Faculdade de Design, Tecnologia e Comunicação
Universidade Europeia

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PROCESS OF CHARACTER DESIGN FOR ANIMATED FILMS: AN ANALYSIS OF ELDERLY CHARACTERS

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Dissertação apresentada ao IADE - Faculdade de
Design, Tecnologia e Comunicação da Universidade
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Professor Auxiliar do IADE

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palavras-chave   Design de Personagens, Filmes de Animação, Design de Figurinos, Personagens Seniores, Análise Visual

resumo   Esta dissertação explora o processo de design de um personagem para um filme de animação. Tendo como referências os filmes de animação criados pela Disney e Pixar. De forma a focar os conceitos obtidos sobre o processo de design de personagens foi escolhido um grupo em específico de personagens para serem analisados, a escolha foram personagens idosos. Procurou-se perceber como é que os idosos são vistos pela sociedade contemporânea e vários autores académico referem que é dos grupos etários que mais sofre com preconceitos. Paralelamente a está pesquisa foram selecionadas várias personagens idosas de filmes de animação da Disney e Pixar, de modo a compreender como é que estas são representadas visualmente. No total de 86 filmes produzidos pela Disney e Pixar apenas 1 filme teve um idoso como personagem principal, Carl Fredericksen, de 78 anos. Carl é protagonista em *Up* (Docter, 2009) e por ser uma personagem tão peculiar e única foi analisado como caso de estudo.

A metodologia utilizada foi baseada em literatura académica e documentários sobre design de personagens, a indústria da animação e sobre seniores. Vários filmes da Disney e Pixar foram visualizados e *stills* recolhidos para exemplificar os conteúdos explicados na dissertação.

Esta dissertação procura explicar o processo de criação de um personagem para um filme de animação a qualquer pessoa interessada na área e pode ser também utilizada para a criação de um personagem senior.

É importante criar personagens apelativas para que se diferenciem e fiquem na memória dos espectadores e a criação de mais personagens idosas em filmes de animação pode ajudar a combater estereótipos perante os idosos.

abstract   This dissertation explores the process of character design for an animated film, having as references the animated films created by Disney and Pixar. In order to focus on the concepts obtained about the process of character design it was chosen a specific group of characters to be analysed, elderly characters. It was sought to understand how the elderly are seen by contemporary society and several academic authors refer that it is one of the age groups that suffers most ageism. In parallel to this research, several elderly characters from Disney and Pixar animated films were selected, in order to understand how they are visually represented. In the total of 86 films produced by Disney and Pixar, only 1 film had an elderly as the main character, Carl Fredericksen, 78 years old. Carl is the protagonist in Up (Docter, 2009) and because he is such a peculiar and unique character, he was analysed as a case study.

The methodology used was based on academic literature and documentaries about character design, the animation industry, and about seniors. Several Disney and Pixar films were viewed and stills collected to exemplify the contents explained in the dissertation.

This dissertation seeks to explain the process character design for an animated film to anyone interested in the area. It can also guide in the creation of a senior character.

It is important to create unique and appealing characters that stay in the viewers' memory, and the creation of more senior characters in animated films can help to combat stereotypes towards the elderly.

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Glossary of Terms

Antagonist refers to a person who strongly opposes to somebody or something.

Antihero is a central character who lacks the characteristics of a conventional hero. Antiheroes are ambiguous protagonists, complex characters who have a dark side. Despite a possible history of bad decisions, or even a questionable moral code, an antihero is in the long run guided by good intentions.

Chain mail refers to small metal rings that have combined to appear like fabric. It was used in the past to protect the body of a soldier from injuries when fighting.

FX is short for special effects in films.

Habergeon refers to a light sleeveless coat of mail worn in the 14th century under the plated hauberk.

Minor antagonist is an antagonist who is not significant to the plot.

Paisley is a detailed pattern of curved shapes that look like feathers. It's used especially on fabric.

Protagonist is the main character in a film, book or play.

Secondary Character is a character that has a short appearance, but it still moves the story forward, it does not make a grand impact.

Supporting Character is a character who is not the primary focus of the story but supports and illuminates the protagonist.

Tartan refers to a pattern of squares and lines of different colours and widths that cross each other at an angle of 90°, used especially on cloth, and is originally from Scotland.

Tweed is **a** thick material made from wool, and can have various colours.

Status effects are a modifier to a character's status. They can be positive or negative effects.

Chapter 1 - Introduction

"I think you have to know these fellows definitely before you can draw them," was the advice Walt Disney gave to the team of animators when they were trying to create the seven dwarfs for the animated film Snow White and The Seven Dwarfs (Hand, 1937). What Walt Disney wanted was personality-driven animation (Gabler, 2006, p. 304). Nancy Beiman (2017) says that creating a good story and appealing characters are the major ingredients for developing an animated film that has its reality and can stay in the memory of audiences. Normally, the first clue one receives about a film is the characters' aesthetics, which show their personality and story. While working on an animated film, the director, teams of character designers, and artists use specific elements to incorporate the cultural meanings and identities of characters.

Around 1932 Disney made a contract with Karmen, a visionary that wanted to place a Disney character in every American home. Many products were manufactured. The success of merchandising sales was one of the factors that allowed Walt Disney to start working on his first feature animated film. In the current times, Walt Disney Studios and Pixar Animation Studios produce films, and the stories they tell cinematically are amplified by transmedia and cross-media. With the creation of books, cartoons, games, merchandising, theatrical plays, musicals on ice, amusement parks such as Disneyland, and others. When audiences fell a connection to the characters, they are more prone to acquire merchandising and other products related to the film. And that is a positive aspect for the companies. Some data also show that the industry of animated films is growing. The Global Animated Films Market envisions a CAGR (Compound Annual Growth Rate) of 4.41% between 2021 and 2028 (Dataintelo). With that growth comes the need for more professionals in the area. That is one of the reasons why understanding the process of character design is important. Creating appealing characters is crucial for a film's success but also for the sale of other products, like merchandising. A film starts with an idea. And with that comes the search for a narrative and the creation of characters.

> A good character can be developed from a story. A good character can *inspire* the story. Story is the most important thing in animation, but creating appealing characters to tell it – *animated* characters – is the *other* most important thing. Character and story reinforce one another and are created concurrently during preproduction. (Beiman, 2017, P. xvii)

This citation from Beiman (2017) was one of the main inspirations for choosing character design as the theme scope for this dissertation. If one starts to think about the protagonists of animated films, it is possible to picture a young family of superheroes, or even a white-tailed deer that was just born. Disney and Pixar have tried to combat stereotypes, creating characters with different ethnicities and gender roles. But what about elderly characters? Although different elderly characters have entered animated films, they were never the focus. This dissertation gathers the knowledge of academic authors concerning how western society perceives elderly people. It was found pertinent to understand more about this age group and to research how elderly characters have been represented visually in Disney and Pixar films.

> At some point in our lives we all seem to have that creepy isolated elderly neighbor whose cranky cold facial expressions remain frozen, even in the summer. We smile at them. Nothing. We attempt a conversation with them. Nothing. But before you start spreading the exaggerated gossip that equally closed-minded neighbors defame these loner elders with, please watch Pixar's 2009 Oscar-winning animated heart-warmer Up. (Mayers, 2013)

Carl Fredricksen, 78-year-old man is the protagonist of *Up* (Docter, 2009). He is the first elderly main character of a Disney and Pixar film. In this thesis this character is going to be analyzed in order to understand how it was designed.

The aim of this work is to offer knowledge and visual references of the process of character design for animation films and an analysis of elderly characters, in a direct and easy way, since gathers a lot of knowledge in a few pages. To explain the different phases of this process references of important academic literature about the subject are presented. The process of character design is organised into 6 parts: how to find an idea; research; shape language and meaning; types of characters; aesthetic analysis and character sheets. Each step has pictures of studies, concept art, and the final art of animated films from Walt Disney Studios and Pixar Animated Studios. This research is going to explore what western societies think about seniors, and how elderly characters are portrait visually. Lastly, as a case of study Carl, the only main character that appeared in a Disney and Pixar animated film is going to be analysed regarding the idea, shapes and his aesthetics.

Chapter 2 - Methodology

The research questions that were created for this thesis are:

1. What are the fundamental aspects of character design for animated films?
2. Why the creation of more elderly characters can try to break stereotypes and combat ageism?
3. How are elderly characters represented visually in Disney and Pixar animated films?
4. Which visual elements make Carl a recognisable and appealing elderly character?

To answer these questions the dissertation was dived into three parts:

- Process of character design for animated films (chapter 3)
- Elderly characters through Disney and Pixar animated films (chapter 4)
- Case study, Carl Fredrickson (chapter 5)

Chapter 3 answers question number 1, chapter 4 answers questions 2 and 3, and chapter 5 answer question 4. The data of this dissertation was gathered from academic literature, documentaries, videos of the making of films, and books with the art of films. Several animated films of the studios were watched, and stills were collected. All these sources were crucial in the understanding of the theories that are presented in this dissertation.

Disney and Pixar studios are famous for their high-quality cinematic storytelling (The Walt Disney Company).Walt Disney Animation Studios has 98 years of storytelling. *Snow White and the Seven Dwarfs* (Hand, 1937) was the first fully animated feature film the studios released (Walt Disney Animation Studios). Pixar Animated Studios produced the world's first computer-animated feature film, *Toy Story* (Lasseter, 1995). In 2006, Pixar Animated Studios was purchased by Walt Disney Company (Pixar). The characters from their films were chosen for this research because they are considered the best studios in the world (Piddubna). Walt Disney Studios and Pixar Animation Studios have produced many animated feature films. In this research, examples of research, concept art, character sheets and stills from final scenes of various animated films are explained. They also illustrate the theories of various academic authors such as Beiman (2017) regarding character design, Bui (et al., 2022) concerning costume design, Hauser (2009) for the design of *Up* (Docter, 2009), among other authors.

In chapter 3 knowledge of academic authors about the process of character design and visual references of Disney and Pixar characters are presented. It gathers references from academic authors that explained colour symbology, and the meaning of shapes, among all the other phases that concern this subject. During the process of this dissertation the first book about costume design for character design was released (Bui, et al., 2022) and it was found most enriching since costume design is also addressed in this dissertation.

Chapter 4 talks about how seniors are viewed by western society and how people feel about ageing. This research was made to better comprehend this age group. After it was made a selection of elderly characters that entered in Disney and Pixar animated films. This age group was chosen for various reasons, one of them was to focus on a specific type of character. Another reason is due to the fact that there are few elderly characters in animated films and just one took the role of the main character. In this chapter, it was made research about elderly humane like characters that entered Disney and Pixar films. All the characters that were not humane or that had any type of magical power were not counted. One of the ideas for this section was to create an image with all the faces, bodies, and colour pallets of senior characters that entered animated films. As so, it was only counted the characters that appeared with a shot of their faces and full body. Many characters appeared as being old but not all had references of being so, in this sense it was only considered elderly characters the ones that had references of being old. The objective was to understand how these studios represented them visually, and what characteristics or elements place them in an older age group.

For chapter 5 the main character from *Up* (Docter, 2009), was chosen to be analysed because it was the first elderly main character of a Disney and Pixar animated film. Carl Fredricksen first appears as a child, then he grows into an adult and then he becomes a senior. It was considered as a great example regarding the process of aging Carl and still maintaining key elements that allow the audience to recognize him as being the same character despite the different age phases. The film also got a long list of awards and nominations, 79 wins and 87 nominations, to be precise. One of the wins is 'Best Animated Feature Film of the Year' by the Visual Effects Society (IMDb).

Chapter 3 - Process of Character Design for animated films

1. Finding an Idea

In every film, there is a story. Those stories normally start from ideas. There are many ways to start to gather ideas, such as doing sketches, writing, or taking notes over a period of time. Paul Wells and Samantha Moore (2016) say that the 'starting place' varies a lot from individual to individual. The author states that one of the hardest parts of developing a film is finding an idea that has sterling potential. Various methods of recording that can be used by an animator to develop ideas are:

- Using personal backgrounds
- Using personal experiences and memory
- Sense memories
- The formative years
- Using iconic images
- Fantasy versus reality: observing and imagination
- Using oppositions and comparisons
- Using and revising traditional story premises (Wells & Moore, 2016, p.15)

Some of Disney's most famous films were inspired by or adaptations of books. Some were: *Snow White* by the Brothers Grimm (1812), which worked as a reference for *Snow White and the Seven Dwarfes* (Hand, 1937); *Alice's Adventures in Wonderland* by Lewis Carroll (1856) was the inspiration for Disney's film *Alice in Wonderland* (Geronimi, 1951); *The Little Mermaid* by Hans Christian Andersen (1837) originated Disney interpretation for the film *The Little Mermaid* (Musker, 1989); inspired by Victor Hugo's literary masterpiece *Notre Dame de Paris* (1831) Disney created the film *The Hunchback of Notre Dame* (Trousdale, 1996); among other examples (Penguin, 2020).

> The mistake that a lot of people make is thinking that you can force ideas to come, you can't, really. All that you can do is observe what kind of environment puts you into a creative state of mind, and then try to create that environment. (Brad Bird quoted by Eric ArtPassion, 2019, 7:20)

2. Research and Life Drawing

Regarding research, Wells and Moore (2006) argues that it is a crucial step in the animation process but sometimes it is not viewed with the importance it deserves. There are different ways to do research: visiting places to get inspired, going to libraries, searching online and talking to people. Beiman (2017) agrees that visiting various locations like zoos, playgrounds and even unique places like laundromats can be helpful for research. While visiting relevant places one can capture rough impressions of people and write descriptions and notes on a sketchbook. The sketchbook is one of the most important research tools.

For Kerlow (2009) the process of character design begins with many sketches and studies on paper. Johnson (2019) agrees, advising that one of the best methods to bring characters to life is to study real examples, for instances, if the characters are humane, studying real people would be most pertinent, like Fig.1 shows.

