

**THE CREATIVE AND TECHNICAL CONTRIBUTION
OF FEMALE AND MALE BELOW-THE-LINE
PRACTITIONERS TO THE COLLABORATIVE
PROCESS IN THE AMERICAN 3D ANIMATION
FEATURE FILM INDUSTRY:
a production studies approach**

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Abstract

This thesis examines the contribution of female and male below-the-line animators and character technical directors (CTDs) to the creative and collaborative process in the North American 3D animation feature film industry. My work draws primarily on theories from the field of production studies and reviews current theories of the social division of labour, creativity, authorship and gender. It utilises a qualitative research approach that involved analysing interviews of practitioners of two different categories of work, to explore whether and how experiences differ depending on the role and gender of the practitioners. This study reveals that practitioners negotiate their authorship and creative input by navigating monitoring rituals, like notes-giving and meetings, as well as through pitching. I demonstrate that communication, trust and friendship are crucial instruments for practitioners below the line to increase collaboration and counter negative industry characteristics such as precariousness and intense competition. My findings also indicate a mismatch between the practitioners' idea and expectation of creativity and authorship, and actual practice in 3D animation studios. This thesis explores an authorship model that can accommodate the collaborative practice below the line in 3D animation studios and proposes an extension of the definition of creativity to include multiple categories of problem-solving. Finally, my study reveals differences between women and men in the experiences of the animation production process and affirms previous research that women are hesitant to link these differences to gender. The interviews revealed that 'unspeakability' is a real issue – the impulse to remain silent about this topic in a work environment is in marked contrast to the actual desire to discuss this topic in a private sphere. While below-the-line practitioners' experiences vary, this study arrives at the conclusion that animators and CTDs in the animation industry have a set of competing agencies, have a sense of shared authorship and are far from being mere passive executants of their work.

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Acronyms and Terms

ATL Above-the-line – typically describes employees categorised as creative personnel in the social division of labour. These employees can claim creative agency and are acknowledged as authors within and outside the industry. In the animation industry, primarily directors, producers and writers are considered above-the-line.

blendshapes Shapes or morph targets for a 3D object or character that are mostly hand-sculpted in virtual space by moving the points of the object's mesh. These shapes are often used for expressions or correctives (see below). Since they use existing points, the created shapes can be blended and morphed from one target to another.

blocking Blocking is an animation pass where the poses of the animation are not keyed on every frame. The interpolation between poses is stepped, resulting in a choppy animation used to get the main idea of a scene across faster.

BTL Below-the-line – typically describes employees categorised as technical personnel in the social division of labour. Below-the-line employees cannot claim individual credits and intellectual property rights. Within the animation industry, animators and character technical directors (CTDs) are regarded as below-the-line workers.

Character TD / CTD Character technical directors, also called riggers, are specialised in the asset production part of the pipeline. The core task of all CTDs is to provide animators with the necessary tools and setup to efficiently animate the characters during shot production.

controls In the context of this thesis, controls (also sometimes called 'movers') describe the user interface the CTD creates for the animator to move different aspects of a character rig. If we compare the character rig with a puppet on strings, the strings would represent the controls, which the animator then can use to animate the puppet.

correctives 'Correctives' describes blendshapes that are used to correct for areas where other deformer, like joint deformations (see below), are not sufficient to achieve the desired form. Correctives are often used to preserve or build up volume, for example, to create the bulges that characterise compressed flesh and muscles.

default pose A 3D character's default pose is the shape and position of a character's mesh to which the rig is built. The CTD often requires a specific default shape for the character to make the rigging process more efficient and the rig more flexible for animation. A good, neutralised default pose is necessary for rigs to support many different poses and facial expressions.

deformer Deformers are techniques and tools to deform the mesh of an object. Blendshapes and joint deformations are used most frequently.

joints A joint is a point in space that can be used to create a skeleton, a hierarchy of joints that is used to drive a rig. The mesh or skin of a character can be bound to specific joints through a process called weighting (see below). Once a mesh is bound to a joint, it will follow the motion of the joint to which it is weighted.

keyframes 2D and 3D animation comprises a great number of individual still images played at a specific frame rate, usually 24 fps in animation feature film (Kerlow 2004). The individual still images are called frames. Keyframes are the frames that include the key poses necessary to tell the story of a shot. Frames between keyframes are called in-betweens. 3D animation software includes tools for interpolating between keyframes which help the animator create these in-between frames.

reel Reels, or demo reels, are short compilations of a practitioner's best personal and professional work and function as a visual resume in the 3D animation industry.

rendering Rendering is one of the last steps in the 3D animation production and describes the process of using software to

compute a 2D image based on the three-dimensional data created in the 3D animation software.

rigging

Rigging is the process of creating an animation rig, that is, the hierarchical control structure that allows animators to move and animate characters and props. A rig is an underlying anatomy that includes motion logic. To make a comparison with a traditional puppet on strings, the rig connects the different elements of a character through joints and controls, the strings, which the animator then can use to animate the puppet.

skeleton

A character skeleton is similar to the anatomy of humans and animals in real life. In 3D animation, it consists of a hierarchy of joint deformers which in turn drive the mesh of the character. The skeleton is one of the main underlying elements of the character rig setup.

topology

In 3D animation, the term 'topology' refers to the surface properties of a 3D model. When working with a polygon mesh, the topology is the layout or the distribution of points that describe a 3D object.

weighting

Weighting or skinning is the process of binding the 3D mesh of a character to the underlying skeleton, so that the mesh or 'skin' of a character follows the rig setup.

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SECTION I

Chapter 1: Introduction

Motivation

This is a study of below-the-line authorship in the American 3D animation feature film industry. Having spent approximately ten years in computer-generated feature animation, with half of them in a supervisory role, I have witnessed constant negotiations for creative control. Bargains are made constantly between above-the-line personnel, like directors and producers, but also between below-the-line personnel like animators, designers, CTDs and production management. These negotiations determine whose ideas make it into the production process and whose do not. While above-the-line personnel are authorised to make such creative decisions, on many occasions, I have observed that below-the-line personnel like animators or CTDs make creative contributions that influence certain aspects of the film. Additionally, although it has become difficult to imagine that there were times when women were almost non-existent in animation studios, I often attend meetings where I am the only woman, aside from possibly a coordinator or project assistant. This imbalance is a 'normal', day-to-day situation, and rarely stands out as unusual or irregular. These personal work experiences in the animation industry sparked my interest in the contributions and authorship of female and male below-the-line practitioners in 3D animation studios.

