings worthy of proper moral treatment.
- 3) Improper treatment of videogame characters can violate player's norms and trigger empathetic distress and feelings of guilt. Guilt effectively diminishes enjoyment.
- 4) Videogames are entertainment products [...]. Violent videogames frequently embed moral disengagement cues that effectively frame the violence as justifiable. Accordingly, players tend

to enjoy videogame violence and related warfare scenarios (rather than feeling guilty or empathetic distress) because they are morally disengaged while playing” (Hartmann 2017, pp. 2).

Bandura (1991) identifies a series of factors that may be introduced in fictional scenarios and that may effectively as a trigger for cognitive moral disengagement. Some of the most easily identifiable of these factors are used as indicators of the game's attempt to morally disengage the player. These indicators are shown in Table 5.

*Table 5: Indicators of moral disengagement.*

Indicator	Explanation	Example
Moral justification	An otherwise reproachable violent act is interpreted as serving a beneficial purpose.	A character kills to save a friend or in the name of the greater good.
Advantageous comparison	An otherwise reproachable act appears more acceptable when compared to an even more morally debased act ostensibly committed by the victim.	A character kills soldiers who fight for an authoritarian regime.
Attribution of blame	Previous actions of the victims or specific circumstances make the violent action appear necessary or logically consequential.	The victims of a character’s violence attacked the character in the first place; therefore, the character is only reacting to someone else’s violence.
Distortion of the consequences	Potentially distressful consequences of an act are concealed or graphically distorted in order to propose a sanitized version of violence.	Victims of a character violence die instantly without screaming or begging for mercy and very little blood is shown.
Dehumanization	Victims are portrayed as not depository of basic human rights and/or interchangeable	Victims are zombies or mind-controlled and

	targets, rather than individuals with personalities.	therefore not real persons anymore.
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Items related to all five indicators are present in the “violent behavior” part of datasheet B (Items 64 to 73). Together they may be used to create an index of moral disengagement factors used in representing a specific character. In data sheet C moral disengagement is investigated using the items from 20 to 27.

The last necessary concept to operationalize is sexist representations in videogames. Like the previous one, this is an incredibly vast field, therefore. Following the main trends identified by Cote’s literature review (2020) and Downs and Smith's content analysis of videogame characters (2009), I decided to focus on three main categories: objectification of women’s bodies, stereotypization of women's personalities and women’s narrative marginality. Body objectification refers to the representation of people as commodities rather than persons, often with a strong emphasis on their potential as objects of sexual desire. Body Objectification is based on the idea that bodies, especially women’s, are always constructed through sociocultural practices and discourses (Fredrickson and Roberts 1997). Different cultures propose divergent ideas of what an “ideal female body” looks like, and by doing so they heavily influence the lives of the people who strive (and often suffer) in order to reach those ideals. However, acknowledging that bodies are sociocultural constructs, implies the necessity of situating any effort to detect body objectification within the boundaries of a specific cultural context:

“Although our goal is to theorize about sexual objectification as it applies to all women, we recognize that much of the empirical literature that we use to buttress our theorizing has overlooked diversity among women, focusing almost exclusively on White, middle-class girls, and women... Some caution is warranted when extracting from this uneven empirical base to understand how sexual objectification factors into the lives of diverse subgroups of women” (Fredrickson & Roberts, 1997, p. 175).

Loughnan et al. (2015) empirically test this assumption and discover that the underestimation of sexualized targets as rational and intelligent persons is stronger in “Western” countries, like the US, Australia, or Italy, compared to countries with a different cultural heritage like India or Japan. In this research, since evidence of Cultivation Effect is searched on an almost completely Italian population, I opted to focus on a more “Western” idea of body objectification. The indicators therefore focus on oversexualization of female bodies, especially regarding two potential aspects suggested by the feminist critic Anita Sarkeesian in the second season of her video-essay series *Tropes vs Women*

in *Videogames*. On one hand, they look for representations of unrealistic body shapes, like exaggerated large chest or extremely thin waist<sup>16</sup>; on the other, they try to detect when characters are dressed in needlessly revealing clothes which results inappropriate for their role within the storyline<sup>17</sup>. A set of items referring to this body objectification can be found in the “character appearance” section of data sheet B, and in particular items from 39 to 43 may be the basis for an index. Women characters also tend to be overrepresented in being characterized by stereotypically “girly” traits like excessive ingenuity, optimism, and sensitivity compared to male characters who are more usually allowed to develop complex personalities. A battery of personality traits-related items inspired by Losito’s research on TV series characters (Losito 2003) is present in the “personality traits” part of datasheet B (items 23 to 35). Lastly, narrative marginality indicates the fact usually videogames plots contain very few female characters, and these few characters tend to have either marginal narrative arcs or fall into problematic tropes. Items designed to measure the narrative marginality of female characters are present in both the “narrative traits” category of Datasheet B and the “general information” in Datasheet C.

## 3.2 Data Gathering Process

As was introduced in the previous chapter, an important issue in the act of gathering data for a content analysis project regarding games is represented by the fundamental differences existing between ludic objects and other products like movies or books which imply a less interactive fruition. In Juul’s characterization of video games as formal systems (Juul 2005), significant emphasis is placed on the notion that games are comprised of rules. These rules demand some dedication from the player in order to face and beat the obstacles proposed by the game software. According to Juul, the analysis of games must not overlook the aspect of actively engaging with the game rules and investigating the affordances generated by these rules’ interaction, in addition to scrutinizing the visual representations or the unfolding storyline. Other significant literature on the subject underlines the importance of this concept. In order to understand how games work and to account for a significant amount of the possible imagined affordances, researchers should also engage themselves with the original material and live the gameplay experience in the first person (Mortensen 2002, Frasca 2003, Mäyra, 2008).

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<sup>16</sup> [https://www.youtube.com/watch?v=qbqRtp5ZUGE&list=PLn4ob\\_5\\_ttEaZWiyCx7VKiFheMSEp1gbq&index=4](https://www.youtube.com/watch?v=qbqRtp5ZUGE&list=PLn4ob_5_ttEaZWiyCx7VKiFheMSEp1gbq&index=4)

<sup>17</sup> [https://www.youtube.com/watch?v=jko06dA\\_x88&list=PLn4ob\\_5\\_ttEaZWiyCx7VKiFheMSEp1gbq&index=7](https://www.youtube.com/watch?v=jko06dA_x88&list=PLn4ob_5_ttEaZWiyCx7VKiFheMSEp1gbq&index=7)



Kücklich (2002) moves the issue even further by highlighting that the act of playing a game inevitably exerts an influence upon it. He maintains that in order to truly comprehend a game, one must engage in playing it, which entails making active choices that may differ from those of other players or researchers. Kücklich arrives to assert that there is no such thing as an ideal player, as games inherently grant players the freedom (and necessity) to exercise creativity within the confines of the game's rules. Consequently, one cannot fully grasp the meaning embedded within a game without taking into consideration the specific nuances of the player's context.

As explained in the previous chapter, a broad conceptualization that attempts to include all the possible difficulties of analyzing games is the notion of “irreducibility” (Juul 2005, Malliet 2007). It indicates a series of potential aspects (player idiosyncrasies, game modules, modifications, add-ons, hardware-software relationships, ...) that influence the final form of the gameplay experience. These aspects either change the game rules or constitute an ulterior element in the interaction between players and the hardware of the game. These possible sources of confusion were taken into account in selecting the games for this research. All the selected games present a linear storyline that is meant to be followed by the player without deviations and can be completed on average in ten to fifteen hours of gameplay. This allows a researcher to play the game and analyze playthrough videos of each title in a reasonable amount of time. Moreover, Naughty Dog develops games that can be played only on one kind of hardware: Sony's PlayStation; this means that all these software were developed in a similar manner and are meant to be experienced on the same kind of machine with the same kind of gamepad.

Regarding “the human component of gaming” it is important to keep in mind that different players with different backgrounds, habits of play, interests, and so on interact with games differently. Games are complex systems in which an individual's playstyle may not exhaust all the possible affordances, even in the case of remaining within the relatively small boundaries of a dominant approach to decoding. A possible way to solve this issue is by turning the data-gathering process into a collective process in which a team of coders analyzes the selected games.

Jørgensen (2012) suggests that players could act as co-researchers in this phase of the research, as their expertise may be beneficial in reaching a deeper understanding of the considered games.

“By letting the experiences and interpretations of other players shed light on the research object, the researchers are not limited to their own interpretation alone and may get a more extensive picture of how specific game features affect gameplay” (Jørgensen 2012, p. 380).

This form of collaboration is based on what may be called a “meaning-making partnership” (Hesse-Biber & Leavy, 2006) in which both the researcher and the involved players are active participants, and interpretations are discussed and evaluated collectively.

In this research, I collaborated with two players and each of them helped me in dealing with one of the considered franchises. They were selected with the objective of including players with different gaming habits and educational backgrounds in the project in order to account for different approaches to gameplay and qualitative interpretation. The first co-researcher is a habitual player with no academic background, while the second is a casual player with an academic educational background. I complete the picture with my profile of a habitual player with an academic educational background.

Both players had a general knowledge of the overall topic of the franchises, but they had not played yet with the selected games. At the beginning of our collaboration, I introduced them to the theoretical framework employed by the research and explained how to fill the datasheets. Before starting, we also ran through all three data sheets in order to find a common interpretation of the concepts that are proxied by the items and the exact significance of the various possible answers to the closed questions. Since I designed both the research and the questionnaires, I provided a framework and the foundation concepts for the discussion, however, we tried to reach a conclusion by consensus rather than vote.

Due to the fact that playing four different games requires a sizeable amount of time, I was the only one to complete all of them while each of my two collaborators focused on one franchise playing two games in total. The data-gathering process for each game was organized through a few subsequent steps. First of all, we played a full run of the game, usually taking notes during the journey. After this, we filled out data sheet B and compared the answers.

Once this first step was complete, we used complete video playthroughs of the game available on YouTube to fill data sheet C. These videos are already edited in order to exclude several attempts to beat the same level and they present a smoother experience to the audience. This helped in finding an “ideal duration” for each playthrough and completing the coding process within a reasonable time schedule. A complete list of the videos used for the coding procedure is available in the references. In this case, the workload was equally divided between me and the involved players/collaborators. We cut the videos into (more or less) one-hour sections and randomly assigned the same number of sections to each of us in order to not code only the end or only the beginning of the game. Both in the case of data sheets B and C, after coding the first groups of cases we had a common discussion in order to revise the questionnaire and improve intercoder reliability. Some clunky items were discarded or modified, and a few were added to cover what the group perceived as gaps in the data sheets. A brief table regarding the datasets produced throughout the application of data sheets B and C can be seen in Table 6.

Table 6: Size of the produced datasets divided for each game.

	Data Sheet B	Data Sheet C
Uncharted 2: Among Thieves	10	77
The Last of Us	14	140
Uncharted: Lost Legacy	5	81
The Last of Us: Part Two	19	236
Total dataset	48	534

Finally, once data sheet C coding was complete, we discussed the open questions of data sheet A and agreed on the main points of the answers to each question which I subsequently proceeded to compile.

Since the process included only three coders, the situation did not allow a satisfactory use of quantitative techniques for estimating intercoder reliability. However, as suggested by the guidelines redacted by MacPhail et al. (2016), we approached intercoder reliability as a qualitative process of review and refinement. During the process of data gathering, we compared our results, and discussed the definitions and the proper way to interpret questions and answers to ensure consistent interpretation among coders. In doing so we always kept in mind the fact that the aim of message-system analysis is analyzing the dominant decoding of the considered games; therefore, we referred to paratexts like official websites, wikis, and interviews with the developers when some issues appeared unclear or ambiguous. While this obviously does not guarantee that we managed to capture the exact meanings that the developers tried to convey, it should help the accuracy of the research.

It is important to keep in mind that this model of data-gathering organization, while useful presents some important limits. Firstly, while the involvement of two other persons reduces the problems related to the necessity of intersubjectivity in content analysis, the number of collaborators involved is quite low. This decision was motivated by the necessity of keeping the data-gathering process within a reasonable time schedule. However, the small dimension of the group allowed a smoother organization of the data gathering process and it ultimately allowed to valorize the inputs of the involved players. The second issue is related to the fact that both players had relatively little experience with content analysis and research activity. This is a common issue in all research that aims to employ figures external to the academic world as collaborators, but it is counterbalanced by the expert insight regarding the field of study provided by the collaborators.

## IV. MESSAGE-SYSTEM ANALYSIS

This chapter covers the analysis of the data gathered and organized according to the methods and techniques exposed in the previous chapter. The chapter is organized following the two themes of gender issues representation and violence representation. Each topic is initially explored through a quantitative lens and then further analyzed qualitatively. The chapter closes with some concluding remarks which lay the basis for the second part of the research (Cultivation Analysis) where the relationship between the analyzed media and the audience is addressed. In this chapter the last three steps of Krippendorff's content analysis (2004) are employed: reducing the data in order to make them more easily accessible, inferring from the data, and narrating the results.

### 4.1 Gender Issues Representation

#### 4.1.1 Quantitative Analysis

The first analyzed topic is gender issues representation, according to the previously introduced research questions. The chapter proposes again all the different questions and tries to give them an answer.

*R1: Does Naughty Dog games represent women as narratively marginal?*

All the analyzed games show their worlds through a "third person point of view". The camera is placed above and behind the shoulders of the protagonist. The character impersonated by the player is always both literally and figuratively at the center of the stage. Since this character has such a great influence over both the narrative and ludic aspects of the games, it is an obvious first choice when looking for narrative marginality. Looking at the considered games, the controlled character is always a man in U2, most of the time a man in TLOU 2, and almost exclusively a woman in ULL and TLOU2. Before looking at the implications of this aspect, it could be interesting to slightly enlarge the scope of the considered details: which people are interacting with these protagonists?

Table 7 shows the cast composition of each of the recorded 5-minute sequences.

Table 7: Relative frequencies of cast composition for each 5-minute sequence of each game.

Gender composition in the sequence	U2	TLOU	ULL	TLOU2
All men	27,27	5,71	0	0
Mostly men	61,04	47,86	5,19	5,24
Mixed	11,69	31,43	12,99	64,11
Mostly non-men	0	7,14	15,58	9,68
No men	0	7,86	66,23	20,97
Total observations	77	140	77	248

The table indicates how, similarly to the choice of protagonist, U2 and TLOU present a mostly male cast: in U2 almost 90% of the sequences show only or mostly men; the same happens in 53% of TLOU scenes. On the other hand, ULL sports a mostly female cast and shows no men in 66% of its overall content. TLOU2 seems to be the most balanced game where 64,11% of the sequences include a mixed cast.

Both the playable characters and the broader cast choices suggest an evolution over time in Naughty Dog works. The older games (U2 was released in 2009 and TLOU in 2013) are mostly male-populated games. ULL (2017) is the opposite of the previous two, and the more balanced TLOU2 was released in 2020.

However, the mere presence of female characters in a work of fiction is not enough to assume that they have an actual weight in the overall narration. A classic example of this situation is represented by the *Lord of the Rings* movie trilogy. While the franchise includes both female and male characters, it happens only once across 12 hours of movies that two women talk to each other. The discourse is only one line spoken between two walk-ins, a mother and her child, which held no real influence on the overall plot.

A useful tool for measuring the active presence of women in a text is the Bechdel test (or Bechdel-Wallace test). A work of fiction passes the test if:

- 1) At least two women appear.
- 2) They talk to each other.
- 3) The content of the dialogue is not related to any man.

The test is named after the American cartoonist and trans-feminist activist Alison Bechdel, who introduced it in 1985 within her weekly comic strip *Dykes to Watch Out For* (Figure 3). After the test became more widely discussed in the 2000s, a number of variants and tests inspired by it emerged.



Figure 3: First formulation of the Bechdel test in the comic strip "Dykes to Watch out for" (1985)

The test started as "a little lesbian joke in an alternative feminist newspaper" according to Bechdel herself, but it gained more and more success over the decades. It inspired a series of other quantitative tests regarding the topic of representation (like the Vito Russo test about LGBTQ+ representation or the "Duvernay test" about BIPOC people's presence in movies), it has been widely adopted by movie critics and it is usually used in marketing research since it appears that succeeding movies have a higher average gross revenue than the failing ones<sup>18</sup>.

However, it has to be considered that the test has some serious limitations. It primarily assesses the representation of women within a fictional work, but it does not guarantee the absence of sexist elements. A piece of fiction can meet the test's criteria while still harboring sexist undertones. Conversely, a work that prominently features female characters may not meet the test's requirements. There are various reasons why a work might not pass the Bechdel test that is unrelated to gender bias. For instance, the story's setting may inherently limit opportunities for female interaction, as seen in *The Name of the Rose* which unfolds within a medieval monastery. Additionally, some works may have a limited number of characters overall, making it challenging to introduce conversations between women, like in the movie *Angel's Egg*, where there are only two named characters in the entire plot.

<sup>18</sup> <https://www.vanityfair.com/hollywood/2018/12/female-led-films-study> or <https://shift7.com/media-research>

Keeping in mind these limitations, the test is a useful and easy-to-measure tool for analyzing narrative marginality. In this research, the test was employed on each 5-minute sequence in order to add granularity and depth to the measurement. The results are shown in Figures 4, 5, and 6.

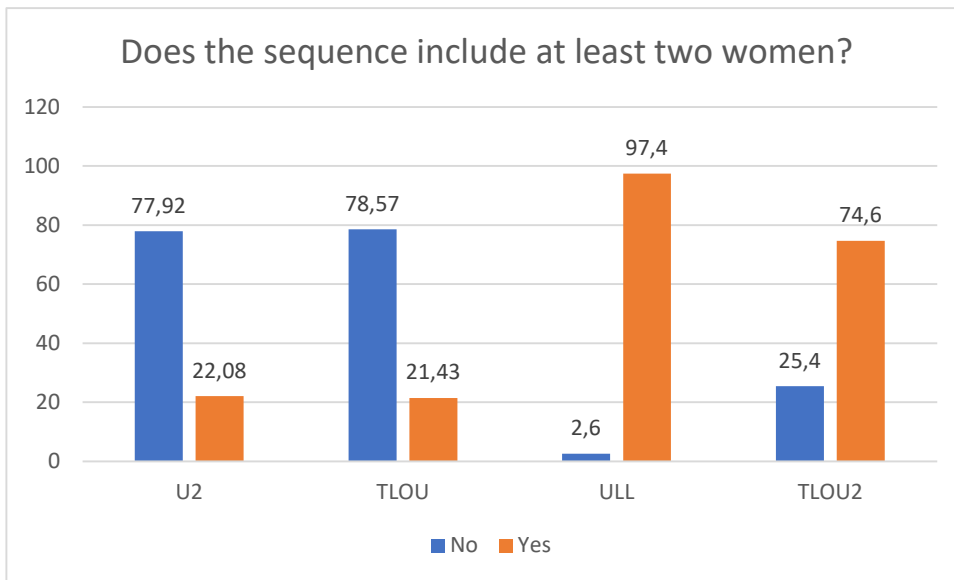


Figure 4: Relative frequencies of the answers to the first question of the Bechdel test grouped by different games. N=542

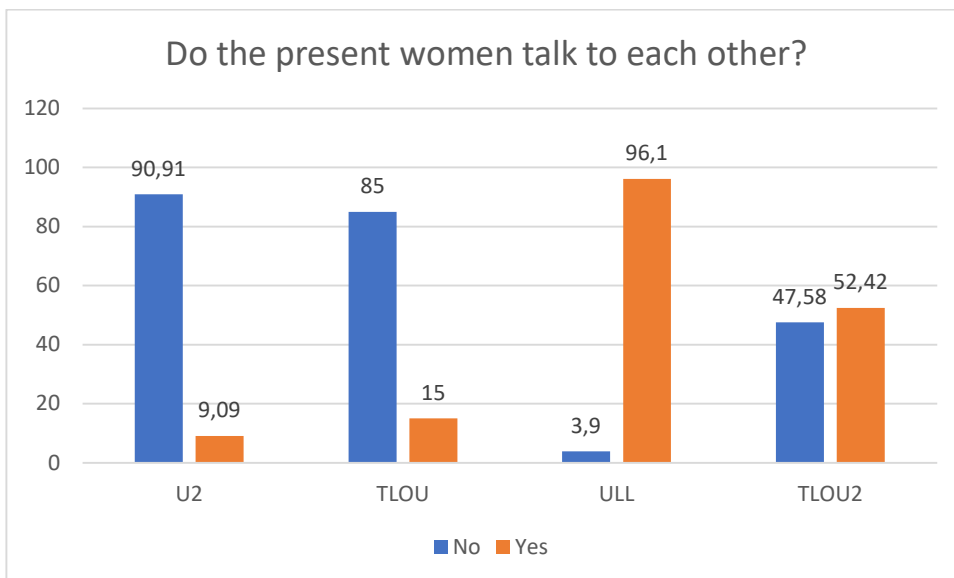


Figure 5: Relative frequencies of the answers to the second question of the Bechdel test grouped by different games. N=542

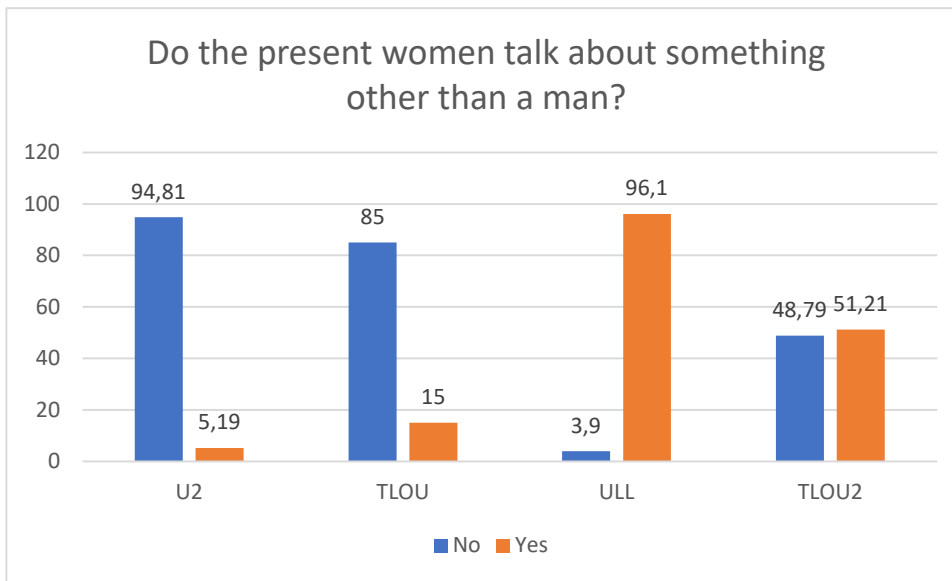


Figure 6: Relative frequencies of the answers to the third question of the Bechdel test grouped by different games.  $N=542$

The results of the test seem to confirm the previously identified trend across all three questions. U2 and TLOU still appear strongly male-dominated; it appears that women talk about something other than a man happens in only 5% of U2 sequences. Likewise, ULL confirms its trend as it passes the test in about 96% of its sequences and TLOU2 gives more balanced results. The results seem to suggest that while Naughty Dog tended to consistently represent women as narratively marginal in the past, this approach changed over time, and it is not that prevalent anymore in the games developed by the company. It is interesting to notice that the games where women see less representation were published before Gamergate<sup>19</sup>, which started in 2014 and reached its peak in 2015, while the ones where female protagonists and a more diverse cast were released after the event. This coincidence may suggest that the company changed their storytelling practices and the kind of characters they represent but without a study of their productive and decision-making processes, it is impossible to prove such a statement.

Moving from the point of view of the overall narration to one of the represented characters, the analyzed games represent 32 male characters and 16 female ones. Since the considered games are different installments of the same two franchises, some of the characters appear across different texts. This created the issue of deciding whether to group all the traits and interactions of the same character across different stories in a single variable or not. In the end, I opted for creating different variables for the same character appearing in different games. I believe this decision is the most appropriate for analyzing each game as a complete and meaningful piece. A player may experience only one of the

<sup>19</sup> See chapter 1.



franchise’s games and therefore the represented characters have sense only within the context of that single narration. This separation also allows to decompose different roles that may be played by a character in different installments of a franchise, giving therefore more clarity regarding the functioning of each story.

In order to understand the narrative centrality of the characters it is useful to understand their role within the economy of the plot. Are they major or supporting characters? Which organizational roles do they tend to perform? The answers to these questions are shown in Tables 8 and 9.

*Table 8: Gender-relative distribution of major and supporting characters.*

	Major Character	Support character
Male	50	72,22
Female	50	27,78
Total observations	12	36

*Table 9: Gender-divided relative distributions of organizational roles of the characters.*

	Leader	Lieutenant	Goon
Male	63,64	90,91	53,85
Female	36,36	9,09	46,15
Total observations	11	11	13

The tables show that, even if the number of male characters is two times the number of women, there is substantial parity in the division of main roles. On the other hand, when the role of characters within an organization is considered the picture changes dramatically. Of the characters represented as leaders of some organization only 36% are women and the percentage decreases in the case of the middle roles. These data suggest a somewhat mixed picture: women can be protagonists, but they also tend to be represented in the lower ranks of fictional organizations, regardless of whether the organization is a group of treasure hunters, a rebel army, or a pack of survivors.

In order to delve deeper into the picture, it is interesting to note whether the represented characters own a narrative arc (or story arc). A character’s arc refers to the evolution or inner voyage of a character throughout the narrative. In stories featuring character arcs, a character starts as one type of individual and gradually transforms into a different persona in response to evolving plot elements. Narrative arc may have a series of traits but what is important for this research is whether they are autonomous or subordinate. The difference between the two is represented by the fact the latter is a character arc whose main goal within the structure of the plot is creating a condition for the evolution

of another character arc. Therefore, is a subordinate arc in the sense that the journey of a character is introduced (among other reasons) in order to advance another character's storyline. The distribution of narrative arcs in the analyzed games is shown in Table 10.