Simply, any act of sketching offers up a perception of the world, and a model by which to communicate thoughts and feelings, and a range of sensory experience. (...) Primarily, though, drawing records the act of observation – a key skill in the animator's armoury (…) works as core research in developing a vocabulary of human movements and gestures (…). (Wells & Moore, 2006, p. 24)
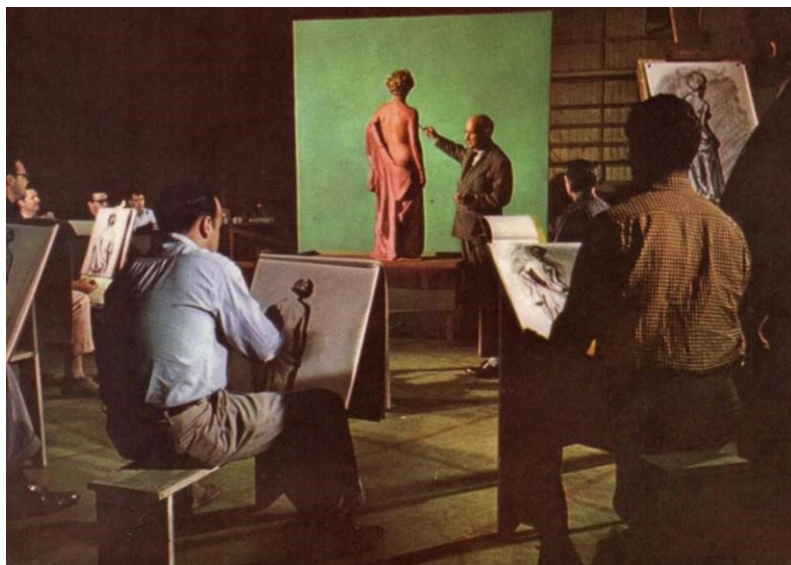
Fig. 1. Don Graham, an art teacher, teaches a group of Disney artists about the proportions of the human body (Thomas, 1968, p.149).

In Disney and Pixar animated films it is common to shoot some scenes in real life action and then using them as reference to draw the characters and animate them with more realistic movements. Fig. 2 was used as reference to draw and animate the scene showed in Fig. 3.

Fig. 2. The live models recite a scene from Sleeping Beauty (Reitherman, 1959) which is taken and used as a reference by the animators, to draw the equivalent scene in the film. Allowing the animators to draw the movements in a more realistic way (Thomas, 1968, p.145).

Fig. 3. Still from *Sleeping Beauty* (Geronimi, 1959), Prince Philip and Aurora walking down the stairs.

"Drawing from life often discovers more exaggerations in postures than those imagined (…)." (Wells & Moore, 2016, p.28). In Fig. 4 Ollie Johnston uses a mirror to see his facial features and expression when making a specific sound. He was animating the character Flora speaking.

Fig. 4. Ollie Johnston drawing the animation of Flora (Thomas, 1968, p.66) for *Sleeping Beauty* (Geronimi, 1959).

For the making of Ratatouille (Bird, 2007) the team did a lot of studying of rats, said Galyn Susman, associate producer as Fig. 5 shows. Character supervisor, Brian Green, added that they research a lot about different aspects that concerned how rats looked and move, for example how their tails and whiskers work. It was also a goal in the film to make the characters cuddly, said Harley Jessup, production designer. After more research about that subject, Mark Walsh, supervising animator, explained what makes a character cute is big eyes and having the hands up, in front of the chest and not down (Eric ArtPassion, 2019).

Fig. 5. Rat used as study reference for the film *Ratatouille* (Bird, 2007) and one of the members of the film sketching while looking at the rat (Eric ArtPassion, 2019, 1:34).

You are constantly trying to get the audience into the state of feeling, and how things feel, rather than how things are. You are trying to get to a very primal, very simple, I think nourishing thing, which is indulging in the human aspect of being alive. (Brad Bird quoted by Eric ArtPassion, 2019, 5:36)

3. Shape Language and Meaning

3.1. Basic Shapes: circle, square, and triangle

In nature and everyday life, we can find many objects that resemble different shapes. A hydrangea, a cotton plant, and an orange resemble circular forms. The teeth of a shark, an aloe vera, and a knife are examples of triangular shapes. Some rocks, buildings, and boxes have the shape of squares, as shown in Fig. 6. Our perception of the world is based on what we understand of each shape, its meaning, and what they communicate. It's possible to perceive distinct personalities in different shapes (3DTotal Publishing, 2015). Bishop (2019) defends that shape language is about using shapes to communicate meanings and that "different shapes provoke different reactions within us, causing us to associate the things we see with certain feelings or meanings".

Fig. 6. Circular forms: a hydrangea, a cotton plant, and an orange. Square shapes: rocks, building, and a box. Triangular shapes: the teeth of a shark, an aloe vera, and a knife. Created by Ana Rita Simões.

Using primary shapes to create well-built characters can be very obliging. They can also add an extra connotation to the characters (Leeuwe, 2019). Each shape creates a pattern of meanings. Beiman (2017) and Leeuwe (2019) agree that the use of identically sized foundation shapes should be avoided since it does not add much interest to the overall shape of the

character, and it might seem repetitive. Instead, the mix between the proportions of shapes, emphasising contrasts, can result in something vastly distinctive.

The knowledge about the meanings of basic shapes of the authors Leeuwe (2019), Nieminem (2017), Tillman (2011), Mattesi (2008), Beiman (2017), Bancroft (2006), and from the book *Beginner's Guide to Digital Painting in Photoshop (2015)* was compiled into Fig. 7.

- very friendly	- strong	- dangerous
- nonaggressive	- stable	- unstable
- soft	- reliable	- dynamic
- good	- trustworthy	- active
- non-threatening	- honesty	- sharp
- completeness	- order	- agression
- gracefulness	- inflexible	- insightful
- playfulness	- security	- sneakiness
- comforting	- equality	- conflict
- unity	- masculinity	- tension
- protection	- solid	- sinister
- childlike	- symmetrical	- suspicious
- safe	- hard to push over	- pointiness
- cute	- real blockhead	- arrow, directs energy

Fig. 7. Meanings of basic shapes: the circle, square, and triangle. Created by Ana Rita Simões.

Certain shapes have taken on symbolic meaning over the centuries. Circular characters are seen as cute or nonthreatening. Squares (including rectangles) are solid and dependable. Triangles are active. This interpretation goes back to the Middle Ages, when most people in Europe were illiterate and were taught important lessons through colours and shapes used in religious art. (Beimen, 2017, p. 82)

Fig. 8. Characters and shapes. Sultan from *Aladdin* (Musker, 1992) constructed primarily with circular shapes, Luisa Madrigal from *Encanto* (Bush, 2021) constructed with squares, and Maleficent from *Sleeping Beauty* (Geronimi, 1959) designed with triangular shapes.

3.2. Styles of character Design

What is good character design? Beiman (2017) argues that it is the incessant work on simplification and communication. The author separates the design of characters into organic and inorganic design.

Organic designs - shapes that blend into another.

Inorganic design - rigid shapes stick into each other.

Defending that designs that have similar sized shapes can result in something boring and repetitive.

Isaac Kerlow (2009) separates styles of character design into three groups:

Cartoon characters – usually caricatures, portraited with exaggeration or simplification.

Stylized characters – have a cohesive treatment regarding shape, can have cartoon and realistic elements.

Realistic characters – good for developing virtual actors.

As shown in Fig. 9 Terry follows the description of a cartoon character. He was simplified in a way that he can be represented only with a line. Smee, on the other hand, is a more stylized character. We can understand he is a male character, a bit old and chubby, but he is a cartoon because some of his features are exaggerated and do not follow real human anatomy. Andy, on the other hand, is a more realistic character.

Fig. 9. Terry from *Soul* (Docter, 2020); Smee from *Peter Pan* (Luske, 1954); Andy Davis from *Toy Story 3* (Unkrich, 2010).

Beiman (2017), Webster (2005), Kerlow (2009) and Lyons (2020) agree that creating appealing characters is crucial.

> (…) "appeal" (…) is the power to attract and grip the viewer's attention while creating some kind of emotional response. Whether it inspires or creates sympathy, fear, anger, humour, revulsion, etc., a successful character design must be appealing. If not, your audience becomes bored into apathy, wondering why they should care about or be interested in your character. The artist must also create a desire to get to know the character. Who is this person? What is he or she or it all about? (Webster, 2005, p.38)

4. Types of characters

Various types of characters can be created ranging from humane, animals, to objects and others. Unconsciously some people search for humane characteristics in things that are lifeless and sometimes ideas emerge for creating new characters. "We humans are a self-centered race, we see and we make the world in our image. ourselves in everything, we assign identities and emotions where none exist." (McCloud, 1993, p.40)

4.1. Humans (baby, children, adult & elderly)

One of the things babies are most known for is their cuteness. Leeuwe (2019) says that proportions are important to draw babies in the right way. Babies normally have a big forehead, big eyes, and small nose and ears (Fig. 10). The author also adds that most of the baby's body has curves and is round, giving a baby a chubby look. Children normally are represented as cute characters, their limbs get longer and slimmer and their personalities start to develop. Fig. 11 depicts the concept art of a character growing from baby to child.

Fig. 10. Baby Tarzan from *Tarzan* (Lima, 1999).

Fig. 11. Concept art by Maria Yi, digital (Disney and Pixar, 2022, p. 11), for *Turning Red* (Shi, 2022).

The human body suffers physical changes when growing from a baby to an adult (Crossley, 2014). In Fig. 12 Bob Parr also known as Mr. Incredible, is represented. Some elements that help the audience perceive him as an adult are the small size of his head compared with the rest of his body, his anatomy, his receding hairlines and some lines on his face.

TONY FUCILE, 2000
pencil and marker, 6 x 9"

Fig. 12. Concept art of Bob Parr by Tony Fucile, 2000 pencil and marker (Vaz, 2004, p. 31), for the film *Incredibles* (Bird, 2004).

Elderly characters, like other age groups, have specific facial and anatomic elements that represent their age. Some of the body parts that grow are the nose and ears. Body postures change, it gets weaker. Some props like glasses, and a cane, can help in the representation of an older person (Leeuwe, 2019). In Fig. 13, Mrs Hasagawa mouth is represented as an elderly humane mouth when they have no teeth. The mouth starts to shrink and gets lines.

Fig. 13. Mrs Hasagawa from *Lilo & Stitch* (Sanders, 2002).

4.2. Animals

Various films in Disney and Pixar animated films have animal characters. "By anthropomorphizing animals in his cartoons, Disney helped sensitize the public to environmental issues; with *Bambi* alone he triggered a national debate on hunting" (Gabler, 2006, p.12).

Fig. 14 shows the concept art of two animal characters. Both have expressions on their faces that help the audience perceive what they are feeling. It is easy to understand what species are represented because the designs have some elements of the anatomy of those animals. They depict a porcupine pufferfish and a sloth.

Fig. 14. Concept art of Bloat (Vaz, 2003, p. 181) for *Finding Nemo* (Stanton, 2003), and Priscilla (Julius, 2016, p. 91) for *Zootopia* (Howard, 2016).

To make completely convincing designs, it is vital that the artist has a good understanding of anatomy. In order to exaggerate, diminish or omit chosen physical characteristics to make a really first-class cartoon design of an animal, it is first necessary to have a clear understanding of that animal in real life, to know its proportions and its structure, and the way in which it moves. (Webster, 2005, p.164)

To create animal characters, one can search for human traits, like facial expressions and body language, to humanise them, says Mattesi (2008). The author defends that, in this way, one can relate to the characters in a more emotional way.

4.3. Objects

Using references for drawing characters is crucial. The world can inspire in many ways. Just by looking around it is possible to find interesting looking objects. The shape they have can help us imagine a new character (Leeuwe, 2019).

In the Documentary *The Pixar Story* (Iwerks, 2007), John Lasseter explains how the Pixar team came up with the idea for an animated film that represented the company. In his mind he was picturing something quite simple and geometric. While he was at his desk, trying to gather ideas, he kept staring at a lamp that was like a classic Luxo lamp. He began to move the object like it had life. And suddenly the idea emerged. A Luxo lamp in its integrity with personality movement and physics (Fig.15).

Fig. 15. *Luxo Jr.* (Lasseter, 1986).

With animation, it is possible to bring inanimate objects to life. They have been represented in ways to illustrate different types of human personalities (Beiman, 2017). One film where inanimate objects are alive is *Beauty and the Beast* (Trousdale, 1992). What adds even more interest to these characters is that each of them is a real human being (Fig. 17), they were just transformed into objects because of a spell (Fig.16).

Mrs. Potts is the head housekeeper of the castle. She was transformed into a teapot. She loves tea, serving others, tidiness and she has a son called Chip.

Chip Potts is the son of Mrs. Potts. He was transformed into a teacup. He likes visitors, having fun and books.

Cogsworth is the Beast's major-domo. He was enchanted into a pendulum clock. He is the voice of reason, making sure every castle servant is working correctly and that all is organized and done on time. He loves punctuality.

Lumière was transformed into a candelabrum. He is the butler of the castle. He is a true gentleman, very romantic, charismatic but rebellious. His girlfriend is Fifi a maid that was turned into a feather duster.

These four characters have very distinctive personalities. They maintain some elements from the object form to the humane form. That helps the audience identify them. The colour pallet is basically the same with minor differences. Little details are kept or changed in subtle ways.

Fig. 16. Characters transformed into objects: Mrs. Potts, Cogsworth, Lumière and Chip (from left to right), *Beauty and the Beast* (Trousdale, 1991).

Fig. 17. Characters in humane form: Cogsworth, Mrs. Potts, Chip and Lumière (from left to right), *Beauty and the Beast* (Trousdale, 1991).

An example of a character that does not have any facial features is the Magic Carpet from *Alladin* (Clements, 1992). He is a sentient Persian carpet that appears in the film when Aladdin is exploring the cave of wonders. What is interesting about this character is that just by the way it moves we can understand what he is felling.

The tassels of the carpet function as hands and foot. The tassels change in a way that emphasise the emotions and actions of the rug, such as: excitement, powerfulness, being sneaky, shame, doubt and being naughty (as seen in Fig. 18, from left to right).

Fig. 18. Magic Carpet, *Alladin* (Clements, 1992).

5. Aesthetic Analysis

5.1. Colour Symbology

In the book *The psychology of colours* by Eve Heller (2008) the author inquires two thousand people about their favourite colours, the colours they less liked, the effect colours have on them, and the colour they relate with each feeling. Those feelings ranged from love and hate, optimism, and sadness, modern to old-fashioned, etc. The results of that research show that colours and feelings are not fused by chance or related to individual taste. Instead, they are intrinsic with common life experiences that have been rooted in us since childhood.

Colour is perceived from the context it is used upon. The colour of a garment will be evaluated differently from the colour of food or a building. In that sense, the context is the criteria that will reveal if colour was used in a right or wrong way (Heller, 2008) (Bloomer, 1976).