This chapter serves as a brief introduction to the key areas of my research. It utilises the description of the 3D animation pipeline as a platform for laying out the primary topics of my thesis. The details of those concepts and the engagement with

existing scholars will follow in more depth in subsequent chapters. After illustrating my motivation for this research project, the next section will outline the primary and secondary objectives of my study.

Objective of the study

My research examines the contribution of female and male below-the-line animators and CTDs to the creative and collaborative process in the North American 3D animation feature film industry. The focus on North America is because of the density of large animation feature film studios, and because of my familiarity with the industry there. The study attempts to 'crack open' the black box of animation film production and reveal the production process and practices of below-the-line practitioners. My primary research objective is to understand whether and how below-the-line female and male animators and CTDs make creative contributions throughout the creation process. I ask how communication and control structures function within the studio community, how the practitioners collaboratively manage the creative process and achieve production goals, as well as to what extent agency, authorship and creativity can be said to function below the line. This study also aims to review current theories of creativity and authorship and develop a model for the negotiated and collaborative process of 3D animation feature film production below the line by discussing interview material. To do so, this thesis utilises a qualitative research approach employing interview analysis to investigate the creative contributions of below-the-line workers in animation from within the animation community. To enable an in-depth study of a culture-sharing group and to explore if employees experience contributions differently depending on their role and gender, I examine an equal number of men and women in two below-the-line roles: animation and character technical direction. The study primarily draws on theories from the

field of production studies, and to a lesser degree, from ethnography, and reflects themes relating to the social division of labour, creativity, authorship, and gender. The next section will take an in-depth look at the animation production process and introduce the theoretical and practical relevance of the research.

The animation production process – Theoretical and practical relevance

Film studies research often concentrates on the output of the production process, the film itself, and not on the process of production. This study attempts to ‘crack open’ the black box of 3D animation film production to examine the contribution of and collaboration between below-the-line practitioners. The following will provide a brief overview of the 3D animation production process and introduce the practitioners under study, as well as their position in the pipeline.

Between several hundred and over a thousand workers with very specialised skills contribute to the production of large 3D animation films. While most personnel work at specific points in the production pipeline, there are some key figures who guide the film production from beginning to end, for example the director, producer and often a computer graphics (CG) or visual effects (VFX) supervisor. The director is the creative lead and responsible for the creative aspects of a film. The CG, VFX or technical supervisor oversees the pipeline and the implementation of creative and technical solutions, for example the rendering workflow. While traditionally, the producer manages the budget, she or he can also have a large influence on creative decisions. The roles of ‘director’ and ‘producer’ are above-the-line occupations that guide and direct the artistic vision and are considered to be the creative talent on a film. The role of ‘CG supervisor’, however, is not regarded as above-the-line, even though this position can have a large impact on

the film. This uncertainty over who is considered creative talent and who is not, ties into a later point about how more technical positions are not included in the group of creative contributors. The large number of specialised practitioners, such as animators and CTDs, needed for animation production are regarded as below-the-line personnel and generally associated more with technical craft and knowledge. The focus of many studies in film and animation is on the above-the-line individuals, like directors or producers, and there is little research on below-the-line personnel in the 3D animation industry. However, the collaborative nature of animation feature film requires a closer look at the contributions of the large number of below-the-line employees. They might or might not be key contributors; however, they certainly should not be ignored.

There are several reasons why a new study of authorship and agency below the line is especially relevant for 3D animation. Technological advances in the medium have had a large impact on the animation production process, making it more complicated and requiring 'even greater interactive collaboration among ... departments and individual studio employees' (Holian 2013). Today, specialised knowledge from many unique experts is required to create a specific look (for example for CG hair), a desired behaviour or tool. Additionally, the switch to new digital production technologies caused three main changes in the production process: 'blurred and collapsed workflows', the increased 'pace of filming and work speed', and increased 'production multi-tasking' (Caldwell 2013a, pp. 359–360). While Caldwell is referring to live-action film, the point is also relevant to CG animation. For example, the fast-paced production process in today's 3D animation studios, requires workers to stand in and perform other job roles, including roles that require creative problem-solving, which imparts more authorial agency to the below-the-line practitioner. Stahl (2005) claims that animation studios rely specifically on the creative input and authorship of animators. While BTL personnel

are not usually associated with creative input, studios count on workers to stand in and perform these roles for schedule and budgetary reasons. Additionally, most theories of authorship focus on the author as an individual – a tradition established by the auteur theory. Theories of authorship of multiple collaborators in the film-production process, especially those that focus on the animation industry, are less explored by film studies scholars. My research is intended to help close that gap in the literature. There are, however, film studies researchers who have explored concepts of collaborative authorship in film, for example Robert Carringer, Berys Gaut, Paul Sellors and Martin Stollery. I will address this area of research more fully in Chapter 2, and establish a solid theoretical foundation for my research by reviewing the theories of these key scholars.

Since my research focuses primarily on a specific aspect of 3D animation production, it is useful to outline the pipeline of the studio as a whole to obtain a general overview of its workings and a sense of the position of the practitioners under study. Even though each studio has its own pipeline and although with every film the process can change slightly, the production process can roughly be divided into three sections: pre-production, production and post-production. During pre-production, the concept of the film is developed. This includes the non-visual and visual foundation of the project. The story of the film is established, and storyboards are drawn. The design or art department starts to create a look and feel for the film. Character and set designs are generated, often using traditional methods like 2D drawings and paintings, as well as clay sculpting. The casting process is set in motion and scratch tracks, sound recordings of voices and noises used as temporary placeholders, are put on tape. Frequently, story reels and animatics (series of storyboard images used for pre-visualisation) are assembled. If the project has special technical requirements and challenges, even technical development and prototypes can be part of the pre-production process.

The production process involves creating the assets, shots and rendered images of the film. It can be divided into two areas: the production of characters and sets (the assets being used in the film) and shot production (which is concerned with the creation of individual shots). During the asset-creation step, characters, objects and environments are first digitally modelled on a computer by the modelling department using the previously created 2D designs and clay sculptures as references. Then, the CTDs in the rigging department use this 'static' 3D model to create an underlying anatomy, comparable to a skeleton in real life, and connect this anatomy to a user interface so that it can easily be animated. Even though, the modelling department sometimes sculpts all the facial expressions and body correctives, in most cases this is done by the rigging department as well. Some studios, such as Pixar, even have their CTDs model the characters. Often, the modelling, rigging and animation departments work very closely together and iterate various processes in multiple phases of character testing. Once the 3D model has been approved, the materials, shading or texture department assigns materials to all assets to give them colour and texture. For characters or objects that require hair, hair or fur technical directors groom the models. These practitioners work very closely with design and often the director or art director. Once the props have been created, the set dressing, assembly or environments department assembles the sets for the shots. The production might also require the development of new technologies and tools to achieve a certain look or functionality which is implemented by the research and development team or by individual departments.