Table 10: Relative distributions regarding the presence and type of characters' narrative arcs.

	Male	Female
Narrative arc presence		
No	43,75	18,75
Yes	56,25	81,25
Total observations	32	16
Narrative arc autonomy		
Subordinate arc	81,82	55,56
Autonomous arc	18,18	44,44
Total observations	22	9

The table shows that female characters represented in Naughty Dog games tend to have their own story arc much more frequently than male characters. Still, this observation is balanced by the fact that many more secondary characters happen to be male (as previously seen). Delving deeper, the data show that female characters' narrative arcs tend to be more significant than the male ones as they have a higher percentage of autonomous narrative arcs (44% against 18%).

*RI.1: Are female characters more likely to be shown as victims of violence or trauma?*

A very common end for a story arc is a tragic event happening to a supporting character which has deep consequences in a main one's storyline. It is a narrative device as old as Western civilization since it is already in the *Iliad*: the hero Achilles returns to the war as a consequence of his regret regarding the death of his friend/lover Patroclus. A particular version of this concept is called "Woman in the refrigerator syndrome". The name refers to a recurring pattern in literature where female characters endure harm, sexual assault, death, or disempowerment (a situation informally referred to as "fridging") in order to shock the audience and advance a main character storyline. The expression was created by the writer Gail Simone, and it refers to an infamous issue of the superhero comic *Green Lantern*, shown in Figure 7. In the story, the antagonist brutally kills the hero's fiancé. When the hero returns home, he finds the body of the girl dismembered and preserved in the fridge. As shown in the picture, the entire sequence is seen from the point of view of the man. The story explores

only the consequences of the murder on his sense of guilt and as a tool to escalate the tension before the final showdown between the two male characters. Several critics, like the Anita Sarkeesian<sup>20</sup>, argue that this narrative device is quite often employed in videogames.



Figure 7: Green Lantern, vol. 3 #54 (1994)

<sup>20</sup> [https://www.youtube.com/watch?v=toa\\_vH6xGqs&list=PLn4ob\\_5\\_ttEaA\\_vc8F3fjzE62esf9yP61&index=2](https://www.youtube.com/watch?v=toa_vH6xGqs&list=PLn4ob_5_ttEaA_vc8F3fjzE62esf9yP61&index=2)  
47



From a quantitative point of view, the picture does not seem to be completely straightforward in this case, as seen in Table 11.

*Table 11: Relative distribution of traumatic events and murders happening to represented characters.*

	Male	Female
<b>Traumatic event victim</b>		
No	53,13	25
Yes	46,87	75
Total observations	32	16
<b>Violently killed</b>		
No	34,38	56,25
Yes	65,63	43,75
Total observations	32	16

The female characters seem to be much more represented as victims of traumatic events, as literally only one in every four women is spared this fate. On the other hand, male characters seem to face a violent death more often than female characters (whose percentage is still quite high).

In conclusion, Naughty Dog has a story of representing women in narratively marginal roles. They also tend to be represented as victims of traumatic events quite more than their male counterparts. On the other hand, there has been a clear trend toward a more sensitive and equilibrated representation during the last years.

*R2: Do Naughty Dog games represent women as objectified bodies?*

Another important proxy of the gender relationship representation within a work of fiction is represented by the objectification and sexualization of the represented bodies. What kind of gaze these representations are meant to satisfy? Are the characters at least believably equipped for their supposed occupations or are they dressed only to create a fanservice effect<sup>21</sup>?

The videogame industry has a long history of representing female characters as overly sexualized bodies. This trait does not exclude that a female character may be shown as competent or owner of a

<sup>21</sup> The word “fanservice” indicate the inclusion in a work of fiction of material, often sexual in nature, such as nudity, intentionally added to please the audience in a cheap and effortless way. The original version of the term referred to Japanese entertainment, especially manga and anime, but it has spread since in other jargons and media.

deep and complex personality, but it implies an idea of the gaming world where a woman in order to be appealing must also be sexually alluring. A good example of this trend is shown in Figure 8 where two of the protagonists of the popular espionage game *Metal Gear Solid V: The Phantom Pain* (2015) are represented.

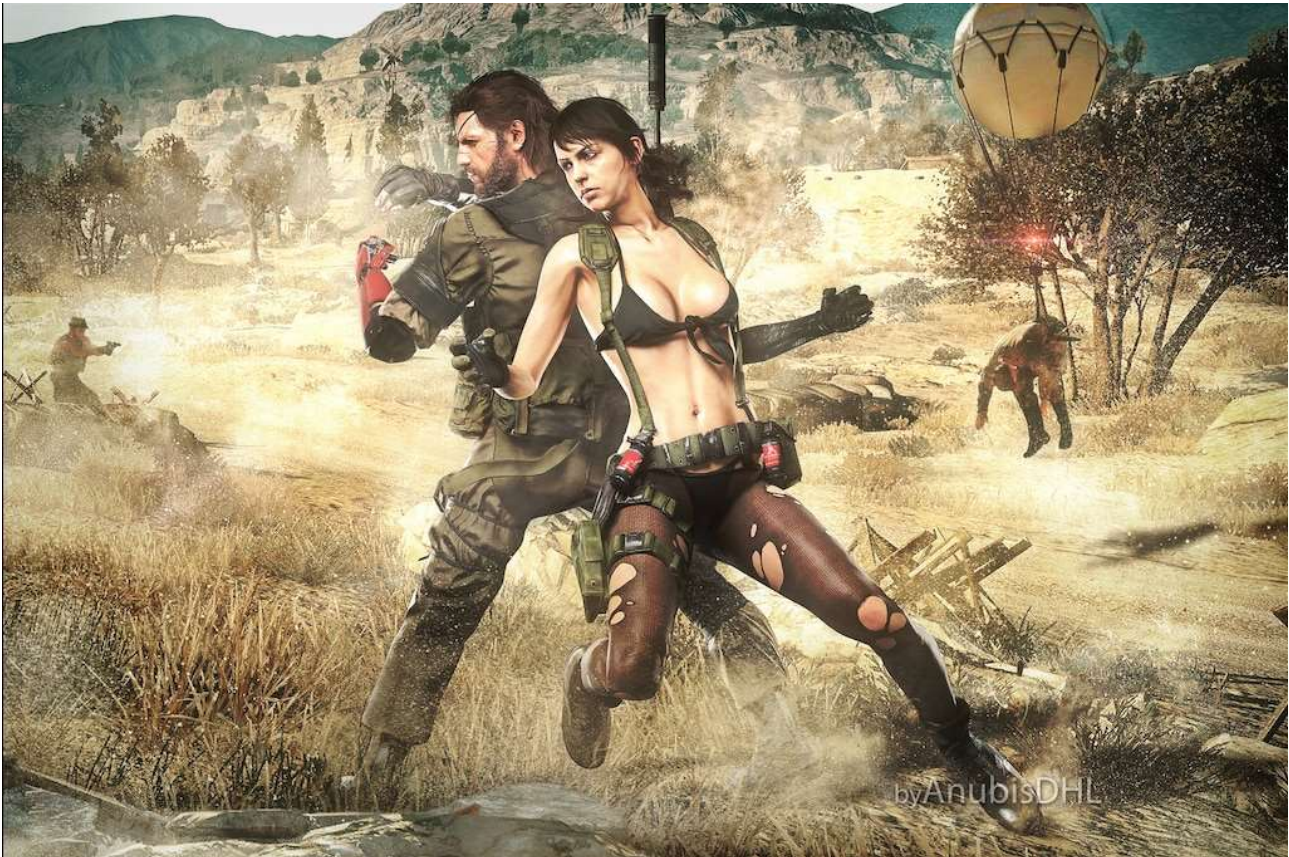


Figure 8: Characters of *Metal Gear Solid V: The Phantom Pain*.

Both represented characters are depicted in the narration as extremely dangerous soldiers and operatives. However, only one of the two is shown fighting and moving through the most dangerous warzones dressed in little more than undergarments.

Table 12 shows various measures of body objectification of characters in the analyzed games. The first variable identifies the frequency of appearance in provocative and objectifying clothing rather than just whether it happens or not, in order to avoid cases where a specific attire is used in only one scene. In this case “objectifying clothing” indicates when women characters are dressed with overly revealing clothes (extremely short pants, very low-cut neckline, ...) compared to the male characters either present in the scene or presented as part of the same organization. The second variable measures the extent to which a character is usually shown dressed and equipped in a sensible way given its occupation. Paying attention to this detail also gives a measure of whether a character is shown as a

serious professional or as a comic relief. The last variable indicates whether the overall body anatomy of the character is realistic or bent to create an exaggeratedly sexualized appearance.

Table 12: Relative distribution of body objectification measures, divided per gender.

	Male	Female
<b>Provocative clothing</b>		
Never	96,88	81,25
Occasionally	3,13	12,5
Often	0	6,25
Always	0	0
Total observations	32	16
<b>Clothing appropriateness</b>		
Never	0	0
Occasionally	0	0
Often	6,25	6,25
Always	93,75	93,75
Total observations	32	16
<b>Body objectification</b>		
No	96,88	87,5
Yes	3,13	12,5
Total observations	32	16

The data show that Naughty Dog tends to represent characters with little body objectification and most times appropriately dressed and equipped for the situation they are supposed to face. However, when body objectification or provocative dressing happens, the female characters are still the prime candidates compared to their male counterparts.

#### 4.1.2 Qualitative Analysis

While the quantitative data creates an overall picture of the messages and representations proposed by Naughty Dog over more than ten years, the qualitative content analysis of the games can delve deeper into the discovered trends and try to figure out what the previously exposed number truly signifies. This section of the analysis is based on the answer given to data sheet A (see previous

chapter). This part of the chapter is analyzed around the same two macro-themes seen during quantitative analysis: narrative marginality and body objectification.

### *Narrative Marginality*

The previous paragraphs showed how narrative marginality is still present in Naughty Dog games. However, the trend changed and partially declined in some of its aspects during the years, creating thus a complex picture. This paragraph tries to disentangle this complexity by focusing on some narrative mechanisms proposed in the analyzed games.

The first mechanism considered is the “damsel in distress” trope. The expression indicates a narrative device a woman gets kidnapped or placed in serious peril and is rescued by a man. The “damsel” has no way to influence her own destiny or protect herself and it is usually represented only as an oppressed creature who moves from the tyranny of her abductors to the “benevolent care” of her savior. Critics have always linked this trope to broader societal views which see women as unable to be responsible for themselves. Women in this narration can be compared to assets that must be recovered after a theft, rather than complete human beings.

This narrative cue has always been popular in the videogame industry. It was already present in *Donkey Kong* (Nintendo 1981), one of the first platform games ever. The game features the debut of the plumber Mario, at the time only named “Jumpman”, who will proceed to become one of the most popular videogame characters of all time, tasked with saving a girl known only as “Lady” from a violent gorilla. Figure 9 shows how the only traits of this girl are her handsomeness and her need for external help. This basic narrative structure has been repeated for more than 20 games of the same franchise with some minor tweaks here and there.



Figure 9: Screen from the videogame Donkey Kong (Nintendo 1981).

In the analyzed videogames the trope seems to appear, especially in the older games but without having a central importance within the overall narration. In U2, the chapter “A train to catch” is kickstarted by the kidnapping of Clohe (a treasure hunter and protagonist of ULL) by the villains and the decision of Drake (the protagonist) to go rescue her. In TLOU as well, during chapter 6, both Ellie and Maria (the wife of the protagonist’s brother) are trapped and are saved by a team guided by Joel and Tommy (the protagonist’s brother). In this sense both the men get to “save the woman they are responsible for”.

However, apart from these examples, the trope is more often used to emphasize the callousness and amorality of the villains. In U2 when Drake, Clohe, and Elena (Drake’s girlfriend) by Lazarevic, the stereotypically post-soviet warlord who serves as the villain of the story. Lazarevic forces Drake to cooperate threatening Clohe and Elena and asking the protagonist to choose which one of the two had to be “used as a lesson” and which one as an “incentive”.

The same game later in the story subverts the trope, since when Drake finally to find Clohe she has already freed herself and she states she “never asked for any of his bloody heroics”, putting herself out of the “damsel in distress” dynamics.



In the more recent ULL Samuel Drake (brother of the other Drake) has the role of “damsel” in distress, who gets kidnapped and then saved by Clohe. This inversion of the roles is particularly interesting in the analysis of Clohe’s character. This suggests rather than the abandonment of problematic narrative devices, just an inversion of the mechanism which is defined as “Ms. male character”. This kind of character is defined by Anita Sarkeesian as: “feminized imitations or derivative copies of already established male characters. They exist only because of, and in relationship to, their male counterparts.”<sup>22</sup>

Clohe most of the time appears just as a female version of Nathan Drake, having the same treasure-hunting adventures, the same sarcastic sense of humor, the same damsels to save, and so on. The only difference is the gender identity and a slightly more sexualized appearance. This situation becomes even more pronounced in ULL, Clohe’s game as the protagonist, which is extremely focused on the father-daughter relationship. Both Clohe and Nadine (the co-protagonist) apparently maintain that they are moved by personal goals, but the narration gives the feeling that they are both trapped in fulfilling their fathers’ dreams. Even Clohe’s extensive knowledge about history is just shown as a by-product of her father’s job as an archeologist. Both women seem at times defined either in opposition or as a consequence of their fathers’ choices.

Father-daughter relationship is a recurring theme in Naughty Dog games, and it is the centerpiece of both TLOU and TLOU2 where it manages to avoid the pitfalls seen in the Uncharted franchise.

In TLOU2 both protagonists (Ellie and Abby) are motivated by the obsessive desire to avenge their murdered fathers. Said fathers, like the ULL ones, deeply influenced their daughters’ view of the world. On one hand, Ellie was educated by Joel who, even if he deeply loved and cared for her, was a very problematic figure. He proposed here a model of a macho and manipulative man. When Ellie discovers the extent of his lies, she initially reacts with disgust, but then she seems to come around them and understand Joel’s point of view. On the other hand, Abby’s father is presented as a caring and loving figure who is not afraid of admitting he is not a “strong man” and his need to be protected by others. At the end of the narration, only Abby manages to achieve some sort of happy ending, by stopping a needless quest for revenge, accepting her father’s death, and focusing on what could actually make her happy. She manages to step out of what she perceives as her father’s shadow and become a complete person.

The other common mechanism that can easily be deduced from this story is the frequent use of the “someone in the refrigerator” trope, especially in the Last of Us franchise which tends to narrate dark and emotively challenging stories. However, it is pretty difficult to find a specific gender bias here.

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<sup>22</sup> <https://www.youtube.com/watch?v=eYqYLfm1rWA>

TLOU has several examples of this mechanism usage. On one hand, Sarah, Joel's daughter, is in the story for just 15 minutes before she gets violently killed by a soldier. The main point of the character is creating trauma in Joel and justifying his growing attachment towards Ellie in the story. On one hand, the tragic end of the brothers Henry and Sam seriously traumatizes Ellie, and later on, she has to feed and tend to the wounds of the barely conscious Joel throughout the winter. While most of the women appearing in the game have a bad ending at the end of their journey the same could be said for most of the men. In this case, the abundant usage of this narrative device is tied to the narrative necessities of a grim story rather than a specific take on gender relationships.

The qualitative analysis shows a more balanced picture of the quantitative one. Characters seem to appear in the same narrative mechanisms regardless of gender, especially in the newest games. A trend in abandoning problematic narrative solutions seems to appear over time, even if it did not completely reach this objective, as the construction of the characters as a direct consequence of their father in ULL testify.

### *Body Objectification*

As seen in the quantitative analysis, the analyzed games do not seem to contain frequent body objectification of female characters. The one big exception is Clohe's profile in U2 who, despite her relevant role in the plot and strong character, has often been framed through a male gaze perspective, at least until ULL's release, her stand-alone videogame. This can be seen very clearly in different material regarding the character like her Wikipedia page which states that "Most critics have received Chloe Frazer positively, focusing on her strength and sexuality"; or the website GamesRadar which named Chloe "Miss 2009" of the "Sexiest New Characters of the Decade", defining her as "exotic and flirtatious". None of this insistence on the "sexual potential" of the character was found in the presentation of the male characters of the same game.

However, from TLOU onwards, opted for a very realistic representation of female characters which even earned them criticism from the gamers more used to heavily sexualized characters. These critics reached their climax after the release of TLOU2 focusing on the character of Abby. The protagonist of the second half of the game, Abby is a trained and efficient soldier and is therefore represented as realistically muscular. This choice, while praised by other developers<sup>23</sup>, was widely criticized by a

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<sup>23</sup> [https://www.reddit.com/r/thelastofus/comments/qdtbd2/abbys\\_body\\_is\\_great\\_a\\_game\\_developers\\_perspective/](https://www.reddit.com/r/thelastofus/comments/qdtbd2/abbys_body_is_great_a_game_developers_perspective/)

toxic fringe of the game’s fans; among them, some even sent death threats to Laura Bailey, the actress who played the character in the game.

Another example of this trend is the representation of a romantic relationship between Ellie (the other protagonist) and her girlfriend Dina. While neither of the girls is represented as ugly, they are also shown with unrealistic supermodel-like bodies and beauty standards. The game never shows any aspect of their physical relationship in a needlessly explicit way in order to satisfy the male gaze, but rather opts to focus on the tenderness and importance of their relationship in contrast with the bleak and grim state of the post-apocalyptic world where they live. Needless to say, also this aspect was toxically criticized by the most conservative players.

Overall, the qualitative analysis tends to confirm the results of the quantitative ones. While in older the studio was more prone to problematic practices of narrative marginalization and body objectification of female characters, this attitude seems to change with more recent games.

## 4.2 Violence Representation

### 4.2.1 Quantitative Analysis

In this second part of the chapter another message-system analysis theme is presented and analyzed. From a genre-related point of view, all the analyzed games are considered “action games”. In this kind of game, most of the tasks that need to be completed in order to progress through the story are related to fighting some kind of enemies, villains, or competitors. The exact amount of fighting, and therefore violence, represented in the analyzed games is shown in Figure 10.

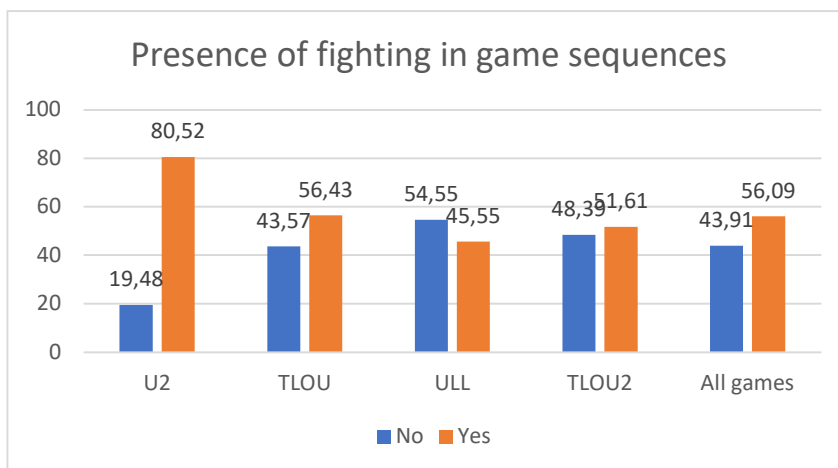


Figure 10: Relative frequencies of fighting representation in-game sequences. N=542

As the graph shows the presence of combat-related sequence is extremely widespread. While U2 remains an outlier with more than 80% of the game devoted to fighting, all the other titles include combat sequences for about half of each playthrough.

On the characters' side, almost 90% of the represented characters are involved in a violent interaction at least once, and about 67% of the characters actually kill someone (table 13).

*Table 13: Relative frequencies of characters' violent behavior.*

Does the character show violent behavior?	
No	10,42
Commits non-fatal violence	22,92
Commits fatal violence	66,67
Total observations	48

While these numbers may seem pretty high at first glance, they are also not exactly surprising apart from the case of U2 where the percentage is truly staggering. At the end of the day when someone buys an action videogame or goes to the cinema to watch an action movie, the heart of the fiction is always some choreographed and stylized representation of violence. Exploration, plot, and dialogues help give full sense to the overall experience, but they are not the “meat of the matter”. This leads to the research questions which were introduced in the previous chapter. How is this violent interaction made enjoyable for the audience?

*R3: Do Naughty Dog games employ moral disengagement strategies to represent violence?*

*R3.1: Among the moral disengagement techniques proposed by Hartman, which are the most employed by Naughty Dog?*

The use of moral disengagement strategies is the basis of every piece of fiction which does not revolve utterly and completely around an act of denouncing the dangers of violent behavior. While this approach may have its merits, it usually does not create a fun or entertaining experience. This is not the case for analyzed games, as it is shown in Table 14.

				Total
				observations
No	Ambiguous	Yes		

Is violence shown as justified?	12,38	17,14	70,48	315
Is violence shown as evil?	46,52	14,24	39,24	316
Is violence shown as comedic?	95,58	3,47	0,95	317
Are the victims shown as deserving violence?	88,28	15,89	75,83	302

Table 14: Relative frequencies of moral disengagement measures for game sequences. N=542.

The data show that in more than 70% of the sequences containing violent behavior, the game's narration and mechanics justify this behavior and present the victims as deserving of it. However, this does not mean that violence is not evil; in this case, the percentage is much smaller, and in more than half of the cases violence is presented as inherently bad or at least ambiguous. On the other hand, the games do not seem to twist the consequence of violence for comedic or slapstick results. Another take on the possible distortion of violence's consequence is shown in Table 15.

Table 15: Relative frequencies of representation of consequences of violence in-game sequences. N=542.

	No	Yes with minimal focus	Yes with serious focus	Total observations
Consequences of violence on people	5,87	33,43	60,7	341
Consequences of violence on objects	32,40	20,11	47,49	358

This table tends to confirm the idea that more focus is given to representing the consequences of violence, at least on people. The lack of care for the consequences of armed clashes on the environment is potentially given by the fact that designing destructible environments that respond to the player's actions is expensive. This feature is usually present in games that imply a great deal of interactivity between the player and the gaming world; this is not the case in the analyzed games which are more focused on delivering a gripping narrative to the audience.

As it happened in the first part of the chapter, the dataset related to character representation may tell a different story and be useful for a possible comparison. Table 16 shows the relative distributions of variables that measure the frequencies of moral justification, victim blaming, advantageous comparison, and victim dehumanization related to the represented characters' actions.

Table 16: Relative frequencies of moral disengagement measures for represented characters. N=48.

	Not applicable	Never	Occasionally	Often	Always
Character violent behavior is justified	12,5	20,83	27,08	10,42	29,17
Character's victims are blamed for their fate	14,58	18,75	25	14,58	27,08
Victims of the character are portrayed as worse people	12,5	27,08	20,83	12,5	27,08
Victims of the character are dehumanized	20,83	27,08	27,08	22,92	2,08

Apparently, all moral disengagement techniques save for dehumanization show a similar distribution. The character's behavior is presented in a completely positive way about 30% of the time. On the other hand, even when they are presented as deserving of their fate, their victims are usually represented as human beings and therefore holders of basic rights. In order to test this finding table 17 shows the results of t-tests which compare the mean of Table 16's variables.

Table 17: t-tests for differences among means of the moral disengagement-related variables.

tt test	Viojus	victblam	Advcomp	dehum
Viojus	X	X	X	X
Victblam	Not significant	X	X	X
Advcomp	Not significant	Not significant	X	X
Dehum	P<0.01	P<0.01	P<0.1	X

The results allow to reject the null hypothesis that the dehumanization-related variable has an equal mean to the other three. However, it does not allow to make statements regarding potential differences among the other variables. Dehumanization is often tied with the use of monsters, zombies, or other fantastical non-human beings as enemies in fiction, but this is not always the case. Several works of fiction present ethnic, political, or other kinds of groups as less than human due to some defining trait. One classic example is the representation of nazis in war games whose inhuman and deplorable ideology allows to represent them as somehow less than human. Therefore, the use of dehumanization is not tied to a fantastic setting but can be extended to any kind of fiction.

In conclusion, Naughty Dog widely employs moral disengagement mechanisms in its games. The most used mechanisms appear to be moral justification, advantageous comparison, and victim blaming, while dehumanization and distortion of consequences appear to be less used.

## 4.2.2 Qualitative Analysis

In this penultimate section of the chapter is presented the qualitative analysis of violence representation in Naughty Dog games. The section is organized following the five techniques of moral disengagement proposed by Hartmann et al. (2014): distortion of consequences, advantageous comparison, dehumanization, moral justification, and attribution of blame. Since these categories were the theoretical basis of the quantitative analysis, employing them as themes for the qualitative one allows me to delve deeper into the relationships already outlined in this chapter. While this decision sacrifices part of the potential for inductive discovery typical of qualitative analysis, I believe it also helps to harmonize the two kinds of content analysis employed in this chapter around a strong theoretical base, namely Hartmann's conceptualization of moral disengagement.

Before the analysis of these categories, I believe It is important to keep in mind two aspects of the considered games. First, these games are heavily violence-centered. Most of the inhabitants of these worlds who can interact with the player are enemies and the interactions with them are mostly violent and antagonistic. Second, the games are story-driven but they do not give the player any chance to influence the outcome of the story. In this sense, they are very similar to movies in which the player is not only a spectator but also an actor who follows and discovers an already-written script. Sometimes the player can escape a hostile situation without harming the foes by relying on their stealth skills. However, this is not always possible, especially when some evil characters or big zombies are present in the room. The games never explicitly state when this option is available and regardless of the player's decision the plot never changes. These two traits should not be morally judged and do not intrinsically mark a game as good or bad, they just define how the analyzed gameplay works and I believe clarifying them may be useful in understanding the following analysis.

### *Distortion of Consequences*

Distortion of consequences indicates all the gimmicks employed in a piece of fiction in order to hide or downsize the horrifying effects of war, murder, gunfire use, and so on. In analyzing the games these devices appeared to be focused on three fronts: consequences on the playable character, on the enemies, and the represented world.

