



Τεχνολογικό
Πανεπιστήμιο
Κύπρου

Σχολή Καλών και
Εφαρμοσμένων
Τεχνών

Thesis Project

Social Representation of Overweight people in Animation

Elias Neophytou

Thesis Project
Social Representation of Overweight people in Animation
Elias Neophytou

Supervising Professor
Nikos Synnos

Limassol, April 2019

COPYRIGHT

Copyright © Elias Neophytou, 2019

All rights reserved. The approval of the graduation thesis from the Department of Multimedia and Graphic Arts of Cyprus University of Technology does not necessarily imply acceptance of the views of the author by the Department.

I would like to show my gratitude and appreciation to my supervisor Mr. Nikos Synnos for his approval of my thesis as well as his assistance throughout the whole process of researching and writing. Finally, I am thankful to friends that helped me spread my questionnaire and form the interrater agreement on my content analysis.

ABSTRACT

As representation in media and entertainment becomes a more discussed topic, we see more research focused on its effects and influence on the larger population. Previous research has shown how it can have positive effects or even negative depending on the type of representation, such effects on children's self-esteem. While several group including women and ethnic minorities, have been a focal point for representation, overweight individuals not so much, especially on protagonist roles. After conducting a content analysis of the top 5 animated films and series from 4 animation categories, I have concluded that the lack of overweight representation was indeed true, especially in action related themes. Following with a survey research, in which, after creating a short animated clip where I presented 3 heroic overweight characters, I have created a questionnaire that was based on that clip. The questionnaire, which was shared around through social media, was meant for individuals who consider themselves overweight, for the purpose of studying their reaction and response to the characters in the animation and see if there is any kind of positive or negative influence we can observe. The results have shown very positive responses for the most part and appreciation for the characters and their design, as well as feelings of interest and excitement. While these results cannot be considered conclusive enough, due to sampling methodology (convenience sampling) and sample size, it still sets a foundation for future researchers to take into consideration.

Keywords: representation, overweight characters, animation, protagonist, action, new media

ΠΕΡΙΛΗΨΗ

Καθώς η εκπροσώπηση στα μέσα ψυχαγωγίας γίνεται ένα πιο συζητημένο θέμα, βλέπουμε περισσότερη έρευνα επικεντρωμένη στα αποτελέσματα και την επίδρασή της στον ευρύτερο πληθυσμό. Προηγούμενες έρευνες έχουν δείξει πώς μπορεί να έχει θετικά ή και αρνητικά αποτελέσματα, ανάλογα με τον τύπο της εκπροσώπησης, με επιπτώσεις στην αυτοεκτίμηση των παιδιών. Ενώ αρκετές ομάδες, συμπεριλαμβανομένων των γυναικών και των εθνικών μειονοτήτων, αποτέλεσαν το επίκεντρο της εκπροσώπησης, τα υπέρβαρα άτομα όχι και τόσο πολύ, ειδικά σε ρόλους πρωταγωνιστών. Αφού διεξήγα μια ανάλυση περιεχομένου των 5 κορυφαίων ταινιών και σειρών κινούμενων σχεδίων από 4 κατηγορίες κινούμενων σχεδίων, κατέληξα στο συμπέρασμα ότι η έλλειψη εκπροσώπηση υπέρβαρων ατόμων ήταν πράγματι αλήθεια, ιδίως σε θέματα σχετιζόμενα με τη δράση. Ακολουθώντας με μια έρευνα επισκόπησης, στην οποία, αφού δημιούργησα ένα σύντομο σχεδιαστικό κλιπ, όπου παρουσίασα 3 ηρωικούς υπέρβαρους χαρακτήρες, έχω δημιουργήσει ένα ερωτηματολόγιο βασισμένο σε αυτό το κλιπ. Το ερωτηματολόγιο, το οποίο μοίρασα μέσω των κοινωνικών μέσων δικτύωσης, προοριζόταν για άτομα που θεωρούσαν τον εαυτό τους υπέρβαρα, με σκοπό να μελετήσω την αντίδραση και την ανταπόκρισή τους στους χαρακτήρες του κλιπ και να δω εάν υπάρχει οποιαδήποτε θετική ή αρνητική επιρροή που μπορούμε να παρατηρήσουμε. Τα αποτελέσματα έχουν δείξει πολύ θετικές απαντήσεις για το μεγαλύτερο μέρος και εκτίμηση για τους χαρακτήρες και το σχεδιασμό τους, καθώς και τα αισθήματα ενδιαφέροντος και ενθουσιασμού. Ενώ αυτά τα αποτελέσματα δεν μπορούν να θεωρηθούν επαρκώς πειστικά, λόγω της μεθοδολογίας δειγματοληψίας (δειγματοληψία ευκολίας) και του μεγέθους του δείγματος, εξακολουθεί να αποτελεί θεμέλιο για τους μελλοντικούς ερευνητές για να λάβουν υπόψη τους.