The second part of the production focuses on shot work. First, the cinematic planning for each sequence of the film is laid out. The camera or layout department defines the shot composition while working closely with the director. The action is roughly blocked in, and cameras and lenses are picked and positioned. The stereo (short for stereoscopy) department then starts their work, making sure that each

shot has the proper level of depth for audiences watching the movie in 3D. While the animation department usually starts their work earlier by interacting with the director, design, modelling and rigging departments to ensure that the characters can fulfil all the performance requirements, the main part of their work starts during shot production. Animators act out the sequences, often video recording themselves, and then recreate the poses with the character rigs in the computer. Thereafter, cloth or character effects technical directors add simulations for garments. The effects department is in charge of simulations, like clouds, water, fire, smoke and crowds in the shots. However, since crowd simulation is very complex and has been increasingly used to populate the 3D worlds in CG films, many studios have a separate crowd simulation department. Once the shots have been approved by the director, they can be lit by the lighting department and then sent to the rendering department to render the images used in the film.

In post-production, the rendered images can be edited and combined with other elements like audio, title and credit sequences. The compositing department can apply filters for post-processing or, for example, paint out parts of the images. The editing department works on the cut, also adding and updating the sound and voice recordings. At the end of the post-production process, the final voiceovers and sound effects are recorded, and the soundtrack composed.

This is just a brief overview that does not capture all elements of the production process and does not reflect the fact that the overall production process is never completely linear and not carved in stone. Work that is designated as part of pre-production might carry on and overlap with the production stage. Many tasks are interdependent, recursive or run parallel to each other. Additionally, techniques, titles and department structures and names may vary from studio to studio. However, in all animation studios, there are many opportunities for degrees of creative input from below-the-line personnel at numerous stages in the production

process. The paragraphs that follow will introduce the two specific job categories of the participants under study, CTDs and animators, and illustrate the reasons why they were chosen for this research. CTDs and animators do their work primarily during the production stage of the 3D animation pipeline, which often offers opportunities for their creative input. Studying personnel in the production stage of the pipeline seems especially useful for exploring creative contributions below the line. While many high-level decisions are made and the general artistic and technical direction is determined during pre-production, it is in the production process that the actual assets and shots are created. Many decisions are revised and adjusted during this process, which creates openings for creative contributions from BTL personnel. For example, characters are repeatedly sent back to design or modelling and gags are proposed to improve the entertainment of a shot as a result of negotiations between BTL and ATL personnel. This research explores if and to what degree CTDs and animators have agency and gain creative control over their contributions in the production process. In particular, my study takes an in-depth look at their negotiations with ATL personnel and among themselves, employing concepts proposed by production studies scholar John Thornton Caldwell: above-the-line strategic authorship control schemes and below-the-line tactical authorial counter-pressures.

The professionals chosen for this research, animators and CTDs, have properties in common, but also feature dissimilarities to allow for a more complete picture of below-the-line authorship in this study. Both sets of professionals are primarily active in the production section of the pipeline and considered below-the-line. CTDs work exclusively in the asset creation part of the pipeline, while an animator's core tasks take place in shot production. CTDs are less acknowledged as artists by the industry than animators. One of the reasons is similar to the basis of the uncertainty about the creative input of CG supervisors: the role of the CTD is

generally considered highly technical and believed to provide fewer opportunities for creative contributions. Undoubtedly, extremely specialised technical skills are vital for this role. This makes CTDs good subjects for my research, as technical skill sets are not always seen as creative. However, aside from their technical knowledge, many CTDs require skills that might be considered artistic. For example, they need to sculpt muscles, expressions and other deformations crucial to the performance of the character and sometimes even influence its model. Another reason is that the CTDs' role is often less featured within and outside the studio. This is often connected to the fact that the work of the CTD, like the production designer's work in live-action film (Brisbin 2013), is less known and often harder to explain.

First, the role of the CTD is relatively new. It emerged mainly from computer animation and requires a very specialised skillset. Second, the title itself is not self-explanatory and does not provide a definition of the role. The term 'technical' suggests that behind this role is a technician, not an artist; however, 'director' implies that the position is one of unique visionary power and artistic control. In the last couple of years, studios have made more efforts to explain the role of the CTD and include them in marketing events and bonus material, for example in *Despicable Me 2* (Coffin and Renaud 2013), Disney's *Frozen* (Buck and Lee 2013) or *Finding Dory* (Stanton and MacLane 2016). However, these videos primarily highlight the technical achievements of CTDs and less of their contribution to the creative production of the films.

When it comes to animators, many people even outside of the industry have a fairly good idea of what they do (or at least think they know what they do). First, the job position of the animator is not a new development. 2D studio animators have been part of the workforce since the beginning of the 20th century. Second, animators are often featured in bonus materials or interviews showing them in a more creative capacity. This is primarily due to the animator's responsibility for the

character's performances. Because of this, animators are often compared to actors. While it might be puzzling for researchers, this correlation is generally and widely accepted in the animation industry. Famous animators like Chuck Jones, Frank Thomas and Ollie Johnston, as well as books and classes focusing specifically on acting for animators, have established this comparison between animators and actors and support this claim. Academic scholars like Paul Wells and Donald Crafton are addressing this correlation as well. Wells, for example, sees the similarities between animator and actor in their motivation to 'extend the possibilities of the character beyond the information given or suggested in the initial text' (1998, p. 104). Crafton (2013) compares an animated character to a puppet and the animator to a puppeteer who creates those performances and becomes the 'real' performer. Because of the connection between the work of an animator and that of an actor, it appears to be easier to acknowledge an animator's creative input than that of a CTD. It is clear however, that in today's 3D animation industry many more people with diverse specialisations and skillsets contribute to a character, and arguably its performance. Thus, a new definition for authorship and agency below the line is necessary to address the changing dynamics of the creative input into the animation production process.