Regarding the first front, the games tend to represent their protagonist as implicitly super-human. Both Nathan Drake (U2) and Clohe Frazer (ULL) never take care of their wounds even if they are targets of shooting for most of the game. They actually auto-heal: their health is not shown as a numerical value or as a colored bar but, as they take damage the colors growingly dim, and red stains appear on the screen. No realistic damage is shown on their body and if they manage to avoid getting damage for a while they just automatically heal. In general, the representation of fatigue is completely missing. The protagonist and the supporting characters during all the playing time are always climbing, jumping, fighting, or shooting but they never appear to be tired. In *The Last of Us* franchise, the player actually has to cure and sterilize wounds, but it is a very fast process which heal completely the playable character. All these traits of the games' protagonists may appear surprising for those outside the audience but are actually very common in these kinds of games. They are never explicitly addressed in any way in the game, and they are usually considered part of the suspension of disbelief pact which stands between the developer and the player and allows the game to run smoothly. If some high-difficulty setting is applied to the game, the protagonists are less strong compared to the enemies, but the overall gaming experience becomes slower and more frustrating. Therefore, this is an aspect of moral disengagement that is almost always present in action games, and which is usually removed only in order to appeal to a limited audience of hardcore players.

The consequences of violence tend to be under-represented on enemies and villains as well, but in a different way. During fights killed enemies tend to not bleed at all or only at the exact moment when they are hit by bullets. The other option is that a small pool of blood suddenly appears around a dead body when sufficient time has passed. Moreover, the enemies tend to die quickly and without a sound, rather than bleed out for several minutes while they scream, pray, and call for their relatives. The situation is different during cutscenes, which are usually the parts of the game where the most shocking bits of narration are delivered. Here violence's consequences appear much more realistic in order to impress the audience, but still, they represent a very small amount of the overall gaming time. The only gaming moments where this trend is subverted happen during a few sequences of TLOU and TLOU2 when both human and zombie enemies are present. The two groups can be set one against the other while the player escapes, and in these moments the games are very effective in delivering how messy gunfighting really is, as most of the time everyone is screaming, panicking, and fighting to stay alive.



A peculiar subsection of the downsizing of violence's consequences of enemies is represented by the so-called "stealth eliminations". The word indicates the act of eliminating enemies without being seen and making noise. It comes up when, for various reasons, the player needs to infiltrate an enemy base or move through a dangerous zone. These sequences are extremely common in the TLOU games but are also present in the *Uncharted* franchise. When these actions are performed the enemies are incapacitated but it is never quite clear how exactly and what is their ultimate fate. During the chapter "Breaking and Entering" in U2 (the first in which violent actions are involved) the player has to attack museum guards stealthily and is not clear if they are killed or just knocked out. The guns used in this chapter are described as "non-lethal" and "tranquilizer guns", but what do these guns actually shoot? The game never elaborates on this. In TLOU the player stealthily eliminates an enemy by grappling them; the act is shown as much cleaner than shooting or fighting an enemy aware of their presence. There is a sequence that never shows blood or any kind of visible damage to the opponent who just falls limply to the ground. This "clean" representation on one hand encourages the player to face the game in the most efficient way (a stealthy approach allows to save resources and take no damage), and on the other gives an ambiguous message to the player. It is never clear if the human enemies eliminated this way are just unconscious or dead, but the player nonetheless perceives that their actions are less ugly (and therefore, more moral) than what they could have been, even if it is unclear whether there are differences in the final result. This approach to moral disengagement is abandoned in TLOU2, where stealth attacks are not sanitized. When the player controls Ellie (the first protagonist) she finishes her enemies with a knife in a quite gory way, while when Abby does the same, she usually breaks their neck with a very audible sound.

Lastly, it is important to consider the consequences of the player's actions on the world. Here is where the developers have the most freedom to decide the level of sanitization of the consequence of violence, according to the overall tone of the narration, as it does not need to be tied to game mechanics in the same way as the strength of protagonists and enemies. In the *Uncharted* games, which really want to convey the feeling of carefree adventuring, all the fight between Drake and Lazarevic can be read as a colonial dispute over the mythical city of Shambala. It represents an untainted and idyllic promised land over which both the Eastern totalitarianism (Lazarevic) and the Western democracy (Drake) want to take power. In this clash, the number of native people killed is presented as irrelevant compared to the greater good of saving the world from dictatorship. The only moment in which Drake's actions are questioned happens when a Tibetan village is attacked by Lazarevic and Elena (one of the co-protagonists) says "This is our fault, we did this". However, the story suggests that Lazarevic would cause destruction anyway, and if Drake manages to defeat him, some sacrifices are at least acceptable and easily forgotten. ULL has an even thinner regard for the

consequences of Clohe's actions as the society where the insurgent group who is competing with her is rooted is represented only at the beginning of the story and then never again.

On the other hand, both TLOU and TLOU2 do not shy away from showing the long-term consequences of violence. Both games are set in a post-apocalyptic world where survival has precedence over everything and therefore nothing really new, be it art or technological advancement, is created. This translates into gameplay constantly focused on scavenging for resources where the finding of every scrap of useful material is a very welcome sight. The player always struggles with limited amounts of bullets or medical kits because, simply put, that's all that remains available. Moreover, the ending of both games shows how questionable decisions taken by the protagonists deeply worsen the living conditions in their communities. At the end of TLOU Joel decides that Ellie's life is more important than the possibility of finding a vaccine for the zombie plague. The horrified player controls Joel as he rampages through a hospital killing anyone on his path, both soldiers and unarmed civilians, and crushing mankind's only hope to find a vaccine. The player has no agency over the ending of the story but is at the same time forced to be unwittingly partial to Joel's actions. In TLOU2 the main theme of the game is the futility of seeking vengeance and the disruptive effects this quest has on people's lives. At the end of the games, both fighting groups are reduced to a few survivors and none of the characters (the lucky ones who survive) can be truly happy until they manage to overcome the idea of destroying their old enemy's life out of spite and nothing else. This theme is very clearly expressed by Owen, one of the characters who realized ahead of the others the lesson of the story, to Abby: "I want what you want (tl;dr, vengeance), but not at any cost". Abby does not listen to him and thus leads her group to an inordinate amount of suffering.

Ellie suffers from PTSD, and she can hardly relax. Even when she is with her family, the flashbacks of her father's death are always close. You also see Abby coming back again and again to the day when she found her father's dead body. In Ellie's diary, she swings between all her guilt and shame in surviving her father and ravings about killing Joel's assassins and getting revenge at any cost.

With the TLOU franchise Naughty Dog tried to explore games where the consequences of violence especially on the world are fully shown. The result is very interesting but extremely distressing to play, as the player must live with the knowledge of being complicit in heinous and criminal actions. Several players actually stated that, while the game is mechanically fun to play, they cannot bring themselves to replay it. Quoting directly from Reddit, "playing through the story is a very disturbing and uncomfortable experience. They force you to do some things you really don't want to and at times

it did take some willpower to push on. It's a sad miserable journey with an ending that makes you really question whether any of it was worth it.”<sup>24</sup>

### *Advantageous Comparison*

Advantageous comparison is a narrative mechanism employed to justify the action of the protagonist by pitting it against much worse individuals. In both U2 and ULL, this happens on a personal level. In U2 the villain of the story is depicted as a pure evil, power-hungry man who explicitly refers to different dictators as inspiring figures. His ideology is depicted as a strong authoritarianism but is not characterized along the left-right wing axis. In fact, he refers in the same way to Stalin, Hitler, and Pol Pot as role models. This seems functional to create an opposition between Eastern/ex-Soviet authoritarianism (impersonated by Lazarevic) and American/western democracy (represented by Drake and his supporters). Drake is initially involved in the story by his selfish desire to live adventures and make easy money, but when confronted by the danger posed by Lazarevic, he realizes the importance of stopping the bad guys. Drake's will to save the world from dictatorship and totalitarianism unveils a quite white-savior attitude typical of the American's idea of "exporting democracy". The Tibetan locals are completely unable to fight those who menace their homes but are rescued by this valiant band of white adventurers. It does not really matter that the actions of the player for most of the game lead to the destruction of several villages and an astonishingly high number of murders. In the end, Drake prevents the evil villain from becoming invincible and incredibly powerful. Therefore, even if his actions caused a large amount of destruction and despair, they prevented the worst scenario from happening. ULL keeps going in this trend by simply ignoring the fact that the protagonists are doing violence. All evil Violent actions done by the player aren't mentioned, just the things done or planned by the bad guys. This sensation of fighting injustice is reinforced by the fact that villains always appear to be better equipped and more numerous than Drake, Clohe, and their partners. This gimmick allows to present the protagonist as a fascinating underdog who fights evil and authoritarian organizations. It does not matter that through the entirety of the narrations entire armies fail to capture a handful of people who are evidently incredibly well trained and apt at fighting; the protagonists are always shown as the ones who risk being overpowered at any moment and their perceived vulnerability lures the sympathy of the audience.

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<sup>24</sup> [https://www.reddit.com/r/patientgamers/comments/qkzm8d/last\\_of\\_us\\_part\\_ii\\_has\\_zero\\_replay\\_value/](https://www.reddit.com/r/patientgamers/comments/qkzm8d/last_of_us_part_ii_has_zero_replay_value/)

On the other hand, this form of personal comparison is not employed in TLOU and TLOU2. Both the protagonists and the enemies of the games are shown as willing to do literally anything in order to survive and are therefore difficult to compare on a personal level. TLOU2 brings the comparability of the protagonist and the villain to a completely new level through a very clever narrative gimmick. Both the protagonists are also the villains in different parts of the story. The game starts with Ellie's revenge journey to kill Abby, the murder of her father Joel. Halfway through the game, the player stops controlling Ellie and Abby becomes the playable character. It is also discovered that Abby killed for revenge as her father was one of the surgeons killed by Joel at the end of the first game. This switch of perspective reaches its climax in one of the final fights of the game where the player, impersonating Abby, fights Ellie who was the protagonist for the first half of the game and coprotagonist of TLOU.

While games like this usually tend to follow only one or a few protagonists fighting on the same side of a Conflict, TLOU2 is based on the idea that you will play with both factions fighting each other and understand their motivation. The game introduces this idea gradually with brief changes of perspective during the first half of the story. The player cannot understand the full extent of this storytelling technique at the beginning, but it prepares the ground for the big perspective shift which happens halfway through the game, when the player starts playing as the person they tried to kill in the first half. However, both in TLOU and TLOU2 advantageous comparison is very much present on an organizational level. The protagonist may do evil actions but the organizations they belong to are still presented as better than the other ones. In a world where cannibalism appears to be a widespread practice is not very difficult to present your group as holder of at least some sense of human decency. What is particularly interesting is that Naughty Dog tends to always present ideologically motivated groups as inherently evil. The two villainous groups presented in TLOU2 are a nepotist theocratic doomsday cult and an initially well-intentioned insurgency that turns into a fascist regime, and it is therefore abandoned by Abby. Even the Fireflies, a rebel group who fights for the end of martial law and the restoration of the old US institutional and legal order, is shown as willing to employ inhuman tactics like terrorism or recruitment of child soldiers. The only group that is presented as unequivocally “good” is the Jackson settlement where Joel and Ellie reside. Curiously, while the games spend a lot of time in defining what is evil, the traits of a good and moral organization are extremely vague. The community is shown as based on vague principles of communalism and mutual help, but nothing more is known about the internal functioning of the group or its ideological stance.

In conclusion, Naughty Dog always employs advantageous comparison, be it on a personal level or systemic level. In both cases, it happens in a very post-ideologic way. The protagonist always has

very practical and agreeable objectives (get rich, survive,) while the enemies' aims are absurd and evil to the point of silliness (gain tremendous power, be invincible, eat people). The protagonists' ideology is always hidden and presented as the normal way in which life should be conducted while the enemies often incarnate an authoritarianism, usually based on vague concepts (not explicit post-soviet communism, theological oppression, ...).

## *Dehumanization*

Dehumanization in this context indicates the act of presenting the protagonists' enemies as not human at all, not completely human, or somewhat less than human. This approach allows to present them as not depositary of human rights, first of all, the right to not be violently killed. This technique is used both in the TLOU and Uncharted series but with a very different approach. In *The Last of Us* series, whose whole concept is based around surviving a zombie apocalypse, the presence of dehumanization mechanisms is pretty obvious. In the game world, being zombified is universally seen as the worst possible fate, to the point where the games show more than once people preferring the option of suicide. Zombies do not appear to have any discernible human (or even animal) behavior unrelated to the urge to feed and spread the plague. They are the ultimate representation of inhumanity as it is impossible to reason and communicate with them, they only convey mindless anger and aggression. Rather than (un)living beings they are seen as a menace or as a dangerous chore to deal with for the safety of the community, but never as persons. However, the composition of zombie swarms is quite interesting. In both games, no zombie child is ever shown during gameplay moments. The developer may have decided that they would be too distressing for the players who face an already quite distressing game. Another important layer is represented by the gender composition of the swarms. TLOU represents women zombies, but it never proposes "living" female enemies. This decision stems from the objective of avoiding representing violence against women, and also reinforces the dehumanization-related disengagement. It indirectly states that killing infected women is acceptable because zombies are not human anymore, in any possible sense.

On the other hand, Uncharted proposes dehumanization in a slightly different but quite problematic way. In U2 all the main enemies and protagonists are white people while all the BIPOC persons represented are portrayed as passive and/or animalistic. The two main groups are the Tibetan villagers who suffer Lazarevic's tyranny without any ability to react and the inhabitants of Shambala.

The latter are introduced disguised as monstrous animals and even when they don't wear animal vests anymore, they are represented as primitive and animalesque. They never actually speak, rather

express themselves only through yelling and they have purple skin and black teeth. From the beginning, they have a violent attitude towards every human being and Drake refers to them as “guardian things” and “creeps” underlying their distance from “proper humanity”. ULL proposes a similar mechanism as the enemy group, the Kannading insurgents, are represented as a stereotyped third-world militia with very vague claims and a lot of disposable goons waiting to be slaughtered by the heroes. Said goons do not have any relevant dialogue or characterization and they compose literally the entirety of the movement. Only their leader and his right-hand henchman are actual characters.

Overall, dehumanization’s use is a trend that remains constant throughout all of Naughty Dog’s production, but its most problematic aspects, like the dehumanization of BIPOC persons, do not seem to be prevalent anymore.

### *Moral Justification*

This section covers how the narration justifies the protagonists’ violent behavior from a moral point of view. As seen in the advantageous comparison section, Naughty Dog always tends to refrain from anchoring their characters’ moral compass to any deep and elaborate ideological stance, church, or philosophical principles. The “good characters” always act motivated by some generic common sense or will to do “the right thing”.

Nathan Drake is the perfect example of this approach. His main occupation seems to be a treasure hunter and a thief. This activity is presented by the game as completely normal and it does not even question the moral implication of stealing and looting treasures from lost civilization with the implicit intention to keep them for himself for profit. The clear colonialist issue of this profession is overshadowed by the prospect of getting rich fast without (seriously) hurting anyone. Drake himself is presented as a clever naughty boy who deep down has good intentions and a heart of gold. The focus on getting rich as a measure of success in life and the normalization of weapon use suggest a tacit support of the traditional American liberal-democracy values. These values are never discussed but implicitly accepted as a normal approach to life. Drake actually becomes a hero when his path is crossed by the evil Lazarevic. Stopping the morally questionable guy is all the moral justification the games decide to provide.

Similarly, in TLOU the characters are often motivated by the necessity to stay alive. Their actions, regardless of their brutality, are always justified until they remain within this acceptable objective. The characters end up on morally questionable ground only when they try something else from this

main objective, like getting revenge or putting their desires above the needs of the community, which tend to be usually related to surviving. Joel and Ellie, the two most famous protagonists of the TLOU series, often cross this line becoming as wicked as the enemies they fight. In these moments the narration stops justifying their deeds creating a strong distressing feeling.

In conclusion, the system of moral justification employed by Naughty Dog appears to be very closely related to the mechanism of advantageous comparison. The hero is very rarely presented as good or just as a consequence of their moral stance. They shine as the heroes of the narration only through a comparison with their enemies who are usually represented as incredibly wicked.

### *Attribution of Blame*

Attribution of blame is a narrative mechanism that allows to frame victims of violence as deserving of what they received. Naughty Dog tend to utilize this mechanism in two different ways. The first is centered around creating a strong sense of ingroup and outgroup in their narrations. All their characters show a strong sense of duty related to protecting their people and their community. While the respect of people in the ingroup is of paramount importance, all the games tend to show that betraying or attacking people from other groups while risky is a more or less acceptable practice. The fact that someone is not part of the ingroup justifies a predatory behavior towards them. In the TLOU franchise, this narrative element is introduced to show how societal collapse destroyed most of the previously existing relationships of solidarity among people. On the other hand, in U2 and ULL it is introduced as an important part of the “thief life” lived by the protagonists.

The other gimmick is related to the fact that the protagonists rarely shoot first. The games routinely show their protagonists as attacked by their enemies, and therefore legitimize their reaction as legitimate defense. Even when they spot armed people first, the games usually suggest that the better approach should be sneaking through them without being seen. If the protagonist is spotted, the enemies tend to shoot on sight, returning thus in the self-defense frame. The players are encouraged to fight on the basis that they are just answering to external attacks, and the enemies bring their fate on themselves by deciding to impede the protagonist's journey. This reasoning extends to the weapons employed by the player throughout the game. In U2, as the narration progresses and the fact that Lazarevic is fielding an entire army, the situation escalates the more the weapons become lethal and destructive. Drake's usage of these weapons is always justified by the game as they were carried by the enemies in the first place. In fact, Drake starts the adventure only equipped with a pistol and switches to more dangerous weapons only by scavenging enemies' dead bodies.

## 4.3 Conclusions

This chapter attempted to recreate message-system analysis as theorized by Gerbner (1998) in Cultural Indicator research: analyzing the structures of meaning, visions regarding society's functioning, and moral values proposed by a mass media source across the long term with a focus on specific topics, in this case, violence representation and gender issues representation. What did this analysis find out?

From a gender issue perspective, it showed that Naughty Dog had been gradually changing their approach to the topic over the last fifteen years. While the company tended to represent women narratively marginal roles, there is a clear trend towards a more sensitive and equilibrated representation during the last years. Likewise, the company tends to avoid the use of body objectification and represent characters with little body objectification and most times appropriately dressed and equipped for the situation they are supposed to face.

Violence representation analysis shows a similar picture across the considered period. Naughty Dog widely employs moral disengagement mechanisms in its games. From a quantitative point of view, the most used mechanisms appear to be moral justification, advantageous comparison, and victim blaming, while dehumanization appears to be less used.

Digging in the qualitative analysis of the game Naughty Dog on the one hand widely employs distortion of consequences as usually happens in order to make accessible action videogames. On the other hand, most of their other moral disengagement efforts seem to converge on the idea of representing their protagonists as normal and the enemy as freaks. Both moral justification and advantageous comparison tend to depict the heroes of the story not as bringers of deep meaning, but rather defenders of the current status quo which is challenged by truly wicked people.

Similarly, to gender representation, the Naughty Dog approach to moral disengagement changed over time. Over the years the techniques become more refined, and the company dropped several techniques to propose a more realistic representation of violence. This trend reached a peak in TLOU2 where the company tried to avoid almost completely some of the moral disengagement subdimensions like advantageous comparison or moral justification. The resulting game is an incredibly distressing experience and a testament to the reason for the employment of moral disengagement in mainstream fiction.

Considering these results, the obvious question is: how do they relate to the classical version of Cultivation Theory and to Cultural Indicator research? Gerbner explains Television, across the long



term, tends to impart repetitive "lessons" that can form the underpinning of our comprehensive outlook on the world, rendering it a notable influencer of overall values, ideologies, perspectives, as well as particular assumptions, beliefs, and imagery. Applying this mechanism to violence representation Cultural Indicators research found that repeated exposure to violence leads the audience to an overinflated conception regarding the presence of violence in American Society. In Gerbner's words:

“Consider how likely television characters are to encounter violence compared to the rest of us. Well over half of all major characters on television are involved each week in some kind of violent action. While the FBI statistics have clear limitations, they indicate that in any year less than 1% of people in the United States are victims of criminal violence. We have found considerable support for the proposition that heavy exposure to the world of television cultivates exaggerated perceptions of the number of people involved in violence in any given week. [...] I have found that long-term exposure to television, in which frequent violence is virtually inescapable, tends to cultivate the image of a relatively mean and dangerous world” (Gerbner 1998, p.185).

By applying Cultivation Theory framework in the context of this research's two thematic axes two different scenarios appear. On one hand, gender relationship representation changed considerably between different games, making it difficult to identify a precise pattern. On the other hand, moral disengagement has been constantly and consistently employed in almost all the considered games before being downsized in TLOU2. According to Cultivation Theory, it may be safe to hypothesize that players who engaged with Naughty Dog games for a long time, and therefore who had their conception of violence more intensely cultivated by videogames, may tend to normalize the use of violence or antisocial behavior in society. This hypothesis is tested in the next chapter of this dissertation.

## V. CULTIVATION ANALYSIS DESIGN AND METHODS

### 5.1 Introduction

In this second part of the dissertation, I try to reach the remaining objectives of this research:

- 1) Explore how players decode narrations and gameplay experiences of the aforementioned games.
- 2) Assess whether or not the messages decoded by players who experienced the considered games contributed to shaping their beliefs regarding violence.
- 3) Assess whether the levels of belief permeation vary among the players according to their background (gender, age, ethnicity, ...), their playstyle (habitual gamers, casual gamers, ...), and their knowledge of the Naughty Dog portfolio.

Before starting with the methodologic outline of this second part, I want to underline how the second objective changed after the analysis of the second chapter. The message system analysis identified a clear trend in the use of moral disengagement in order to create a fun experience for players in almost all considered games. Even in TLOU2, where this approach to violence representation is sensibly toned down, some elements are still present. On the other hand, gender issues representation does not seem to follow a similarly straightforward approach. The research identified wide differences between the two main Naughty Dog's game franchises, making thus more difficult to elaborate concise and clear hypotheses for this second part of the research. However, this is also part of the function of Message-system analysis: identifying the most interesting trends in the considered texts and guiding the Cultivation Analysis part of the process.

After this much-deserved clarification, I move to explain the focus of this Cultivation Analysis effort. In order to try to detect the possible presence of cultivation effect this research employs again a mixed methods approach. On one hand, it employs a quasi-experimental design called "non-equivalent control group design":

"One of the most widespread experimental designs in educational research involves an experimental group and a control group both given a pretest and a posttest, but in which the control group and the experimental group do not have pre-experimental sampling equivalence. Rather, the groups constitute naturally assembled collectives such as classrooms, as similar as availability permits but yet not so similar that one can dispense with the pretest. The assignment

of X to one group or the other is assumed to be random and under the experimenter's control” (Campbell e Stanley, 1963, p. 47).

In other words, the design is based on the creation of two groups of participants for a quasi-experiment: a control and a treatment group. Both groups compile the same pre and post-treatment surveys but interact with a different treatment. The quantitative data gathered by the experiment are reinforced by qualitative notes to be collected during the experiment. These notes are based on my observations of the players' interaction with videogames and they allow me to delve deeper into how the players interact with the proposed games. Gerbner himself (1983), reflecting on his empirical results underlined the idea that qualitative analysis is complementary to a more traditional quantitative approach to Cultivation arriving to affirm that the two should be “inseparable”. This position was further articulated by Van den Bulck and Vandebosch (2003) who stated:

“Quantitative approaches to cultivation theory have found persistent relationships between media use and certain world views. Qualitative studies might shed a different light or offer new hypotheses to those looking at what happens in the “black box” of viewers’ minds to explain these relationships” (Van den Bulck & Vandebosch 2003, p. 114).

Before delving into the specifics of this phase of the research’s design an important question needs to be addressed: Why choose a quasi-experiment?

The original Cultural Indicators Project conducted by Gerbner (1970) included several different stratified samples which included people from all different backgrounds and profiles across the USA for a total of thousands upon thousands of respondents. Despite this effort, the study was also widely criticized because it struggled to capture the myriad of intervening variables that mediate or influence the effects of media on the audience. Some people may be more inclined to be influenced by what they see on television by their familiar background, ideological stance, ethnic belonging, and so on and so on. More recent research managed to overcome this difficulty by paying more attention to the context where cultivation happens and the specificity of each different topic that is cultivated. Van den Bulck & Vandebosch (2003) employed cultivation analysis to demonstrate how inmates facing their first prison detention experience organized their expectations regarding jail life according to the stereotypes learned by watching movies and TV shows. They managed to demonstrate their hypothesis by focusing on “new” inmates who never had any direct experience of jail and who needed to use secondhand information to create expectations regarding what was going to happen in their lives.

Similarly, Ruddock (2011) analyzed the effect of the conservative journalist Ross Kemp’s coverage of the English soldiers’ daily life during of Afghanistan war by focusing on the posts written by his

fanbase on the website of his TV show. While a small subset of the posts criticized Kemp's narration, most of the analyzed material was written by fans who approached this very specific topic mostly through the show.

Both these studies show that in order to properly identify media effects within the boundary of Cultivation Theory framework a researcher should consider Cultivation "as a conditional process that depends on context and interpretation" (Ruddock 2011, p 347).

My topic is sadly broader than the ones considered in the two aforementioned research. Violence happens in everyone's life, and while some of the violent actions shown in videogames, like shooting with a gun, are (luckily) not part of most people's lives, it is a fairly common experience having been in a fistfight at least once during a person's lifetime. A similar discourse can be made for stealing other people's objects, or other "antisocial" behaviors which are usually represented in the highly conflictual worlds of Naughty Dog videogames. Therefore, I believe that an experimental setting, with its unparalleled capability of manipulating most of the setting traits, is the best fit for reaching the objectives of this research. Moreover, previous literature confirms that a similar design is suitable for registering the possibility of Cultivation Effect. Fiske and Taylor's social cognition overview (1991) shows that people tend to "form impressions online" when they are exposed to a phenomenon, especially if they are not completely familiar with it. Van den Bulck & Vandebosch's research shows that when people watch a movie or a TV show they know that events like a murder or a robbery are not really happening, but at the same time, they usually believe that they are watching "careful dramatization" of how the real event is supposed to happen. Potter (1993) elaborates further proposing the concept of "sudden insight".