Λέξεις-κλειδιά: εκπροσώπηση, υπέρβαροι χαρακτήρες, κινούμενα σχέδια, πρωταγωνιστές, δράση, νέα μέσα

TABLE OF CONTENTS

| | |
|--|-----|
| ABSTRACT..... | i |
| ΠΕΡΙΛΗΨΗ..... | ii |
| TABLE OF CONTENTS..... | iii |
| LIST OF TABLES..... | iv |
| LIST OF IMAGES..... | v |
| 1 INTRODUCTION..... | 1 |
| 2 LITERATURE REVIEW | 3 |
| 2.1 Effects of representation on minority groups..... | 3 |
| 2.2 How representation affects the perceptions of the overall population | 4 |
| 2.3 Representation in different media..... | 4 |
| 2.4 New media in animation | 6 |
| 3 METHODOLOGY | 8 |
| 3.1 Type of Methodology | 8 |
| 3.2 Content analysis..... | 8 |
| 3.2.1 Research Question..... | 8 |
| 3.2.2 Coding Scheme | 8 |
| 3.2.3 Sampling | 9 |
| 3.2.4 Results..... | 12 |
| 3.2.5 Conclusion | 13 |
| 3.3 Survey Research..... | 13 |
| 3.3.1 Animation | 13 |
| 3.3.2 Questionnaire | 16 |
| 3.3.3 Sampling Method..... | 16 |
| 4 RESULTS | 18 |
| 4.1 Answer analysis | 18 |
| 5 DISCUSSION AND CONCLUSION..... | 22 |
| 6 REFERENCES | 24 |
| 6.1 Articles and Websites..... | 25 |
| 7 APPENDIX..... | 26 |

LIST OF TABLES

| | |
|--|----|
| Table 1: Animated Overweight Protagonists..... | 11 |
| Table 2: Question 1....., | 18 |
| Table 3: Question 2..... | 19 |
| Table 4: Question 3..... | 19 |
| Table 5: Question 4..... | 20 |

LIST OF IMAGES

| | |
|-----------------------|----|
| Image 1: Jeremy..... | 14 |
| Image 2: Ramsey....., | 14 |
| Image 3: Helen..... | 15 |

1 INTRODUCTION

Animation has been part of the entertainment industry for over a century as it combines the appealing elements of storytelling and art in the forms of animated drawing. Like several other forms of media and entertainment, animation had been part of the general discussion of diversity and representation, with many attempts over the years, to try and tell the stories of different type of strong characters, from any ethnicity, gender or age. We see examples, from Disney, with animated films such as *Mulan*, *Pocahontas*, *Frozen* and *Moana*.

The discussion about representation and diversity has been a focal point for academia and research for many years and had been studied deeply, as I explain and showcase in more detail, in my literature review. We see it as an important aspect of our society to represent ourselves and our identities and we see occasions, that have been reported, where this attempt had even saved lives. A very interesting story was brought to light by a Vox article of *German Lopez (2016)*, who has reported about the experience that a comic book store employee has described on Twitter, had with a young gay girl. The little girl has talked and explained to the employee, how the reveal of a gay character in the *Supergirl TV Show*, had basically saved her life, by showing her that she can be loved and be happy, it took away any thoughts of killing herself. This touching story can illustrate to a certain degree why people seek for more diversity and more representation of minority groups.

So for my thesis, I decided I would like to approach the subject of representation, but of a group I had the personal observation, that was not represented enough in animation. That group is overweight people. Through my own experience I had noticed that in animation, but particularly in action related animation, like superhero cartoons or animated films or anime, it seems to be lacking on overweight characters, especially on main and significant for the plot, roles. So the goal is to first, establish that this personal observation is valid and not just a mere assumption, through content analysis.

In the case that the content analysis, proves my suspicion correct, my project would be based on two research questions:

- *Which animation design solutions can be proposed that integrate overweight characters as protagonists? (RQ1)*
- *What kind of influence can the solutions have on the population of interest? (RQ2)*

With the first question, I would address the practical aspect of this thesis, by creating a short animation in which I will showcase overweight characters. The second question is meant to address in how the final product can affect and influence my target population.