Donald Crafton admits in his latest book, *Shadow of a Mouse*, that he does not mention computer animation, since 'computer-generated imagery (CGI) is another immense project to be tackled' (2013, p. xv). To find a model of collaboration and authorship that incorporates the collaboration in 3D animation and works for more than one category of below-the-line work, this thesis raises the question of what defines a creative contribution. My research approaches an answer by analysing current definitions of creativity and examining how the practitioners theorise their own production practices. The inclusion of two BTL professions helps to shift the focus from the animator, who is regarded as more creative, to CTDs, who are

considered more technical. As a result, the thesis explores whether a definition of creativity should be extended to include multiple categories of creativity, for example artistic, technical and problem-solving creativity.

The two BTL work roles also provide interesting insights on questions of gender in the 3D animation industry, which represents another important aspect of my thesis. Throughout animation history, the role of women in animation production has been marginalised. Even in animation history publications widely known for their more objective and scholarly approach, one must search intensively to find female animators. To some extent, this is due to the small percentage of women in the industry in years past. Today, women's numbers in animation seem to be rising. A recent report from the Animation Guild, the American labour organisation representing animation and visual effects practitioners in mainly Los Angeles-based studios, states that 25.6% of its members in March 2018 were women, compared to 23.2% in October 2016, 20.6% in April 2015 and 17.3% in 2006 (McLean 2018; Hulett 2015b; Animation Guild 2006). Women in Animation (2016), a more internationally oriented organisation dedicated to advancing women in the field of animation, found that in 2015, 23% of all below-the-line animators in the United States were female. While the two studies do not distinguish between different BTL roles in animation, a report from the Animation Guild in 2015 disclosed that 17% of all their female members were technical directors and 6% were CGI animators/modellers (Hulett 2015a). However, one should not necessarily conclude that more women work as CTDs than as animators. Since the statistic only includes members of the Los Angeles-based Animation Guild and does not differentiate between various technical director roles (materials, fur, character, effects, crowds, pipeline, etc.), the numbers might be misleading, which the reality of this research seems to confirm. For example, while seeking relevant participants for my study, female CTDs were particularly hard to find in the animation industry and for one

animation studio (Sony), I was not able to find a female CTD, even after searching film credits. My thesis takes a look at such indications of a form of horizontal segregation by gender, which is the strong association of some occupations within an industry with women and some with men, by discussing the interviewees' experiences in the animation studio environment.

Since women in animation have been invisible for decades, my study aims to uncover potential inequalities and reasons for the lower participation rates of women in the animation workforce employing theories and key points of feminist debate by Proctor-Thomson, Ball and Bell and McRobbie. I attempt to close the existing gap in literature on the contribution of female below-the-line animators to the collaborative creative process in contemporary studio animation, as well as remodel our knowledge of women in the current animation industry in general. Through analysis of the interviews, I intend to facilitate an understanding of the below-the-line practitioner's access to the animation process and their creative contributions with a special focus on gender. I hope this thesis will be a valuable addition to the current body of research and bring me one step closer to my ambition to draw a more clear, thorough and current picture of male and female animators in North American 3D studio animation. The following section will provide an outline of the structure of my thesis.

Thesis structure

The thesis is divided into two sections. Section I consists of Chapters 1 to 3 and focuses on a review of current research and the presentation of my study's design and methodology. Following this introductory chapter, Chapter 2 establishes a solid grounding for the research design by reviewing the current literature and theoretical foundations of the four core concepts of this thesis: collaboration,

creativity, authorship, and gender. The discussion focuses on the current body of literature on the social division of labour, the gendered division of the animation workforce, questions of creativity and the theories of authorship and agency with focus on collaborative authorship below the line. After examining the current concepts, the chapter suggests that the film studies theories discussed are not sufficient to answer all the questions my thesis is trying to answer. Consequently, I turned to the field of production studies, which provides a useful model for a negotiated process of production between ATL and BTL personnel.

Chapter 3 introduces the theoretical framework of my study which draws primarily on theories from production studies. The chapter details the qualitative research approach of this study and presents current concepts by key scholars in production studies like John Thornton Caldwell, Vicki Mayer, Miranda J. Banks, Bridget Conor and Matt Stahl, as well as findings in closely related fields of the creative industries from David Hesmondhalgh, Sarah Baker and others. It also discusses current feminist debates from researchers like Sarah Proctor-Thompson, Rosalind Gill, Vicky Ball, Melanie Bell, and Angela McRobbie. Additionally, I review the role of the researcher and the ethical implications of my study. I conclude Section I by suggesting that the creative contribution and authorship below the line in 3D feature animation requires fresh assessment as some questions that arose from this study could not be fully answered with current ideas of creativity and collaborative authorship.

Section II includes Chapters 4 to 7 and contains the findings, analysis and conclusion of my research. Chapter 4 examines workplace hierarchies, animation studio power dynamics and the degree of autonomy of BTL practitioners in 3D feature animation. With the help of the interviews, I explore the negotiated process of production involving practices and rituals like ATL control schemes and BTL countermeasures. The chapter identifies monitoring rituals, such as notes-giving and

meetings, employed by studios to manage the contributions from below the line. It also demonstrates that below-the-line animators and CTDs contribute creatively to the animation feature film, intentionally and unintentionally circumventing or countering these top-down authorship control schemes. Finally, the chapter introduces the concept of trust and friendship as countermeasures to create a collaborative environment below the line.

Chapter 5 explores how authorship, creative control, and agency can be said to function below the line in the 3D animation studio. First, the chapter discusses the motivations of animators and CTDs to contribute creatively. Then, I examine the interviewees' understanding of what they consider a creative activity and how they define authorship. The resulting findings suggest a mismatch between the practitioner's idea and expectation of what creativity and authorship is, and the actual practice in 3D animation studios, which requires a collaborative approach to authorship. The chapter concludes with the development of a collaborative authorship model that can work for below-the-line contributions in the 3D animation studio environment.

Chapter 6 introduces the topic of gender and investigates the opportunities of female and male practitioners to contribute to the feature animation production process. It considers the gender inequalities women and men still report in some aspects of work, for example the low representation of female practitioners in the workforce, the level of salary and seniority. Theories and key points of feminist debates by Proctor-Thomson, Ball and Bell and McRobbie serve as a base for the exploration of these inequalities and potential reasons for participation rates of women in the animation workforce. Finally, the chapter discusses the dilemma that gender inequalities cannot be raised openly in the animation studio, and thus remain unspeakable in a work environment.

The last chapter reviews the main findings of my thesis and considers its

Chapter 1: Introduction

weaknesses and limitations. I also assess the implications of the study and make recommendations for further research and for practical application in the animation industry.