"Finally, perhaps the amount of television exposure serves as a preparatory condition (or antecedent) to a kind of sudden insight effect. Viewers may have to be exposed to the same messages for a long period of time before they are "ready" to perceive what those messages are" (Potter 1993, p. 593).

This perspective is coherent with Shrum's idea of second-order judgments which was quoted in the theoretical framework of the research (Shrum 2004). These judgments indicate general beliefs regarding how society functions and how people generally behave and are usually drafted online in the short term:

"In what we term an online (as opposed to memory-based) model, television influences attitude and value judgments directly as program information is processed during viewing" (Shrum 2004, p. 48).

This literature suggests that an effect, if present, could and should be registered in the short term after media exposition happened.

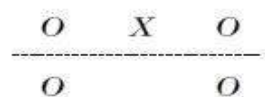
Keeping in mind this perspective, the aim of the experiment is to register the possible presence of a Cultivation Effect among videogame players regarding their beliefs about violence and antisocial behaviors in society. As a starting hypothesis, I follow a tweaked version of the usual stereotype about videogames effects: “games make you violent”. However, since this is an application of Cultivation Theory, a direct effect of media on actual behavior would be out of context. Therefore, the aim of the experiment is the following.

*H1: Exposure to violent content in videogames leads to greater acceptance of violence and antisocial behavior as normal in our society compared to exposure to non-violent games.*

*H2: Heavy players tend to be more influenced by the violence depicted by videogames.*

## 5.2 Experiment Design

As previously introduced, the design chosen to test these hypotheses is the equivalent time-sample design as depicted by Campbell and Stanley (1963). This design can be graphically represented as follows:



O represents the two participating groups and X is the treatment that is administered to one of the two groups. The two groups are not exactly equivalent, as said groups would be impossible to find. However, they are comparable along a series of pre-specified traits, creating thus a credible counterfactual for the group that receives the treatment. In particular, it must be recognized that, even in the absence of complete equivalence, the introduction of a control group in this experimental design greatly reduces the ambiguity of interpretation compared to designs characterized by the presence of only one group subjected to pre-test and post-test. If the recruitment criteria of the two groups are very similar and if this similarity is reflected in the scores obtained by the two groups in the pre-test, then the controls envisaged by the traditional experimental logic are almost as effective as the ones of full-fledged experiments.

In this experiment, the two groups are defined according to three main traits: gender, videogame experience, and moral disengagement. Gender is always one of the most important socio-demographic variables to consider, and I believe that it is valuable in this case as well. Our society always tends to propose violent media to a mainly male audience. The wide majority of playable characters in action and shooting videogames are male, the same happens regarding the people who usually appear in the commercials and other marketing material of said games. The lingering idea that shooting or fighting is “for boys” is still rather present in our society, where girls are usually gently pushed towards more relaxed games. Therefore, I believe this is a relevant dimension to take into account in the formation of the groups. To avoid falling into gender binarism the experiment divides between male and not male players. I hope this may be an acceptable compromise between the time constraints of the research and a proper representation of all subjectivities included in the audience, as most of the non-male players face issues of under-representation, and delving into the specifics of said representations is not the point of this phase of the research.

On the other hand, media exposure, in this case, represented by the amount of the participants’ experience in playing videogames, has always been an important element of Cultivation Theory. Cultural Indicators (Gerbner 1970) demonstrated how heavy viewers were more influenced by TV shows’ representation of society. Moreover, having an idea about each player’s level of expertise is helpful to gain deeper insights in the qualitative part of the analysis. It allows us to compare perception and usage of imaginary affordances between experienced and inexperienced players.

Lastly, moral disengagement is the “dependent variable” of the experiment, and therefore it is important that both groups may be at least roughly equivalent in this regard. Both groups should contain both respondents who score high and low results in a moral disengagement indicator and have a similar mean. Taking into account the level of moral disengagement of the participants follows the idea of Cultivation as a “reinforcement effect” (Hawkins, Pingree, & Adler 1987; Potter 1993). These perspectives explained that audiences could have formed their perceptions of the TV realm not by directly watching TV, but by heeding the perspectives of their parents, peers, and other media sources regarding TV content. Subsequently, they may have started watching TV with a heightened awareness of specific matters. When engaging with television, they aim to strengthen their preexisting beliefs by identifying examples that align with their established views. In this light, it is even more important to use the pre-treatment survey to assess the respondents’ level of moral disengagement.

The treatment effect consists of half an hour of actual gameplay. The participants who end up in the treatment group try two sequences of TLOU for a total of about half an hour of playtime. In selecting these sequences, a series of considerations were made. The sequence needs to be accessible in order

to be completable even by the most inexperienced players but also not completely devoid of challenge in order to keep the participants engaged. It also needs to be intelligible for the players. TLOU is a narration-heavy game, therefore the sequence must not include too many characters or cutscenes too tied to convoluted or not immediately understandable plot points. Keeping the players aware of what is going on in the game is important in order to create the sense of telepresence, the sense of being more present in the mediated environment rather than the real world. As suggested by Skalski et al. (2010) maintaining a sense of telepresence is very important for any serious effort of media effect research. Lastly, the selected sequences should have an average completion time of about 30 minutes. This is the ideal time of gameplay suggested by previous experimental studies on videogames in order to have an impact on the participants and at the same time not result in boring or excessive effort (Gabbiadini et al. 2012; Gabbiadini & Riva 2018).

In the end, I opted for two sequences at the beginning of the game which can be easily played one after the other. The first sequence is the game's opening where the zombie plague is introduced. In the sequence, Joel, his brother Tommy, and his daughter Sarah discover that some form of cataclysm is happening and try to escape from the suburbs of Austin where they live. After their car crashes in an accident, Joel carries a wounded Sarah, running from the infected in a situation of mass hysteria where no one seems to actually understand what is going on. At the end of the sequence, Joel and Sarah bump into a soldier who receives a direct order to shoot them in order to prevent the potential spreading of the unknown illness. The soldier reluctantly obeys his order and manages to shoot a few bullets before being killed by Tommy who sneaks on him while his attention is focused on Joel and Sarah. The stray bullets miss Joel but mortally wound Sarah. The sequence closes with a very strong emotional moment in which Sarah dies while Joel cries and holds her in his arms. The sequence shows violence as a very distressing and disturbing force that should mainly be escaped rather than reacted to. The player's actions are mainly centered around running from infected and pushing them away when they get too close. However, even without explicitly asking the player to enact violence, the game introduces two important mechanisms of moral disengagement: dehumanization and moral justification. In representing a situation of societal collapse and mass hysteria the game tells that surviving is the absolute ultimate goal and therefore justification for every action; at the same time the player is introduced to the concept that you can trust only your closest loved ones who are represented as actual people, while everyone else is dehumanized and represented as an obstacle which hinders the chances of survival of the ingroup.



*Figure 11: Sarah and Joel are held at gunpoint by a soldier.*

The second sequence takes place 20 years after the first in a full-fledged post-apocalyptic world. The protagonist Joel has become a smuggler in order to survive and, with his accomplice Tess, is helping an insurgent group to move a girl out of a fortified city that was once Boston. When the group reaches the meeting point with the insurgents, they get ambushed by the proto-fascist soldiers who run the city. Tess sacrifices herself to buy Joel and Ellie some time and then the player must escape from a soldier-infested building. During this sequence, the player gets involved in a shooting with the soldiers. It is actually possible to continue the game and avoid killing anyone by sneaking out of the building. However, the game never explicitly tells it and while some of the participants managed to understand that this is an actual possibility, no one managed to do it without killing anyone. This second sequence asks the player to enact violence in a more elaborate and systematic fashion and to actually kill living people. It also introduces the other three moral disengagement mechanisms. The soldiers are presented as clearly worse people than the protagonists as they fight for a brutal and callous authoritarian regime. They are also blamed for their actions as they attack player who just wants to escape the city and just react to their chase. They are ultimately to blame for their grim fate. Lastly, the violence on them is much sanitized compared to the one which is inflicted on the protagonists. When they are hit by enough bullets they die swiftly and without a sound falling limply to the ground.





Figure 12: Joel is ready to fight soldiers in order to escape.

Overall, the two sequences have a total time of playthrough of about 30 minutes. They are quite intelligible for the participants who do not know the story presented by the game and they expose them to all the relevant moral disengagement mechanisms exposed in the previous chapter.

On the other hand, the other half of the experiment, namely the control group, needs an activity that provides a neutral stimulus. They have to play a game, otherwise, the whole operation would lose sense and I would be inferring about the difference between playing violent videogames and doing nothing at all. Moreover, the experiment needs a precise moment when the post-treatment survey is administered. In order to provide said stimulus, I opted for making the members of the control group play the first 30 minutes of *Journey* (Thatgamecompany 2012). The game takes place in an unidentified desert where the player controls a hooded person who wanders across the ruins of an ancient civilization. This protagonist never speaks and never shows their face; it is voluntarily designed as a “blank page” for players with completely different backgrounds to identify with. The game features an exploration of the desert, interaction with mysterious creatures that seem to be made of fabric, and a few platforming puzzles. A calm and contemplative soundtrack contributes to creating an overall relaxed experience. The game does not include any violent interaction and it does not superimpose any clear narrative to the player; rather it suggests a cryptic story that can be interpreted by the player. This indeterminacy makes it perfect for the current experiment, as it does not give any strong message to the participants of the experiment.



*Figure 13: Journey's protagonist wandering through the desert.*

All participants responded to the same pre-treatment and post-treatment questionnaire. Both questionnaires include some items and batteries related to the core aims of the experiment and some others which are meant to conceal the exact extent of these aims from the participants. The pre-treatment opens with a consent form which also presents the experiment. Then it continues with socio-demographic questions and items related to the playing habits of the respondents. Hidden in this part of the questionnaire there is a question that presents a long list of popular games and ask the respondent whether they tried them or not. The question aims to identify whether or not the participants played either of the experiment games before. The last two sections of the pre-treatment questionnaire include an Italian translation of the validated scale for detecting mechanisms of moral disengagement proposed by Bandura et al. (1996) and batteries of items regarding players' attitudes towards women. Some of the items are related to attitudes towards women in videogames and some are an updated version of the classical scale for registering these attitudes proposed by Spence et al. (1973, 1978). Despite acknowledging that modifying validated scales nullifies their internal validity, this was a necessary passage in this case. The original scale was written keeping in mind the societal conditions of the Seventies. Some of its items, like "Sons in a family should be given more encouragement to go to college than daughters" or "It is ridiculous for a woman to run a locomotive and for a man to darn socks" are agreeable statements only for a very conservative audience. Therefore a few tweaks had to be made in order to make the items relatable to the current social reality.

On the other hand, the post-treatment questionnaire includes several batteries of questions related to the gameplay experience lived by the participants. It also included the same batteries related to moral disengagement and attitudes towards women which are the main focus of the experiment. Both questionnaires include a question that asked the respondent to create an anonym alphanumeric code which can be used to merge the pre and post dataset in order to analyze the experiment's result. Only the pre-treatment questionnaire asked for a contact (e-mail or telephone number) of the participant in order to organize the treatment. Each sensible piece of information was deleted after the end of the collection of data. A complete version of each questionnaire is available in the Appendix 2<sup>25</sup>. Both were submitted and accepted by the University of Milano-Bicocca data protection responsible office and subsequently uploaded on the Qualtrics platform. Due to the low impact of the study on the participants, it was not required a validation from the University's ethical committee. A brief recap of the experiment design is shown in Figure 14.

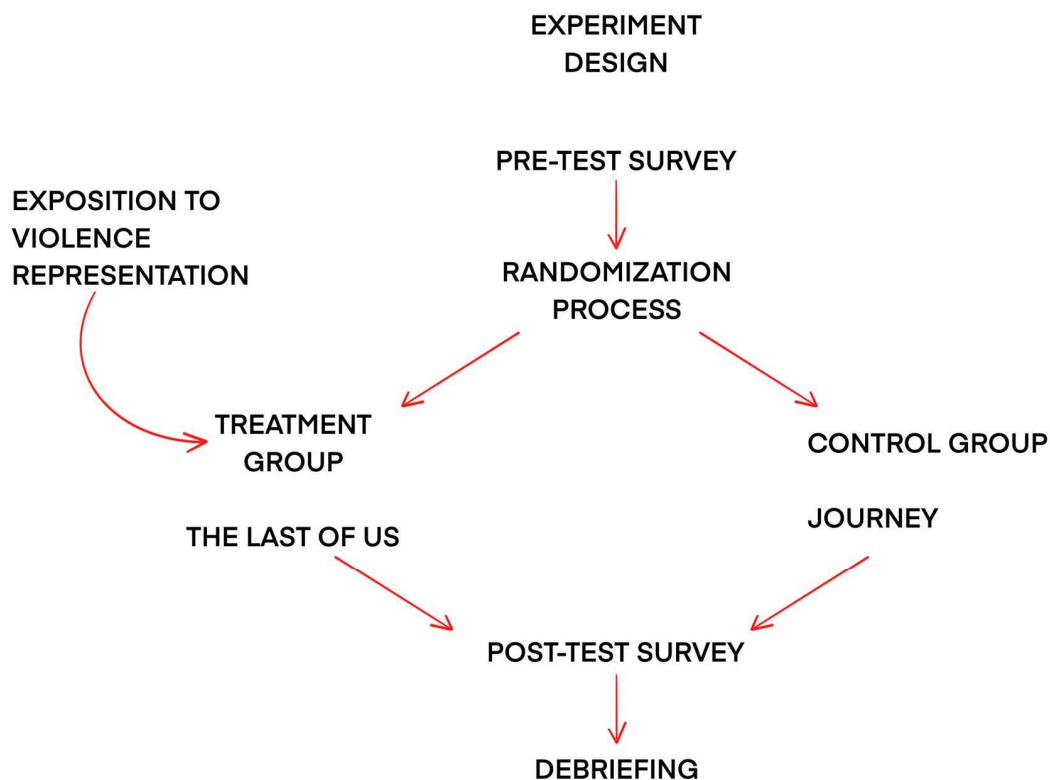


Figure 14: Experiment design recap.

<sup>25</sup> Both surveys are written in Italian because they were administered to a population of Italian speakers and I could know beforehand their level of English proficiency.

## 5.3 Experiment log

After completing the elaboration of the analytic tools and the aims of the experiment a full recap was submitted for registration to the American Economic Association's registry for randomized controlled trials in order to guarantee full transparency on the analysis and results. The experiment was registered on the Twelfth of May 2023 and its page is publicly accessible on the AEA website<sup>26</sup>.

After this task, I proceeded to gather participants for the study. The idea was employing a “maximum variation sample” technique, as proposed by Flick (2006) and applied to the field of videogames by de Wildt & Aupers (2019). This technique aims to include cases that are purposefully as different from each other as possible regarding the selected characteristics in order to consider a significant part of the range of differentiations in the field. I chose this technique due to the cost and time limits of my condition as PhD student, as it is one of the best ways to include all the possible profiles regarding all the relevant traits for the current research even with samples of small dimensions. As for the population I opted for the one most available to me: university students and staff. This decision has its pros and cons, on one hand, it allowed me to access a varied population with different educational levels (high school diploma, bachelor's and master graduate, and even PhDs); on the other, it excluded the two extremes of the possible age distribution: retired elderly and children/teenagers. However, these two segments of the population are particularly difficult to interact with, due to a series of legal and social reasons; therefore, once again the limits of my conditions play a role in forcing me to decide on a more frugal option. Having decided the kind of sample, how to operatively reach the possible participants?

In order to do this, I drafted a flyer (shown in Figure 15) in which I briefly presented myself, and the project and pledged a ten-euro voucher for buying books as an incentive for every participant of the experiment<sup>27</sup>. The flyers were distributed in all the main buildings of the University of Milano-Bicocca during May 2023. The flyers also included my telephone number and e-mail address (which are obscured in Figure 15 for privacy reasons) in order to allow the potential participants to contact me. I also presented the project in several university courses and meetings of student associations. I started being contacted by potential participants and the distribution of the pretreatment survey started on the 15<sup>th</sup> of May. 100 people answered the pre-treatment survey and were divided into two groups

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<sup>26</sup> It is available at this link: <https://www.socialscienceregistry.org/trials/11391>

<sup>27</sup> For transparency purposes I clarify that I bought the vouchers with my money. No external funding with annexed pressures intervened in the research.

through a randomization mechanism. Both groups needed to have roughly the same number of participants for each of the eight possible profiles created by the intersection of the three relevant dummy traits previously exposed: male/not male, morally disengaged/not morally disengaged, and experienced player/inexperienced player. For transparency reasons, I did not perform the randomization, but I outsourced it to a colleague. For every participant he generated a value, either 1 or 2, using a randomization software. 1 meant treatment group and 2 control group. Scrolling the list, when he found the next participant with the same traits of a randomized one, he positioned it in the other group. He also considered whether the participant had already played either of the two games, and when possible, he moved them to the group of a not previously tried title. This allowed to create two groups of about the same number of participants and 16 sub-groups containing more or less the same number of participants with similar profiles, allowing thus a credible counterfactual for the treatment group. Meanwhile, I completed the last tests on the gameplay sequences, proposing them to people not part of the trial to assess the effective duration and to familiarize myself with those specific parts of the games.

The administration of the trial commenced on May the 31<sup>st</sup> and it was completed on July the 14<sup>th</sup>. The gameplay sessions were held in the Department of Sociology of the University of Milano-Bicocca in one of the rooms assigned to the PhD student (shown in Figure 16).





Vuoi vincere una gift card  
da 10€ partecipando ad un  
esperimento sociale?

CIAO, MI CHIAMO GIACOMO LAURITANO E SONO UN DOTTORANDO DEL  
DIPARTIMENTO DI SOCIOLOGIA E RICERCA SOCIALE DELL'UNIVERSITÀ DEGLI STUDI  
DI MILANO-BICOCCA.

IL MIO AMBITO DI RICERCA SONO I GAME STUDIES, LO STUDIO SOCIOLOGICO DEL  
GIOCO E DELL'INTERAZIONE LUDICA.

PER COMPLETARE LA MIA TESI DI DOTTORATO STO ORGANIZZANDO UN  
ESPERIMENTO E STO CERCANDO VOLONTARIE.

A TUTTE LE PARTECIPANTE CHE COMPLETERANNO L'ESPERIMENTO VERRÀ  
ASSEGNATO COME INCENTIVO UN BUONO DA 10 EURO SPENDIBILE PRESSO LE  
LIBRERIE FELTRINELLI.

PER MAGGIORI INFORMAZIONI CONTATTAMI A UNO DI QUESTI RECAPITI:



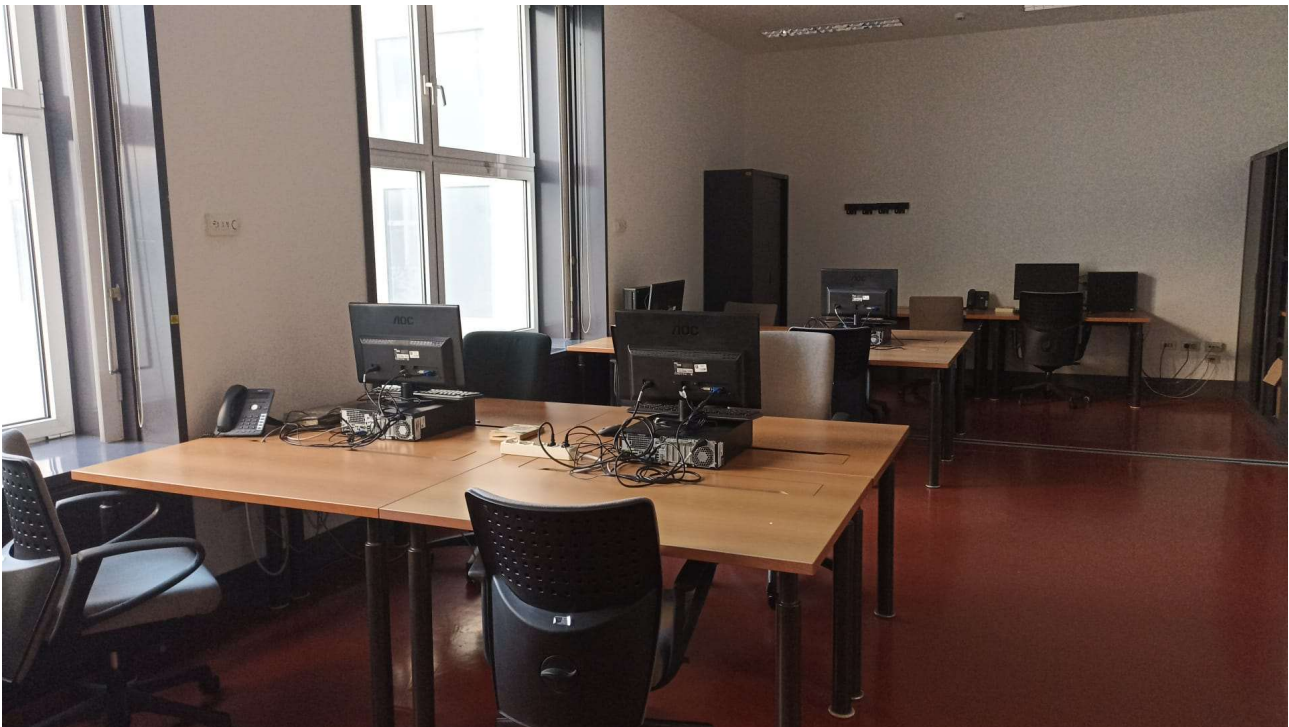
TELEFONO: [REDACTED]

MAIL: [REDACTED]



Figure 15: Flyer for enlisting participants. Phone number and e-mail address are covered for privacy reasons.

The environment is quite neutral: the room is mostly devoid of ornamentation and most of its furniture elements consist of workstations for students. During the sessions, I was alone with the participant to minimize external influences of the trial. The sessions always followed the same standardized process. Before the participant arrived, I checked which game they were supposed to play. When they arrived after a brief welcome moment, I explained to them that they were supposed to play a game for half an hour and then answer a questionnaire. I also encouraged them to speak while they were playing, to say out loud whatever came to their mind while they were playing. I asked everyone's permission to record the audio of the session in order to use their discourses for the qualitative part of the analysis. Every respondent agreed to be recorded. During the session I collected notes on their behavior and approach to the game and answered their questions, being vigilant not to guide them in the game.



*Figure 16: Setting of the experiment.*

Once the gameplay session was over the participants responded autonomously to the post-treatment survey. After the survey, I gave them the voucher and performed a debriefing of the participants. I explained to them the aim and design of the experiment, whether they were or not in the treatment group, and often we chatted a little about the game they played. Until the debriefing, the participants were not aware that the experiment comprehends two groups that play two different games in order to avoid the design of the experience influencing them. In this phase, I always asked them to avoid talking about the content of the experiment until the second half of July, in order to avoid spillover

effects. I can't possibly know whether they did as I told them, but my only chance of completing this research is believing their word as they would not have reason to lie to me in this regard.

In total 85 people participated in the experiment. 15 of the participants were lost due to issues related to loss of interest in the project, difficulties in balancing their schedule, and incomprehensions with the management of the university building. I calculated the statistical power of the trial using the PowerUp web app<sup>28</sup>, the result is shown in figure 17.

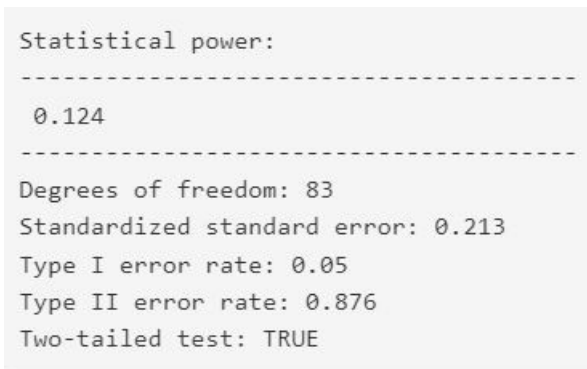


Figure 17: Power calculation of the trial.

The results of the calculation are undoubtedly concerning. This value indicates that there is a very small chance to be able to reject a false null hypothesis of equity between treatment and control groups. This very high chance of false positives should be kept in mind in interpreting the result of the study. Sadly, organizing the experiment was a very expensive and time-consuming process, especially due to the necessity of giving incentives to the participants in order to expect a reasonable turnout and the impossibility of hiring collaborators for the data-gathering process. This is the maximum number of participants that I could afford within the financial and temporal constraints of the Ph.D. However, I believe that this does not mean that the whole design is worthless. As happened with the previous chapter, the quantitative data may represent a good starting point for a deeper qualitative analysis of the considered phenomenon.

Table 18 shows the final composition of the two groups and the number of participants for each profile.

Table 28: Experiment groups composition

	Treatment group	Control Group	Total
Not man - Not experienced player -	12	12	24

<sup>28</sup> <https://powerupr.shinyapps.io/index/>



Not morally disengaged			
Man - Not experienced player - Not morally disengaged	3	3	6
Not man - Not experienced player - Morally disengaged	7	7	14
Man - Not experienced player - Morally disengaged	7	7	14
Woman - Experienced player - Not morally disengaged	4	4	8
Man - Experienced player - Not morally disengaged	2	3	5
Woman - Experienced player - Morally disengaged	3	2	5
Man - Experienced player - Morally disengaged	5	4	9
Total	43	42	85

The participants' traits that allowed this division were operationalized as follows.