Many authors like Bui (2022), Leewe (2019), Solarski (2012), Bleicher (2012), Lupton (2015), Blommer (1976), and Gage (1933) agree that the experience of colour can vary from culture, religion and societies. The same colour can have different connotations.

> While some colours appear to affect people in general physiological ways, other human responses to colour are arbitrary, personal, or socially influenced. Cultural tradition determines the symbolic meanings of colours. (Blommer, 1976, p.119)

Symbolism and meanings are associated with colour (Bui, 2022). Fig. 19 is a table about colour symbolisms, cultural meanings and associations, with the theory of the authors: Mattesi (2008, p.116), Leeuwe (2019, p.43), Edwards (2004, p.192, 207), Adams (2017, p.51-227), Clair (2017, p.37-238), and Bleicher (2012, p.59, 208).

Colour:	Symbolism:		Cultural meanings & associations:	
red	- love - passion - strong emotions - hatred - blood - life - lust - death - hot - fire - active - energy - radical	- extreme - dynamism - power - courage - virtility - stimulation - sexual excitement - lust - danger - anger - aggresion - violence - evil	- Is the color of war: Roman soldiers carried red battle flags, and many nations clothed their soldiers in red tunics; - Christian church's Passion ceremony of the death of Jesus, and Christian priests often wear red chasubles to symbolize the shed of blood of martyred saints; - Brides in China wear red, and in India brides wear read saris; - Is used in China as a burial colour, and other cultures; - In Asia red is the color of joy and good luck;	- The devil is traditionally depicted in red;
yellow	- excitement - happiness - positivity - optimism - cheerful - light - sunny - sunlight - gold - value - creativity - intellect	- enlightment - envy - disgrace - ilness - deceit - betrayal - cowardice	- In Islam, golden yellow is the colour of wisdom; - During Chinese Ch'ing dynasty (1644-1912), only the emperor was allowed to wear yellow; - In Christian tradition Judas wore a yellow cloak when he betrayed Jesus with a kiss; - A yellow patch was used to label Jews during the Middle Ages, and European Jews were forced to wear yellow "Stars of David" by the Nazis; - In Japan yellow represents courage;	- In India it is symbolic of peace and knowledge, and is particularly associated with Krishna, who is generally depicted wearing a vivid yellow robe; - In the West, for example, blonde hair, has long been held up as the ideal. Economists have shown that pale-haired prostitutes can demand a premium, and there are far more blondes in advertisements than is representative of their distribution among the population at large;
blue	- friendly - comfort - contentment - flfilment - loyalty - honesty - royal - order - authority - success - pure - health - cool	- calm - serene - reverie - sadness - melancholy - void - vast distances	- In Christianity the Madonna is usually clothed in blue, symbolizing fidelity; - Blueness is visible nearly everywhere because the both the sky and water are blue; - From the Medicine Buddha on, the hue has underlying associations with health and devotion. This may be one reason why early medicine bottles were cobalt blue; - A labourer is called a blue-collar worker, In the early 20th century, they usually wore clothing which was sturdy,	cheap and didn't show dirt easily. Their uniform was made of blue fabric like denim; - Aristocracy is referred to as blue-blooded; - Blue is the color of holiness in Judaism; - In Hinduism, blue represents the god Krishna; - In Western culture blue is masculine;

Fig. 19. Colour table with symbolisms, cultural meanings and associations from Mattesi (2008, p.116), Leeuwe (2019, p.43), Edwards (2004, p.192, 207), Adams (2017, p.51-227), Clair (2017, p.37-238), and Bleicher (2012, p.59, 208). Created by Ana Rita Simões.

orange		
	- warm - heat - fire - energy - youth - positive - happine - frivoly - danger	- In Eastern philosophy, orange represents the creative centre as the second chakra, located below the navel; - Protestant Orangemen of Northen Ireland are passionate about orange; - Buddhist monks are highly visible in their saffron orange robes; - The color of Guantánamo Bay jumpsuits; - In the United States and Canada, orange, combined with black, represents Halloween; - Used to create a sense of immediacy	and spontaneity. Fast-food restaurants use orange in the interior to energize the customer and hasten their departure;
purple	- royal - status - aristocracy - dignity - power - bravery - spirituality - depp feelings	- In the Roman age only the emperor could wear purple; - In early cultures, purple dye was extremely difficult and expensive to produce, therefore "royal purple" quickly came to symbolize the ruling class, purple clothing was forbidden to those of lower rank; - To be born into the purple was to be born into royalty, after the Byzantine custom of bedecking the royal birthing chambers with porphyry and Tyrian cloth so that it would be the first thing the new	princelings saw; - In certain Native American tribal populations, purple represents wisdom; - In Thailand purple is worn by widows when mourning their husband's death; - In Western culture, purple represents wealth and luxury; - Usage by Eastern religions and Catholicism;
green	- nature - gross - fertility - illness - regeneration - poison - environment - evil - rich - harmony - balance - youth - money - capriciousness - envy - decay - jealousy	- The association with poison, at least, had some merit after the development and explosive popularity of the new copper arsenite pigments in the nineteenth century. Scheele's green and other types of green, were responsible for many deaths, as unsuspecting consumers papered their homes, clothed their offspring, and wrapped their baked goods in an exciting new shade that contained lethal doses of arsenic; - In the Muslim world, green signifies the Prophet Muhammad and therefore represents the entire religion;	- In England the color "Lincoln Green" has a heroic connotation it's connected with the folk figure Robin Hood; - In Western culture, green is considered lucky, as in "Luck of the Irish"; - Eastern cultures use green to convey fertility and regeneration; - Symbolizes illness someone "turn green"; - Color of money; - Today green tends to conjure up comforting images of countryside and environmenally friendly politics;

Fig. 19. (continuation) Colour table with symbolisms, cultural meanings and associations from Mattesi (2008, p.116), Leeuwe (2019, p.43), Edwards (2004, p.192, 207), Adams (2017, p.51-227), Clair (2017, p.37-238), and Bleicher (2012, p.59, 208). Created by Ana Rita Simões.

brown	- solid - wholesome - stable - dreary - misery - gloominess	- Brownies in folk literature were small brown elves who helped with housework; - The early Nazi party used brown uniforms, referred to as "brown-shirts"; - In India, brown is the color of mourning as it relates to dying leaves; - In the United States, brown and orange are the colors of Thanksgiving; - Most cultures connect brown with the earth;
pink	- light moods	- Word pinko was a derogatory term for left-leaning political views, and politicians even today avoid wearing pink ties; - In Western culture pink is feminine;
grey	- mature - neutral - emotionless - dull - indecision - uncertainty - gloom - depression - abdication of self	- Franciscan friars wore grey as a symbol of their vow of poverty; - The colour of the Confederate Army during the American Civil War was grey; - The term "grey area" is used as a way to describe issues that have no clear moral value: - Associated with aging; - For some animals is the colour of camouflage (grey wolves, grey whales, grey elephants);
white	- innocence - virginity - holy - purity - cleanliness - heroism - exclusive - autocratic - neurotic	- White has long been intricately connected with money and power. Fabrics, including wool and cotton, had to be heavily processed in order to appear white. Only the very wealthy, supported by battalions of staff, could afford to keep the fresh lace and linen cuffs, ruffs and cravats worn in the sixteenth, seventeenth, and eighteenth centuries pristine; - White in Western cultures is used for bride's gown or a baby's baptism dress; - Represents death and mourning in China, Japan, India, and many African nations; -White flag of truces sinals an honorable intend to surrender peaceably; - White mask in Chinese drama signifies a frightful person; - A white carnation symbolizes death in Japan, while a white rose is associate with marriage and new beginnings in Western culture; - Professionals are called white- collar workers;
black	- confidence - evil - sophisticated - hell - formal - damnation - sleek - fear - anarchy - drama - cool - empty - unknowing - mystery - protest - rebel - mourning - death	- Ancient Egyptians viewed black as a positive color. It was the color of Anubis, the god of the underworld who protected the dead from evil; - It reminded the ancient Egyptians of the rich silt that the Nile deposited after the floods each year, making the land fertile; - The Romans first used black as the color of mourning; - In old western films the black and white hat were the symbolic headgear for the "bad guys" and the "good guys"; - Hindu traditions use black as the color of Kali, the goddess of time and change. -In contemporary society black represents death, the night.- In our own time, the African-American "Black is beautiful" campaign urges a return to a more positive orientation toward black; - the color of clergy, color worn by widows and graduating students

Fig. 19. (continuation) Colour table with symbolisms, cultural meanings and associations from Mattesi (2008, p.116), Leeuwe (2019, p.43), Edwards (2004, p.192, 207), Adams (2017, p.51-227), Clair (2017, p.37-238), and Bleicher (2012, p.59, 208). Created by Ana Rita Simões.

Fig. 19 was created to gather knowledge about the symbolisms of each colour, meanings and associations intrinsic to them. It is possible to understand how different cultures feel about each colour and how the use of the same colour can be culturally connected to a specific ritual (Blommer, 1976).

There are various professions like colour therapists, graphic designers, interior architects, and others, that use colour as a fundamental tool. These professionals should comprehend the various ways in which colour can affect people (Heller, 2014).

Mattesi (2008) argues that one interesting example of the usage of colour for character design is the colour choice for the cape of Worthington Faulfellow the fox from *Pinocchio* (Sharpsteen, 1940). He is a character that acts in a friendly way but actually he is evil. His cape is blue (friendly) on the outside and red (evil) on the inside, as Fig. 20 shows.

Fig. 20. Worthington Faulfellow, *Pinocchio* (Sharpsteen, 1940).

Colours have been used masterfully in the representation of the hero and the villain. Fig. 21 shows the different choices of colours for Aladdin (the hero) and Jafar (the villain). Audiences can easily distinguish one from the other, and from secondary characters, just by noticing the colour palette of each character. Normally colour is the element that makes the first impression, before the imagery (Bui, 2022).

Fig. 21. Colours used for the costume of Aladdin (the hero) and Jafar (the villain) of *Aladdin* (Musker, 1992).

Beiman (2017) argues that the colour palettes of characters and backgrounds should be created at the same time, in order to understand if the characters will read well on top of the film backgrounds.

Furniss (2008) explains that colour is perceived before form giving an initial impression in a composition. Colour is a unique component in designs. It stimulates the eye and the brain, can change one's temperature perception, pulse rate, blood pressure and breathing speed. It has the capacity to create a fast response with the viewer (Bleicher, 2012) and the ability to call attention or move attention away (Kratter, 2017).

> One of the most important tools we have as filmmakers is color. Color doesn't just make things beautiful; it makes things emotional. Color helps bring viewers into the moment with our characters, helps them feel what the characters are feeling. (John Lasseter quoted by Kratter, 2017, p.5)

Above Fig. 22 shows a scene in *Finding Nemo* (Stanton, 2003) where the characters Dori and Marlin get fascinated with the strong illuminated rod hanging from the head of an anglerfish, That ability is called bioluminescence, and is a common characteristic from deep-sea creatures (The Disney Wiki, *Anglerfish)*.

Finding Nemo, 2003

Fix. 22. Dori, Marlin and an anglerfish (Kratter, 2017, p. 45) from *Finding Nemo* (Stanton, 2003).

Bleicher (2012) compares colour with music since both have rhythm, harmony, and can amplify feelings. Colour can originate emotions in a scene as fast as a musical score (Landis, 2012).

Beiman (2017) recommends that various colour palettes should be experimented with to understand what best suits the personality of the character. Fig 23 shows that tests for Aurora from *Sleeping Beauty* (Geronimi, 1959).

Fig. 23. Colour tests for Aurora from *Sleeping Beauty* (Geronimi, 1959) show the different colour combinations that were experimented with, to decide which would be most effective against scenic backgrounds (Thomas, 1968, p. 56).

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"(…) Mirabel's side of the family wears cool tones of blues, purples, and greens, while Pepa's side wears warm tones of orange, yellow, and red inspired by Félix's joyful Caribbean heritage. Abuela sits in the middle, dressed in darker shades of purple, brown, and black. The townspeople, on the other hand, wear neutral colors so. The core family stands out with their vibrant hues." (Jones, 2022, p. 29)

While developing the characters for the film *Encanto* (Bush, 2020), the team found a creative way to represent family ties and personalities through colour (Fig. 24 and Fig. 25). Production Designers Ian Gooding and Lorelay Bové explained that they gave distinctive colour pallets for each family branch, giving clues to the audience about the kinship of the family (Jones, 2022).

Fig. 24. Colour pallet used for each member of the Encanto family by Lorelay Bové, digital (Jones, 2022, p.28, 29), made for the film *Encanto* (Bush, 2021).

Fig. 25. Family tree of the Madrigals, concept art by Neysa Bové, digital (Jones, 2022, p.180), made for the film *Encanto* (Bush, 2021).

5.2. Costume Design

Costume design is a key element in the process of character design. What characters dress and what they use are key in telling their stories (Johnson, 2019). Clothes are part of what people want to convey to society. It is like a second skin, a skin they choose. Outfits can be expensive or cheap, practical or formal, colourful or colourless, plain or with a lot of patterns, cold or warm or even a big mix of everything. A specific status or job asks for a particular way of dressing. Take, as an example, a princess, a politician and a firefighter. What type of clothes' designs, fabrics, patterns, and textures will they wear? In the case of the firefighter, the clothes have various layers that give protection from heat, external chemicals, and cuts and provide better insulation (Knop). The helmet, gloves and boots are also crucial for protection.

In Fig. 26 the three characters personate firefighters. They don't have all the layers, pieces of garment and accessories that a firefighter is supposed to have but we can still read them as firefighters. Key elements are the firefighter hat that the three characters wear, and the suspenders that Goofy uses. The rest of the clothes are part of the characters and weren't created for this short film. Representation of key elements is enough to create a connection to the profession. Costume communicates just as much to the audience as the face and pose. (Anderson, 2019).
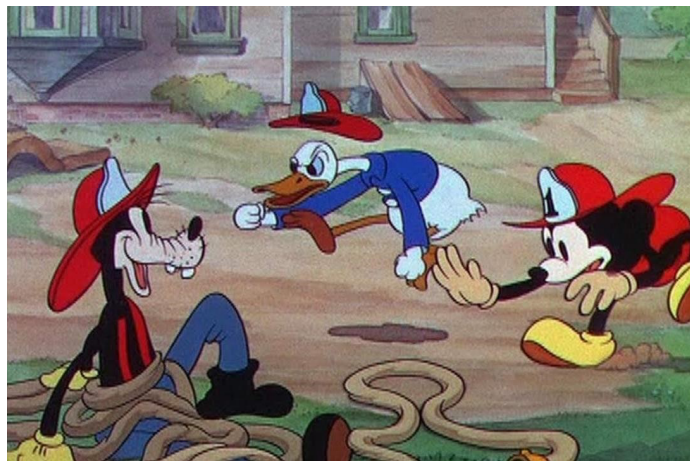
Fig. 26. Goofy, Donald Duck, and Mickey Mouse as firefighters in *Mickey's Fire Brigade* (Sharpsteen, 1935).