Chapter 2: Review of Literature/Theory

Introduction

This chapter reviews and introduces the current literature and theoretical foundations that this research builds upon to establish a solid grounding for the research design. Several subjects need to be explored to provide a solid base for my study of the creative and technical contribution of below-the-line female and male practitioners to the collaborative process in the 3D animation feature film industry. Since this thesis primarily emphasises themes of collaboration, creativity, authorship and gender, the following paragraphs will centre on the current body of literature in the following areas: the social division of labour and the gendered division of the animation workforce, questions of creativity and theories of authorship and agency with a focus on collaborative authorship below the line. All four core concepts are introduced with special regard to their relation to animation film production and below-the-line workers.

The social division of labour and theories of creativity

The examination of workplace power dynamics, hierarchies and control schemes is at the core of the study of the contribution of below-the-line female and male practitioners to the animation production process. The work hierarchies in which those practitioners operate, the nature of their relationships and how they communicate and collaborate with each other, allow us to analyse the animation community. These features of their work offer a glimpse into their daily tasks and conditions to help us understand if their work environment grants them the freedom to contribute creatively. This section of the chapter focuses on three themes: the

social division of labour in the animation industry, its strong connection to theories of creativity and the gendered division of the animation workforce. While this section introduces the categorisation of the animation industry into two labour segments, below-the-line and above-the-line employees, it also outlines how strongly claims of creativity and authorship are associated with those segments and challenges the accepted division into 'creative' and 'technical' employees.

First, the categorisation might not be based on a 'measurable difference of creativity or responsibility' (Stahl 2009, pp. 64–65), but rather inspired by reasons of financial profit, since it defines employees' remuneration and authorship rights. Second, the definition of creativity is highly subjective, which makes it difficult to judge who is creative and who is not. Additionally, creativity is traditionally associated with an individual, an idea which is deeply rooted in our understanding of what creativity is. This section will briefly discuss such definitions of creativity which focus on the creator as an individual and illustrate how those concepts permeate the conception of creativity in society. It will further introduce collaborative theories of creativity which allow for creative processes to occur when a group of individuals is working together. Elements of both approaches are relevant for this study and will facilitate the analysis of what creativity means for animators and CTDs in 3D feature animation and help determine whether their ideas are in line with current definitions. However, since the animation industry process is inherently collaborative, newer concepts of group creativity seem to be more suitable. The section will conclude with a look at women in the animation workforce and vertical and horizontal work segregation by gender, as well as the gendered pathways in animation history. The following also includes an overview of the statistics on the employment of women in the industry.

The motion picture industry is divided into two labour segments commonly known as 'above the line' and 'below the line' (Pope 2008). While those terms are

derived from project budget sheets which visually outline creative work expenses 'above the line' and technical labour 'below the line' (Banks 2006), Kara Jolliff Gould (2006) claims that the division of labour is grounded on early film's history and Frederick Winslow Taylor's scientific management theory. This theory separates creative decision making from manufacturing to increase the efficiency of the production process (ibid.). Gould argues that the popularity of Taylor's theory at the time film production started to industrialise had a major influence on film production and the introduction of the studio system. She also suggests that the application of this management style to filmmaking 'deemphasized the creative roles of lower-level workers while glorifying the contributions of producers and directors'. The division in 'creative' above-the-line and 'technical' below-the-line employees seems to confirm this tendency. Each section includes a variety of different occupations. Typically, above-the-line occupations are understood to be associated with creative roles that guide and direct the artistic vision, that is, the creative talent of a film. Below-the-line positions are generally associated with more technical craft and knowledge. Within the animation industry, animators and technical directors are regarded as below-the-line workers. Animators can be involved in the asset creation process, but their core work takes place in shot production, animating those assets. Technical directors, on the other hand, work in both areas. Character, materials and fur technical directors are primarily specialised in asset creation while effects, lighting and rendering technical directors work on shot production. They are all considered technical workers.

While American animation was originally 'characterized by an artisanal production process' (Stahl 2005, p. 88), as in Winsor McCay's *Little Nemo* (1911) and *Gertie the Dinosaur* (1914), animation production was remodelled early on to install an industrial mass production process defined by the division of labour. J. R. Bray, the creator of the *Colonel Heeza Liar* cartoons (1913–1924), also called the 'Henry Ford

of animation' (Crafton 1993, p. 135), closed a distribution deal to produce animated films more regularly which forced him to 'abandon individual control over production and mete out the work to assistants – in other words, establish division of labor' (ibid., pp. 144–145). While the new production model provided a mechanism to control and organise the artists in American commercial production, authorship migrated from artist to producer, from BTL to ATL (Stahl 2005). Between 1900 and 1910, 'it became quite clear ... that the employer was entitled to the copyright as a matter of law unless there was express agreement to the contrary' (Fisk 2003, p. 55). Still, animators remained responsible for the creative work and management would only become involved when production slowed (Stahl 2005). However, from then on, it was not the person who actually drew the images, but the studio or studio head who became the legal author. An early example is studio head Pat Sullivan, who took credit for the Felix the Cat cartoons, first released in 1919, 'when they were wholly conceived and executed by Otto Messmer' (Wells 2002, p. 77). Interestingly, the films in which the artist on screen interacts with his characters, for example Max and Dave Fleischer's *Out of the Inkwell* (1919–1929) starring the animated character Koko the Clown, with Max Fleischer playing the role of the artist, did not reflect the division of labour with multiple artists producing a film. The films still show an individual artist drawing on screen. As before, it was a single artist, 'the hand of the artist' or the 'magical creator' (Stahl 2005, p. 92), who represented the pool of animators involved in the production. However, it is important to note that 'Max Fleischer is only pretending to be the animator' (Crafton 1993, p. 298). Dave Fleischer is the actual animator who even used rotoscoping techniques of his own filmed footage to animate Koko. Thus, this inadvertently reflects the division of labour and the shift of authorship from artist to producer Max Fleischer, who stages himself as the artist and author of Koko's creation.