2 LITERATURE REVIEW

2.1 Effects of representation on minority groups

Presenting the question of what effects, can representation have, on minority communities, we look at the cases of United States and New Zealand. After the creation of U.S. House districts, more Black and Latino candidates could possibly win elected office. New Zealand had a system in which representative of Maori and European descent, would be elected, since 1867. According to **Banducci, Donovan & Karp (2004)**, Descriptive representation has shown to be able to break barriers of communication and the allowed for people to identify with their representatives, while also empower and encourage more participation by minority citizens. This type of representation, leads to the conclusion that it, usually, produces positive effects on minority communities (like increase chance of voting in places where it is practiced).

It has been demonstrated that children spend several hours per day consuming entertainment media. Research had focused on the effect that media can have on children's health and development. This study (**Martins & Harrison 2012**) tried to determine, if changes in television use, can be linked to self-esteem, of white and black children (boys and girls) measured after a year. The only group that did not have its self-esteem decreased, was white boys, possibly due to reinforcement of positive traits of white men, while the other groups (white girls and black children) were presented with more unfavorable characteristics. These would be use by children, as their basis for self-evaluation.

Bradley (2018), studied, the animated series of Steven Universe and the way it evaluates the ideas of gender identity, as social constructions and presenting non-essentialist, positions. In its unusual approach, compared to the rest of the mainstream media, representation of non-binary and queer characters, is observed. Particularly, the character of Stevonnie (fusion of Steve and Connie), presents us with a non-binary figure, in a children's cartoon, that can also feature some deeper themes, in regards to issues that the trans community usually faces, like micro or macroaggressions. We get a better understanding of the importance of representation of such minorities and the positive effects it can have on these groups.

2.2 How representation affects the perceptions of the overall population

Media and games have become a social power of indications about gender performance, through the characterization of individuals. Media choices have shown to be able to shape one's self or self, shaping media choices. The research, done by **Blackburn & Scharer (2018)**, is meant to investigate, video game's role as a predictor of views that players adopt, in regards to masculinity. Other studies managed to show, the gender gap that exists, in terms of roles and numbers, with men usually being numerically more and also being the main characters. This study would predict, that video game (especially violent) exposure, will correlate with approval of traditional masculinity gender roles. Despite certain limitations, this study, still provides a basis in which, people of the gaming industry, can understand the need for more diverse representations of gender and expressions of masculinity, for players, to consume.

These type of effects of representation can come from different types of media, including news. Research has shown that there is an overrepresentation of Blacks as criminal suspects, in news. Content studies, show how news programming would usually link Blacks with criminality, more often than whites. The study of **Dixon (2008)** tries to understand the relation between the report of crime news as well as the exposure of people to them, to their understanding of crime and race. Results have shown a positive relation between the overrepresentation of Black criminals and the perception of them as violent.

2.3 Representation in different media

On the need to improve our understanding of situations about ethnic diversity and representation in graphic novels, **Moeller & Becnel (2018)** conducted a research, in which they would rely on the Critical Race Theory (CRT), to understand race as a deeply embedded social construct. They would study the amount of POC characters, their roles and the race of their authors and illustrators. Evaluating 57 books, focusing firstly on text, then visuals, then both of those criteria. Images usually allow for more representation and depiction of reality and we see the importance of accurate reflection of diverse populations, signified. The study is meant to also help us understand the importance of comprehending the concept of race, in systemic levels and its role on people's lives.

Diversity has become a present concept in the areas of workplace, market and the media, with the gaming industry trying to adopt it as well. As the article describes (**Kerr et al., 2018**), Triple-A games, have shown the pattern of presenting their playable characters as, usually, good looking, heterosexual, cis-gender, strong, white men. Usually this type of portrayal, sets unrealistic ideals, even for the demographics that are represented. The problem is actually about this pattern itself, rather than the existence of this kind of representation. Prior to the sixth console generation, female representation was actually more frequent at the time. The change occurred with the popularization of gaming genres, like shooters. There is a struggle to introduce positive portrayals of female protagonists, especially having their own agency (as explained in the comparison of the original Lara Croft with her reimagining). Moreover, it is observed that there are issues in regards to poor ethnic minorities, representation, and even sometimes depicting them, as the antagonists, based on their nationality or faith (e.g. Russians, Arab-Muslims). Positively, there is more focus on queer representation, as it has been observed in several games. For the industry to succeed, it needs to consider its diverse base of consumers.

Visual media is a possible influence to the general audience and children's media viewing/consumption consists of several hours per week. Family portrayals on media, can be a perceived reality for children and a way to evaluate their own experience, as they may rely on these depictions for information about family structure and function. Disney films, once purchased, are being constantly viewed by kids. Certain qualities of family portrayals, have been observed in Disney films, such as overrepresentation of single parents. So, in an attempt to have a more comprehensive analysis of those Disney family depictions, **Zurcher, Webb & Robinson (2018)**, have evaluated 85 Disney films, examining the representation aspects (rather than the social effects), through studying the structures, ethnic representations, compositions, support, relationship and climate of those families. It can be concluded that there is an overrepresentation of single-parent families (incompatible with the actual US data of family demographics), probably in an attempt to promote the idea that non-traditional families should not be perceived as inferior. Also there is a rise of ethnically diverse families and a depiction of mostly loving and warm ones.