> How we dress our characters and what we give them to use and for interacting with others are essential in telling their stories. Without costumes and props, we have nothing but a cast of mannequins standing around all day doing nothing in an empty void. Costume can be more than fancy dress, superhero tights, suits, armor, or period attire. A grandmother's apron can be part of her costume. (Johnson, 2019, p.262)

What would most of the characters from animated films look like without clothes? They would have a lack of elements that help us understand what they meant to portray. Costume design also shows five different aspects that can help in the representation of context and story, such as:

- ▪ "Connects to plot and theme
- ▪ Establishes the structure of society
- ▪ Contextualizes time and place
- ▪ Indicates personality
- ▪ Reveals a passage of time (Bui, at al., 2022, p. 8)

Disney and Pixar animated films show their characters professions through their outfits and colours as represented in Fig 27.

Fig. 27. Professions of characters in Disney and Pixar films (from left to right): Ringmaster, *Dumbo* (Sharpsteen, 1941); Philip Sherman, Finding *Nemo* (Stanton, 2003); Friar Tuck, *Robin Hood* (Reitherman, 1973); Chef Skinner, *Ratatouille* (Bird, 2007); Nana, *One Hundred and One Dalmatians* (Reitherman, 1961); John Silver, *Treasure Planet* (Musker, 2002).

The analysis that is presented below was made to understand how some specific pieces of clothes, accessories, and props can automatically place a character in their profession or occupation. Portmann (1972) refers that the colour of the garment can also represent a person's social status, profession, and physical or moral status. Clothes permit differentiating people. They have a social language, a way of communication.

In *Dumbo* (Sharpsteen, 1941), the ringmaster wears a typical red jacket with tails, a bow tie, and gloves. He is holding his hat and whip. Those elements place him immediately in the world of the circus.

In *Finding Nemo* (Stanton, 2003) Philip Sherman wears a mint green V-neck t-shirt, disposable gloves, and he is seen using a tooth extraction tool. He is a dentist.

In the film *Robin Hood* (Reitherman, 1973), Friar Tuck is the friar of the Church of England. He wears a brown monk's robe with a hood and a rope functioning as a belt on his waist. On his foot he uses black sandals.

Chef Skinner is the antagonist of the film *Ratatouille* (Bird, 2007). He is the head chef of the restaurant *Gusteau*. He wears a double-breasted white jacket that ends just above his knees. His sleeves are rolled up. He wears a white waist apron and a white neckerchief. The purpose of this last piece is to help the cook stay cool in warm kitchens. The fabric absorbs sweat and prevents it from falling into the dishes. Skinner's trousers have a checker black and white pattern. He wears dark socks and dark brown slogs. On his head, he uses a tall white toque. "Traditionally, the height of the chef's hat was meant to signify station and rank in the kitchen. The executive chef wore the tallest hat in the kitchen, and the hats got a bit shorter as you go down the line (…)" (Auguste Escoffier School of Culinary Arts, 2021)

Nana is the housekeeper of the family that owns the dalmatians in the film *One Hundred and One Dalmatians* (Reitherman, 1961). She is seen wearing a long black dress with a white club collar and cuffs. Above her dress, she uses a white apron with a big bow on the back, almost a simplified version of a Victorian apron. Under her neck, she uses a red and orange brooch. On the top of her head she uses a type of white maid cap. Nana wears light grey tights and black boots.

In *Treasure Planet* (Musker, 2002), John Silver is the main antagonist. He plays the role of pirate captain and chef. John is a cyborg, half-human half mechanical. His cyborg elements are his eye, ear, arm, and leg. He wears a V-neck beige shirt with a tab collar and straps. He uses a long black jacket, a brown belt with a gold buckle, light red shorts, light brown socks, brown shoes with a gold buckle, a red scarf, and a three-pointed hat.

Bruno is a character that was created for the film *Encanto* (Bush, 2021). He wears a poncho. The choice of colour for the garment had a specific reason. Lorelay Bove, *Encanto* (Bush, 2021) film's associate production designer, explained the choice of the emerald green for Bruno's costume:

> We picked emerald green for Bruno because in Colombia, they have mines of emeralds, and there's this idea that emerald, in many cultures, is sort of like an amulet. Some civilizations in the past have used it to predict the future. (Nechamkin, 2022).

Neysa Bove, costume design lead of the film, also adds that this character looks weird because he was locked away inside the house for a long time (Fig. 28). The only friends he had were rats, and they chewed up holes in his poncho (Nechamkin, 2022).

Fig. 28. Poncho design for Bruno, concept art by Meg Park, digital (Jones, 2022, p.139), made for the film *Encanto* (Bush, 2021).

> To draw clothes is good to have in mind that pieces of garment are something loose that hang on a body and are pulled down by gravity. Clothes shape our body and follow our movements. Each movement can result in a change of the wrinkles of the fabric, it can be stretched, pulled, pushed or squashed. (Leeuwe, 2019, p.40)

In Fig. 29 we can see how the pattern of stripes from Evelyn's shirt follows her body proportions and posture. It was done in a way that represents how a shirt would fit and wrinkle in real life.

Also, in Fig. 28 we can understand how the fabric of Bruno's poncho is pulled down by gravity.

Fig. 29. Evelyn Deavor, *Incredibles 2* (Bird, 2018).

Bob is a character from *Incredibles 2* (Bird, 2018), and is the dad of three children. He started taking care of them all day long. That was the job his wife used to have, but since she started working, they changed positions. On the first morning that Bob takes care of the children, he gives them breakfast and cleans the dishes. He wears a light blue polo, that is well ironed with no wrinkles at all, for the start of a new day. Later, he needs to help with homework, deal with teenage problems, and do more household chores. In the scene where he tries to read a book to Jack-Jack, his baby son, Bob's blue shirt is all wrinkled. The condition of his garment can represent he was busy all day and helps to show it was not a calm day. In another scene, Bob appears completely exhausted. He tries to do everything for his children, but he forgets to take care of himself. Bob is so distracted that he falls into a part of his house that has water and gets all wet. He does not shave as he normally does and his hair is messy. His shirt appears wet and wrinkled. The three scenes in Fig. 30 are an example of how the wrinkles of the fabric and the condition of a piece of garment can help to tell a story (Bui, 2022).

Fig. 30. Condition of Bob Parr garments from *Incredibles 2* (Bird, 2018).

Materials rarely exist in a vacuum and are usually affected by one or multiple status effects during the course of the narrative. A commonly neglected pass, the condition of materials adds a level of immersion into the world and plot that would otherwise halt your audience's suspension of disbelief. Status FX can be permanent, resulting in an evolution of the character, or temporary, fading with time or until washed or repaired/replaced. (Bui, 2022, p. 129)

Bui (et al., 2022) also add that the condition of materials can have behavioural aspects - wrinkles, food stains, patches, customization, etc.; conflict – when there are tears, blood, fraying, etc; environmental – when there's dust, mud, rain, insects (moths), charring, etc; time – when the colours fasteness, rusting, etc.

In Bob's case, his garments are an example of behavioural clothes because they have wrinkles, and environmental because they were wet.

Materials and patterns:

Portman (1972) refers that "(…) colours and materials acquire a certain effectiveness in the mind of the wearer, owing to the protection they offer against dangers and diseases" (p.63) In Fig. 31 King Fergus wears a half sleeve habergeon made of chain mail underneath the rest of the layers of his garments. This fabric protects the body from possible injuries when battling (Cambridge Dictionary, *Chain mail).*

Fig. 31. King Fergus, Lord Dingwall, Lord Macintosh and Lord MacGuffin, *Brave* (Andrews, 2012).

The film *Brave* (Andrews, 2012) takes place in Medieval Scotland. Merida, the main character, is supposed to be betrothed to the son of one of the father's allies. The three lords and their sons come to visit the kingdom. King Fergus and the three lords have something in common: they all wear garments with a tartan Scottish pattern as Fig. 32 shows.

Tartan has an ancient history. The earliest known tartan in Scotland can be dated to the third or fourth century AD. (…) Though clan tartans are the most well-known, tartans can represent many different things. Some tartans represent families, towns, district, corporations, individuals, events (…) it is a fact that tartans today have meaning, and when you wear a tartan you are identifying yourself with what that tartan represents (…). (The Scottish Tartans Museum and Heritage Center)

Fig. 32. Detail of tartan Scottish pattern of King Fergus, Lord Dingwall, Lord Macintosh and Lord MacGuffin, *Brave* (Andrews, 2012).

This pattern has a strong cultural meaning. Each clan has different colour combinations, emphasising how they are all different from each other. Still, they are from the same country, so there is a familiarity and affection with the pattern.

It is possible to register new tartans. In fact, Disney and Pixar registered the *DunBroch Tartan*, which they designed. It has subtle and rich colours that reflect the rough and natural landscapes of Scotland. It represents the tartan that the Royal family in *Brave* wore (Fig. 33).

Much like Scotland itself, the *DunBroch* Tartan is set against the ocean blue of the North Sea. The deep scarlet represents the family's reverence for its own history, and the blood shed during battles between the clans. Deep green shows a love for Scotland's majestic highlands, where the story of Disney Pixar's 'Brave' unfolds. Navy blue, and its clear central intersections, represents the forging of the clans within the *DunBroch* kingdom. And finally, the subtle grey imbues a sense of respect for the inner soul of the strong Scottish people. (The Scottish Register of Tartans)

Fig. 33. *DunBroch Tartan* (The Scottish Register of Tartans).

The *DunBroch Tartan* has many meanings. It translates the culture and story into a pattern. Disney and Pixar designed various patterns for characters in films. Bui (et al., 2022) says that the usage of pattern in a costume is a good way to add visual interest. The pattern can go from a more subtle weave or a big bold pattern like paisleys. It can help to emphasise something about a character quickly.

Bonnie is a character that was created for *Toy Story 3* (Unkrich, 2010). She is a shy little girl when confronted with new situations and people. One of her traits is creativity. She can do a lot with little. Solomon (2010) referred that the artists didn't want to make her a stereotypically pink girl. The author added that "Bonnie has to be instantly likeable – engaging and funny without seeming overly cute or saccharine. The audience has to believe she would be a worthy playmate for Woody, Buzz, Rex, and the other new friends she eventually receives" (p.139). Landis (2003) states, "Before an actor speaks, his wardrobe has already spoken for him" (p. 9). And Bonnie is an example of so, as Fig. 34 shows.

Fig. 34. Bonnie, *Toy Story 3* (Unkrich, 2010).

Just by noticing Bonnie's outfits and their colours, we can depict her as a little girl with lots of creativity and freedom to express herself. She wears different colour socks, which might suggest that she chooses her own outfits. She uses a bandage on her knee, colourful wooden beads necklace and bracelet, and a butterfly hairpin on her hair. Every time she plays in her house she adds a new garment to her outfit. In one scene a purple cape with yellow stars, and in another a pink ballerina tutu. The choice of the yellow goloshes boots to play in the garden can be a representation of how she chooses and is allowed to play freely.

6. Sheets

Webster (2005) says that once the process of character design is completed and approved an animation bible is created. It's a document that gathers various model sheets. This bible grants that every person working on the film as the information about the intended design of each character. Some of those sheets are construction sheet, action sheet height relation chart, colour model guides, and others that are presented bellow. Those model sheets function as templates and guidelines throughout all the development of the film (Kerlow, 2009).

6.1. Construction Sheet

Beiman (2017) explains that construction sheets are created when the basic design of the character is approved. This sheet shows how the character was constructed with primary shapes and how they are used to standardize its proportions.
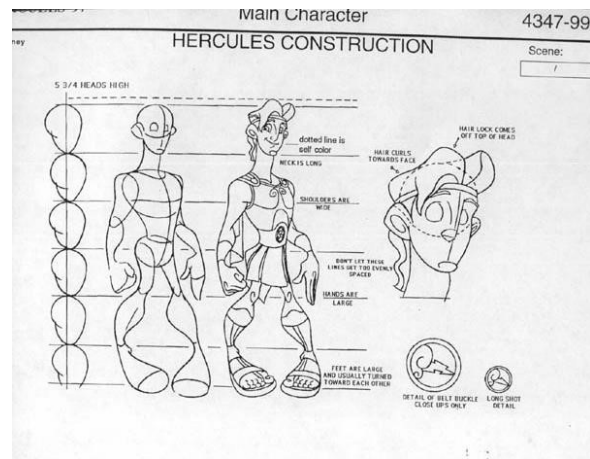
Fig. 35. Hercules construction sheet (Walt Disney Studios Motion Pictures) for *Hercules* (Musker, 1997).

Fig. 36 is a visual representation with notes of how the construction of Hercules head was created. Adding notes can be helpful in explaining or reinforcing information.
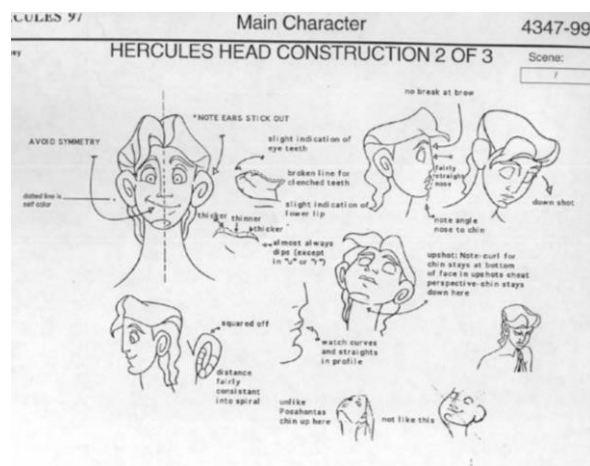
Fig. 36. Hercules head construction sheet (Walt Disney Studios Motion Pictures) for *Hercules* (Musker, 1997).