Gender was registered from the answer to the question:

*“How do you identify yourself among the following options?”*

*1) Man 2) Woman 3) Other (specify)*

All the answers different from “Man” were grouped to create a dummy variable.

The playing experience was based on the question:

*“On average how often do you play videogames?”*

*1) Never 2) Less than once a month 3) Approximately once a month 4) Approximately once a week 5) More than once a week*

In this case, the first three answers were grouped in the “Not experienced player” trait and the last two in "Experienced player".

For defining the level of moral disengagement, the situation is more complex. The measurement tool is the aforementioned moral disengagement validated scale proposed by Bandura et al. (1996).

The scale includes twenty-six items; therefore, after standardization of the variables, I conducted a preliminary exploratory factor analysis to identify a subset of the items that could be used to create an index variable able to account for all the relevant dimensions of moral disengagement. This preliminary analysis allowed to select the fifteen variables with acceptable levels of uniqueness (below 0,5). The Cronbach's alpha measure of the fifteen items is 0,81. After this step, I conducted a principal component analysis in order to create a suitable index. The results of the analysis are shown in Tables 19 and 20.

Table 19: Overview of the first three components of Principal component analysis.

Component	Eigenvalue	Proportion of variance explained	Cumulative proportion of variance explained
Component 1	4.149	0.277	0.277
Component 2	2.305	0.154	0.431
Component 3	1.335	0.089	0.52

After the third component, the percentage of explained variance drops dramatically. However, the first component summarizes a satisfactory proportion of variance. Table 20 shows the loadings of the three components.

Table 20: Components' loadings. Values higher than 0.2 are in bold.

Variable	Item 1	Item 2	Item 3
1) It is alright to fight to protect your friends.	<b>0.21</b>	0.15	<b>0.25</b>
2) Damaging some property is no big deal when you consider that others are beating people up.	<b>0.27</b>	-0.12	<b>-0.34</b>
3) If kids are living under bad conditions, they cannot be blamed for behaving aggressively.	<b>0.24</b>	<b>-0.35</b>	0.12
4) It is okay to tell small lies because they don't do any harm.	<b>0.28</b>	-0.04	<b>-0.28</b>
5) If kids fight and misbehave in school, it is their teacher's fault.	<b>0.2</b>	<b>-0.3</b>	-0.01
6) It is alright to beat someone who bad-mouths your family.	0.17	<b>0.47</b>	0.17
7) To hit obnoxious classmates is just giving them "a lesson."	<b>0.24</b>	<b>0.23</b>	<b>0.34</b>
8) Stealing some money is not too serious compared to those who steal a lot of money.	<b>0.29</b>	<b>-0.26</b>	0.05
9) If kids are not disciplined, they should not be blamed for misbehaving.	<b>0.21</b>	<b>-0.36</b>	<b>0.37</b>
10) It is okay to treat badly somebody who behaved like a "worm."	<b>0.28</b>	<b>0.21</b>	<b>-0.24</b>
11) It is alright to fight when your group's honor is threatened.	<b>0.23</b>	0.08	<b>0.53</b>
12) It is okay to insult a classmate because beating him/her is worse.	<b>0.34</b>	<b>0.2</b>	<b>-0.26</b>
13) Compared to the illegal things people do, taking some things from a store without paying for them is not very serious.	<b>0.34</b>	-0.17	-0.12
14) It is alright to lie to keep your friends out of trouble.	<b>0.32</b>	0.03	-0.09
15) Insults among children do not hurt anyone.	0.19	<b>0.39</b>	-0.06

Table 20 shows an acceptable association between component 1 and almost all the 15 considered variables. Moreover, it is associated with variables related to all aspects of moral disengagement:

moral justification (variables 1, 3, 9,11), advantageous comparison (2, 8, 12, 13), distortion of consequences (4, 14, 15), victim blaming (5, 6, 7) and dehumanization (10). Therefore, I proceeded to create an index based on the first component of the principal component analysis. Since the variables were standardized, 0 was taken as a middle value for the scale; lower values indicate low levels of moral disengagement and vice versa. The resulting variable has a range of values which goes from -5.07 to 6.27. The overall mean is 0.08; the control's group mean is -0.1 while the treatment group's is 0.29. A t-test rejects the alternative hypothesis of the difference between the two means.

## 5.4 Internal and External Validity Assessment

In this section, I investigate all the possible sources of internal and external validity for the non-equivalent control group design as outlined by Campbell & Stanley (1963) and I explain the precautions taken in order to avoid as much as possible the impact of these sources on the research project. I start this examination by looking at the internal validity hazards in order to understand the extent to which the observed results represent actual traits of the considered sample and thus, are not due to methodological errors.

The first issue considered is Selection, namely possible distortions caused by the overlapping of different methods of distribution of the participants between the two groups. Usually, selection problems are given by differences in average values of the analyzed traits between the groups or faults in the randomization process. In the case of this study, while the groups are not “natural groups” like school classes or households, a rigorous randomized assignment of participants with similar profiles should shield from the possibility of selection. Moreover, as shown before, the groups are mostly equivalent regarding the independent variables of the study (gender, game experience, and moral disengagement). For these reasons, I would exclude the possibility of selection effects within the sample.

The second potential source of internal errors is History. This expression refers to any event happening between the pre-test and the end of the experiment which may influence the participants that could be wrongly mistaken for the action of treatment. This issue epitomizes the imperfect transferability of experimental logic from natural to social sciences. In the former, through experimental isolation, it is possible to effectively block any disturbance related to the historical factor. In the latter, such an aim is obviously not possible, not ethical, and not even desirable as an

excessively artificial environment could upset or otherwise influence the participants (Fasanella 2004). An attempt to control historical sources of error is represented by the standardization of all the procedures of the experiment. In this case, I believe that aim was fulfilled as all the participants were contacted in the same way, played on the same gaming console in the same room and, more in general, interacted in all the phases of the experiment with the same researcher (namely me). Therefore, I believe I can affirm that all the possible precautions to exclude history-related sources of error were undertaken in this experiment since if anything interacted with the participants it did so in the same way for both control and treatment groups.

The third factor which can impact the internal validity of an experiment is Maturation. It indicates, rather than external events that influence the participants' point of view, processes internal to the subjects that have little or nothing to do with the action of the experimental stimulus. These processes are incredibly varied to the point where it is impossible to list them all. They include aging, fatigue, changes of opinion, and so on. Controlling these events is usually beyond the capabilities of researchers, especially if they work alone. However, in this case, the short duration of the project helped the overall situation as it left less available time for respondents' maturation. The whole project lasted for two months; therefore, the time span for such events to happen was particularly short compared to other studies which kept going for years.

The fourth considered factor is Testing. The repetition of a test, especially when, as in the present case, some sections remain identical, implies the possibility that the first test may influence the second one. This is especially true when dealing with students, for whom completion and repetition of tests is a common occurrence and at times, the ultimate objective of their job effort. Consequently, it must be kept in mind that a variation recorded between pretest and posttest may not be due to the intervention of the experimental stimulus but rather to the interaction between the two, with the first effectively preparing for the second. In this case, the presence of the control group, even if not completely equivalent as it happens in this case, acts as a safeguard for the overall project. If there has been an interaction between the two tests, there is no reason to believe that it has affected the two groups differently since both groups' participants compiled the same questionnaires. Therefore, even if present, this effect should not invalidate the logic of the experiment.

The fifth factor which should be considered in evaluating the internal validity of an experiment is Instrumentation. This expression refers to the fact that some variations during the experiment may be attributed not to the participants to alterations in the measuring instruments and in the actors who conduct the measurement. In this experiment, the setting, the game hardware, and the procedure always remained the same due to an effort in standardized planning. However, the researcher is also

part of this consideration. The researcher over the course of the experiment, may become tired or overconfident after witnessing the same treatment over and over. This may lead to mistakes, like infractions of the experimental standard or a decrease in the sophistication of the observations, which ultimately lead to a biased study. In order to keep this risk under control, it helps to have access to a recording of the sessions. In listening to the recording of the sessions for the qualitative analysis I did not encounter any relevant violation of the standardized procedures which were decided before the beginning of the trial. I acknowledge that this is my judgment of my own work, and it is as fallible as any other of my activities during the trial, but a second control of the overall experience helps rule out possible distortions.

Another factor that should be kept under control is Regression. This factor refers to a specific phenomenon where participants selected as a consequence of extreme scores in the pre-test tend to move toward the group average in subsequent tests, and this shift is often mistakenly considered an effect of the experimental variable. In this research, all potential participants who contacted me were allowed to conduct the experiment without pre-selection evaluations based on specific scores. Moreover, thanks to the pre-post design, it is perfectly possible to track the cases that present extreme scores and follow their evolution comparatively between the two groups and time moment.

The penultimate relevant factor for internal validity is Mortality. This factor indicates the loss of participants over the course of the experiment. The loss of units among different groups can create imbalances between the control and treatment groups which may be wrongly attributed to the effect of the experimental variable. This situation is particularly serious in research designs with a non-equivalent control group where it can ulteriorly enhance undetected imbalances between the groups. The importance of this issue is reduced by the construction of randomized groups, as it happened in this research, as there is no reason to believe that experimental mortality would act differently in different groups. In this research 15 of the 100 initially foreseen participants abandoned the trial after compiling the pre-test. Luckily, these defections did not unbalance excessively the comparability of the two groups, as I showed in Table 18 in the previous section of the chapter.

The last hypothetical issue that could invalidate the internal validity of the experiment is represented by potential interactions between the Selection factor and any one of the other considered factors. Namely, this precaution means controlling the possibility that each of these factors may have exerted its influence on only one of the two groups, or both, but in different ways. The reason for the unlikelihood of interaction between selection and every other factor is considered in Table 21.

Table 21: Interaction between selection factor and other factors.

Factor	Interaction with selection
History	It is highly improbable that some external event could have systematically influenced the groups differently.
Testing	It is unlikely that the standardized questionnaire or any researcher's mistake could have produced a consistent differential effect on any of the groups.
Instrumentation	It is unlikely that the standardized questionnaire or any researcher's mistake could have produced a consistent differential effect on any of the groups.
Regression	The participants were involved in the experiment and divided among the groups according to standardized random criteria
Mortality	Mortality happened as a consequence of personal schedule difficulties or random events (es. misunderstandings with the building staff).
Maturation	The analyzed subject is highly unlikely to have caused a systematic different evolution between the two initially equivalent groups.

This concludes the control of factors of internal validity. As noted by Campbell & Stanley (1963), this quasi-experimental scheme is rather good in maintaining internal validity due to the high control over all the phases of the design it grants to the researcher. However, the same cannot be told for external validity. External validity indicates the limits of generalization of a research design, and the level of representativeness of the results on the broader population. Designs that foresee several repeated observations fare better in this than simple pre-post trials. In the case of this project, three factors need to be considered.

The first, which is also the most problematic, is represented by the interaction between the selection factor and the experimental variable X. It may happen, in fact, that it is not permissible to extend the conclusions drawn to the reference population because, compared to it, the sample may not be representative. On one hand, this research tried, within its time and cost limits, to pursue the criterion

of the maximum variety of relevant profiles, in order to increase the degree of confidence in the representativeness of the sample. While this effort implied shunning an absolutely random selection of the participants, it must also be noted that it is impossible to create a random selection of videogame players. They are not a defined group like a classroom or the workforce of a company, they can be everyone as their defining trait is having a rather common hobby. This experiment was participated by a sample of students and university workers which included all the theoretically relevant dimensions. Due to already discussed logistical and economic constraints the size of the sample does not allow for satisfactory statistical power, and this is the main limit of this research. However, while the sample is small for the standards of quantitative research is rather big for the ones of qualitative analysis; therefore, I believe this issue, which is quite critical for the statistical part of the project, should not be considered harmful for the qualitative interpretations which conclude this chapter.

The second obstacle regards the eventually that the pretest may influence the reception of the experimental variable (testing-X interaction). The question is: how is it possible to generalize the effects of a particular experimental variable to those who are not subjected to a pretest? Following this reasoning, since both groups underwent the pretest, it should consequently be inferred that the research conclusions are not exportable. However, this situation is not so straightforward.

On one hand, the design of the experiment indeed gave the participants at least a general idea about what could be the point of the research and consequently, the participants' previous knowledge and stereotypes about the subject may hypothetically have been artificially inflated by the sensitization effect of the pretest. On the other hand, it is also true that the specific research situation on a university population represents a very specific case. As Campbell & Stanley stated:

"When experimental observations are similar to those normally performed, there will be no unwanted interaction between testing and X" (Campbell & Stanley, 1963, p. 71).

Among all possible populations, the university's is one of the most exposed to the creation and completion of tests with the aim of knowledge assessments. Solving tests is a normal part not only of students' lives but also of researchers' and professors' experience as most of their activities are routinely evaluated through standardized questionnaires. I believe the specific context of the research allows to generalize the results of the study, at least within the field of the population of students and academic workers.

The last issue to be considered is the potential reactivity of experimental conditions, namely the chance that the awareness on the part of the subjects of being studied can produce a substantial difference between the studied and unstudied populations and therefore nullify the generalizability of

the conclusions. Generally speaking, every aspect of the experimental setting that feels “artificial” to the participants increases this risk. Literature suggests that in this research these elements can be the pretest, its interaction with X, the presence of control and treatment groups, the presence of researchers, and the idea of having to compile a questionnaire after the end of the playtime. Regarding the pretest and its interaction with X, as it happened with the previous factor, it can be stated that a structured and standardized questionnaire is not an uncanny event in the life of a student or a researcher. Likewise, the existence of groups cannot be a problem as the participants were not aware of their existence before the debriefing which happened after they completed the post-test. Regarding the chance that awareness of the post-test questionnaire influenced the participants’ performance, it is possible to gain some insight from the post-test itself, as shown in Figures 18 and 19.

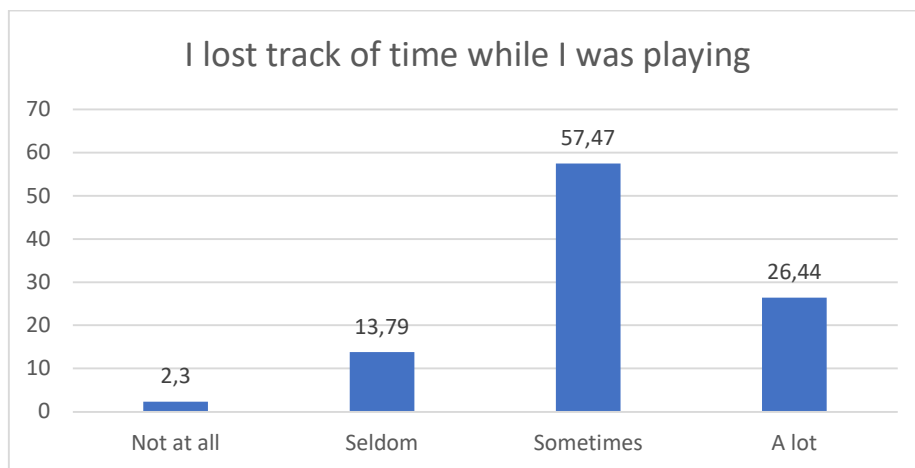


Figure 18: Relative distributions of answers to the post-test questionnaire. N=85.

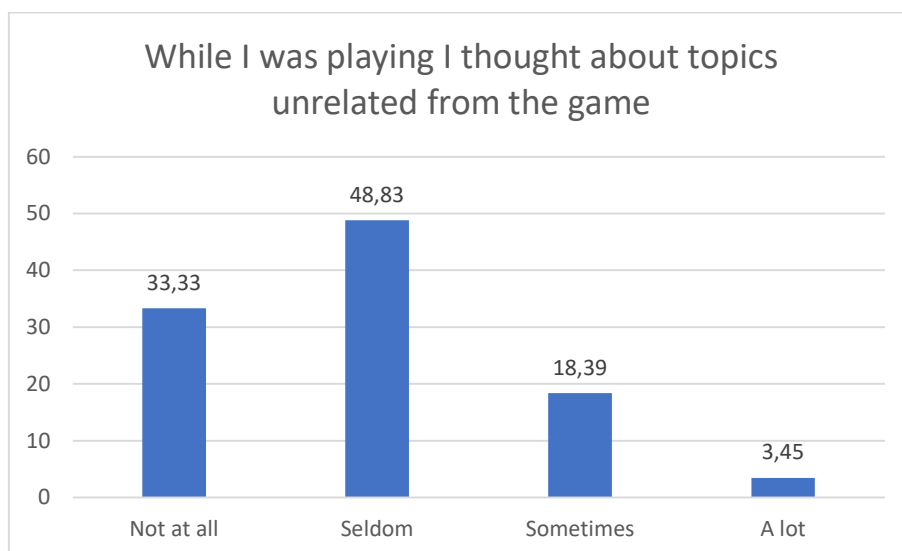


Figure 19: Relative distributions of answers to the post-test questionnaire. N=85.

The two figures show the relative distributions of the evaluation of the respondents of two statements which measures their level of telepresence. This word indicates the subjective feeling of being present



in the mediated environment rather than in the immediate physical environment (Steuer 1992). This data suggests that while playing a sensible majority of the participants were fully concentrated on the task at hand rather than on the experimental setting, favoring thus the idea that said setting did not influence much the overall experience. On the other hand, the presence of the interviewer could not be avoided. The opposite case would have prevented the gathering of qualitative observations regarding gameplay, and I would not be able to know whether the participants actually played the games or not. However, since the post-treatment was self-administered and my activity was limited to its explanation, it is reasonable to believe that my presence in the room may have influenced the course of the experience in a very limited fashion, if at all.

With this last factor, I conclude the exhaustive examination of all the literature-foreseen limits of the design and implementation of this phase of the research. I believe that I have done anything in my power to minimize the impact of these limits and I am fully aware of the seriousness of the limited statistical power of the experiment. However, I also argue that while its representativeness is limited from a statistical point of view, this issue does not mean that this research is worthless or meaningless. The rigorous application of a mixed-methods strategy in all of its aspects is original both in the field of Cultivation Theory and in Games Studies. Even if some aspects of the overall design did not perform as intended due to physical constraints, this does not preclude the validity of the execution and the qualitative part of the research.

## VI. CULTIVATION ANALYSIS

This chapter finally presented the last part of my PhD research. As happened in the previous analysis section, this chapter opens with the analysis of quantitative data which gives initial insight into the topic, in this case assessment of the possible presence of Cultivation Effect. The discourse is concluded by the analysis of qualitative observations conducted during the experiment I presented in the previous chapter.

### 6.1 Quantitative analysis

In this section, I provide a statistical analysis of the quantitative data gathered during the experiment and I try to validate the hypotheses expressed in the previous chapter:

*H1: Exposure to violent content in videogames leads to greater acceptance of violence and antisocial behavior as normal in our society compared to exposure to non-violent games.*

*H2: Heavy players tend to be more influenced by violence depicted by videogames.*

The most efficient analytic strategy which allows to check the effect of the experimental stimulus in the treatment group by comparing it to the untreated control group is called “difference-in-differences” (from now on just “DiD”). The name indicates a statistical technique that assesses the impact of a treatment, characterized as either an explanatory variable or an independent variable, on a result, denoted as a response variable or dependent variable. This is done by contrasting the average change in the outcome variable over time for the treatment group with the average change over time for the control group. The procedure can be recapped in the following formula:

$$DiD = [(average\ treatment\ group\ post) - (average\ treatment\ group\ pre)] - [(average\ control\ group\ post) - (average\ control\ group\ pre)]$$

The rationale behind the DiD strategy is quite straightforward: merge the two simpler methods to sequentially eliminate selection bias and the impact of time. The initial step involves calculating the simple before-and-after difference for both groups, effectively removing unit-specific fixed effects. Subsequently, after these initial differences are computed, we take the difference of the differences (hence the name) to obtain an unbiased estimate of the effect of the experimental stimulus on the treatment group.

However, this technique is underlined by a crucial assumption, namely the absence of time-varying group-specific unobservable factors. In other words, it assumes that in the absence of treatment, the difference between the treatment and control group is constant over time. This is commonly referred to as the “parallel trends assumption”. There are a series of statistical means to prove this assumption (or at least give it the benefit of the doubt) but they all imply the presence of several observations of the data. What can be done in a simple pre-post scenario? First of all, one has to check the raw data of the sample. As shown in the previous chapter there is no statistically significant average difference between the control and treatment group regarding the scores on the moral disengagement index. The second control is to check whether the treatment itself is endogenous, as in this scenario the assignment to treatment group would be directly dependent on pre-treatment outcomes and therefore the post-outcomes would change regardless of the treatment. However, in this case, the opposite effort was actually made: the group was specifically created in order to save randomization of the assignment and make the control group a reasonable counterfactual of the treatment group, discarding thus the chance of endogeneity. While these expedients cannot completely rule out the chance of violation of the parallel trend assumption, they are the most reasonable assurance of its respect within the limits of the present design.

### 6.1.1 Difference-in-Differences

Once all the preliminary checks were completed, I proceeded to organize the data in order to perform the DiD analysis. The pre and post dataset were merged using the identity code present in both the questionnaires. The first DiD model, with no covariates, appears in Table 22.

Table 22: DiD model examining the treatment effect on moral disengagement with no covariates. N=85.

Coefficient	Robust standard errors	t	P >  t	95% confidence interval
-0,37	0,4	-0,92	0,36	-1,17 / 0,43

The first iteration of the model does not yield significant results. While previous literature suggested that the size of the Cultivation Effect tends to be moderate in absolute terms (Potter 1993), in this case, it is not possible to ascertain whether it is actually different from zero. The data even show a negative coefficient which may suggest the opposite relationship I hypothesized in this research. However, it is impossible to reject the null hypothesis of equivalence between the two groups.

Therefore, a second model including the dummy variables of gender and gaming habits is added to the model. These two variables may have a relevant intervening effect in the relationship. On one hand, the participants who are not habitual gamers may not have the instruments to decode the messages and the actions that are represented on screen. This may be particularly true in the case of videogames rather than movies where inexperienced users put a lot of effort into understanding the controls of the game and may therefore miss something of what happens on-screen during their gameplay experience. On the other hand, male players may be more affected by the violence in the proposed game as they have been the main target audience of these games until very recent times. Both these groups (male players and habitual players) should be target of what Gerbner (1980) calls “mainstreaming”, the strong audience who regularly engages with the medium and who is specifically targeted by the medium producers. The results of the inclusion of these variables are shown in Table 23.

Table 23: DiD model examining the treatment effect on moral disengagement with gender and gaming experience as covariates. N=85.

Coefficient	Robust standard errors	t	P >  t	95% confidence interval
-0,35	0,4	0,87	0,39	-1,15 / 0,45

Adding these variables does not much change the situation. The coefficient is roughly the same as the one shown in Table 22. This result seems to suggest that gender and gaming habits, at least in the way they are operatized in this research, do not influence that much the rates of moral disengagement, allowing thus to reject the second hypothesis I proposed in this section of the research. This result may give credit to Newcomb’s criticism of Cultivation Theory, almost as old as the theory itself, which stated that Gerbner and his collaborators struggled to demonstrate the presence of a mainstreaming effect due to the inherent complexity of the relationship between media and audience and the limits of surveys. As he originally argued, culture is not a thing that can be measured.

Before concluding I try to enlarge the scope of the analysis by including a proxy of cultural capital, in order to understand whether this may also be a relevant factor in the participants’ understanding and processing of the games they were exposed to. In order to do this, I include two other variables, one measuring the highest educational level attained by the participants and the highest educational level attained by one of their parents. The chi-square test does not seem to show any relevant association between the two variables and the two experimental groups. The coefficients of this last model are shown in table 24.

Table 24: DiD model examining the treatment effect on moral disengagement with gender, gaming experience, educational attainment, and parental educational attainment as covariates. N=85.

Coefficient	Robust standard errors	t	P >  t	95% confidence interval
-0,35	0,4	0,87	0,39	-1,15 / 0,45

As the table shows these coefficients do not change the results in any meaningful way, thus confirming the results of the previous model. A graphical representation of this last DiD model is shown in Figure 20.

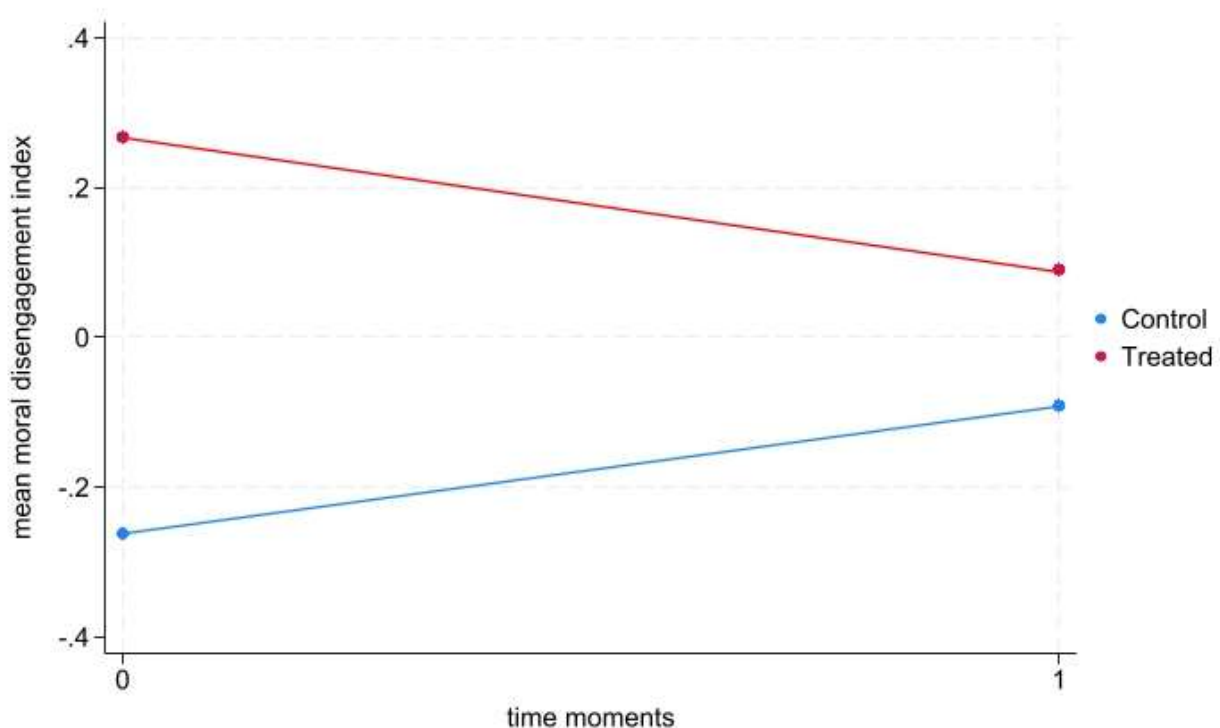


Figure 20: DiD model examining the treatment effect on moral disengagement with gender, gaming experience, educational attainment, and parental educational attainment as covariates. N=85.