2.4 New media in animation

As animation progress and new mediums appear, we need to consider how they can also effectively be used for the purpose of representation. 2D Computer animation developed techniques that were based on traditional animation. Research on 3D animation, brought more attention to image rendering rather than the animation. New animation systems, would allow more people, to produce animation of high quality but also the animation itself would also be bad, due to unfamiliarity with the basic principles of that field. As **Lasseter (1987)**, explains, those principles were the result of classes that were set up by Walt Disney, for his animators, to learn how to properly animate human figures and animals. Those principles, would consist, of ideas, such as squash and stretch, timing, anticipate, staging etc. Adjustment of some of those, remain the same, regardless of the medium of animation that is used (2D or 3D), while others need different applications. Through smart ways of implementing those principles, would result in granting to the animated character, their personality. The importance of the application of those principles, is illustrated and emphasized, in order to create quality animation.

In the age of animation, even with the advancement to 3D animation, it still is, mostly, displayed through traditional 2D methods (screen). So, the goal of **Feng & Tomimatsu (2017)**, was to suggest a 3D method of display, through the combination of 3D projecting techniques with projection mapping. Conducting their research on multi-screen techniques and projection mapping techniques such as mapping, edge bleeding and picture adjustment. Their animation experiment, focused the creation of 4 short animation based on a traditional Chinese story, portraying the seasons, using PM projecting and multi-screen techniques. Through this experiment, viewers got an unusual feeling, because of the 3D projection, also giving them curiosity experience and increasing the amount of information they get.

As described by **Chen (2017)**, Digital media art is the integration of multiple technological disciplines, a production of the combination of computer science and art design. Through the development of digital video, audio, film (and other media), traditional media were replaced by digital and have been applied to several fields of life. As the advancement of the multimedia industry was growing, so was its contribution to national economies, like that of China's. Maya is the most important 3D animation software, used for movie special effects and character animations. Then there is MEL language, which is the foundation of the Maya software,

allowing designers to define and extend the software's function. Methods, in this paper, that help to analyse MEL, solved problems that existed in traditional animation. Character animation and group animation control systems were set up through MEL.

The figures of Miao Xiaochun and Lu Yang, are considered prominent, in modern Chinese art, through their creativity in regards to 3D digital animation. Their work has been characterized as “pervasive animation” because of its multiplication through different media, interfaces and platforms. Their work, express a non-naturalistic perspective, due to the employment of techniques that doesn't just rely on the realistic representation of objects and perspective. An analysis of both of their work (**Kim, 2017**), explained each artist's perspective. Miao focused on the recreation of European and Chinese paintings in 3D animation, with deconstructing traits. Lu's work is based on the connection of modern technology/medicine with spirituality. The distinction between these works can be observed, on Miao's recognition of algorithmic tools and virtual space as revolutionizing and his projection of Western and Chinese work(old media) into this 3D space (new media). While Lu's approach is the perception that technology and the internet are no longer new, but basic conditions of life, and also her remixing of media images and 3D scanning. In addition, their work consists of the use of vertical and multiple perspectives and the omnidirectional and gravitation-free movements of virtual cameras.

An important part of both new media and animation, are video games. The video game and computer industry has its roots in the creation of Atari, with developed nations advancing their markets on that area, with the addition of the merging of computer animation and games. As **Ghayur (2007)**, explains, there is a large increase (and with the expectation of getting even larger) of the video gaming industry, with online gaming, being the fastest growing. The animation industry, has also seen, a great growth, with leading Studios of UK, France, Germany and Spain, in Europe and Japan and S. Korea, in Asia. Other Asian nations have also shown increase in this area and have strategies for their development, such as increasing innovative ideas and a collaborative mechanism between government and the industry.

3 METHODOLOGY

3.1 Type of Methodology

For the purpose of this study, I am using mixed methodology. For the first part, I am using content analysis research, to establish whether there is a lack of representation of overweight characters, in protagonist roles, or not. For the second part, I am using survey research, to see if my suggested solution (animated characters), had any positive response from my target population.

3.2 Content analysis

3.2.1 Research Question

This analysis, is based on the question, of, if there is a decent representation of overweight/chubby, characters through animated series and animated movies (mainly in the superhero/action genre)?

Definition of overweight character:

Character that is usually presented and designed, as big, with a big belly and circular characteristics.

Definition of protagonist:

Main character that the plot revolves around.