6.2. Turnaround Sheet

The turnaround sheet depicts the character from different sides, giving information about structure, form, details and costume. The character should be represented in a simple pose from the front, rear and side views like Fig. 37. That helps to visualise the character design in 360 degrees. If the character appears with different outfits, a turnaround sheet should be created for each of them (Webster, 2005).
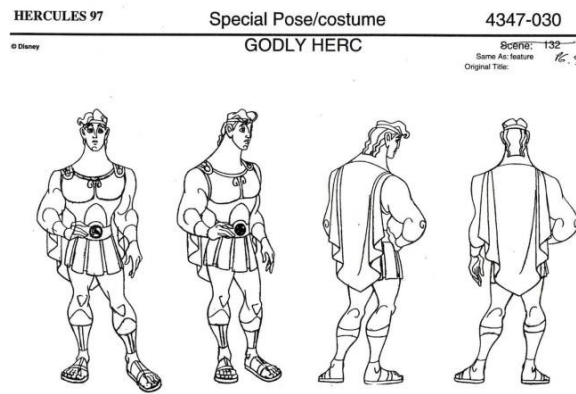
Fig. 37. Turnaround sheet of Hercules (Walt Disney Studios Motion Pictures) for *Hercules* (Musker, 1997).

6.3. Expression Sheet

Mattesi (2008) emphasizes that a fast way to read a character is through facial expression. The author also refers that people read expressions very easily. Even the smallest change in the face, like the corner of the mouth, can indicate a completely different emotion.

> The actor must understand the complexity of emotional experience in attempting to convey an emotion in performance. (…) When the actor is feeling his way into the emotional experience of a character, he needs to be sure that his expression of that emotion is commonly understood. (Ekman, 2003, p.18)

Hades is the villain of the film. Fig. 38 shows Hades' different expressions: his evil look, vicious smile, being surprised, talking, etc. We can see his skull and various side views of his head and neck, for a better understanding of his face anatomy.
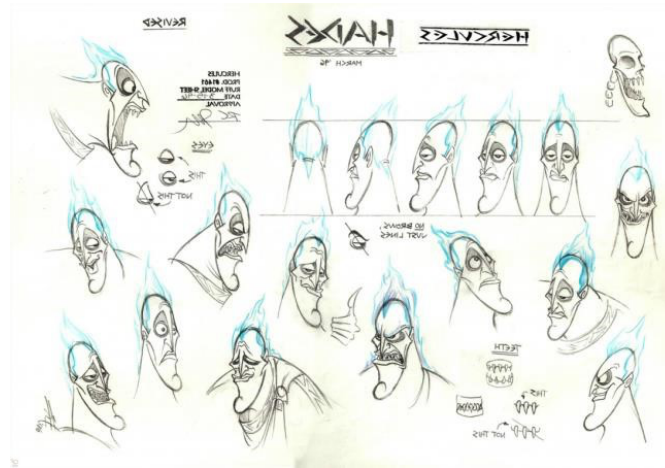
Fig. 38. Expression sheet of Hades (Walt Disney Studios Motion Pictures) for *Hercules* (Musker, 1997).

6.4. Pose Sheet

Young Hercules is depicted in Fig. 39 running and standing. His body makes ample movements while running, representing his explosive power and strong will to get something. His eyes are squinted, showing anger, and his teeth are clenched, reinforcing the same feeling. In the image on the right, young Hercules is standing with his legs wide open and his arms on his waist. He has a posture of a confident person, but his face shows a bit of confusion and maybe doubt. His poses are a representation of his personality.
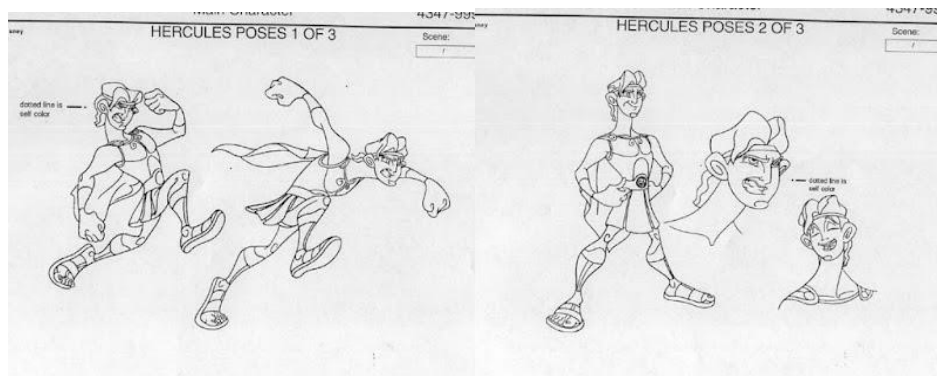
Fig. 39. Pose sheet of young Hercules (Walt Disney Studios Motion Pictures) for *Hercules* (Musker, 1997).

6.5. Action Sheet

Webster (2005) explains that action sheets are developed in order to give an understanding of the typical and extreme actions a character can undertake. Those actions facilitate the understanding of how the character intends to move, but they also give clues about personality, with different representations of body language and facial expressions. Johnson (2019) says that body language has its own expressive and extensive language. It can convey different emotions and attitudes.

In Fig. 40 Phil is represented as an enthusiastic and grumpy character. A wide range of actions, movements and expressions are depicted: arms up, crossed arms, his body shrinking because he has someone touching his head, jumping, being wet and frustrated, laughing, being enraged, running, sitting and whistling, yawning and stretching, being enthusiastic, and being bored.

> Richard Phelan advises to think about stance, posture and angle when doing character design. 'Don't use boring poses; think about how the character sees themselves and is seen by others. Think about the way that Buzz Lightyear looks, hands on hips, looking skywards, seen slightly from below. His selfconfidence and aspirations are clear just from his stance'. (Wells & Moore, 2016, p. 67)
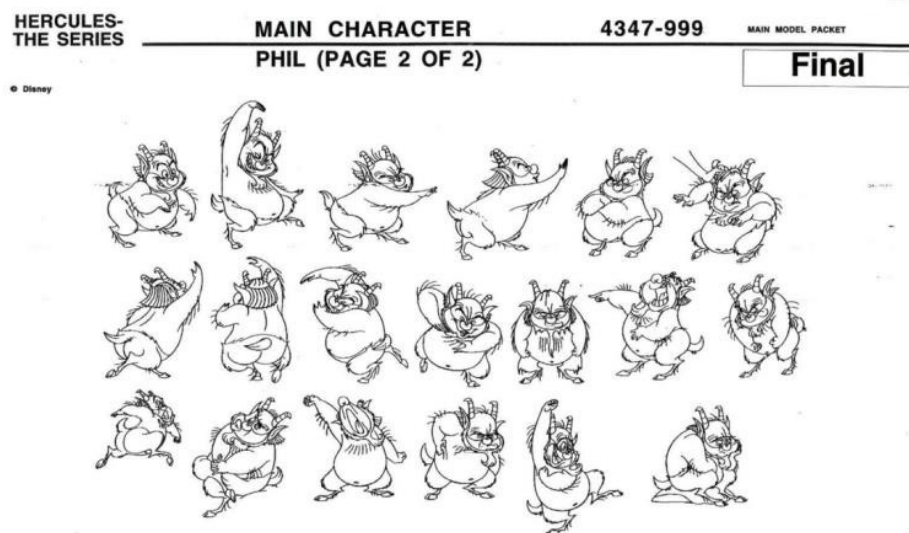
Fig. 40. Action sheet of Phil (Walt Disney Studios Motion Pictures) for *Hercules* (Musker, 1997).

6.6. Colour Models

Colour model sheets gather all the information regarding the colours of the character. All the colours that are used should be depicted, ranging from skin, body parts, clothes, accessories, props, outline colour if used, etc as seen in Fig. 41. Webster (2005) says that a colour model sheet should be done for each outfit the character wears and different environment, explaining that different settings will make the character colours look different even though he/she can be dressed in the same way. The author gives distinct examples: a brightly lit room, an exterior moonlit scene or the light emanating from a campfire.

"They are also useful when designing sets and backgrounds, so that incompatible colour schemes are avoided." (Webster, 2005, p.168)
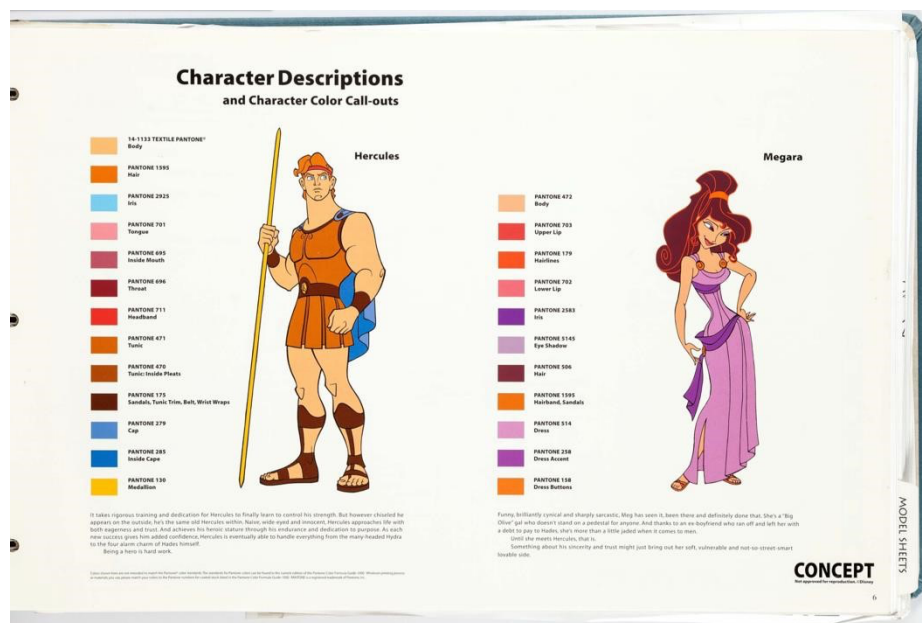
Imaged by Heritage Auctions, HA.com

Fig. 41. Character Description and character colour call-out of Hercules and Megara (Heritage Auctions) for *Hercules* (Musker, 1997).

In Fig. 42 lines point to the area where each colour should be used. There is also a description. On the bottom left there are indications of colours that might be hard to point to, such as the iris, the inside of her mouth, tongue, gums, and teeth. The author of the figure also shows that the colour of the hair should change to another colour whenever it is against a dark background.

Fig. 42. Colours used for Thalia (Disney) for *Hercules* (Musker, 1997).

6.7. Lineup Sheet

It is common to see characters with distinct silhouettes. Some are very big and others are tiny. Some are fat and others are thin. Beiman (2017) argues that it is usual to have characters of different sizes. This makes them easily recognisable, whereas if they all looked similar, it would be harder to distinguish them.

Webster (2005) defends that having a height relation chart can be favourable when various characters appear in a film sequence. This chart helps to understand the height of the characters, making sure they do not change sizes throughout the film.

A height relation chart is also known as a size comparison chart or lineup. They all stand for the same purpose: to gather the cast of the film in the same sheet and to compare their sizes and heights - lines in the background help to measure the characters. In Fig. 43 we can understand the personality of the characters just by noticing their posture and expressions. Overall, they all seem friendly except Ursula, that has a vicious smile on her face, she is the villain of the film.

Fig. 43. Size comparison chart for Triton, Sebastian, Scuttle, Flounder, Max, Ursula, Ariel and Prince Eric (Disney Enterprises) for *The Little Mermaid* (Musker, 1989).

6.8. Silhouette

Silhouettes are a key element of character design. Beiman (2017) defends that "characters that work together should have readable silhouettes that help convey the acting and the story point" (p.139). A clear silhouette permits the character to read well. Some famous characters can be recognised just by their silhouette (Leeuwe, 2019), Fig. 44 is an example of so. In Disney when characters are represented holding object they hold them outside the shape of their bodies in order to better represent the object (Mattesi, 2008).
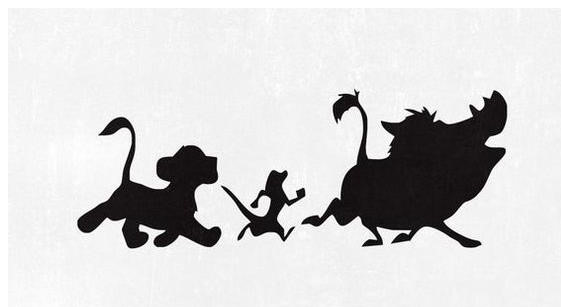
Fig. 44. Silhouettes of Simba, Timon and Pumbaa for *The Lion King* (Allers, 1997).

6.9. Sculpture

In the Art of Up (Hauser, 2009, p. 56), the sculpture Greg Dykstra enlightens the importance of sculpting characters saying that "A picture is worth a thousand words is very true, but I think in our business you could go with 'A sculpture is worth a thousand pictures'". Fig. 45 shows the different clay sculptures made for *Inside Out* (Docter, 2015).

It's in the sculpting process that a character design really comes to fruition. Drawings are fast and graphic, which makes them perfect for exploring multiple concepts quickly, but linear representation is inherently illusionistic – you don't really know if a design works until you realize it in three dimensions. (Jason Dreamer quoted by Disney and Pixar, *The Art of Turning Red*, 2022, p.15)

Fig. 45. Clay sculptures (Docter, 2015, p. 81) created for *Inside Out* (Docter, 2015).

Chapter 4 - Elderly characters through Disney and Pixar animated films

1. What is being old?

> "White hairs or wrinkles cannot usurp authority; but an early life well spent reaps authority as the fruit of its age." (Cicero, 1887, p.37)

Why is youth preferred over old age in some cultures? More than ever before, there are advertisements for creams to rejuvenate skin, promoted almost like a magic potion to get younger. Elective plastic surgery procedures are getting more and more common (Nussbaum, et al., 2004). One of them is the facelift, known as the ultimate anti-ager. After this procedure, the face and age of a person are not related anymore. It's interesting to notice how some specific wrinkles or loose skin make someone look older as Fig. 46 shows.

Fig. 46. Example of an intervention of face lift in a woman (Thomas Mustoe Sammy Sinno).

Many people, the big majority women, paint their hair when it starts getting white or grey. This is another method on how to disguise one's actual age. Also, another treatment that is used more often is hair transplants - normally with young men, when their hair is falling or receding hairlines start. It is not a recent thing that people like to have nice hair.

(…) hair has been associated with power, and among the ancient Gauls its length was like an aura of honour and freedom that never completely faded in the collective imagination (Amara, 2020, p.80).