While it may appear in the Figure that the two groups have different starting points, I want to stress the fact that, as shown in the previous chapter, the difference between the two groups in the first-time moment is not statistically significant. Rather than an incremental effect of moral disengagement on the treatment, the graph seems to show a convergence of the two groups towards an intermediate value. While this result could be theoretically significant, we still have to consider that neither of the attempted models yielded any significant results, and therefore does not allow to accept either of the two hypotheses formulated in the phase of the research.

As happened in the previous phase of this research, these results will now be complemented by the analysis of the qualitative observations gathered during the experiment's progress. Compared to the

previous step of this research, the situation in this phase is more uncertain, as the quantitative part does not yield any precise indication. It is important to remember that failed acceptance of the hypotheses does not mean rejection. The results may be due to errors in coding the concepts or the lack of statistical power of the design. However, these issues do not influence the analysis of qualitative data in the same way.

## 6.2 Qualitative Analysis

In this section of the chapter, the field notes taken during the experiment's progress are analyzed. The notes include observations of the researcher and direct quotes from the participants who agreed to be recorded during the gameplay sessions.

During the sessions, the participants were encouraged to speak about what they were doing in a completely free format, according to the “think aloud” technique. This technique, originally developed by Ericsson & Simon (1993), is described as follows:

“Within the think-aloud method, participants think out aloud while performing a given task, or recall thoughts immediately following completion of that task. A typical verbalized thought stream might look as follows, where the task here is a golf putt: ‘Get my line, more to the left, and putt’. The theory underlying this method proposes that thoughts elicited by the method are a valid reflection of at least a subset of the thoughts involved in the mediation of the task being performed” (Eccles & Aarsal 2017, p. 514).

During my observations, the participants spoke about a series of topics related to the activity they were performing precise recollections of their actions, insights about what the game supposedly was trying to tell them, considerations regarding their overall relationship with gaming, and so on. The whole process allowed to gather an impressive amount of information, collected in about 67-word pages. For each observation, I noted whether the participant was experienced or inexperienced as a player, whether they had a low or high score in the moral disengagement index, and which game they played. All this information was particularly useful as it gave me a scheme for the initial part of the analysis where I used these dimensions as the basis for an exploratory coding effort. In this part of the research, I focused directly on the half of the sample that played TLOU and was therefore exposed to violent content, therefore the following analysis is based on the 43 members of the control group. In the analysis I focus on how the player faces the representation of violence during gameplay and which effects this interaction has on them. The notes were analyzed using an axial coding strategy. The material is presented following the main macro-themes derived by the coding.

## 6.2.1 Expectations about Antisocial Behavior

The first recurring trend noticeable from the analysis of the notes regards the varying reactions of the player to the expectation that violence may actually happen during their gameplay experience. The sequence opens with Sarah, a 12-year-old girl, alone in her house. The game encourages the player to explore the house where increasingly distressing elements regarding the status of the country appear (a newspaper with alarming headlines, a TV news service gets interrupted by a sudden explosion, Sarah's father is nowhere to be found but his phone is full of lost calls).



Figure 212: Sarah watching a distressing news service.

In this context, almost all the players realized that the tension was slowly growing and something bad was bound to happen.

As can be reasonably expected, the more inexperienced players had a lot of questions and doubts regarding the situation. Several of them expressed anxiety about the rules of interaction with the game world and with the gamepad. They all needed to create a link between the object full of buttons they were holding in their hands and the limited set of actions they could perform in the game world by interacting with said object. The graphics of the game are still fairly realistic, even ten years after the original release, therefore most players spent a little time looking for potential affordances by trying to understand which elements of the environment were scenography and which ones allowed some form of interaction. One of the most widespread concerns regarded the pace of the game, and especially the speed of the playable character:

*“I am anxious because the character is walking really slow, and I want to run” (participant 24CE).*

*“Can I go faster than this?” (participant 21VC).*

*“I hope they are allowing me to run” (participant 08MM).*

These players feel that the low speed afforded to the character is increasing the distress of the situation. They expect to be in a problematic situation soon and they feel the game is not giving them the instruments to face it. In front of this problem, some differences start to emerge between the players who scored high and low results in the moral disengagement index. The less disengaged players seem rather concerned about the chance of violent interaction and either express the desire to avoid it if possible or frame it only as a self-defense act.

*“I hope I will not need to shoot. I don’t think I will survive” (participant 04CF).*

They seem to be concerned about the NPCs as well:

*“Should I protect her (Ellie)? Can I tell her to follow me?” (participant 04CF).*

*“Who told her to speak? There are probably killer zombies around, I do not want to draw their attention” (participant 09LC).*

On the other hand, the more morally disengaged seem more eager to face potential enemies. They usually start early to ask questions regarding the specifics of the potential violent interaction:

*“Is this a survival game? Should I kill things?” (participant 28MR).*

Others ask whether they can or cannot loot dead bodies, how the respawn system works, and whether the death of the playable character is a common occurrence. The idea that a videogame sooner or later will include some form of violent interaction seems to be granted for them and the question is not whether it can be avoided but how they can be better equipped to face it.

On the other hand, experienced players had way fewer comments about what they expected was going to happen and simply went through the game. They already had familiarity with the controller, and they usually identified quite easily which elements of the game allowed them some form of interaction. Therefore, their expectations were usually tied to what the game just taught them: when the game gave them a gun, they expected to have to use it. However, even in this case, the same difference regarding the idea of facing violence resurfaces. The more morally disengaged players do not seem to be particularly bothered, while the ones who scored low in the index express distress at the idea of fighting:

*“The game gives me the same anxiety felt by Sarah, literally the same. It is absurd” (participant 13PG).*

*“And now we progress, and the game forces us to enter the fray while we would like to us stay home and drink a hot tea”. (participant 18CG).*

Overall, these observations suggest that two different kinds of expectations regarding violence representation: players who approach videogames with an already relevant level of moral



disengagement tend to accept mediated violence as a basic feature of gameplay, while others show an array of different responses which ranges from stress to begrudging acceptance. On the other hand, the level of previous experience with videogames seems to influence the overall interaction with the game and how affordances are imagined, but it does not imply any particular previous idea about violence representation.

## 6.2.2 Violent Interaction

After having analyzed the expectations tied to the representation of violence, a logical point of view suggests investigating how players handle and react the violent interaction per se, the sections of the game where a violent response is (almost) mandatory in order to progress through the narration. The first element that meets the eye in the note is the fact that players take the principle of Chekov's gun<sup>29</sup> a bit too seriously. Pun's aside, halfway through the gameplay section organized for the experiment the players are given a gun. Once these happen several players assumed that said gun was the key of solving most interactions, either by shooting or by using the stock to smash parts of the environment.

*"Can I shoot the door?" (Participant 11CL).*

*"Can I shoot the glasses? In any case I draw the gun, you never know" (Participant 14MN).*

The mere existence of the gun in the hand of the playable character changes completely the relationship between the player and the surrounding environment. Even if most times the game does not allow the players to solve environmental puzzles by shooting at objects, they often seem to imagine it as a reasonable affordance. Sadly, the environment of the experiment did not allow to use further questions to delve into this topic without altering the experimental stimulus. However, what remains clear is that the presence of the gun has an empowering effect on the players. It makes them feel they have an agency over what is going on around them, albeit a destructive one.

This aspect is even more evident during the actual gunfights where players, regardless of their scores in the moral disengagement index during the pre-test, seem to almost universally draw some sort of satisfaction in beating the enemies. This phenomenon has some extreme cases represented by players

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<sup>29</sup> Chekhov's Gun, or Chekhov's Rifle, is a storytelling concept asserting that every component in a narrative should serve a purpose, with any superfluous elements eliminated. In practical terms, if a writer introduces a gun into the plot, there ought to be a compelling reason for its presence, like it being discharged later in the storyline. Essentially, all narrative elements must eventually contribute meaningfully to the unfolding of the plot.

who explicitly stated that being able to shoot made them feel powerful. However, even the players who expressed discomfort in facing a violent interaction showed satisfaction in winning the confrontation. Players express this satisfaction by yelling “Yes” or commenting on the fact that they did a good job. More experienced player seems to be embarrassed when they die as if showing me their failure makes them lose prestige in front of me. During these comments, it is particularly relevant how moral disengagement mechanisms, in particular dehumanization, work particularly well. The players know very little about the game world, and the motivations of the soldiers they are fighting. The game sections present them only as a series of nameless guys hellbent on killing the protagonist. After a little most players start to refer to them with dehumanizing nicknames like “sewer rats”, “cockroaches”, “pigs”, “fascists” and several times even more vulgar and derogatory epithets.

*“Let’s go, Uncle Tommy, kill this s### with a uniform!” (Participant 06BL).*

Most players appear to be utterly concentrated during these fights, with the action absorbing all their attention. Several comments on the fact that they cannot think about anything else while they are playing these sequences as they feel they are particularly difficult and require to perform several tasks at the same time, absorbing thus all their attention. While they are focused on eliminating these enemies most players never realize that the game actually never asks them to kill anyone, as the arena can also be completed by sneakily escaping from the building without harming anyone. However, the game never explicitly tells the player that this is an option, and this returns the argumentation to the concept of Chekov’s gun. Since they are given a weapon, most players expect they have to use it in a very “natural” way. All the moral disengagement techniques included in the game facilitate this thinking process and allow and what is considered an extremely serious action in real life as quite easy in the videogame environment.

The players who scored higher on the moral disengagement scale seem to be a little more confident than the others in this phase of the game as they seem able to see funny elements of the violent interaction. They often use slapstick jokes or black humor remarks to comment on some relevant moment of the game.

*“Lol<sup>30</sup>, I gave him a giant punch” (Participant 01AC).*

*“Top! Thank you for your sacrifice, man!” (Participant 01FB).*

Using humor as a form of trivialization of violence is something that has been already studied in the context of television comedy (Potter and Warren 1998). It indicates that the moral disengagement

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<sup>30</sup> “Laugh out loud”, it is a slang expression typical of online forums which indicates amusement.

mechanisms are working as intended and the videogame experience is able to create enjoyment and fun in the players despite its grim content.

Regarding the divide between expert and non-expert players it is interesting to notice that, as partially stated before, the representation of violence has some sort of empowering effect, especially on the players who are less used to the internal functioning of action games. These players do not know that the story of the game is entirely scripted and therefore expect that they can actually change the outcome of what is happening on screen. These players ask whether they can replay the scenes of Sarah's or Tess's deaths in order to reach another outcome. They ask whether they could have done something to prevent these tragedies from happening. After all, the protagonist can die an infinite number of times, so why can't the other character do the same?

*“Why can't I come back and save her (NDR. Sarah)? When I die I can and when she does I cannot.” (Participant 01AC).*

This question reveals what expert players assume is a very obvious mechanism of action games is not obvious at all for the uninitiated. In this kind of games, the players are often just executors of an already written plot; the allowed interaction facilitates immersion within the story and allows the player to feel more “part of the action”, but they actually have very limited agency. However, it appears that there is one moment in which these games at least simulate some form of agency, and this happens when the players feel empowered. They feel they can survive the challenges ahead, and that they may have a chance of getting a happy ending at the end of the story. This idea of agency, even if only perceived, is strongly tied to an idea of morality. What should I do in this difficult situation the game is presenting me? What is the right thing to do? This new element of the interaction between player and game is explored in the next sub-chapter.

### 6.2.3 Moral Dilemmas

One of the reasons TLOU has always been considered a very good game is due to its representation of the ambiguous morality of its protagonists. The game forces the player to go along with the questionable choices of the protagonists, often stimulating some sort of moral dilemma in the player.

*“What I like about Joel is that he is a simple man. He is a man who listens to his guts and his feelings and therefore he makes completely wrong choices” (Participant 18FD).*

During the selected gameplay sequence one of such dilemmas is presented when Joel and his family are escaping by car from the spiraling chaos in the city. Suddenly they encounter another family who is attempting the same but lack a vehicle. When this second group asks for help and underlines the fact that they have a kid with them, Joel callously orders his brother to keep driving and don't pay attention to this family's pleas. He justifies the decision by stating that they have a kid with them as well, implying that her safety comes before the one of any other possible kid.



Figure 22: Joel decides to avoid helping another family of supervisors.

This sequence, which happens in about thirty seconds, left a deep impression on the participants who often commented on it. In this case, the players with low scores on the moral disengagement index expressed discomfort and adversity regarding Joel's decision. Among them, some proposed that the game could offer the player a choice and then take responsibility for their decision.

*“Couldn't the game ask me whether I wanted to stop or not?” (Participant 18PS).*

On the other hand, the more morally disengaged players tended to agree with Joel's decision. They reasoned that, while unpleasant, the safety of the people you actually care about should always come on top of the list of priorities, and helping strangers was an excessive risk. On one hand, this position is actually in line with the one expressed by the classical version of Cultivation Theory. Representation of violence and anti-social behavior leads to a belief that our society is a cruel place where, under a layer of politeness, everyone ultimately just cares for themselves and is ready to overthrow others in order to satisfy their needs. Considering that this opinion was usually held by players who already had a more relaxed perspective about anti-social behavior, this finding seems to validate Potter's hypothesis that Cultivation rather than introducing new ideas in the audience works

as a reinforcement of already held convictions (Potter 1993; Hawkins, Pingree, & Adler 1987). Said convictions may be hazy and not completely elaborated and media like television or videogames provide a structure and a framework to organize them.

“Viewers might have derived their belief about the television world not by watching television but by listening to what parents, friends, and other media say about television and then watching television after being sensitized to certain issues. When they expose themselves to television, they seek the reinforcement of already learned beliefs through instantiation of examples” (Potter 1993, p. 593).

On the other hand, on the expert/inexpert player divide what changes is usually related to the depth of the reasoning and the ability to catch and reflect on minute details represented in the gaming world. The inexperienced players tend to be overwhelmed by the inputs asked by the game in order to progress through the story. Complete a fighting sequence requires a series of different actions: shooting, moving, using covers to avoid getting shot, and so on. Therefore, as they concentrate on these different new tasks, they have to perform all at the same time they usually stop to reflect only on the most evident elements of the background or the story. The expert players, on the other hand, are more able to abstract from the tasks at hand and reflect on what they see. One player for example reflected on what could have been the dilapidated city neighborhood where the shooting happened before the zombie apocalypse. The player reflects on the consequences of violence even if the game presents them as a neutral part of the environment. Another noted that a newspaper read by Sarah titled “Crazy woman kills husband and 3 others”. She commented that, in her opinion, this is exactly the kind of secondary victimization headline that may be seen in real life; when a woman has an active part in an accident the newspapers tend to question her mental stability and depict her as “crazy.

An interesting case is represented by the scene of Sarah’s death. Several expert players reflected on the fact that after a while of playing, they got quite anesthetized about the represented violence, but the violence on children, or even its foreshadowing, remains quite disturbing thought. However, Sarah’s death is probably the one shown with less moral disengagement techniques in the entirety of the game, showing thus that the sanitization of all the other examples of violence works quite well. This suggests that moral disengagement techniques work quite well even for expert segments of the audience, despite their mastery of the medium.

## 6.2.4 Stress

The last topic related to violent representation I intend to discuss in this dissertation is the relationship between violence and players' stress. As stated before, players, especially the inexperienced ones, were consistent in showing signs of agitation before and during the violent interaction.

*"This game is mad because it creates too much anxiety. I would never play it at home."* (Participant 18TR).

This level of agitation seems to make the participants more vulnerable to the techniques of moral disengagement employed in the game. It appears that while they are in this altered state it becomes easier for them to accept the idea of fighting and killing within the game world.

*"They started, otherwise I would not have killed them."* (Participant 29RN)

This quote exemplifies the idea very well. The game employs a very typical advantageous comparison mechanism: the enemies are the aggressive ones who started shooting; therefore, the player's actions are comparatively not that bad as they were strictly related to self-defense during a high-tension moment.

However, the fact that players accept to partake in the violent act does not automatically imply that they accept it as moral or just.

*"I feel guilty, I killed a lot of people, but I was defending my life"* (Participant 18LR).

The need to find a justification confirms two fundamental elements of moral disengagement in games theory as exposed by Hartmann (2017). The first is the fact that people perceive fictional characters and their adventures as at least partially real:

"Research leading to the model was originally motivated by the question of why users enjoy virtual violence, rather than feeling guilty about it. From a media-psychological perspective, the answer to this question seemed challenging. On the one hand, if asked in interviews, most gamers stressed that they do not feel bad when enacting virtual violence because they distinguish reality from fiction and know that "this is not truly happening". [...] However, on the other hand, empirical studies from different contexts [...] increasingly suggested that, despite better knowledge, users might also automatically feel like they are present in a videogame, are actually acting in the virtual environment and are encountering actual social beings [...]. Accordingly, "knowing that this is not truly happening" does not provide a conclusive answer to the question of why virtual violence is enjoyable" (Hartman 2017, pp. 1-2)

This element of juxtaposing what happens in the game with real life often happened in the participants' discourse. They seldom referred to their actions as actions of the character but as actions they did: "I was saving my life", "I shot him in the head" and so on.

The other element that is often at the center of players' discourse is the consequent need to justify their "problematic" actions towards partially perceived-as-real people. Moral disengagement techniques smooth this process and make (most) games an enjoyable experience rather than soul-wrenching ordeals.

Contrarily to what happens for the expert/inexpert divide, players seem to be stressed regardless of their scores in the moral disengagement index registered during the pre-test. Even more disengaged players express dislike for the anxiety they feel in the shooting sequences. Therefore, I did not feel that moral disengagement is closely associated with the stress of the player during fast-paced gameplay moments.

## 6.3 Conclusions

In this last section, I try to wrap up the result of this attempt of Cultivation Analysis. On one hand, a more traditional quantitative analysis has not yielded any significant results. Here it is important to remember that rejecting alternative hypotheses is still a result as it indicates that the investigated relationship does not work in the way it was supposed by the researcher, or at least they employed instruments and conceptualization fails to measure such relationships. In this case, the already discussed limitations related to the small size of the sample have surely played a role in the low significance of the results. However, as was registered in previous studies (Williams 2006, Chong et al. 2012), it may also be that the relationship between the message encoded in the media and the audience is not as simple and direct as it was postulated in the original formulation of Cultivation Theory.

Luckily, the availability of qualitative data allows to look further and deeper in this relationship. In this case, the configuration of the sample and the experimental setting provide an additional advantage. Due to the presence of the pre-test, I know much more about the traits of the respondents than what usually happens in qualitative research. This allows the chance to make a smooth comparison between expert and inexperienced players and between the ones who already show relevant levels of acceptance of antisocial behavior and the ones who do not.

The insights gathered from the observation indicate the presence of a Cultivation effect which acts, rather than as a source of new meanings, as a reinforcement of already held beliefs. The participant who already held a permissive stance towards antisocial behaviors saw the events of the game as a confirmation of their positions. They generally seemed to abide by the vision of the world as a cruel and merciless place which Gerbner registered in the heavy TV viewers (Gerbner 1970). These players asked more frequently and with a more positive stance when they were going to receive a weapon; they were the ones who most often coped with the violence by using humor rather than showing distress; and they were the ones who tended to agree with Joel's cynical vision of the world.

On the other hand, contrary to the classical formulation of Cultivation Theory, the length of the exposure to the selected media of the participants does not seem to be strongly associated with the reception of the games' messages. The most expert player showed more confidence in overcoming the game's challenges and more level-headedness during the gameplay. They were able to investigate the game world on a deeper level and noticed much more minute details in the environment, but they did not seem to reach different conclusions regarding what was happening in the narration compared to the inexperienced players. In other words, participants seemed to accept the representation of violence framed through moral disengagement techniques more or less in the same way regardless of their experience.

Lastly, an important aspect, which I believe may require further investigation is the relationship between violence representation and players' perception of empowerment. Most participants radically changed their approach to the game once they received a gun. They tended to assume that being armed finally gave them a chance to impose their will on the game world, when actually that was not exactly the case. The gun allowed them very few environmental interactions and all the combat sequences could be solved without recurring to violence. What matters is that the gun, therefore the promise of violence, changes the way in which participant perceive their place within the fictional story and how they play along with it. At first players, especially the inexperienced ones, feel threatened by the game world. Then, when they are handed a possible way to turn the violence back on the NPC who threatened them, they feel empowered. These mechanisms of empowerment integrate a few moral disengagement techniques (especially advantageous comparison and moral justification) and lead players to accept violence as an acceptable part of the media.



## VII. CONCLUSIONS

In the last chapter of this dissertation, I retrace the steps of the research and try to check whether the objectives set in Chapter 2 were met. As a reminder, I repeat said objectives:

- 1) To explore the representations of violence and gender relationships coded by Naughty Dog in its portfolio of games across the long term by analyzing *Uncharted 2: Among Thieves* (2009), *The Last of Us* (2013), *Uncharted: Lost Legacy* (2017) and *The Last of Us Part 2* (2020).
- 2) To explore how players decode narrations and gameplay experiences of the aforementioned games.
- 3) To assess whether or not the messages decoded by players who experienced the considered games contributed to shaping their beliefs regarding violence and gender relationships.
- 4) To assess whether the levels of belief permeation vary among the players according to their individual background (gender, age, ethnicity, ...), their playstyle (habitual gamers, casual gamers, ...), and their knowledge of the Naughty Dog portfolio.

This chapter retraces the steps of the research, therefore it is divided into two main sections which present the results of both steps of my research and attempt to show that the first is preliminary to the second. The chapter concludes with a brief discussion of the limitations of my research project.

### 7.1 Message-System Analysis Conclusions

In the first phase of this research, I performed a Message-System Analysis (Gerbner 1998) on a sample of the games published by Naughty Dog starting in 2009. This phase of the research aimed to reach objective 1) and therefore was focused on analyzing trends in the representations related to violence and gender.

From a gender issues perspective, it showed that Naughty Dog has been gradually changing their approach over the last fifteen years, moving towards more sensitive and equilibrated representations and trying to eschew the most problematic trends like blatant body objectification or consistent narrative marginality of a majority of the represented female characters.

However, this trend shows some limitations, which we can see for example in the evolution of Clohe Frazer, a supporting character in U2 and the protagonist of ULL. While it is clear that the studio wished to give her more space within the overall *Uncharted* narrative, rather than develop her as a full-fledged character, she ends up being little more than a female version of Nathan Drake (the series' main protagonist). This kind of character, defined as “Ms. male character” by Anita Sarkeesian, is essentially a reproduction or a derivative replica of a well-established male character, fashioned in a more feminine manner, whose existence is defined in relation to, the male counterpart.

On the other hand, the analysis of violence representation shows a different picture. Naughty Dog widely employs moral disengagement mechanisms in its games, with small changes between the first three analyzed games aimed mainly towards a more lifelike portrayal of violence from a graphical point of view. TLOU2 is a big outlier as some of the aspects of moral disengagement are significantly reduced; however, the modus operandi underlying violence representation remains quite similar. The main technique often revolves around portraying protagonists as “normal” and sensible individuals while depicting the adversaries as “deviants”. Both moral justification and favorable comparisons often paint the story's heroes not as conveyors of profound significance, but rather as defenders of the existing status quo, which is under threat from genuinely malicious individuals.

Overall, Naughty Dog's trajectory confirms Gerbner's idea that mainstream representations tend to closely follow society's status quo (Gerbner 1998). This is motivated by the fact that quality television serials, similar to AAA videogames as the ones produced by Naughty Dog, have exorbitant production costs and therefore they must not fail as investments. The best way to avoid potential economic disaster is to propose messages and representations that are not perceived as provocations for the largest possible share of public opinion. However, this center is not stationary, but it changes with the big cultural shifts happening in our society. Nowadays audience is much more sensible to representations of sexism as the concept of what sexism itself changed for the average citizen. U2 in particular proposes jokes and behaviors which now would be seen as problematic but would have probably been considered as fine in 2009, when the game was released. The fallout of Gamergate probably had some form of impact on the narratives proposed by videogame developers<sup>31</sup>.

This importance of easily acceptable representations is further confirmed by the case of TLOU2. The game took big risks both by representing a truly diverse and queer cast and by strongly tuning down the moral disengagement of players. Both decisions left a deep impact on Naughty Dog's audience.

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<sup>31</sup> <https://theconversation.com/how-gamergate-led-the-gaming-industry-to-embrace-more-diverse-and-caring-values-190068>

<https://www.port.ac.uk/news-events-and-blogs/popular-culture/how-gamergate-led-the-gaming-industry-to-embrace-more-diverse-and-caring-values>

On one hand, the game was widely criticized by the most conservative and homophobic players, who threatened and harassed various employees of the company. On the other, it left the fans shocked by the distressing narrative presented. Overall, it is remembered as a much more controversial piece compared to its predecessor, even among hardcore Naughty Dog fans.