3.2.2 Coding Scheme

For my coding scheme creation, I did not rely on the literature (due to a lack of analysis of the specific subject of overweight representation), so I relied on my own attempt at creating one, based on the general features (which I specified on my definition of overweight characters) that I'm looking for on the animated characters that I sampled.

- Animated Overweight Protagonist (P)

3.2.3 Sampling

Target population:

Animated Overweight Protagonists (P) in the most popular animated series and animated films.

Sampling method:

I took samples of the 5 most popular pieces of 4 animated categories, based on articles from IMDb, Business Insider and The Top Tens:

- Animated children's films
- Animated Superhero films
- Animated series/cartoons
- Anime

For the purpose of not having to place movies of the same franchise separately, I have included them together or in cases where a movie would be based on the same character for over 2 times (batman), the third time, would be replaced by the following movie, in the list.

Animated Children's films (John Lynch, 2018, Business insider):

- Inside Out
- Snow White and the Dwarfs
- Zootopia
- Toy Story (1,2)
- Up

Animated Superhero films (**tobiasgm, 2018, IMDb**)

- Batman the Dark Knight Returns (TDKR 1,2)
- Justice League the flashpoint Paradox (TFP)
- Batman Under the Redhood (UTR)
- Spider-man: Into the Spider-Verse (ITSV)
- Incredibles

Animated series/cartoons (**the top tens**)

- The Simpsons
- Spongebob Squarepants
- South Park
- Gravity Falls
- Looney Tunes

Anime (**the top tens**)

- Dragon Ball Z
- Death Note
- One Piece
- Naruto
- Fairy Tale

Determining Scale:

The goal is to measure how many of the following popular series/animation movies contain animated overweight protagonists (P):

0 is the absence of overweight in this category and the 1 is presence

0 = absence

1 = presence

Table 1: Animated Overweight Protagonists

| Shows and films | P |
|---|----------|
| Inside Out | 1 |
| Snow White and the Seven Dwarfs | 1 |
| Zootopia | 0 |
| Toy Story | 0 |
| Up | 1 |
| Batman TDKR | 0 |
| Justice League TFP | 0 |
| Batman UTR | 0 |
| Incredibles | 0 |
| Spider-man: Into the Spider-Verse (ITSV) | 0 |

| | |
|------------------------------|----------|
| The Simpsons | 1 |
| Spongebob Squarepants | 0 |
| South Park | 1 |
| Gravity Falls | 1 |
| Looney Tunes | 1 |
| Dragon Ball Z | 0 |
| Death Note | 0 |
| One Piece | 0 |
| Naruto | 0 |
| Fairy Tale | 0 |

3.2.4 Results

- P: 7/20
- Animations with overweight protagonist: 7/20
- Animations with no overweight protagonists: 13/20
- Animated Children's films: 3/5

- Animated Superhero films: 0/5
- Animated Series/cartoons: 4/5
- Anime: 0/5

The results were validated through interrater agreement. Superhero animated films and anime series, the 2 categories that were mostly related to the action genre that I'm focused on in this research, show the greatest lack of overweight protagonists. Cartoons and animated children's films have the most overweight representation, with cartoons (usually comedic in nature) having the most.

3.2.5 Conclusion

These results, allow us to observe that in the most appreciated products in several categories of animation, particularly those with action related themes, there is lack of representation of overweight main characters. This confirms, to some degree, my initial suspicion about the overall lack of dynamic, chubby protagonists in action based cartoons and animation films.

3.3 Survey Research

After concluding how there is a prevalent lack of overweight representation in animation products, my research continues to the second part of the methodology, which is survey research. This survey would be based on my proposed solution for my first research question (RQ1), about what animated ideas I can suggest that can introduce overweight characters as protagonists.

3.3.1 Animation

Firstly, I had created 3 distinguished characters, with the characteristics that would define them as overweight. These characters were given names, personal information and some basic concept ideas about what their stories are, what they do and what their general skills are.