Hair that is well cared for, glowing skin, and healthy physic are some elements that can make someone look more attractive. When the author Saul Levmore visited Japan for the first time, he found elderly Japanese citizens uncommonly good-looking compared to Americans. Male pattern baldness is rare in Japan. Instead, they had lots of dark hair. Wrinkles were very noticeable but also different in some way. There were no signals of obesity. Finding someone more attractive can depend on what the observer is accustomed to. But as Levmore suggests, in a group of elderly people, friendly smiles, sympathetic eyes and well-treated hair can make someone look especially inviting. But ageing is not seen as an attractive phase for everyone. Most people don't like signals of getting old, so they try to disguise them. Why should that be? Isn't getting older part of life? Why is ageing not seen as a victory?

There is great power hidden within old age, but we will remain ignorance of the depth and breadth of that power as long as we insist on simply comparing youth to age. A more useful approach would be to chart – in the context of old age itself – the changes in human capacity that aging calls forth. The doctrine of youth's perfection, in addiction to simply being wrong, also distorts and misleads. It confines us to a narrow and uninformed perspective on human experience. (Thomas, 2004, p.33)

William Thomas also argues that contemporary society created a concept of old age as being something terribly bad: the starting point for diseases, dependence and finally the end of the human experience. Having that misconception in mind makes people fear ageing, hoping that someday there will be a cure for what is unavoidable. With that fear, something is not understood: the realisation that with age and experience, a fresh taste for life comes. "The growth process from birth to maturity is accompanied by changes in the face that are reliable cues to age (Zebrowitz, 1997, p.15)", as Fig. 47 shows.

(…) ageing is a phenomenon which has stalked humans since the dawn of our species. We also see ageing in our pets: dogs with arthritis, no longer so excited to chase a stick (…) And this comes as no great surprise – outside of biology, machines wear out and break with time, buildings crumble and fall. Why should living things be any different? (Steele, 2020, p.45)

Fig. 47. Face alterations through the ages. A baby, an adult, and an elderly person (Wongso, 2020) (Ulzahabayev, 2019) (Huang, 2018).

Thomas (2004) explains that skins of distinct species differ a lot. When the skin of a snake turns old, it sheds. Birds moult - a process of shedding and regrowing new strong and warm feathers. Mammals, on the other hand, keep the skin in which they are born, the dermis. Above the dermis, the fur function as a protection to the ultraviolet rays in sunlight. But not all mammals have fur. One example is the naked mole rat that lives exclusively in underground tunnels and burrows (Fig. 48). This is a great way to protect his skin against the sun. On the contrary, the majority of humans like to catch some sun, if not full sun baths, in the summer. That is one of the main reasons people get wrinkles. Thomas (2004) says that "The ideal candidates for wrinkle formation are long-lived, hair-less terrestrial mammals. Humans share these characteristics with just one other species. We, like elephants, get wrinkles" (p.6). Fig. 49 shows two different age elephants and how the wrinkles get more noticed with age.

Fig. 48. Naked mole rat (Lanting).

Fig. 49. Baby elephant and old elephant (Carrie, 2021) (Clode, 2018).

Wrinkles are pain-free, they do us no harm. The only thing troubling about it is the way society wants to eradicate them, with suffering methods brought by the cosmetics and surgery industries (Nussbaum, et al., 2004).

> What would it be like to live in a society that adored wrinkles? The idea may seem laughable at first, but for millennia, living to a ripe old age was as exceptional achievement and was often recognized as such by society. Confucian societies, among many others, have long held that the aged should be treated with special respect (Thomas, 2004, p.10).

Preferably, wrinkles should be a symbol of exceptional intellect and humour instead of the end of life (Nussbaum, et al., 2004). As actor Bette Davis observed, "Old age is not for sissies." (Thomas, 2004, p.23)

2. Elderly Characters

Gabler (2006) argued that Walt Disney's influence can only be measured by how it changed American culture and consciousness. Griffen (2017) agrees and states that Disney is very widespread in modern culture. In accordance with Gray (2019), Disney has also received some severe critics regarding the way they depicted characters with mental illness. Holding negative connotations that denigrate the characters could have prejudicial consequences on the way

children viewers perceived that disease. If so, the same can be true for elderly people. It is then necessary to understand if elderly characters are depicted in Disney and Pixar animated films in a more positive or negative way. And why would this be important? Because according to Griffin (2017) "Disney animations are one of the most widespread of such reality-shaping influences in the modern era". Ingvild Kvale Sørenssen said that Disney is trying to keep up with the current times by making references to gender equality. Diversity matters (Gray, 2019). Issac (et al. 1986), studied children's prejudice against the aged and findings showed "significant levels of ageist prejudice". Ageism refers to stereotypes, discrimination and prejudice towards someone based on their age (World Health Organization, 2021).

Ageism has serious and wide-ranging consequences for people's health and well-being. Among older people, ageism is associated with poorer physical and mental health, increased social isolation and loneliness, greater financial insecurity, decreased quality of life and premature death. An estimated 6.3 million cases of depression globally are estimated to be attributable to ageism. It intersects and exacerbates other forms of bias and disadvantage including those related to sex, race and disability leading to a negative impact on people's health and well-being. (World Health Organization, 2021)

Is something that affects our society. Ageism leads to various negative repercussions, such as fear, illness, waste, and misery and the age group that is especially affects are the elderly explains Palmore (2005), also stating that "It is a social disease much like racism and sexism." Its also associated with the decrease of physical and mental health, increase social isolation, an upsurge of financial insecurity, decrease quality of life and premature death (World Health Organization, 2021).

It was made research regarding the way older adults are represented in Disney animated films by Zurcher and Robinson (2017). The findings showed that they notice an overall similarity in the negative portrayal of elderly characters in recent animated films compared with the previous films.

What makes a character look older? If we think about real life, we can guess the age of different people. Noticing the face, anatomy and what the person is wearing can help us understand what's the age of a person. An elderly person normally as the body shrunken, the face is sagged

(Zebrowitz, 1997) and they have different kinds of wrinkles, the hair is white or grey as the eyebrows and beard.

For this research, it was found pertinent to do a visual analysis of the way elderly characters of Disney and Pixar animated films. To gather the images used in Fig. 50, many films were analysed, to capture stills from the senior characters. One element that was relevant for the choice of the characters was to find one shot of the face and one of the entire body, to better visualise the way the characters were designed. Only characters that had a reference of being old, or over 60 years old, were gathered. Another specification implemented by the author was that the characters needed to be humane like, without any type of magic or superpowers. In this way, a smaller group could be targeted. The colour pallet was made using *Image picker* (Coolors). In total 19 senior characters were found, 10 male and 9 female.

- All of the characters have white or grey hair, with the exception of two characters where the hair was not visible.
- 5 characters use a cane.
- 1 character was represented in a wheelchair.
- 6 characters have glasses.
- All the characters were represented with lines on their faces.
- 7 characters were represented with few teeth or with their mouth scrunched inside as if they were toothless.

Elderly characters from Disney & Pixar films
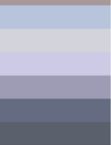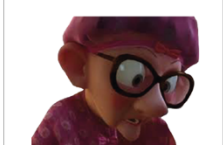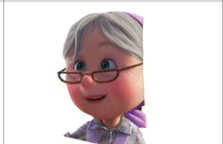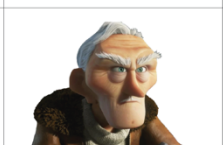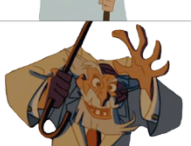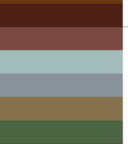
Character name, film, description of being elderly &/or age	Face	Body	Colour palette	Character name, film, description of being elderly &/or age	Face	Body	Colour palette
Madame Adelaide Bonfamille, *Aristocats* (1970) elderly women				Pearl Gesner, *Home of the Range* (2004) elderly women			
Georges Hautecourt, *Aristocats* (1970) elderly man				Sheriff Sam Brown, *Home of the Range* (2004) elderly man			
Amos Slade, *The Fox and the Hound* (1981) old man				Mrs. Hogenson, *The Incredibles* (2004) old women			
Bishop, *The Little Mermaid* (1989) old man				Mabel, *Ratatouille* (2007) old women			
Frollo, *The Hunchback of Notre Dame* (1996) 66				Carl Fredricksen, *Up* (2009) old man, 78			
Grandmother Fa, *Mulan* (1998) elderly women				Ellie, *Up* (2009) old women			
The Emperor of China, *Mulan* (1998) old man				Charlez Muntz, *Up* (2009) 90			
Rudy, *The Emperor's New Groove* (2000) elderly man				Mama Coco, *Coco* (2017) 99			
Preston B. White-more, *Atlantis* (2001) old man, 70				Elena Rivera, *Coco* (2017) 68			
Mrs. Hasagawa, *Lilo & Stitch* (2002) elderly women							

Fig. 50. Elderly characters from Disney and Pixar films. Face, body and colour palette. Created by Ana Rita Simões.

Chapter 5 - Case Study, Carl Fredricksen

1. Idea

What was the main creative idea for creating the film *UP* (Docter 2009)? For Docter, the director of the film, it was interesting to think about what the lives of old people had been like. The idea started with a drawing that Docter did of a bad-tempered old man that was holding a lot of fun and bright colourful balloons (Fig. 51). For Bob Peterson, the co-director, the mix between the grouchy man and the fun balloons was curious. The team began to work on the story (*Up: Geriatric Hero*). They also had another idea that was a key element for the development of the story: an elderly man soaring elsewhere in his house with balloons (*Alternate Scene: Married Life*).

Fig. 51. Pete Docter, marker/coloured pencil, 2004 (Hauser, 2009, p. 11) created for *Up* (Docter, 2009).

The main protagonist started to emerge - it would be an elderly man. But what could be the interest of casting a character of this age group? Jonas Rivera, the producer of the film, says that a character with that age is ideal since he could have a lot of adventures he had lived. One of the members of the team, Scott Clarck, the supervising animator, expressed his thoughts about how we live in a culture that is full of energy and youth. Even though that is good he likes the fact that the film casts an elderly character and can show most of his life in the beginning of the film until he is 78 years old (Pixar, 2016, *Geriatric Hero*). This character was named Carl.

If one starts to search for a film done by Pixar and Disney that has an elderly character as the protagonist we conclude that until 2009 there was none. Even now in 2022 *Up* (Docter, 2009) continues to be the only Disney and Pixar film that casts an older character as the main character. It seems to be a gap in Disney and Pixar studios.

> Here is a basic story rule: Normal characters are not interesting in normal situations. Something has to happen to get them out of their routine, in order to hold our interest and create a story. "Normal" characters can become very interesting when placed in unfamiliar contexts. (Beiman, 2017, p.29)

Taking Beiman (2017) words into consideration it is possible to notice that the main character of *Up* is not "normal" since he is much older than most of the protagonists of animated films. The adventure of a floating house with balloons is also peculiar. Carl's routine was about being alone, upset and angry with the world since he had lost his wife. But when there is need for him to escape he flies away in his house full of balloons (Fig. 52). Everything changes and he goes on an unexplored situation.

Fig. 52. Lou Romano, digital, 2008 (Hauser, 2009 P. 85), created for *Up* (Docter, 2009).

To understand the story that is being created it is important to answer the following questions: who, what, when, where and why (Beiman, 2017). In this case:

- Who is the main character? Carl, 78-years-old.
- What is him? He is a curmudgeonly man, a widower, and a former balloon salesman.

- When does the action takes place? It takes place after two nursing home assistants try to take him away of his house.

- Where does it happen? The adventure starts in his house and goes into his dream destination *Paradise Falls*.

- Why does it happen? It happens because he doesn't want to live in a retirement home. He prefers to continue living in his house which reminds him of his wife.

Creating a character is mandatory, but it is not enough to only think about their construction since they do not prevail alone. They need a context and a universe (Anderson, 2019, p. 30). Just by answering these five questions, it is possible to imagine and capture part of the story world of Carl.

1.1. Research

In the case of researching for *UP* it would be important to understand how elderly people look like, what distinguishes them from other age groups, what they wear, how they move, talk and gesticulate. And that's exactly what the team of creators did (Fig. 53). Ricky Nierva, the production designer, explained that the team researched elderly men's anatomy. They read tons of books and visited a nursing home where they silently studied the people that lived there (Pixar, 2016).

Fig. 53. Sketches of elderly people (Pixar, 2016, *Geriatric Hero,* 1:22) created for *Up* (Docter, 2009).

Understanding and observing real examples of what is intended to be created is crucial. In this case by going to the nursing home, analysing and studying old people, the team of creators gathered more knowledge and sensibility in relation to the subject.

> A designer needs to bring an air of authenticity and believability to their designs. As character designers, we need the audience to engage with, and believe in, our characters. Relevant research into personalities, costume, posing, and culture is what separates bad design from good. Good design is problem solving, and if we only understand part of a problem and its context, we can only deliver a half-hearted design solution (Anderson, 2019, p.48).

Directing animator Shawn Krause was careful when trying to find physical expressions and mannerisms of elderly people. He visualised antique films that could have information regarding that age group and observed the way his grandparents did things as example (Pixar, 2016, *Geriatric Hero*).

1.2. Character Biography

In the beginning of the film, Carl appears to be a naive child that likes to explore and have fun. When he meets Ellie he becomes rather shy. Ellie is an outgoing and talkative girl. Carl enjoys her company but he is more introvert. He gets in an unlucky situation when trying to recover his lost balloon breaking his arm. Ellie comforts him in his bedroom and shares her dream of visiting South America. Time passes and they get married. Ellie can bring up the best part of Carl. He is friendly, easy going and sometimes funny. Their routine is about going to work and having picnics. They start saving money to go to *Paradise Falls*, but every time there is an emergency, like Carl breaking his leg or a hole in the roof, they must use that money. Those unexpected situations don't allow them to make the trip of their dreams. Both are getting older, and Carl decides he wants to surprise Ellie with the so desired trip. When he is about to tell her she gets weak and gets hospitalized. Ellie dies and he is left alone. A new chapter begins in the film. Carl is different. Now he is a closed-off person, grouchy, sad and unfriendly to strangers. Carl's biography is represented in Fig. 54. The questions were created by Anderson (2019, P.31).

What does he like?

He likes Ellie and balloons.

What are his virtues?

He has a really good heart.

What are his flaws?