In conclusion, the first step of the research successfully managed to reach objective 1, namely, to perform a comprehensive exploration of the themes and trends represented in Naughty Dog's games which could be used as a guide for the second step. The two considered macro-themes present two slightly different scenarios. While both gender issues and violence representation changed over time, the latter followed a more direct path towards more realistic representations before being downsized in TLOU, a highly divisive and controversial game. On the other hand, gender issues representation changed considerably between different games. It moves towards a generally more progressive vision, but it is difficult to outline a precise pattern.

For this reason, I opted to drop gender issues and keep only violence representation as a theme for the second step of this research. This decision was motivated by two main factors; firstly, from a theoretical point of view, the stability of violence representation over time should help to register an eventual Cultivation Effect as the same kind of message has been proposed by Naughty Dog in the long term. Secondly, the experimental nature of the second step of my research would make particularly difficult including the analysis of two different themes. On a hypothetical level, it could be doable, but it implies a proliferation of different groups subjected to different experimental stimuli which cannot be managed with the resources and time windows at my disposal.

## 7.2 Cultivation Analysis Conclusions

The second step of the research aimed to reach objectives from 2 to 4. Somewhat unintuitively, let's start from objectives 3 and 4 which are the ones more closely related to Cultivation Theory. The development of this research gave two important insights, one more related to the methodological issues and the other more related to the Cultivation Effect itself.

From a methodological perspective, it is important to register that quantitative analysis struggled to capture any significant effect. It is important to remember that the fact that the proposed hypotheses were rejected does not mean that there are no relationships between the analyzed concepts. Alternative explanations may refer to a myriad of different reasons which range from bad

operativization of the concepts to models that fail to capture the shape of the (potential) association or absence of relevant intervening variables.

This result resonates with two different suggestions which come from previous literature on Cultivation Theory. Firstly, in this research, I tried to detect an eventual Cultivation Effect conceptualizing it as a direct effect of the media on the audience. The fact that my models did not register any effect is coherent with previous studies of games-related Cultivation. Both Williams' (2006) and Chong and collaborators' (2012) projects postulated that in the case of videogames, the relationship between the message encoded in the media and the audience may not be as simple and direct as it was postulated in the original formulation of Cultivation Theory.

Secondly, this development adds another proof of the importance of a mixed methods approach in the analysis of media effects. The importance of employing both quantitative and qualitative techniques to reach a more complete understanding of the studied phenomena has often been voiced within the field of Cultivation Theory (Gerbner 1970, Van den Bulck & Vandebosch 2003, Ruddock 2011). However, a similar approach to this day remains more the exception rather than the rule.

From a substantive perspective, the qualitative analysis found evidence that suggests the presence of the Cultivation Effect at work. Coherently with the results of Chong et al. (2012), the experimental setting tends to register more second-order judgments related to general societal beliefs rather than precise first-order judgments related to everyday life (Shrum 2004).

The observations suggest the presence of a Cultivation Effect that reinforces existing beliefs rather than introducing new meanings. Participants with permissive attitudes towards antisocial behaviors interpreted the game events as confirmation of their views, aligning with Gerbner's notion of heavy TV viewers seeing the world as mean and merciless. They reacted positively to receiving weapons in the game, used humor to cope with violence, and embraced the cynical worldview proposed by Joel, the playable character.

Regarding objective 4, I found that, in contrast to traditional Cultivation Theory, participants' traits like their previous level of media exposure or socio-demographic variables like gender, were not strongly associated with how they received the game's messages. Expert players displayed confidence in overcoming challenges and approached gameplay more calmly; however, they ultimately drew conclusions about violence representation similar to the ones expressed by inexperienced players.

Moving to objective 2, this research again reached relevant conclusions both from methodological and substantive points of view.

The observation showed consistent differences between expert and non-expert players during their interaction with the game. While the presence of differences may not be a surprise, I believe that the specifics of said differences could be fruitful for further game-related research.

Understandably, non-expert players had a lot of questions regarding how to interact with the game world. They first learned how to tangibly interact with the controller, what parts should be touched, and which were useless. After this first step, they usually started to familiarize themselves with the environment and ask questions regarding which kinds of actions are allowed by the game. The game still maintains realistic graphics, even a decade after its initial release. As a result, many players spent time exploring and identifying interactive elements within the environment. Which objects allow an actual affordance, and which one only looks like they can be used?

Lastly, after they gained some confidence, they usually started questioning the rules of the game. Why can I loot only some dead bodies? Why does the game start again only when the protagonist dies and not when something bad happens to another character? Why do the other characters tend to follow the protagonist all the time?

In each of these steps, the inexperienced players questioned a series of game rules and mechanics which are given as completely granted by the more experienced ones. While these questions are useful for them in order to play the game satisfactorily, I also believe that they are truly useful for the researcher as well. In my case, being not only a researcher but also a videogame player for the last 20 years of my life, their observations opened my eyes to a series of small and big interactions that my brain overrode as an automatic reflex.

From a methodological point of view, this research proves the importance of inter-subjectivity in the analysis of an interactive medium like games. Involving players with different experiences and playstyles within the context of the same study, as suggested by previous literature (Bartle 1996, Aarseth 2003, Malliet 2007), allows us to fully take into consideration the subjective dimension of the imaginary affordances of games. As Nagy & Neff (2015) remind us, these affordances are imagined by both the creator and user of the same media. This bargain between two semi-powerful actors should never be taken for granted by researchers who seriously want to analyze media and their effects.

Lastly, an important aspect, which I believe may require further investigation is the relationship between violence representation and players' perception of empowerment. Most participants radically changed their approach to the game once they received a gun. They tended to assume that being armed finally gave them a chance to impose their will on the game world, when actually that was not exactly the case. The gun allowed them very few environmental interactions and all the combat sequences could be solved without recurring to violence. What matters is that the gun,

therefore the promise of violence, changes the way in which participants perceive their place within the fictional story and how they play along with it. At first players, especially the inexperienced ones, feel threatened by the game world. Then, when they are handed a possible way to turn the violence back on the NPC who threatened them, they feel empowered. This process of empowerment allows us to look exactly into how moral disengagement functions. The players are given moral justification (defending themselves) for enacting violence on characters who are shown as hostile since their first appearance (advantageous comparison) and therefore actually deserve to be gunned down (victim blaming).

The link between moral disengagement, empowerment, and violence representation in games is an increasingly studied topic. Previous research (Huang-Isherwood & Peña 2021) shows how players feel empowered after playing a shooter game in which the narration frames their avatars' actions as good and both empowered and guilty when they play as the "bad guys". However, our knowledge of this interaction is far from complete; Huang-Isherwood & Peña's research analyzed players who acted in a complete "black-and-white" situation where the ideas of what was morally right and wrong were very clearly defined. How does empowerment mechanism work for games like TLOU which proposes ambiguous characters and morally challenging situations?

In conclusion, this research found evidence of a Cultivation Effect on the participants' beliefs pushed by violent representation proposed by videogames, confirming thus the results of previous similar attempts (Williams 2006, Chong et al. 2012). The Effect was related mainly to second-order judgments about overall society functioning and morals and seemed to confirm the classical Cultivation Theory postulate of the "Mean World Syndrome".

However, contrary to the traditional formulation of Cultivation Theory, it did not seem that heavy users were more susceptible to the representation contained in the played games compared to casual ones. The main trait that seemed to influence Cultivation was a high score on the Moral Disengagement Index. Indeed, rather than implant new ideas in the audience it seems that Cultivation in this case worked as a reinforcement of already held beliefs.

From a methodological point of view, this research confirmed the old Newcomb's idea (1978) that culture is not something that can be measured, or at least not entirely. This research was able to take into account the complexity of the analyzed phenomena through a mixed-methods approach which acknowledged the importance of both qualitative and quantitative sources of information.

Despite the ever-increasing wealth of research on the topic, our knowledge of the effect of games on their audience is still far from exhaustive and univocal. This research proved that a wide-scope

theory like Cultivation is a powerful tool for interpreting the entity and the functioning of this relationship, but it also raises some significant questions that could hopefully be addressed by future research, especially regarding the role of this medium interactivity in mediating the relationship.

### 7.3 Research Limitations

While this research reached some significant results within the fields of Game Studies and Media Effects Studies, it is also important to underline its limitations.

Both phases of this project present relevant limitations which are mainly linked to the generalization of the results. In discussing the specifics of the generalization-related limitations of the two steps of my research, I believe that it is important to keep in mind that what I did is a case study. This kind of research is helpful for the overall academic debate not through direct generalization of the results, but by providing intensive and detailed analysis of a single case, which can then be used to develop hypotheses and theories that can be tested across larger populations. The appropriate response to ambiguity in case studies is to overreport by reporting all facts and hypotheses that might be relevant, as this detail may be of utility to future researchers. Therefore, case studies can contribute to broader generalizations by providing a rich source of data and insights that can be used to develop and test hypotheses and theories across a larger set of units (Gerring 2004, Gerring & Cojocaru 2016).

The first step of the research is very specifically focused on only one developer which tends to produce only one type of games: third-person action-adventure shooters. This genre, even if it is very popular and several games that could be ascribed to this category are published every year, only covers a very specific and limited sub-section of the near-infinite variety of possible games. These games are played by a (not negligible) subset of all the possible players, and large parts of the audience may never even try a game published by Naughty Dog. Therefore, it may be questionable to speak about “mainstreaming” when the effect of Naughty Dog’s games on the audience is considered.

However, I agree with Williams’ position (2006) when he maintains that pretending to reach a precise measurement of a possible mainstreaming effect is not particularly meaningful within the field of Game Studies. As he puts it:

“It is possible to the extent that game worlds are similar to one another. But if this point is questionable for television, it is even more so for gaming. Game worlds, less limited by the constraints of film and the physical world, range from violent fantasy worlds to outer space to tiki beach parties to the everyday. In online spaces, what regulates the digital architecture is simply computer code. This code is the law of cyberspace (Lessig, 1999) and it is far too varied to make predictions of mainstreaming effects for something so broad as “games. [...] A more realistic and fruitful goal is to measure and isolate common themes, occurrence, and patterns, identifying a game’s mix of attributes. (Williams 2006, p. 83)

This research attempted exactly what was proposed in this excerpt, it analyzed scrupulously a specific sub-genre of games in order to understand what is represented and be better equipped for a subsequent phase of empiric research. I believe that the results I reached are valuable both as a case study on action games and as a methodological example of how to analyze a game genre and should therefore be interpreted as such.

Regarding the second step of my project, the situation is slightly more complex due to the technicalities of experimental research. The first issue is tied to the (relatively) small sample size and its consequences on the statistical power of my experiment. My experiment has a low statistical power which means that there is a high chance of failing to reject a false null hypothesis.

As I previously explained, a larger sample could not be organized within the financial and temporal constraints of my Ph.D. Organizing an experiment is a very expensive and time-consuming process, especially due to the necessity of giving incentives to the participants to expect a reasonable turnout and the difficulty of hiring collaborators for the data-gathering process. However, the mixed-methods nature of the process helped in mitigating the impact of the issue on the overall project. As it happened with the first step of the research, the quantitative data represented a starting point for a subsequent qualitative analysis which attempted to make sense of the results.

Regarding the issues of internal and external validity of the experiment, I extensively discussed the subject at the end of chapter 4, and I believe I did everything in my power to contain all the possible factors of risk. The only factor that I believe should be mentioned in the conclusion is the potential impact of the interaction between the selection factor and the experimental variable X on external validity.

This research tried, within its time and cost limits, to pursue the criterion of the maximum variety of relevant profiles, in order to increase the degree of confidence in the representativeness of the sample. While this effort implied shunning an absolutely random selection of the participants, it must also be noted that it is impossible to create a random selection of videogame players. They are not a defined group like a classroom or the workforce of a company, they can be everyone as their



defining trait is having a rather common hobby. This experiment was participated by a sample of students and university workers which included all the theoretically relevant dimensions. Therefore, I argue that the results should be interpreted keeping in mind that they refer to the effect of Action Games not on an absolute ideal type of gamer but on a very specific population, namely Italian and highly educated people between their 20s and 40s.

The last limitation related to the experimental dimension of the research is represented by the fact that, during my observations, I could not delve further into unforeseen but potentially relevant topics that were hinted at by the discourses made by the players during the gameplay sessions. Doing so would have meant violating the strict directives that regulate the internal validity of the experiment. However, as suggested before, these topics, like the relationship between empowerment and moral disengagement, could be the basis for relevant future research.

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## *Appendix I*

### **Data Sheet A - Games**

#### **Elements of representation**

##### **Audiovisual style**

- 1) What aspects of the fictional world are left out? Why?
- 2) Which inclusions and omissions in representation reflect an ideological stance?
- 3) Which genres the game belongs to? Which features collocate the game in said genres?
- 4) Does the game breaks from the conventions of the genres it belongs to?
- 5) Does the fictional world representation apply racist or orientalist tropes?

##### **Narration**

- 6) What is the role of the player in the fictional world?
- 7) Do the player actions lead to a better or worse situation in the fictional world?
- 8) Does the game present the player's actions as justified?
- 9) Which moral themes are underpinning the game narration?
- 10) Does the narration attribute the blame of violent actions of the player on the victims? How?

##### **Complexity of controls**

- 11) What does the player do in the game? How are these actions performed on through the controller?
- 12) What are the on-screen elements which give information to the player regarding how to play the game?
- 13) Which elements of the game change through its progression to make it more difficult?

14) What is the proportion between the power/stats of the player and their opponents?

15) Does the player have the chance to develop different ways to tackle the challenges of the game?

### **Character and objective structure**

16) Is there a goal in the game? Does achieving this goal end the game?

17) Who does the player control?

18) Is the ideology of the game integrated in the rules?

19) What kind of behavior does the game encourage? Does this behavior change thorough the game?

20) Do some characters follow the archetypes of “Manic pixie dream girl”, “Woman in the refrigerator” or “Damsel in distress”?

### **Balance between input and rules**

21) How does the structure of the game allow the story to progress? Which actions are triggers for the cutscenes?

22) Which elements of the story are told through cutscenes and which thorough gameplay?

23) What elements of the game do the inhabitants of the world sense and respond to?

24) What actions are explained as a narrative event? Which ones do not?

## **Data Sheet B – Characters**

**N.B.** The characters are considered such only if they present two traits: a distinct polygonal model which is not used for any other role and at least one line of dialogue spoken during at least two of the game cut scenes.

## **Socio-demographic traits**

**1. title)** What's the title of the game in which the character appears?

TLOU – TLOU2 – U2 - ULL

**2. name)** What's the name of the character?

**3. playch)** Is the character a playable character in the game?

1 No – 2 Yes

**4. chstatus)** What is the weight of the character in the overall game?

1 Major character – 2 Supporting character

**5. sexori)** What is the character sexual orientation?

1 Heterosexual – 2 Homosexual – 3 Bisexual - 4 Other - 0 Not known

**6. age)** What's the age of the character in numbers? (Looking at a game wiki may help answer this, if possible)

**7. age2)** Which of these options approximate best the character age?

1 Child – 2 Adolescent – 3 Adult – 4 Old

**8. race)** Which of the following labels define the character best?

1 Caucasian – 2 Black – 3 Asian – 4 Other

**9. nation)** Which is the character nationality? Looking at a game wiki may help answer this, if possible)

**10. prof)** What is the character profession?

**11. profcomp)** What is the shown proficiency of the character in their professional activity?

1 Competent – 2 Not competent – 0 Not shown

**12. class)** What is the character social class?

1 Clearly upper, obvious wealth – 2 Upper middle – 3 Lower middle – 4 Clearly lower, obvious poverty – 0 Not understandable

## **Narrative traits**

**14. faction)** Which faction Does the character belong within the game's story?

**15. factionpow)** What is the position of the character within the faction?

1 Leader – 2 Lieutenant – 3 Rank and file – 0 Not applicable

**16. role)** How is the role of the character presented?

1 Mostly light, comic – 2 Neither light nor serious, mixed, unclear – 3 Mostly serious

**17. status)** What is the stats of the character at the beginning of the narration?

1 Good – 2 Evil- 3 Neutral – 4 Ambiguous

**18. statuse)** What is the stats of the character at the end of the narration?

1 Good – 2 Evil- 3 Neutral – 4 Ambiguous

**19. stausco)** Is the final status coherent with the initial one?

1 No – 2 Yes

**20. arc)** Does the character own a narrative arc?

1 No – 2 Yes

**21. arcsup)** Does the character (and their eventual arc) exist only to support another character's one?

1 No – 2 Yes

**22. trauma)** Is some physical or emotional trauma suffered by the character used as a device to continue the narration?

1 No – 2 Yes, only physical – 3 Yes, only emotional – 4 Yes, both physical and emotional

## **Personality traits**

Position each character in a scale from one to four regarding the following adjectives. Code “0” if the proposed dichotomy is not applicable.

- 23) Likeable 1 – 4 Unlikeable
- 24) Extrovert 1 – 4 Introvert
- 25) Smart 1 – 4 Dumb
- 26) Mental openness 1 – 4 Close
- 27) Rational 1 – 4 Emotive
- 28) Secure 1 – 4 Insecure
- 29) Active (dynamic) 1 – 4 Passive
- 30) Strong willpower 1 – 4 Weak willed
- 31) Altruist 1 – 4 Selfish
- 32) Loyal 1 – 4 Unroyal
- 33) Cinic 1 – 4 Naive
- 34) Honest 1 – 4 Dishonest
- 35) Polite 1 – 4 Brusque

### **Character appearance**

Position each character in a scale from one to four regarding the following adjectives. Code “0” if the proposed dichotomy is not applicable.

- 36) Neat 1 – 4 Shabby
- 37) Well-dressed 1 – 4 Ragged
- 38) Well-mannered 1 – 4 Ill-mannered
- 39. **bodyatt**) Define the body attractiveness of the character.  
1 Ugly – 2 Not very attractive – 3 Attractive – 4 Very attractive
- 40. **faceatt**) Define the face attractiveness of the character.



1 Ugly – 2 Not very attractive – 3 Attractive – 4 Very attractive

**41. provcloth)** How often does the character appear dressed in a provocative way?

1 Never – 2 Occasionally – 3 Often – 4 Always

**42. clothapp)** How often does the character appear dressed in an appropriate way for their tasks or profession?

1 Never – 2 Occasionally – 3 Often – 4 Always

**43. bodyobj)** How often does the character is the subject of body objectification? (Complete or partial nude appearances, insistence of the camera on breast or butt shots, camera crawling up the body from feet to the head, ...)

1 Never – 2 Occasionally – 3 Often – 4 Always

**44. polall)** Does the character attire comprehend tokens of political allegiance?

1 No – 2 Yes

**45. relall)** Does the character attire comprehend tokens of religious allegiance?

1 No - 2 Yes

### **Physical traits**

**46)** Beautiful 1 – 4 Ugly

**47. weight)** Describe the body weight of the character

1 Thin – 2 Toned/fit/average – 3 Slightly overweight – 4 Very overweight/obese

**48)** Muscular 1 – 4 Skinny

**49. imperf)** Does the character sport notable physical imperfections?

1 No – 2 Yes

**50. Imperf2)** If yes, which ones?

**51. able)** Is the character disabled?

1 Able – 2 Lightly disabled (limp, hearing aid) – 3 Heavy disabled (missing limb, wheelchair, blind, deaf)

**52. able2)** If disabled which disability

### **Overall world views**

**53. individ)** Is the character individualist or collectivist?

0 Not shown – 1 Individualist – 2 Collectivist

**54. pol)** Does character openly manifest their belonging to a real-life political ideology?

1 No – 2 Yes

**55. Pol2)** If yes, which one?

1 Left-wing – 2 Centrist – 3 Right-wing – 0 Not applicable

**56. consprog)** Does the character express conservative or progressist views?

1 Progressist – 2 Conservative – 0 Not applicable

**57. law)** Is the character lawful or chaotic?

1 Lawful – 2 Neutral - 3 Chaotic – 0 Not applicable

**58. autreg)** Does the character fight an authoritarian regime?

0 Not applicable - 1 No – 2 Yes

**59. autreg2)** Does the character work for an authoritarian regime?

0 Not applicable – 1 No - 2 Yes

**60. relig)** Is the character shown to be religious?

1 No - 2 Yes

**61. relig2)** If the character is religious, which religion?

## **Violent behavior**

**62. violence)** Does the character commit any violence?

1 No – 2 Commits non-fatal violence – 3 Commits fatal violence

**63. viocons)** Which are the consequences of the character's violent behavior:

1 Character violent behavior is neither rewarder or punished – 2 Character violent behavior is mostly rewarder – 3 Character violent behavior is mostly punished – 4 Character violent behavior is both punished and rewarded – 0 Not applicable

**64. noviolence)** Does the character is shown in trying to solve arguments without recurring violence if possible?

1 Never – 2 occasionally – 3 Often – 4 Always – 0 Not applicable

**65. violencevic)** Does the character is subjected to any violence?

1 No – 2 Suffers violence but no damage is shown – 3 Suffer violence and damage is shown

**66. killed)** Is the character violently killed?

1 No – 2 Yes

**67. vio GRAT)** Does the character indulge in acts of gratuitous violence?

1 Never – 2 Occasionally – 3 Often – 4 Always – Not applicable

**68. selfdef)** Does the character consider violence only as a form of self-defense?

0 Not shown - 1 No - Yes

**69. viojus)** Character violence is portrayed as justified.

1 Never – 2 Occasionally – 3 Often – 4 Always – 0 Not applicable

**70. vicblam)** Victims of character violence are portrayed as deserving of their fate.

1 Never – 2 Occasionally – 3 Often – 4 Always – 0 Not applicable

**71. advcomp)** Victims of character violence are portrayed as being worse people than the character.

1 Never – 2 Occasionally – 3 Often – 4 Always – 0 Not applicable

**72. dehum)** Victims of character violence are monsters or in general being not subject of human rights.

1 Never – 2 Occasionally – 3 Often – 4 Always – 0 Not applicable

**73. vioimm)** Character violence is portrayed as immoral.

1 Never – 2 Occasionally – 3 Often – 4 Always – 0 Not applicable

**74. remorse)** Does the character exhibit remorse about violent conduct?

1 No – 2 Yes

**75. wound)** Number of persons non-mortally wounded by the character during non-gameplay moments

**76. pkill)** Number of persons mortally wounded by the character during non-gameplay moments

**77. npkill)** Number of not-persons (animals, monsters, ...) mortally wounded by the character during non-gameplay moments

**78. threat)** Does the character Threatens other people?

1 Never – 2 Occasionally – 3 Often

**79. insult)** Does the character insult other people?

1 Never – 2 Occasionally – 3 Often

### **Sexist and homophobic behavior**

**80. sex\_rem)** Does the character employ sexist remarks?

1 No – 2 Yes

**81. sex\_rem2)** If applicable which type of sexist remarks?

1 Misogynist – 2 Misandrist - 3 Other – 0 Not applicable

**82. sexrem\_vic)** Does the character is victim of sexist remarks?

1 No – 2 Yes

**83. hom\_rem)** Does the character employ homophobic remarks?

1 No – 2 Yes

**84. homrem\_vic)** Does the character is victim of homophobic remarks?

1 No – 2 Yes

**85. sex\_harm)** Does the character physically harm someone on the basis of sexism?

1 No – 2 Yes

**86. sex\_harmed)** Is the character physically harmed on the basis of sexism?

1 No – 2 Yes

**87. sex\_des)** Does the character destroy other people belongings on the basis of sexism?

1 No – 2 Yes

**88. sexdes\_vic)** Does the characters own assets which are destroyed on the basis of sexism?

1 No – 2 Yes

**89. macho)** Does the character act according to a macho stereotype?

1 No – 2 Yes

**90.weak\_gen)** Does the character help or protect someone they believe is belonging to a “weak gender”?

1 No – 2 Yes

**91. condes)** Does the character have a condescending attitude towards women?

1 No – 2 Yes

### **Data Sheet C – Game sections**

**N.B.** A section is a five-minutes sequence of the walkthrough.

#### **General info**

1. **title)** What's the title of the game in which the character appears?  
TLOU – TLOU2 – U2 - ULL
2. **time)** Note here at which time in the video the sequence ends (hh:mm format)
3. **type)** Does the sequence include?  
1 Cutscene – 2 Gameplay – 3 Both
4. **chapter)** Which chapter this section belongs to? (referring to a game wiki may help in understanding this). If the sequence is split between two chapters use the latest one.
5. **race)** Which kind of characters appear in the sequence?  
0 Not applicable - 1 All White – 2 Mostly White (some non-whites appear) – 3 Mixed – 4 Mostly non-white (some whites appear) – 5 All Minority
6. **sex)** Which kind of characters appear in the sequence?  
0 Not applicable - 1 All men – 2 Mostly Men 3 – Mixed – 4 Mostly non-men 5 No Men
7. **sex\_avatar)** Gender of the controlled character:  
1 M – 2 F - 3 Other – 0 Not applicable
8. **combat)** Does the sequence involve fighting scenes? 1 No – 2 Yes
9. **exploration)** Does the sequence involve the exploration of new environments? 1 No – 2 Yes
10. **puzzle)** Does the sequence involve resolving puzzles? 1 No – 2 Yes
11. **looting)** Does the sequence involve looting for resources? 1 No – 2 Yes
12. **reading)** Does the sequence involve reading documents, letters, ...? 1 No – 2 Yes
13. **escape)** Does the sequence involve escaping from enemies? 1 No – 2 Yes
14. **bechidel1)** Are at least two women present in the sequence? 1 No – 2 Yes
15. **bechidel2)** If more than two women are present, do they speak each other? 1 No – 2 Yes
16. **bechidel3)** If two women are speaking each other, are they talking about topics non concerning men? 1 No – 2 Yes

## Violence

17. **vio\_verb)** Does the sequence include verbal violence (threats and verbal abuse)?  
1 No – 2 Yes

- 18. vio\_phys)** Does the segment include physical violent interactions?  
 1 No – 2 Violence against property only – 3 Violence against people only - 4 Violence against both people and property
- 19. vio\_invo)** Is the controlled character involved in the violent interaction?  
 1 No – 2 Yes – 0 Not applicable
- 20. vio\_jus)** Is violence shown as justified?  
 1 No – 2 Violence is depicted as ambiguous - 3 Yes – 0 Not applicable
- 21. vio\_evil)** Is violence in the sequence seen as evil, negative and destructive?  
 1 No – 2 Violence is depicted as ambiguous – 3 Yes – 0 Not applicable
- 22. vio\_com)** Is violence in the sequence shown as comedic or light?  
 1 No – 2 Violence is depicted as ambiguous – 3 Yes – 0 Not applicable
- 23. vio\_choice)** If violence is present, is shown as a free choice of the character or are they forced to employ it?  
 0 Not known (or no violence is shown) - 1 Free choice – 2 Forced choice
- 24. vio\_cons)** Are the consequences of violence on people shown(injuries and dead bodies)?  
 1 No – 2 Yes with minimal focus – 3 Yes with serious focus – 0 Not applicable
- 25. vio\_cons2)** Are the consequences of violence on property (broken objects, vehicles and buildings)?  
 1 No – 2 Yes with minimal focus – 3 Yes with serious focus – 0 Not applicable
- 26. vio\_vic2)** Are the victims of the player's character violence shown as deserving of their fate?
- 27. 1 No – 2 Violence is depicted as ambiguous – 3 Yes – 0 Not applicable**
- 27. typevic)** Are the represented enemies monsters and/or human beings?  
 1 Humans – 2 Monsters – 3 Both – 0 Not applicable
- 28. goodie)** Does a good or mostly good character die in the sequence?
- 29. 1 No - 2 Yes – 0 No violence in the sequence**
- 30. evildie)** Does an evil character die in the sequence?  
 1 No - 2 Yes – 0 No violence in the sequence

### **Sexual content**

- 31. sex\_behav)** Does sexual behavior appear?