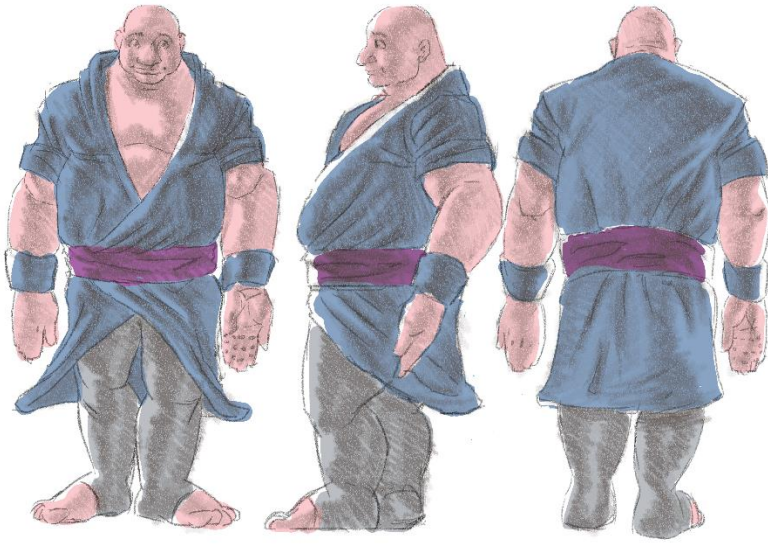


Image 1: Jeremy

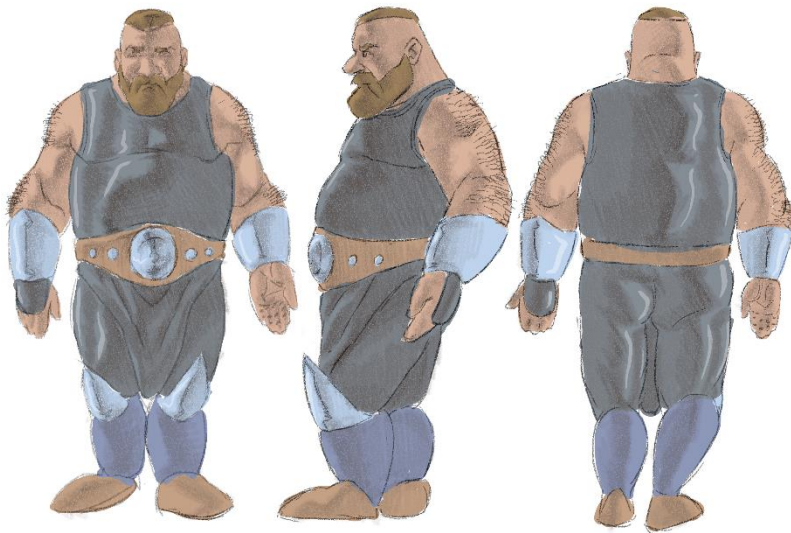


Image 2: Ramsey



Image 3: Helen

Then, I created a script that would help me form three animated clips that would showcase these characters in a positive way and their unique skills that come from their sizes, through short action scenes.

Scenario:

- Clip 1: Jeremy is relaxing, while suddenly he hears a thrust in the air. Some small darts are heading towards him. He quickly jumps out of the way to avoid them and in the process he bounces off the ground in order to make a flip and land on his feet. He looks in the air and observes the two assassins that tried to harm him. He then confidently slams his foot on the ground, causing a shockwave that would blast these two characters far away.
- Clip 2: Ramsey is standing proudly looking at the horizon, as he suddenly realizes he is being attacked by a swordsman, he quickly avoids his attack. The swordsman immediately goes for a second attack that Ramsey would block with his hand, He then grabs the swordsman, he jumps high in the air, then flips in an attempt to body slam his opponent with great force.

- Clip 3: A thug is running down the street. Suddenly he notices a silhouette standing mostly in the shadows. He stops to observe better and notices a big figure, in shock. The figure is coming out of the shadows, to reveal Helen, who lifts her arm up and shoots a blast at him.

After the creation of the models and the script is done, I was ready to make the animation clips that I would put together in a finalized form of a one minute animation with all three characters.

Link to animation:

<https://www.youtube.com/watch?v=ADAvLNNf7vY>

3.3.2 Questionnaire

With my animation project ready, I formed a questionnaire with my animation clip as the basis of it, meant for my target population, overweight people. The purpose of my questionnaire, would be to address my second research question (RQ2) about the kind of influence that my solution (animation and characters) can have on the aforementioned target population and what kind of response I can get from it.

Target Population: As mentioned already, the target population is overweight people, regardless of gender, age, ethnicity or sexual orientation. But more specifically, I'm looking for people that would consider themselves as overweight, due to social experience that would affect their perception in that regard, rather than being based on some kind of scientific objective measurement and analysis of their weight. The purpose of this study after all, is to study the kind of reception the animation would have, from the people that could possibly associate themselves with the characters that are presented.

3.3.3 Sampling Method

My sampling method, due to lack of resource and time, is non-random, convenience sampling. My questionnaire comes in the form of Google Forms that would of course be spread through

social media. The time required for the questionnaire to be filled is approximately 2 minutes. The time period for the reception of responses was about 2 weeks.

Question 1:

Do you consider yourself an overweight person?

Question 2:

What do you think about the characters in the animated video?

Question 3:

What do you think about the characters' design?