It is difficult for him to trust someone.
At first, he can be mean to people and
animals since he thinks he wants to be alone

What does he deslike?

He dislikes not having Ellie, strangers,
the people that want to buy his house
and evil people.

Character Biography

What does he want more than anything?

He wants to make his wife's dream of visiting
South America and living on Paradise Falls came
true. When they were children, Carl swore to Ellie
he would take her there.

What are the stories this character features in?

Loving to explore since he was a child.
Meeting Ellie.
Breaking his arm.
Knowing Ellie's dream and swearing he will not tell anyone.
Getting married.
Getting a house.
Fixing the house.
Working as a balloon salesman.
Discovering he cannot have babies with his wife.
Fixing a tire of his car.

Breaking a leg, having picnics.
Dancing with his wife.
Cleaning his house.
Buying tickets to travel.
Losing his wife and going to her funeral.
Living alone.
Hitting a man accidently.
Going to court.
Dealing with people that want to take him
away from his house.
Meeting a scout boy, named Russell.

Camping at Paradise Falls.
Meeting his child favourite explorer, Muntz.
Going inside a dirigible, Muntz house.
Extinguishing the fire of his house.
Throwing away all his house belongings.
Having to fight Muntz.
Saving Kevin.

Flying away in his house full of balloons.
Having to take care of Russell.
Arriving to Paradise Falls.
Meeting Kevin, an enormous bird.
Meeting Dug, a dog.

Going to the ceremony of Russell.
Giving his cane to Kevin and her babies.
Giving his grape soda badge to Russell.
Eating ice-cream with Russell and Dug.
Having a new home, Muntz dirigible.

Fig. 54. Carl Biography diagram, with questions created by Anderson (2019, p.31). Created by Ana Rita Simões.

2. Body and Face Shapes

Characters are constructed with shapes as already mentioned in chapter 3. There are three basic shapes: the circle, the square and the triangle (Beiman, 2017). They all convey different meanings. Carl is an example of a character that suffers a transformation. When the protagonist first appears in the film, he is still a child. His face has circular shapes that resemble a circle. This form can illustrate meanings such as wholeness, playfulness, sympathy, unity, protection and childlikeness. But with time his circular features disappear, and he begins to look more like a square, firm and rigid, hard to push over, solid, dependable, and trustworthy (Beiman, 2017; Tilman, 2011) (Fig. 55 and Fig. 56). Bob Peterson, co-director, and Ricky Nierva, lead artist, worked together to develop a vocabulary for Carl's construction. He is all about squares and boxes and he's very solid and very stuck in his ways (Pixar, 2016, *Geriatric Hero*).

Carl's life and appearance change because he grows older. Later, with the death of his wife, he is thrown into a dark place where he must live alone without the love of his life. To Carl his wife was everything. Both shared love and dreams. Once she died all his life changed and there

was no reason for him to be happy or feel joy. He turns into a closed person that is stuck into his own life and does not care about others or being nice. Everything that he had passed through his life is translated into his shapes and personality. Designer Daniel López Muñoz (Hauser, 2009) (P.40) refers that "Carl is a box, a heavy brick, because of how close to the ground he has sunk. After the death of his wife, he has shut off the world around him. So, he's stuck in his way, very square. Impenetrable. Unmovable. There's heaviness to his soul. It's easy to read that he has been through a lot."

Fig. 55. Carl as a child, adult and senior. The shapes that construct the face. Created by Ana Rita Simões.
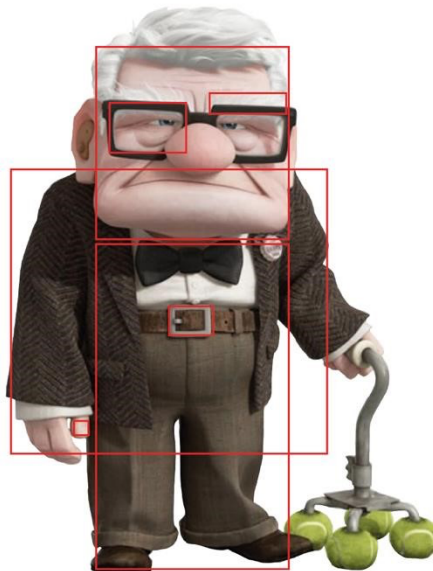
Fig. 56. Squares and rectangles that were used to construct Carl. Created by Ana Rita Simões.

The head of a character is normally used to measure proportions for the rest of the body (Beimn, 2017, P.148). According to Clark, supervising animator, Carl was constructed with three heads high (Hauser, 2009) (P.43) which is quite short for a main character.

2.1. Silhouette

If we transform the entire image of a character into black it is possible to see what his silhouette looks like.

> A good animated character, in any medium, will have a recognizable shape. When we can identify it instantly in silhouette, we say that it *reads* well. (…) Design important props along with the characters. This will help them work well together in animation. It also helps define the characters' personalities. Shading in the silhouette tests the design's readability. (Beiman, 2017, p.104, 113,)

If the film has more than one character, they should be worked together to create distinctive silhouettes, so it is easier to understand which character is who. In *Up* we can see how the silhouette of Carl is very different from the rest of the characters as shown in Fig. 58. The shapes they were constructed upon are the major element that makes them have a different design. Bob Peterson, codirector and writer, explained that Dug, Russell, Kevin and Ellie have curves and are dynamic characters, in a way they are rolling, moving forward whereas Carl is the least likely to change due to his square and still shape. So, the four characters with circular shapes have the purpose to push Carl so he can begin to do some changes in his life (Hauser, 2009) (Fig. 57).
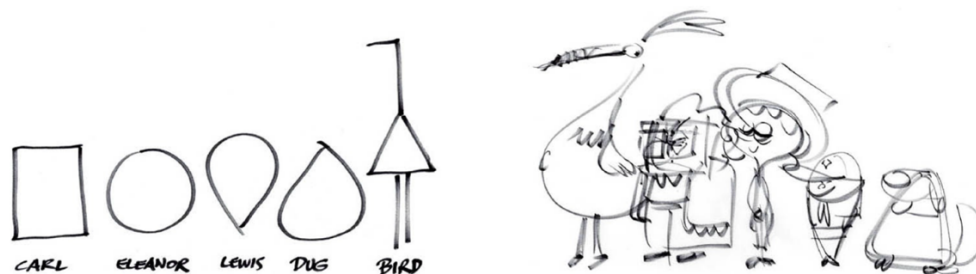
Fig. 57. Ricky Nierva, marker, 2005 (Hauser, 2009, p.18) (Note: Lewis was the name the team of the film thought for Russell).

Fig. 58. Silhouette of Carl, Ellie, Russell, Dug and Kevin.

2.2. Face Reading

For reading Carl's face some information about face reading was collected. Mac Fulfer's (1996) argues that faces reflect the way one is regarding emotions, capacities, attitudes, temperament, choices and personal history. The author also said that "Like the study of body language or spoken language, face reading is an attempt to attend more deeply to a pre-existing vehicle of communication." (p.11)

Patrician Mccarthy (2007) argues that faces have the purpose of recognition and communication. We normally recognize people by their faces, and we express our feelings, emotions and thoughts on our faces.

There are several features that constitute a face. Each of those elements can have different shapes and divergent meanings. The parts of Carl's face that are going to be analysed are: forehead, eyebrows, eyes, eyelids, nose, ears, mouth, lips, jaw, chin, lines, face shape and head type. The knowledge of Dee (2018), Fulfer (1996), Mccarthy (2007), and Zebrowitz (1997) where combined to create Fig. 59.

Carl Fredricksen, face reading

Lines,
Mental development lines
- Develop mental abilities
- Possible brillance

Lines,
Forced focus lines
- Too hard on themself
- Effort on being correct and exact

Face shape,
Physical type
- Doer
- Necessity for personal space
- Competitive

Eyebrows,
(basic shape) Straight eyebrows
- Factual approach
- Necessity for facts

(position) Low eyebrows
- Quick actions
- Do things at the moment they appear
- Antecipates what others are going to say

(specific type) Tangled hair
- Unusual intellect
- Enticing disagreements
- Havve a boarder view of a matter

Ears,
(size) Large ears
- Goodwill, receptive and open-handed
-Big lenght, indicator of intelligence

Nose,
(size and shape) Large
- Needs to be in control
- Whats to have a major impact

(with) Wide nose
- Supports loved ones
- Willing to share
(size and shape) Big bulb
- Importance with financial security
- Collector

Lines,
"Big picture" lines
- Sees the bigger picture

Eyes,
(spacing) Closely spaced
- Very focused
- Attention to details

(angle) No angle
- Pratical
- Stable view
- Strong under pressure

(depth) Recessed
- Evaluating everything
- Careful
- Alert
(size of iris) Small iris
- Hate shouting
- Needs physical reassurance

Lines,
Disappointment lines
- Emotional disappointment
Long, Thin Fa Ling Lines
- Subject may be his worst enemy,
outspoken manner

Eyelashes,
Thin lashes
- Tremendously sensitive

Support lines,
- Lifts up others
- Gives encouragement

Jaw,
Big jaw
- Committed to ideals
- Loyal
- Desires to dominate

Mouth,
(size) Large
- Outgoing
- Sel-assured
- Expressive
(angle) Turns down
- Mistrusts what people say
- Prepared to hear the worst

Eyelids,
(top lids) Thin lids
- Values closeness
- Act independently
(bottom lids) Curved
- Positive mind
- Does not judge
- Good listener

Eye puffs,
Intense puffs
- Bad temperament
- Protective, egotistical
- Contradiction

Shin,
Very broad
- Incredible resilience
- Physically demonstrative
- Qualities of honour
- Inner strength

Lips,
(size and shape) Thin lips
- Reserved
- Mistrusts flattery

Forehead,
Backward angle
- Quality memory
- Fast responses
- Soft spot for proven methods

Head type,
Square head
- Cautious
- Dependable

Shin,
Sticks out
- Formidable adversary
- Not easily intimidated

Fig. 59. Face reading of Carl Fredricksen. With the knowledge of Dee (2018), Fulfer (1996), Mccarthy (2007), and Zebrowitz (1997). Created by Ana Rita Simões.

We wanted to create an essence of an old man. With age comes storytelling in every line in every single pore and we studied how elastic their faces are, really what are the most important wrinkles on the face there's the nasolabial fold, and an accessory google fold, the crow's feet are important, the stuff on the forehead are important, all the other things we just shaded in to make sure that we can get age in there. (Ricky Nierva quoted by Pixar, *Geriatric Hero*, 2016, 2:09)

Thomas Jordan, character supervisor of *Up* (Docter, 2009) said that he learned various aspects about aging. He wanted to understand how a human face changed over the years. Jordan and the team created three models of Carl with different ages Fig. 60. They needed to look like the same person (Hauser, 2009).

Fig. 60. Sculptures of Carl as a child, adult, and senior. Made by Greg Dykstra, cast Urethane, 2005-2008 (Hauser, 2009, p.56).

3. Aesthetic Analysis

3.1. Carl's Clothes, Accessories & Colour Palette

When we see someone for the first time, the way they dress has an impression on us. Even if we do not think much about it. Is something that happens unconsciously. The combination of colours, fabrics, shapes, patterns, textures, and the tidiness or messiness of clothes creates many looks that translate into different personality associations. The same happens with the way animated characters dress. We get a feeling of who they are, their personality, tastes, and social status. "Clothing is the outward expression of the inner person" (Peres, 2007, p.53). A costume can work as a crucial element in telling the story of a film (Landis, 2012). "Costume design serves two equal purposes: to support the story by creating memorable characters and

to provide balance within the frame using color, texture, and silhouette" (Bui, at al., 2022, p.7). Many characters have clothes that define them. When someone relates to a character and what's to cosplay them, it is important to understand what the key elements are, to recreate that specific look. Those can be clothes, accessories and props. It is mandatory to create distinctive and unique costumes while creating a character. Developing a wardrobe that speaks before the character says anything (Landis, 2003).

When considering garments is important to talk about the vocabulary of elements. According to Bui (et al., 2022) some of them are darts, the style line, cut, embellishments, closures, seam lines and hems. Mattesi (2008) (P.96) argues that clothes also say a lot about culture. Sometimes we can understand from which country the character is just from noticing their outfit is. The author also emphasises the importance of developing questions about the way characters feel about their clothes. Do they like what they wear? Does it make them proud?

In the film *Up,* Carl first appears as a child, then as an adult and finally as a senior. It makes sense that he wears different clothes since a child aged 6 does not dress the same way as a 78-year-old man. "It's worth remarking that people's fashion sense often fossilizes in their heyday. Older people are frequently seen wearing the same style of clothing as was fashionable 30 or 40 years earlier." (Clancy, 2014, p.132)

> Show your audience what you want them to see. Avoid *telling* them about it. The environment and the props associated with a character enable the audience to *read* the story and characters without your having to resort overmuch to filmic devices like voice-overs or explanatory dialogue. Creative designs for characters, backgrounds, and props will contribute enormously to the audience's understanding of what happened before the story began. (Beiman, 2017, p.139)

In the majority of the film, when Carl is a senior, he uses a brown tweed suit, a white shirt, a brown belt, suspenders, black leather shoes and a bow tie. "Stereotypical elements may appear in the design to render characters' personalities instantly recognisable." (Beiman, 2017) (P.121). For the creation of Fig. 61 it was gathered the knowledge of various authors such as Peres (2007), Sheng (2018), Hallet (2014), Flusser (1985), Crotty (2014), Song (2020), Idnay (2021), and Martin (Elder Guru). Some terms were also searched in the online dictionaries like Word Sence Dictionary, Oxford Learner's Dictionaries and Meriiam Webster.

Carl Fredricksen clothes and accessories description

Tie,

- The tie is the ultimate men's accessory that can take an outfit from shlumpy to stylish

- Carl only uses print ties. This means that all of them have patterns. These types of ties add visual interest and colour to the outfit. Carl wears some ties with a dimple. A dimple is a fold in the tie's fabric near the knot. Adding a nice finishing touch. The end of the tie should hit the mid of the belt buckle.

Sleeve garters,

- A garter worn on the sleeve of a shirt above the elbow to hold the lower part of the sleeve tight and keep the cuff in the correct position.