Today's animation industry is still characterised by a hierarchical structure

and a division of labour. While the original organisation of the 2D animation industry had reinforced 'their classification as the technical workers ... rather than as creative workers with any possibility of authorial claims' (Stahl 2005, p. 94), the new technology of 3D animation intensified this categorisation. One of the reasons was the extreme specialisation of work tasks. Now, one frame of character animation requires not only an animator, but also modelling, rigging, fur, materials, simulation, effects, lighting, compositing and rendering, among other specialists. This subdivision makes it difficult for BTL employees to claim authorship. A different approach that allows for the collaboration necessary in computer animation is necessary, since approaches focusing on traditional animation cannot necessarily be applied. Donald Crafton, for example, admits in his latest book *Shadow of a Mouse* that he does not mention computer animation, since 'computer-generated imagery (CGI) is another immense project to be tackled' (2013, p. xv). This makes sense, since Crafton primarily speaks about one animator sharing dual agency with his creation from a performance standpoint. His theory might have to expand for today's 3D animation, in which many more people are responsible for the character, and arguably its performance. For example, an effects and cloth simulation specialist, as well as the modeller and the CTD contribute to an animated shot, and might even add to the performance in some way. Thus, this thesis strives to extend the model of creative contributions and authorship in computer animation to account for multiple practitioners contributing to a performance, as well as for contributions that do not relate to performance. While the new technology in computer animation intensified the exclusion of below-the-line practitioners from authorship claims through the extreme specialisation of work tasks, it also led to the misconception that the new technology would essentially do the work for the animator. Especially in the early stages of 3D animation, technology was perceived as the driving force and human agency completely removed from the equation. The following anecdote illustrates

this:

The SIGGRAPH audience went wild for Andre and Wally B. One programmer said to Lasseter, 'That film had such a warmth and personality! What software did you use?' As though the computer program, and not Lasseter's skill as a visual artist, was what made the difference (Sito 2013, p. 242).

Mihaela Mihailova states that 'the potential suppression of artistic creativity' still 'remains a topical concern' (2013, p. 135) in the field of computer animation. However, she cautions that one should not forget that it is the human artist who uses the software needed for computer animation, and not the other way around. Just pushing a button on a machine is not enough to create an exceptional film. Paul Ward confirms this idea by claiming that technology on its own does not make good animation; technology and creativity 'feed off one another' (2006, p. 237). Animation requires a human agent, who controls and drives the technology by means of his or her creativity.

My thesis challenges the accepted division in 'creative' and 'technical' labour in the animation industry and the presumptions behind this division of labour are interrogated in the following chapters of this study. Since the 'line' which segregates the workforce into two categories has been adapted from production budgeting to determine the cost of a film, the division needs to be evaluated with its financial background in mind. First, the categorisation indicates how employees are paid. While above-the-line residuals¹ are calculated on an individual basis, resulting in royalty-like, direct payments, below-the-line workers benefit from residual

¹ Residuals are 'extra-salary payments for the reuse of produced material' (Stahl 2009, p. 58) made to the creator or the performer in the material. A typical example is a television rerun.

payments collectively often through enhancements of benefits like company contributions to health or pension funds (Stahl 2009). Even though some studios offer bonuses to their below-the-line employees based on the domestic or international box-office gross, the percentage is shared collectively and not determined by individual negotiations.

Second, the 'line' defines who can claim creative authorship and who cannot. But who defines what is considered to be creative and what is not? The definition of creativity is one that has been studied in depth by many researchers. The theories vary, as I will discuss below. However, most approaches agree on creativity being a process which must be new or produce something new and must be given value according to some criteria. While above-the-line workers can claim creative agency and are acknowledged as authors within and outside the industry, below-the-line employees are denied individual credits and intellectual property (Stahl 2009). Nevertheless, this thesis will argue that workers categorised as below-the-line and 'non-creative' are often contributing immensely with creative ideas and solutions while developing films, a position supported by my interview-based research. Stahl especially mentions 'technical' workers in animation who are 'crucial to the development of characters and stories, particularly in animated films' (2009, p. 61). He specifies that the division in 'creative' and 'technical' workers is not based on a 'measurable difference of creativity or responsibility', but rather serves 'to produce and/or sustain particular (im)balances of power' (ibid., pp. 64–65).

Since who and what is considered creative is directly related to one's position in the social division of labour, it is necessary to first explore the nature of creativity before attempting to investigate the contribution of female and male animators and CTDs to the creative and collaborative process. Below-the-line employees in the 3D animation industry have their own concept of what 'being creative' means and what the sense of creativity is for them. To understand if current

theories of creativity are in line with their ideas, or if current definitions need to be extended, it is important to provide an overview of these theories as a foundation for discussion. This overview will also allow for a critique of the division of labour in 'creative' above-the-line and 'technical' below-the-line employees.

While many researchers (notably Gruber, Csikszentmihalyi, Gardner, Amabile, Tighe, and Simonton) have been studying creativity and agree on the fundamentals of its definition as a process, idea or product which must be new and be given value, the details vary from researcher to researcher. The concept espoused by Amabile and Tighe (1993) is that for work to be considered as creative, it needs to be judged to be new or significantly different by appropriate observers. Simonton (1999) adds that not only must judges decide if something can be deemed original, but also if something can be considered workable. Csikszentmihalyi explains that 'creativity is any act, idea, or product that changes an existing domain, or that transforms an existing domain, for example Mathematics or Art, into a new one...' (1996, p. 28). Besides novelty and value, Gruber and Wallace (1999) determine two additional criteria to be part of creativity: purpose and duration. In order to be creative one needs to have a purpose, and usually those creative endeavours are difficult and take time, thus possess a duration. Gardner describes a creative individual as 'a person who regularly solves problems, fashions products, or defines new questions in a way that is initially considered novel but that ultimately becomes accepted in a particular cultural setting' (2011, p. 33). Gardner's inclusion of problem-solving in the definition of a creative process is extremely relevant for the analysis of the animator's and CTD's creative contribution. As discussed in Section II of this study, CTDs in particular question whether problem-solving is a creative activity with some suggesting that it is a different kind of creativity, dissimilar from, for example, artistic creativity. This thesis will explore if a definition of creativity should be extended to include multiple categories of creativity, for example artistic,

technical and problem-solving creativity. While this paragraph offered only a quick and limited glance at the theories of creativity, two ideas that are part of most definitions of creativity represent an issue for my study: the concept of 'new and valuable', and the association of creativity with an individual.