Question 4:

What emotions did you feel from the characters' presentation? (you can choose more than one answer)

Question 5:

If you chose "other", then give us a very brief answer

The purpose of Q1 was to isolate the responses to my target population. Responders that would respond as not consider overweight or chubby, would submit the form, at that point of the questionnaire. Q2 would allow me to see what the general thoughts and appreciation (or lack of) were of the responders, about the characters of the animation clip. The replies to Q3 would help me see if the design approach would be pleasing enough or not. And Q4 would showcase what were the general reaction of the responders in regards to this kind of presentation of these characters, with Q5 being an extension of it, for more comments if necessary.

4 RESULTS

The questionnaire managed to reach a relatively decent number of people, inside and outside of Cyprus, through the connections made in social media, which includes Facebook, Twitter and Instagram. In the period of 2 weeks, the questionnaire had been answered by 97 people overall.

4.1 Answer analysis

Table 2: Question 1

Do you consider yourself an overweight person?

| Answer | Percentage |
|---------------|-------------------|
| Yes | 76.3% (74) |
| No | 23.7% (23) |

From the 97 people that responded, 74 are the ones that replied positively in the question that determined whether they find themselves in my target population or not. So the rest of the questions will be measured with 74 as the total number of relevant responses.

Table 3: Question 2

What do you think about the characters in the animated video?

| Answer | Percentage |
|---------------------------------|-------------------|
| I don't like them at all | 4.1% (3) |
| I don't like them | 0% (0) |
| I feel indifferent | 6.8% (5) |
| I like them | 40.5% (30) |
| I like them a lot | 48.6% (36) |

Table 4: Question 3

What do you think about the characters' design?

| Answer | Percentage |
|-----------------------------|-------------------|
| Unappealing | 4.1% (3) |
| No feelings about it | 0% (0) |

| | |
|--------------------|-------------------|
| Interesting | 6.8% (5) |
| Appealing | 40.5% (30) |

Table 5: Question 4

What emotions did you feel from the characters' presentation? (you can choose more than one answer)

| Answer | Percentage |
|-----------------------|-------------------|
| anger | 2.7% (2) |
| disgust | 0% (0) |
| disappointment | 1.4% (1) |
| ridicule | 4.1% (3) |
| indifference | 6.8% (5) |
| interest | 60.8% (45) |
| surprise | 37.8% (28) |
| impressiveness | 48.6% (36) |
| excitement | 51.4% (38) |

Additional Answers:

- Power
- Fat is bad
- Amazed
- They look powerful and mighty
- Interested and questioned
- I feel sorry for them

What we can get from these results, is that the animation had a generally positive reception from the target population. The vast majority of responders in Q2 have shown to have a great appreciation for the characters presented with a very small number not liking them at all or having no real interest in them. The numbers in Q3 seems to present a very positive response to the design of characters, which leaves the indication that the target audience, was probably, not put off by the large size of the characters, except for a very small number of responders. And Q4, also showcase that the majority of responders had very positive feelings watching the animated presentation of the characters, especially having interest in them and showing excitement.

Though it did receive some small number of negative responses like ridicule or anger and also in the additional answers, we got comments like “fat is bad”, we also got comments that have shown empowerment (“power”) and admiration (“they look powerful and mighty”).

The general trend that is being presented by the answers in this questionnaire, indicate that the target population, which as we have established are overweight individuals, had shown satisfaction to the results of the animation and the characters that meant to represent them, which seem to be consistent to the idea of how positive representation can affect positively the groups that are represented.

5 DISCUSSION AND CONCLUSION

The topic of representation in media and the effects it can have on population groups is a highly discussed topic. What we understand through my literature review, is how research indicates that representation can have positive or even negative effects, depending on the type of representation that is being presented through different forms of media and entertainment. So this thesis focused on the following two research questions.

Which animation design solutions can be proposed that integrate overweight characters as protagonists? (RQ1)

After my brief content analysis allowed me to confirm my idea of how there is a lack of positive representation of overweight characters, particularly in action related cartoons and animated films, I created as a suggested solution, a brief animated presentation of three overweight heroes in action scenes, performing unique skills such as, bouncing off the ground, or having traits related to their size such as, being intimidating. Following that, comes the second research question.

What kind of influence can the solutions have on the population of interest? (RQ2)

The results of my survey research has shown for the largest part, a very positive reaction to these characters, including appreciation for their design, which indicates that their large size is no perceived as negative factor, and also expression of interest and excitement. To a certain degree, these results demonstrate some kind of consistency with the idea of positive representation having positive effects on the social groups and populations that are being represented.