1 No – 2 Talk Only, implicit (innuendo) – 3 Talk Only. Explicit – 4 Physical only (implicit) – 5 Physical only, explicit – 6 Talk and Physical, implicit only (innuendo) – 7 Talk and Physical, explicit

**N.B.** Implicit sex includes sexual innuendo and physical suggestiveness; explicit sex induces kissing, heavy kissing, sexual embraces and hugs, sexual caressing or touching, sexual intercourse

**32. sex\_ser**) Is the sexual portrayal serious:

1 Mostly light or comedic – 2 Mixed, ambivalent – 3 Mostly serious – 0 Not applicable

**32. sex\_sig**) Is the sexual portrayal significant to the plot?

1 It is gratuitous – 2 It is incidental to the plot – 3 It matters considerably in the involved characters narrative arc – 0 Not applicable



## *Appendix 2*

### **Pre-Treatment Survey**

#### **Welcome Message and privacy statement**

Benvenuto nel questionario dell'esperimento della mia ricerca tesi. Questo esperimento si inserisce nell'ambito di ricerca dei Game Studies e degli studi sull'interazione uomo-macchina con l'obbiettivo di analizzare l'evoluzione del nostro rapporto coi videogiochi.

L'esperimento si struttura nel seguente modo: per prima cosa ti chiedo di rispondere alle domande presenti in questo questionario; dopodichè avverrà l'esperimento vero e proprio durante il quale proverai brevemente a un videogioco sotto la mia supervisione; infine ti chiederò di rispondere a un altro questionario per concludere l'esperienza.

A tutte le partecipante che completeranno l'esperimento verrà assegnato un buono da 10 euro spendibile presso le librerie Feltrinelli.

Le informazioni che mi darai rimarranno anonime e non mi sarà possibile in nessun modo associare le risposte a uno specifico partecipante. Per maggiori informazioni riguardo al trattamento dei dati personali puoi consultare l'informativa presente a questo link:

<https://drive.google.com/file/d/12KL5rjHttj9g2pjKgTdJxbFmk4ZZqpkA/view?usp=sharing>

Ti ringrazio per la collaborazione

Alla luce di quanto esposto nell'informativa sul trattamento dei dati personali accetto di partecipare all'esperimento. 1 Sì – 2 No

Ti prego di lasciare qua un tuo contatto (mail o numero di telefono) per poter essere ricontattato per la seconda parte dell'esperimento. Come specificato nell'informativa, il contatto verrà eliminato dalla banca dati una volta terminato l'esperimento. \_\_\_\_\_

### **Socio-Demographic Traits**

**1.1)** Quanti anni hai? (numero)

**1.2)** Come ti identifichi tra i seguenti? 1 Uomo – 2 Donna – 3 Altro (specificare)

**1.3)** Qual è la certificazione educativa più avanzata da te conseguita?

1 Licenza media – 2 Diploma di maturità – 3 Laurea triennale – 4 Laura magistrale o master di primo livello – 5 Altra certificazione superiore alla laurea magistrale (Dottorato, ...)

**1.4)** Qual è la certificazione educativa più avanzata dai tuoi genitori?

1 Licenza media – 2 Diploma di maturità – 3 Laurea triennale – 4 Laura magistrale o master di primo livello – 5 Altra certificazione superiore alla laurea magistrale (Dottorato, ...)

**1.5)** In questo momento della tua vita sei uno studente?

1 No – 2 Sì, sono iscritto a un corso di laurea triennale – 3 Sì, sono iscritto a un corso di laurea magistrale – 3 Sì, sono iscritto a un master – 4 Sì, sono iscritto a un dottorato – 5 Altro (Specificare)

**1.6)** In questo momento hai un impiego lavorativo, anche occasionale o privo di contratto?

1 No - 2 Sì – 3 Preferisco non rispondere

**1.7)** Compila inserendo 1) il giorno del tuo compleanno (non il mese e non l'anno), 2) la prima lettera della tua città d'origine e 3) la prima lettera del tuo nome. Ad esempio Giacomo di Milano che compie gli anni il 26 può mettere "26MG". Questa domanda serve per abbinare il questionario pre e post

esperimento ed è quindi fondamentale per la riuscita del progetto. Il codice alfanumerico che inserisci non può essere usato in alcun modo per identificarti. \_\_\_\_\_

## **Gameplay Habits**

**2.1)** In media quanto spesso giochi ai videogiochi?

0 Mai – 1 Meno di una volta al mese – 2 Approssimativamente una volta al mese – 3 Approssimativamente una volta a settimana - 4 Più di una volta a settimana

**2.2)** In media quanto spesso giochi in single player?

0 Mai – 1 Meno di una volta al mese – 2 Approssimativamente una volta al mese – 3 Approssimativamente una volta a settimana - 4 Più di una volta a settimana

**2.3)** In media quanto spesso giochi in multiplayer con amici?

0 Mai – 1 Meno di una volta al mese – 2 Approssimativamente una volta al mese – 3 Approssimativamente una volta a settimana - 4 Più di una volta a settimana

**2.4)** In media quanto spesso giochi in multiplayer con sconosciuti?

0 Mai – 1 Meno di una volta al mese – 2 Approssimativamente una volta al mese – 3 Approssimativamente una volta a settimana - 4 Più di una volta a settimana

**2.5)** Preferisci giocare single player or multiplayer?

1 Single Player – 2 Multiplayer – 3 Non ho una preferenza

**2.6)** Quali di queste ambientazioni di videogiochi ti interessano? (scelta multipla)

1 Fantasy – 2 Fantascienza – 3 Horror – 4 Western – 5 Storico (o pseudo storico) – 6 Attualità – 7 Romantico – 8 Erotico – 9 Altro

**2.7)** Quali di questi generi di videogiochi ti interessano? (scelta multipla)

1 Sparatutto – 2 Picchiaduro – 3 Survival – 4 Action adventure – 5 Gioco di ruolo – 6 Simulatore sportivo – 7 Simulatore gestionale – 8 Simulatore di vita – 9 Simulatore musicale - 10 Strategico – 11 MOBA (Multiplayer Online Battle Arena)

**2.8)** Quali di questi hardware usi abitualmente per giocare? (scelta multipla)

1 Personal Computer – 2 Telefono cellulare – 3 Playstation (qualunque modello) – 4 Xbox (qualunque modello) – 5 Nintendo Switch – 6 Altro

**2.9)** Quali di questi videogiochi hai avuto modo di provare? (scelta multipla)

Among Us - Call of Duty (qualsiasi capitolo) – Counterstrike - Dark Souls (qualsiasi capitolo) – Destiny (qualsiasi capitolo) – FIFA (qualsiasi) - Final Fantasy (qualsiasi capitolo) - Fallout (qualsiasi capitolo) - Fortnite – God of War (qualsiasi capitolo) - Grand Theft Auto (qualsiasi capitolo) – Guitar Hero (qualsiasi capitolo) - Journey - Legend of Zelda (qualsiasi capitolo) - League of Legends – NBA (qualsiasi) - PES (qualsiasi) - Pokemon (qualsiasi capitolo) – Resident Evil (qualsiasi capitolo) - The Last of Us (qualsiasi capitolo) – The Sims (qualsiasi capitolo) - The Witcher (qualsiasi capitolo) – Uncharted (qualsiasi capitolo) World of Warcraft

**2.10)** Qual è il tuo videogioco preferito? \_\_\_\_\_

**2.11)** In media quanto spesso guardi dirette o video registrati di gameplay?

0 Mai – 1 Meno di una volta al mese – 2 Approssimativamente una volta al mese – 3 Approssimativamente una volta a settimana - 4 Più di una volta a settimana

**2.12)** Hai mai trasmesso in diretta il tuo schermo mentre giocavi?

**2.12)** Quale di queste piattaforme usi per guardare o trasmettere stream? (scelta multipla)

0 Non guardo altre persone giocare – 1 Twitch – 2 Youtube – 3 Discord – 4 Altro

## **Overall views regarding videogames**

Esprimi quanto sei d'accordo con le seguenti affermazioni usando le opzioni (1 Molto – 2 Abbastanza – 3 Poco – 4 Per nulla)

**3.1)** I videogiochi possono essere una forma d'arte in grado di far provare emozioni profonde ai giocatori.

**3.2)** I videogiochi possono essere un modo divertente e coinvolgente per imparare nuove skills o conoscenze riguardo ad argomenti specifici.

**3.3)** La sessualizzazione dei personaggi femminili nei videogiochi non è una questione così rilevante e non ferisce nessuno.

**3.4)** I videogiochi possono dare dipendenza e avere un impatto negativo sulla salute mentale dei giocatori e le loro vite sociali.

**3.5)** La popolarità e l'influenza dei videogiochi continuerà a crescere nei prossimi anni.

**3.6)** L'industria dei videogiochi dovrebbe assumersi più responsabilità per l'impatto che i videogiochi hanno sui singoli giocatori e sulla società nel suo insieme.

**3.7)** Le donne nei videogiochi sono spesso rappresentate come deboli o bisognose della protezione degli uomini.

**3.8)** Gli sviluppatori di videogiochi dovrebbero essere liberi di creare e rappresentare i loro personaggi senza limitazioni.

**3.9)** I videogiochi possono essere un'importante forma di espressività sia per gli sviluppatori che per i giocatori.

**3.10)** I videogiochi possono essere un importante mezzo per aiutare le persone a incontrare gente che condivide simili interessi e passioni.

**3.11)** La rappresentazione dei ruoli di genere nei videogiochi dovrebbe fare riflettere questioni sociali più ampie legate alle disuguaglianze.

**3.12)** La rappresentazione di personaggi LGBTQ+ nei videogiochi è importante per promuovere l'accettazione della diversità.

**3.13)** I videogiochi possono essere uno strumento importante per promuovere la giustizia sociale e aumentare la sensibilità riguardo a questioni importanti.

**3.14)** La violenza e l'aggressività rappresentate nei videogiochi possono contribuire a creare una cultura di accettazione e giustificazione della violenza nel mondo reale.

**3.15)** I videogiochi possono essere un ottimo modo per esplorare nuovi mondi e scoprire prospettive e culture diverse dalla propria.

### **Moral Disengagement**

Esprimi quanto sei d'accordo con le seguenti affermazioni usando le opzioni (1 Molto – 2 Abbastanza – 3 Poco – 4 Per nulla)

**4.1)** È giusto reagire per proteggere i tuoi amici.

**4.2)** Colpire o spingere qualcuno è spesso solo un modo di scherzare.

**4.3)** Danneggiare oggetti non è un comportamento grave se si compara al picchiare o ferire altre persone.

**4.4)** Una singola persona in un gruppo non dovrebbe essere considerata responsabile per i problemi causati dal gruppo.

- 4.5) Se alcune persone vivessero in condizioni disagio non dovrebbero essere biasimate nel caso avessero un comportamento aggressivo.
- 4.6) È accettabile raccontare piccole bugie se non feriscono nessuno.
- 4.7) Alcune persone meritano di essere trattate come animali.
- 4.8) Se uno studente si comporta male a scuola la colpa è probabilmente dell'insegnante.
- 4.9) È accettabile picchiare qualcuno se ha insultato la tua famiglia.
- 4.10) Colpire un collega o un compagno di corso insopportabile può insegnargli una lezione.
- 4.11) Rubare in un negozio non è così grave se il negoziante non rilascia mai lo scontrino fiscale.
- 4.12) Chi si limita a suggerire di infrangere le regole non dovrebbe essere incolpato se altre persone decidono effettivamente di farlo.
- 4.13) Se una persona non avesse ricevuto nessuna educazione non dovrebbe essere biasimata per comportamenti maleducati o aggressivi.
- 4.14) I bambini non sono disturbati dall'essere presi in giro perché capiscono che è un modo per dare loro attenzioni.
- 4.15) È accettabile maltrattare qualcuno che si è comportato da "verme".
- 4.16) Se una persona non fa attenzione a dove lascia le sue cose non deve essere sorpresa nel caso venga derubata.
- 4.17) È giusto reagire quando l'onore del tuo gruppo è minacciato.
- 4.18) Usare la bici di qualcuno senza permesso e poi ridarla è solo un prestito.
- 4.19) È accettabile insultare un collega o un compagno di corso se l'alternativa sarebbe picchiarlo.
- 4.20) Se un gruppo decidesse insieme di fare qualcosa di dannoso o ingiusto sarebbe scorretto incolpare singole persone all'interno del gruppo.
- 4.21) I bambini non possono essere incolpati di usare parole volgari quando lo fanno tutti i loro coetanei.
- 4.22) Il solo prendere in giro qualcuno non può veramente ferire.
- 4.23) Se qualcuno è davvero insopportabile non merita di essere trattato come una persona.

4.24) Chi viene maltrattato in genere ha fatto qualcosa per meritarselo.

4.25) È giusto mentire se ciò permette di evitare dei guai a un amico.

4.26) Confrontato con altre azioni illegali che vengono commesse tutti i giorni, rubare qualcosa da un negozio non è così grave.

4.27) Insulti e prese in giro tra amici non feriscono mai realmente nessuno.

4.28) Alcune persone devono essere trattate duramente perché non hanno realmente dei sentimenti che possono essere feriti.

4.29) I bambini non sono completamente nel torto se si comportano male quando i loro genitori sono troppo rigidi.

### **Gender issues**

Esprimi quanto sei d'accordo con le seguenti affermazioni usando le opzioni (1 Molto – 2 Abbastanza – 3 Poco – 4 Per nulla)

5.1) Bestemmie e imprecazioni sembrano più spiacevoli se pronunciate da una donna rispetto che da un uomo.

5.2) Entrambi i partner dovrebbero avere le stesse opportunità durante un divorzio.

5.3) Raccontare barzellette sporche dovrebbe essere una prerogativa maschile.

5.4) Nella situazione attuale in cui sempre più donne sono attive nel mercato del lavoro, gli uomini dovrebbero fare la loro parte in lavori domestici come lavare i piatti e fare il bucato.

5.5) è oltraggioso che le donne debbano affermare di “obbedire al marito” nel giuramento nuziale tradizionale.

5.6) I mezzi di comunicazione come giornali o notiziari spesso rinforzano stereotipi scorretti o inaccurati sulle donne.



- 5.7)** Le donne reggono l'alcool meno degli uomini.
- 5.8)** Nel mercato del lavoro attuale esiste un sistema meritocratico che premia i lavoratori con bonus e promozioni a prescindere dal loro genere.
- 5.9)** Vedere donne in posizioni di potere nelle aziende o nelle istituzioni è un buon segno per la società.
- 5.10)** Il femminismo non è ormai più necessario perché gli uomini e le donne hanno raggiunto pressoché la parità in tutti i campi della vita sociale.
- 5.11)** Donne che guadagnano quanto i loro partner dovrebbero offrirsi di dividere il conto quando la coppia esce a cena o affitta una stanza per una vacanza.
- 5.12)** è normale che le donne debbano fare più attenzione degli uomini nel tornare a casa la sera, specialmente se hanno bevuto.
- 5.13)** Le donne sono spesso giudicate più duramente degli uomini per gli stessi comportamenti o azioni.
- 5.14)** Se una donna lavorasse in fonderia finirebbe solo col rallentare i suoi colleghi uomini.
- 5.15)** Entrambi i genitori sono ugualmente in grado di affrontare e comprendere i problemi dei figli a prescindere dal genere del bambino.
- 5.16)** La libertà economica e sociale valgono molto di più per le donne rispetto all'adesione a ideali di femminilità creati dagli uomini.
- 5.17)** Le donne di oggi non sono giudicate per la loro vita sessuale in modo diverso dai loro coetanei uomini.
- 5.18)** La nostra società tutt'ora continua a proporre stereotipi di genere riguardo alle donne che limitano le loro possibilità lavorative.

## Post-Treatment Survey

### Welcome Message and privacy statement

Benvenuto nel questionario dell'esperimento della mia ricerca tesi. Questo esperimento si inserisce nell'ambito di ricerca dei Game Studies e degli studi sull'interazione uomo-macchina con l'obiettivo di analizzare l'evoluzione del nostro rapporto coi videogiochi.

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Ti ringrazio per la collaborazione

Alla luce di quanto esposto nell'informativa sul trattamento dei dati personali accetto di partecipare all'esperimento. 1 Sì – 2 No

Compila inserendo 1) il giorno del tuo compleanno (non il mese e non l'anno), 2) la prima lettera della tua città d'origine e 3) la prima lettera del tuo nome. Ad esempio Giacomo di Milano che compie gli anni il 26 può mettere "26MG". Questa domanda serve per abbinare il questionario pre e post esperimento ed è quindi fondamentale per la riuscita del progetto. Il codice alfanumerico che inserisci non può essere usato in alcun modo per identificarti. \_\_\_\_\_

### **Gameplay experience**

Esprimi quanto sei d'accordo con le seguenti affermazioni usando le opzioni (1 Molto – 2 Abbastanza – 3 Poco – 4 Per nulla)

- 1.1) Il gioco mi è piaciuto.
- 1.2) Ero concentrato sul gioco.
- 1.3) Potevo immedesimarmi nei personaggi.
- 1.4) Ho pensato che il gioco fosse divertente.
- 1.5) I comandi del gioco erano intuitivi.
- 1.6) Ho pensato che il livello di difficoltà fosse appropriato per le mie capacità.
- 1.7) I menu del gioco erano chiari e navigabili.
- 1.8) Ho perso il senso del tempo mentre giocavo.
- 1.9) Il mondo di gioco sembrava interessante.
- 1.10) Gli obiettivi del gioco mi risultavano pochi chiari.
- 1.11) Mentre giocavo ho pensato ad argomenti non collegati al gioco.
- 1.12) Il gioco ha risposto alle mie azioni in modo prevedibile.
- 1.13) Mi sentivo perso nel mondo di gioco.
- 1.14) Ho sempre sentito di essere in grado di raggiungere i miei obiettivi durante il gioco.
- 1.15) Le Meccaniche del gioco mi sembravano interessanti.

- 1.16) Ho smesso di prestare attenzione a ciò che accadeva intorno a me quando ho iniziato a giocare.
- 1.17) L'inquadratura rendeva difficile capire cosa stesse succedendo durante il gioco.
- 1.18) Le varie informazioni presenti sullo schermo erano difficili da leggere.
- 1.19) Lo stile estetico del gioco era interessante.
- 1.20) Il modo in cui il personaggio che interpretavo interagiva col mondo era irrealistico.
- 1.21) Il gioco mi ha motivato a continuare a giocare.
- 1.22) Lo svolgimento del gioco era prevedibile.
- 1.23) Volevo continuare a esplorare il mondo di gioco.

### **Moral Disengagement**

Esprimi quanto sei d'accordo con le seguenti affermazioni usando le opzioni (1 Molto – 2 Abbastanza – 3 Poco – 4 Per nulla)

- 2.1) È giusto reagire per proteggere I tuoi amici.
- 2.2) Colpire o spingere qualcuno è spesso solo un modo di scherzare.
- 2.3) Danneggiare oggetti non è un comportamento grave se si compara al picchiare o ferire altre persone.
- 2.4) Una singola persona in un gruppo non dovrebbe essere considerata responsabile per i problemi causati dal gruppo.
- 2.5) Se alcune persone vivessero in condizioni disagio non dovrebbero essere biasimate nel caso avessero un comportamento aggressivo.
- 2.6) È accettabile raccontare piccole bugie se non feriscono nessuno.
- 2.7) Alcune persone meritano di essere trattate come animali.
- 2.8) Se uno studente si comporta male a scuola la colpa è probabilmente dell'insegnante.

- 2.9)** È accettabile picchiare qualcuno se ha insultato la tua famiglia.
- 2.10)** Colpire un collega o un compagno di corso insopportabile può insegnargli una lezione.
- 2.11)** Rubare in un negozio non è così grave se il negoziante non rilascia mai lo scontrino fiscale.
- 2.12)** Chi si limita a suggerire di infrangere le regole non dovrebbe essere incolpato se altre persone decidono effettivamente di farlo.
- 2.13)** Se una persona non avesse ricevuto nessuna educazione non dovrebbe essere biasimata per comportamenti maleducati o aggressivi.
- 2.14)** I bambini non sono disturbati dall'essere presi in giro perché capiscono che è un modo per dare loro attenzioni.
- 2.15)** È accettabile maltrattare qualcuno che si è comportato da “verme”.
- 2.16)** Se una persona non fa attenzione a dove lascia le sue cose non deve essere sorpresa nel caso venga derubata.
- 2.17)** È giusto reagire quando l'onore del tuo gruppo è minacciato.
- 2.18)** Usare la bici di qualcuno senza permesso e poi ridarla è solo un prestito.
- 2.19)** È accettabile insultare un collega o un compagno di corso se l'alternativa sarebbe picchiarlo.
- 2.20)** Se un gruppo decidesse insieme di fare qualcosa di dannoso o ingiusto sarebbe scorretto incolpare singole persone all'interno del gruppo.
- 2.21)** I bambini non possono essere incolpati di usare parole volgari quando lo fanno tutti i loro coetanei.
- 2.22)** Il solo prendere in giro qualcuno non può veramente ferire.
- 2.23)** Se qualcuno è davvero insopportabile non merita di essere trattato come una persona.
- 2.24)** Chi viene maltrattato in genere ha fatto qualcosa per meritarselo.
- 2.25)** È giusto mentire se ciò permette di evitare dei guai a un amico.
- 2.26)** Confrontato con altre azioni illegali che vengono commesse tutti i giorni, rubare qualcosa da un negozio non è così grave.
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**2.28)** Alcune persone devono essere trattate duramente perché non hanno realmente dei sentimenti che possono essere feriti.

**2.29)** I bambini non sono completamente nel torto se si comportano male quando i loro genitori sono troppo rigidi.

### **Gender issues**

Esprimi quanto sei d'accordo con le seguenti affermazioni usando le opzioni (1 Molto – 2 Abbastanza – 3 Poco – 4 Per nulla)

**3.1)** Bestemmie e imprecazioni sembrano più spiacevoli se pronunciate da una donna rispetto che da un uomo.

**3.2)** Entrambi i partner dovrebbero avere le stesse opportunità durante un divorzio.

**3.3)** Raccontare barzellette sporche dovrebbe essere una prerogativa maschile.

**3.4)** Nella situazione attuale in cui sempre più donne sono attive nel mercato del lavoro, gli uomini dovrebbero fare la loro parte in lavori domestici come lavare i piatti e fare il bucato.

**3.5)** è oltraggioso che le donne debbano affermare di “obbedire al marito” nel giuramento nuziale tradizionale.

**3.6)** I mezzi di comunicazione come giornali o notiziari spesso rinforzano stereotipi scorretti o inaccurati sulle donne.

**3.7)** Le donne reggono l'alcool meno degli uomini.

**3.8)** Nel mercato del lavoro attuale esiste un sistema meritocratico che premia i lavoratori con bonus e promozioni a prescindere dal loro genere.

**3.9)** Vedere donne in posizioni di potere nelle aziende o nelle istituzioni è un buon segno per la società.

**3.10)** Il femminismo non è ormai più necessario perché gli uomini e le donne hanno raggiunto pressoché la parità in tutti i campi della vita sociale.

**3.11)** Donne che guadagnano quanto i loro partner dovrebbero offrirsi di dividere il conto quando la coppia esce a cena o affitta una stanza per una vacanza.

**3.12)** è normale che le donne debbano fare più attenzione degli uomini nel tornare a casa la sera, specialmente se hanno bevuto.

**3.13)** Le donne sono spesso giudicate più duramente degli uomini per gli stessi comportamenti o azioni.

**3.14)** Se una donna lavorasse in fonderia finirebbe solo col rallentare i suoi colleghi uomini.

**3.15)** Entrambi i genitori sono ugualmente in grado di affrontare e comprendere i problemi dei figli a prescindere dal genere del bambino.

**3.16)** La libertà economica e sociale valgono molto di più per le donne rispetto all'adesione a ideali di femminilità creati dagli uomini.

**3.17)** Le donne di oggi non sono giudicate per la loro vita sessuale in modo diverso dai loro coetanei uomini.

**3.18)** La nostra società tutt'ora continua a proporre stereotipi di genere riguardo alle donne che limitano le loro possibilità lavorative.