The concept of defining creativity as something 'new and valuable' is problematic, because these qualities are highly subjective. Since novelty, value and usefulness are not objective characteristics, they are prone to bias (Smith 2001). Therefore, the differentiation between technical BTL and creative ATL practitioners is equally subjective, and creative contributions might not easily be recognised. For example, a below-the-line practitioner's contribution might be innovative, but not get judged as such, because the kind of creativity involved is not recognised by the person appraising it. Thus, the separation in technical and creative workers seems to be less based on actual creative contributions than on subjective categories of what is considered and recognised as creative, and works well for the employee remuneration scheme. Another main issue with the definition of creativity is that it is often associated with individuals. The reason lies in the deeply rooted romantic notion of the 'lone genius', an image frequently connected to 'exceptional creativity' which can be traced back to pre-Christian societies (Simonton 2004). Additionally, some researchers claim that the economic orientation and individualistic culture, especially in capitalistic nations like the United States, embedded the view to value individual works over collaborative efforts even deeper in the society (González 2008). The idea of the author as an individual artist also serves an economic purpose. Individualism influences the distribution of creative credit through intellectual and creative property laws. Even the division of labour, as previously outlined, originated from a budget sheet, and thus, the decision of who is below and above the line was financially driven. Also, attributing film to the artistic expression of an individual, usually the director, helps to elevate and establish film as an art

form and provides a useful marketing tool to promote film. It is no coincidence that movies are generally advertised with the slogan 'from the director that brought you [name of film]'. Connecting a film to an individual who has successfully worked on another film creates distinction and value. As discussed later in this study, below-the-line practitioners in the 3D animation industry also struggle with this concentration on the individual creator when trying to determine their own creative contribution. The interviewees especially debate if only the initial idea of an individual can be considered as a creative contribution or if everyone who might extend or change the initial idea in the process can be regarded as creative individuals as well.

More recent theories aim to address group creativity or collaborative creativity, as well as organisational creativity and focus instead on creative processes which need a group, rather than only an individual, to occur (González 2008). Woodman, Sawyer, and Griffin define organisational creativity as 'the creation of a valuable, useful new product, service, idea, procedure, or process by individuals working together in a complex social system' (1993, p. 293). Since film production, as Simonton points out, is 'typically the collective creation of a large number of separate individuals, each contributing their creative input, unique talents, and technical expertise' (2004, p. 1495) theories of group creativity seem to be more appropriate for this field than previous concepts. R. Keith Sawyer, a group creativity researcher, affirms that 'the collaborative nature of movie production cannot be explained with individualist approaches' (2006, p. 197). Bennis and Biederman agree with Sawyer by calling filmmaking collaborative 'almost by definition' (1997, p. 6). Both Simonton and Sawyer encourage the research on group creativity in the motion picture production process as an important, rather unexplored research issue. The newer concepts of group creativity seem to be a more suitable approach for my analysis than the concepts of creativity based on an individual, since film-

making and animation are inherently collaborative processes. However, the interviewees are influenced by the historically conditioned and commonly accepted preconception of the creative as an individual, justifying the need for both individual and group creativity theories to interrogate the presumptions behind BTL employees' creative contributions in the animation industry. Another important facet of the discussion of labour in the animation industry is gender, as I will discuss in the following paragraphs.

Within the social division of labour in the animation industry, and thus, in the classification of who is considered creative personnel and who is not, a gendered division can be observed. Sharon Couzin writes that, historically, 'the field was occupied by men in the conception, rendering and distribution' (1997, p. 72). Until the 1970s, women directors in animation were extremely rare, which indicates a strong vertical segregation by gender. A vertical segregation refers to the segregation in low- and high-status work, for example the underrepresentation of women in key creative roles, like directing or writing. For years, women were solely employed in the ink and paint departments of animation studios. As a secretary in a big animation studio wrote in 1939:

Women do not do any of the creative work in connection with preparing the cartoon for the screen, as that work is performed entirely by young men. For this reason girls are not considered for the training school. To qualify for the only work open to women one must be well grounded in the use of pen and ink and also of water color (Cohen 1997, pp. 155-156).

Anonymously painting, and as in the case of the Disney studios, working spatially completely separated from the men, only some female artists like Phyllis Craig and

Helen Nerbovig 'established themselves as artists in their own right' (Furniss 2007, p. 234). This illustrates an example of horizontal segregation by gender, which is the strong association of some occupations within an industry with women and some with men. In the case of the ink and paint department, the job association with women was quite exclusive, especially since it represented 'some of the few jobs open to [women]' (Furniss 2016, p. 63). This is relevant, since this work was not considered creative and was seen as less significant in comparison to the prestigious character animation which was exclusively exercised by men. Furniss writes that while female artists were able to 'move horizontally within the system', women 'were prevented from vertical moves, or advancing to other creative positions' (2016, p. 99), for example character animation. Since women were not able to break into such key creative roles, it is not surprising that there are few women who were able to make names for themselves. One woman who managed to get her name into the books of animation history was LaVerne Harding who worked for the Walter Lantz studios and was one of the early female animators in the American studio system (Bendazzi 1994). Lillian Friedman, the first female animator in the American studio system, and Edith Vernick worked at the Fleischer Studios in New York (Furniss 2007). Mary Blair, Sylvia Holland and Retta Scott were part of the Disney organisation and Xenia Somerville worked with Chuck Jones (Halpern Martineau 1980). However, as Mindy Johnson writes in her book *INK & PAINT - The Women of Walt Disney's Animation*: there 'are countless more [women], who from the very beginning, played a vital role in defining the animated films' (2017, p. 14). Johnson's research is one of the only comprehensive accounts that goes beyond these few names acknowledging and revealing the extraordinary contribution of women behind-the-scenes in the history of the Walt Disney Animation Studios. There is also evidence for an early inequality in women's remuneration. Friedman, for example, was paid \$40 per week as an animator in 1933, \$85 less than her male animation

colleagues (Lenburg 2006). This shows that although women were present in the commercial animation industry, they were very much in the minority. Animated feature director Lorna Cook (DreamWorks' *Spirit: Stallion of the Cimarron* (2002)) recalls that she was the 'sole woman in the animator training program at Disney in the '70s' (Rodriguez 2002). Dianne Jackson, who in 1982 directed *The Snowman* for Channel 4 in the United Kingdom, 'one of the most successful and popular TV animated specials ever made' (Pilling 2011, pp. 24–25), was one of the rare women in commercial animation. In 1990, a summary of the Los Angeles-area Motion Picture Screen Cartoonists Union Local 839 statistics revealed not much change in the industry: besides a total female membership of 34%, only 16% of the top of the employment hierarchy consisted of women (Furniss 2007). It was not until 1982 that the first organisation to specifically support female animators, the Women's Animation Network Directory Alliance (WANDA) was founded (Furniss 2016). In 1993, the professional organisation *Women In Animation* followed to represent the female artists in the animation industry internationally. Linda Simensky writes:

Men in the business joked, 'Where's the Men In Animation group?' to which the women replied, 'That's what we call "The Animation Industry"' (Simensky 1996).'