Of course this research cannot be conclusive or explanatory enough, for several reasons. Due to limitations such as lack of resource, budget and time, the sampling method that was used, which as stated before, is non-random convenience sampling, is not the ideal method to allow us to understand the opinions and attitudes of populations, on a representative level. Moreover, the sample size is not a satisfactory enough either. The questionnaire had reached nearly a hundred responders, but only 74 of them were relevant for the goals of this research. But I believe it still sets an introduction for future research on this specific subject of representation of overweight individuals in media and entertainment, particularly animation, which this subject had not been

addressed on a deeper level by previous research on representation and diversity. It still leaves some indications of positive influence for researchers to take into consideration and try to verify with more thorough research.

In future attempts to investigate and understand this subject more, a better sampling methodology, like a random one and larger sample size, would be a more appropriate approach to let us get more representative results and data. In addition, studying the possible effects and reactions, this type of representation can have on the audience that is not part of the target population, would also allow us to have a clearer picture about the effects and influence that come from diversifying animation.

Additionally, in regards to the animation aspect of this research, I used traditional 2D animation, following the general ideas and techniques of the 12 principles of animation. But as my research has shown, in our era, we can create animation through different means and media, creating unique experience for the audience. It would be an interesting approach to see the entertainment and animation industry bringing these new media techniques into the mainstream, while also seeing the different attempts at presenting diverse characters and stories that reflect our society and the groups and individuals that are part of it and even try to learn if these different animation experience could bring even bigger impact on the audience.

6 REFERENCES

- Banducci, S. A., Donovan, T., & Karp, J. A. (2004). Minority representation, empowerment, and participation. *The Journal of Politics*, 66(2), 534-556.
- Blackburn, G., & Scharrer, E. (2018). Video Game Playing and Beliefs about Masculinity Among Male and Female Emerging Adults. *Sex Roles*, 1-15.
- Bradley, M. (2018). Living in the Liminal: Representation of Transgender and Nonbinary Identity in 'Steven Universe'.
- Chen, H. (2017). Research on the application of digital media art in animation control based on Maya MEL language. *ACTA TECHNICA CSAV*, 62(1), 499-507.
- Dixon, T. L. (2008). Crime news and racialized beliefs: Understanding the relationship between local news viewing and perceptions of African Americans and crime. *Journal of Communication*, 58(1), 106-125.
- Feng, Z., & Tomimatsu, K. (2017, July). A Study of Digital Media Art Utilizing 2D Animation: Digital Video Expression Using Projection Mapping and Multi Screen Techniques. In *International Conference on Applied Human Factors and Ergonomics* (pp. 449-457). Springer, Cham.
- Ghayur, A. (2007). Computer Animation and Gaming Industry. *Animation and Gaming*. N/A: N/A, 19.
- Kerr, C., McAloon, A., Kidwell, E., Francis, B., Cross, K., Kruse, L., & Guide, G. C. (2018). Representation and Design Trends in Games. *Identity*.
- Kim, J. (2017). Digital and postdigital 3D animation in the contemporary Chinese art scene: Miao Xiaochun and Lu Yang. *Journal of Chinese Cinemas*, 11(3), 227-242.
- Lasseter, J. (1987, August). Principles of traditional animation applied to 3D computer animation. In *ACM Siggraph Computer Graphics* (Vol. 21, No. 4, pp. 35-44). ACM.

Martins, N., & Harrison, K. (2012). Racial and gender differences in the relationship between children's television use and self-esteem: A longitudinal panel study. *Communication Research*, 39(3), 338-357.

Moeller, R. A., & Becnel, K. (2018). Drawing Diversity: Representations of Race in Graphic Novels for Young Adults. *School Library Research*, 21.

Zurcher, J. D., Webb, S. M., & Robinson, T. (2018). The Portrayal of Families across Generations in Disney Animated Films. *Social Sciences*, 7(3), 47.

6.1 Articles and Websites

John Lynch, 2018

<https://www.businessinsider.com/best-animated-movies-all-time-critics-2018-3#6-up-2009-45>

tobiasgm, 2018

<https://www.imdb.com/list/ls023063145/>

<https://www.thetoptens.com/anime/>

<https://www.thetoptens.com/best-animated-television-series/>

German Lopez, 2016

<https://www.vox.com/identities/2016/12/5/13834432/lgbtq-representation-media-supergirl>

7 APPENDIX

<https://docs.google.com/forms/d/e/1FAIpQLScj7jgHLiaOt9WKSfXfEYVC187X0-Zngd98qajJHVreJY0g/viewform>

<https://www.youtube.com/watch?v=ADAvLNNf7vY>

This is the Behance link that takes to the post with all the deliverables, including character models, storyboards and the animation clip:

<https://www.behance.net/gallery/79084881/Thesis-Project-Representation-in-Animation>