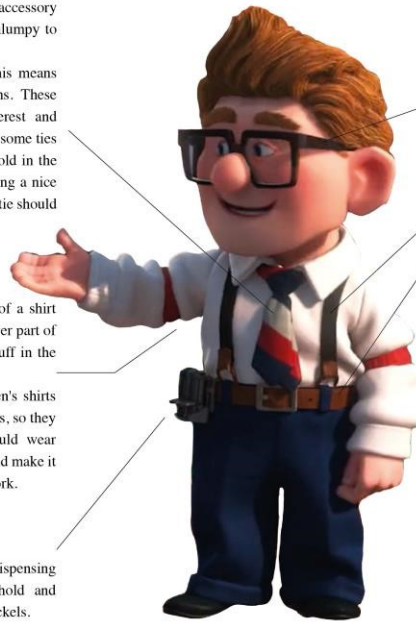- Back in the 19th century, men's shirts didn't have buttons at the sleeves, so they were a little looser. Men would wear sleeve garters to pull them up and make it a little shorter, especially for work.

Four-barrel money changer,

- A device for holding and dispensing sorted change. Four barrels hold and dispense quarters, dimes and nickels.

Glasses,

– Black frame with rectangle shape.

Belt and suspenders,

- A belt is a stripe of lather or other material. It's functionality is to support or hold clothes, normally trousers.

- Suspenders are a pair of elastic straps that pass over the shoulders and are secured to the waistband of trousers at the front and the back to hold it up.

- In some scenes Carl is seen wearing a belt and suspenders. Belts should never be worn in conjunction with suspenders. It is considered in poor taste. Therefore, if the trousers are to be worn with suspenders, the tailor should remove the belt loops.

- Belts should be wore with sports clothes rather than with a business suit. The preferred colours for the buckle are gold or silver. The best design for the buckle is a simple one, so it does not call attention. Carl's uses a simple light brown leather belt with a silver buckle.

Bow tie,

- Wearing a bow tie is a signal of confidence, by making a statement that one is not afraid to stand out in a crowd. It's an extra step to look as sharp as possible in an outfit. Bow ties are mostly more formal than normal neck ties.

- The big butterfly is a large bow tie style. It is sometimes worn in formalwear and is perhaps best-suited to fancy-dress occasions. This large bow tie is also very appropriate for bigger or taller men. Without a suitable context, or on a smaller man, the big butterfly bow tie style can look comic. It is a grandiose tie, and should, therefore, be worn grandly.

Jacket,

- Has a notched lapel and is single breasted.

- Two flap pockets on each side. A flap pocket, the ones that have a rectangle of fabric which is the flap, add more thickness on the hip. It emphasises his robust and square silhouette and give a more casual look to the jacket.

Trousers,

- They have a seven belt loops and inside buttons for using suspenders

- They are pleat trousers because they have a pleat front, folds along the waist. It's also a sophisticated and traditional look.

- The trousers create a full-break. This occurs when the trousers are slightly too long for the leg. The full-break is the classic length for men favouring the more traditional look.

Hearing aid,

A small device that fits inside the ear and makes sounds louder, used by people who cannot hear well.

Suit,

- All-American fit. Classic American style emerged in the 1950s with the Ivy League look and is normally more relaxed and informal.

Tweed brown fabric,

- Tweed generically describes coarse-textured woollen spun fabrics from Scotland, Ireland, and Yorkshire, although Scottish in origin. Today they have been made lighter in weight and are available in all fashion colours.

Ellie badge,

- Bottle cap from a grape soda with a safety pin attached to it.

Shirt,

- Shirt tucked inside the trousers.

- The cuff of his shirt is visible while wearing the jacket. The cuff should sit just above the wrist bone, with 1–2 centimetres of the shirt cuff showing past the sleeve of the jacket - Shirt has a regular collar.

Cane with tennis balls,

- To attempt to push a walker with rubber pads on the back legs is difficult and leads to the walker 'shuttering' as you move it. This is why so many people add tennis balls to the rear feet of their walkers. They aid in the pushing process, help keep one from scuffing floors, and make for a much smoother walk.

- The back of the trousers comes right down to the end of the heel. This look should be reserved for more formal occasions such as tuxedos and work suits.

- The type of hem of Carl's trousers is cuffed, which means the fabric at the end of the trousers is folded up unto the outside.

Fig. 61. Clothes and accessories description of Carl Fredricksen. Created by Ana Rita Simões.

Fig. 62 shows the outfits and accessories that Carl used during the film. The illustrations were created digitally by the author, and they try to depict approximately what appeared during the film. The figure also functions as a fast way to visualise the outfits and colour pallet that Carl used as a child, adult, and senior.

In childhood, Carl wears brown, orange, and beige garments. His shorts resemble the fabric tweed wave with the pattern of a windowpane. A windowpane pattern is known for having large squares in a different colour from the rest of the fabric. In another scene, he wears a blue pyjama with the pattern of planes, letters, and postcards. This is a quick way to show that the character has a particular fondness for flying machines and travelling.

> Using patterns on the clothes of a character is a fast way to emphasise something about a character like their status on society or personal taste. If not created correctly patterns can be distractive as well. (Bui, et al., 2022, p. 150).

After Carl gets married, he wears a wide range of outfits. He dresses with some darker tones mixed with lighter colours such as yellow and mustard, light blue and some accents of various colours on his ties. Each tie has original prints, ranging from stripes of different thicknesses, nature-inspired patterns with flowers or leaves, polka dots, and spots, to a paisley design. In one scene, he appears in a hospital with a cast on his leg. He is wearing a blue-striped pyjama.

Once he gets older, the colours of his outfits change to a darker tone. The white of his shirt is maintained from adulthood as his blue-striped pyjamas. During that time, he goes on a big adventure with his house and Russell, and his outfit suffers some alterations. He uses a turquoise hose strapped on the is shoulders and back to move his house. He uses his jacket to extinguish the fire on his house, he appears without his black bow tie and wears Russels's explorer sash.

Ricky Nierva, production designer of the *Up* (Docter, 2009) said that when Ellie was alive the colour palette of the film was very saturated, she brought colour to Carl's life. But once she dies, the palette changes to more desaturated tones like grey (Hauser, 2009) (Pag. 82).

Fig. 62. Outfits and accessories used by Carl during *Up* (Docter, 2009), the time is related to the minutes those outfits appeared on the screen. Created by Ana Rita Simões.

Chapter 6 - Analysis and Discussion of Results

After this study, these are the answers to the research questions:

1. What are the fundamental aspects of character design for animated films?

An idea - finding an idea that has the potential for creating an interesting story and characters.

Research - research from real sources is crucial for understanding the subject that is intended to be created. If the idea is to create a character that is a wild bear, it would be most enriching to observe and draw sketches of life bears in a zoo or, if possible, in the wild; watch documentaries about bears; read books or articles about bears; interview bear biologists; take notes and write about what was learned; define the bear breed and, if possible, even touching the bear, so one could experience how the fur feels like. Another type of research is cultural research, which is important to tell the story of the film. Understanding cultures can be helpful to the development of visual cues for a character.

Shape language - there are three basic shapes: the circle, the square and the triangle. Each of them has a different meaning. Those meanings were not invented: circle – friendly, cute, soft, and good; square – heavy, strong, and stable; triangle – dynamic, sharp, unstable, and dangerous. The same can be noticed in nature and everyday objects' shapes. Understanding what different shapes convey, and choosing the right forms for the construction of a character is mandatory, in order to create a cohesive character that translates exactly want we want.

Types of character - different types of characters can be created. Ranging from humane, animal, object, and others. It is important to do extensive research on the chosen idea to establish the fundamental elements that can better represent the character.

Aesthetic analysis - each colour has specific meanings and symbologies. In order to represent the personality of the character, a careful choice of colour is important. Clothes are a symbol of status, wealth, profession, age, culture, etc. The way a person dresses can tell a lot about themselves - it is the first impression. Pieces of garments can differ a lot depending on the shape, fabric, colour, pattern and condition. To design clothes for a character, it is crucial to focus on the story we want to tell.

Sheets & sculpture - the development of character sheets is a mandatory phase. They will function as a manual for the construction of the character. The turnaround sheet reunites

different views of the character's front, rear and back perspectives, which later will help animators construct the character digitally. Creating sculptures of the characters is also important to understand if the design works in 3D.

2. Why the creation of more elderly characters can try to break stereotypes and combat ageism?

In the current times, Disney and Pixar are making an effort to produce films with original characters regarding ethnicity and gender. This is important because it can break stereotypes and create more diversity. But the creation of elderly characters is still not as common as the rest of the aged groups depicted in the films, and that could be associated with ageism regarding the elderly. It was found that Disney and Pixar characters have "reality-shaping influences" on children (Griffin, 2017) and that elderly characters are portrayed in a negative way (Zurcher and Robinson, 2017). That can lead to prejudice against seniors.

> "Inclusivity isn't just about race, gender, or orientation; it's about different worldviews and backgrounds coming together to tell relevant, authentic stories. It's just one way for brands to break through the noise and create a genuine connection with their consumers." (Savy, 2021)

From the elderly characters that were analysed, it was found that only in 2009, 3 elderly characters appeared in the same film. In the rest of the films, 2 or 1 elderly character appeared per film. Disney and Pixar produced 86 feature animated films from 1937 to 2022. In 86 films, only one had an elderly character as a protagonist.

3. How are elderly characters represented visually in Disney and Pixar animated films?

From the 19 elderly characters that were selected it was found that all the characters have white or grey hair, except two characters where the hair was not visible because of a hat and a sleeping hat. 5 characters use a cane. 1 character was represented in a wheelchair. 6 characters have glasses. All the characters were represented with lines on their faces. 7 characters were represented with few teeth or with their mouth scrunched inside as if they were toothless. 14 characters are Caucasian, 2 are native Chinese, 2 are indigenous Mexican, and 1 is a native Hawaiian.

4. Which visual elements make Carl a recognisable and appealing elderly character?

Silhouette - the silhouette of Carl makes him immediately recognisable, because of his scrunch squared body and his famous cane with tennis balls.

Face reading - the wrinkles and all the elements of his face were designed to make him look elderly. Also, his famous grumpy expression makes the audience understand that he is not very happy, which helps to tell the story.

Aesthetic analysis - Carl wears a brown tweed suit with a white shirt and a bow. He uses props that help the audience perceive him as elderly: the cane, hearing aid and denture.

Chapter 7 - Conclusion

One of the concerns of this study was: how to design appealing characters for audiences. The creation of characters is connected to the story since they both work together and, as Beiman (2017, p.xvii) says, "developing one in the absence of the other is like making an omelette without eggs". This study explains the process of character design for animated films, from the starting point of gathering ideas, to creating a story, doing research, understanding shape language, colour symbology and developing costume design. All these phases were represented with visual examples of Disney and Pixar films from their research methods, to concept art and final art. Those examples function in a way to better understand how one of the best studios in the world develops characters for their animated films. One of the aspects that was found most interesting is the vast research the team of creators made for each film. Even though they have a lot of experience, they always invest time and resources in that phase. From reciting a scene with live models to better draw the movements of the characters as it happened in *Sleeping Beauty* (Reitherman, 1959), to travelling to get to know cultures like in *Encanto* (Bush, 2021), to arrange a way to study a specific animal for example rats for *Ratatouille* (Bird, 2007), among other ways of research.

This study also focused on analysing a specific character group: elderly human-like characters. Some senior characters have entered Disney and Pixar animated films, but they had never taken on the role of a protagonist until 2009, when Carl Fredricksen, the first elderly protagonist of an animated Disney and Pixar film, was created. It was found pertinent to explore how the elderly are seen in western society, and what are the physical aspects that represent them. People await ageing with little excitement. It is a chapter in life that most people would prefer not to experience. Even though people cannot stop the ageing phases in their lives, they can still work on appearing to be less old. That is why procedures such as face-lifts are more in use. People don't want to look old. Could that be one of the reasons why elderly characters do not take the role of the main characters? Could it be because people associate seniors with negative aspects, such as disease, fragility, dependency, or incapacity? According to Palmore (2005), ageism affects the elderly and is a problem. But ageing has positive outcomes, some of them are experience, knowledge, and a wider perspective of life (Zebrowitz, 1997). According to Tom Robinson (2007) children can have negative feelings regarding older adults. The media and the cultural impact of Disney and Pixar animated classics can trigger those feelings. As so, one way to better represent elderly characters in animated films could be to create more senior characters that depicted the positive aspects of this age group.

As a final section of this dissertation, Carl Fredricksen, the protagonist from *Up* (Docter, 2009), was analysed regarding different aspects such as colour pallet, shape language, face reading and costume design. For research, the team of creators of this film found a way to immerse in the life of elderly people. They went to retirement homes to study and observe the people that lived there. This resulted in a better understanding of the key characteristics that represent a senior. Concerning this dissertation, and after analysing Carl, it was found that there are various visual elements that quickly place him as an elderly character. Some are physical, such as his white hair, the existence of different lines on his face and his body posture. Others are the accessories he uses, like his hearing aid, his cane. The clothes he wears also help place him as a senior. The research regarding face reading was very interesting to do, because the majority of the meanings of his facial features and lines made sense with the story and the personality of the character. For the film, the team of creators developed various outfits for Carl, that really helped to tell the story. When Carl is an adult, he appears dressed in around 14 different outfits, and 12 different ties appeared in his neck representing the passage of time, all of this during 2 minutes and 95 seconds of the film. The choice of colours and the pieces of garments really helped in the representation of the character. Later in the film, when Carl is a senior, he uses a tweed brown suit. That same suit appears in various scenes. What is interesting to note is that the suit suffers transformations during that time, it gets dirty, the jacket is used to extinguish the fire in his house, and in the final part of the film it changes from a normal suit to a hero and adventurous suit. In this sense, the costume of Carl is constantly changing according to what the character is experiencing, emphasising the passage of time.

One of the limitations of this dissertation was the lack of information regarding elderly characters for Disney and Pixar animated films. A lot of knowledge was found in books entitled the "Art of" various films, but the majority of the elderly characters that were found appeared in older films that don't have that type of books. In a first phase it was selected 47 elderly characters from Disney and Pixar films. But later on it was found that not all of them had references about their age, so the characters were reduced to a group of 19.

The realization of this dissertation was found to be constructive challenge. It was an inspiring path in the research for knowledge concerning the various themes addressed. Despite the enormous interest that the author has regarding character design, it was discovered a gripping curiosity about the elderly. It is incredible how an elderly has so many carved stories in himself. Some of those stories can be shared via conversations, but other can be seen just by looking at the facial features of a senior. As Curtis Tyrone Jones said, "When she smiles, the lines in her face become epic narratives that trace the stories of generations that no book can replace."

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