A couple of years later, animator Tasha Wedeen (Pixar's *Toy Story 2* (Lasseter and Brannon 1999); *A Bug's Life* (Lasseter and Stanton 1998)), still 'reports that at Pixar of 60 animators, nine are women' (Rodriguez 2002). Recently, however, it has become more common to find women working in animation studios. A report from the Animation Guild reveals that as of March 2018, 25.6% of its Los Angeles-based labour organisation members are now women, compared to 23.2% in October 2016, 20.6% in April 2015 and 17.3% in 2006 (McLean 2018; Hulett 2015b; Animation Guild 2006). Increasingly, women are hired in various capacities, even for creative

jobs like writing and directing which had been male-dominated areas for decades. This might have been in part 'because women have made it to the top of the labour hierarchy and are now looking out for the future of other women' (Furniss 2007, p. 232). Yvette Kaplan co-directed *Beavis & Butt-Head Do America* in 1996, Vicky Jenson co-directed *Shrek* (2001) and *Shark Tale* (2004), and Jun Falkenstein solo-directed *The Tigger Movie* (2000). Particularly, with the announcement of Pixar's *Brave* (Andrews, Chapman and Purcell 2012) in 2008 the topic of female directors in animation became the headline of several articles. The film did not only feature the studio's first female lead character, but was also headed by its first female director, Brenda Chapman. When a couple of years later Chapman's removal from the production was publicised 'it stung not just Chapman but also her female colleagues in the animation industry' (Sperling 2011a). Her story inspired me to use one of her statements about gender inequalities in the animation industry in my interviews to ease into this subject. Since then several women have been able to attain the position of the director in animation studios: Jennifer Yuh Nelson solo-directed DreamWorks Animation's *Kung Fu Panda 2* (2011), Lauren MacMullan directed Disney's short film *Get a Horse!* (2013), and Domee Shi directed Pixar's short film *Bao* (2018). Nevertheless, the future of women in key positions in the commercial and independent animation industry appears to be brighter as female enrolment in character and experimental animation programs have increased, at CalArts to more than 50% (Barney 2012), and female role models have increased in number. Women in Animation (2016) found that in 2015, 60% of all animation students were female. One might hope that as more women start holding higher creative positions, female animation practitioners will naturally become more common in animation studios. Lorna Cook, writer, animator and director (*Spirit: Stallion of the Cimarron* (2002)), asserts that 'as times changes, eyes are opened by strong women artists' abilities and talents' and that those women will 'encourage and inspire more women into the film

industry' (ScratchPost 2002). Pilling writes that 'critical mass in itself can play a role in that greater visibility of women filmmakers can inspire and encourage other women' (2011, p. 24). For example, Chang and Keifer-Boyd's (2011) research suggests that female role models seem to have a large influence on the motivation and ambitions of women who are interested in pursuing a career in animation.

While the growing number of women in the industry in the last decades promises an improvement of the imbalance in the industry, current female participation numbers still show slower change concerning the gender diversity in the animation workforce than one might expect looking at the increase in female animation students. Many questions concerning women in the animation industry today, especially in computer-generated commercial feature animation, have not been answered. While several books offer an insight into the thoughts of female animators in independent animation, not many books focus on the career of women in commercial Western animation. My research will approach an explanation for the potential reasons of the low numbers of women in 3D animation feature film by examining the experiences and ideas of male and female practitioners. The study will include voices of recent professionals rarely heard and whose contributions are sometimes overlooked. I will take a special look at female practitioners in today's 3D animation industry to examine if they have been able to gain the same access to the animation production process as male practitioners. Additionally, while many studies concentrate on filmmakers and directors, few studies focus on below-the-line practitioners in the 3D animation industry. My research, however, will focus on women and men who work as two types of below-the-line professionals: animators and CTDs. I hope that being a female professional working in the animation industry as well as being a researcher will help me bring a unique angle to this study. This personal closeness to the topic might also cause difficulties as discussed in Chapter 3, but it is 'the researcher's task ... to recognize his or her own point of view and

understand how it affects his or her perceptions of a given situation' (Furniss 2007, p. 231). My aspiration is to encourage further research in this area and to inspire women to pursue careers in animation, to develop increased gender diversity in the animation industry.

While this section outlined the division of labour in below- and above-the line roles, as well as associations with creativity and division of the workforce by gender, the next section will discuss closely related questions of authorship and agency.

Theories of authorship and agency

This section introduces relevant theories of authorship in film studies with examples from the field of animation and outlines my proposed model of authorship for the thesis based on these ideas. First, it briefly outlines the main ideas behind the theories of authorship in film studies of the past and present, primarily focusing on the author as an individual. In many academic theories of authorship the figure of the individual as author is predominant. However, theories that attribute creative agency to a single figure are of limited use to the study of below-the-line professionals in the inherently collaborative animation production process. Thus, the following paragraphs will focus on theories of collaborative authorship by key scholars like Robert Carringer, Berys Gaut, Paul Sellors, and Martin Stollery, which account for the contributions of more than one person. This section will provide a critique of these theories of collaborative authorship and a discussion of their value for my study's methodology. First, the section will turn to Carringer's concept of authorship. While he still focuses on the director and leaves out the idea of a negotiated process of production between ATL and BTL personnel, he recognises both ATL and BTL practitioners as possible collaborators. He also offers the valuable

definition of a collaborator as someone who makes a distinguishable contribution to a film. Second, Gaut's theories, which are at the core of my research, will be presented. He adds the idea that tasks in the film production process leave room for interpretation and, thus, opportunities for BTL contributions. Additionally, he understands film production as an ensemble of activities, suggesting that they produce a result that is greater than the sum of its individual parts. This comes close to a usable methodology for my research. Third, this section will briefly discuss Sellors' ideas about intentionality, which are not practical for this study. However, his approach allows for authors above and below the line who make small, considering the scope of a film, but still relevant contributions, which is a topic that arose from the interviews. Lastly, the discussion that follows will demonstrate that Stollery's ideas about collaboration and control are extremely valuable concepts for my research on the animation industry. Feature animation studios are characterised by hierarchies which formally assign and distribute control. Thus, the concept of control will be especially valuable for the examination of the negotiated process of production and the exploration of creative control behind the scenes of animation studios by gender.

Film critics and scholars have attempted to attribute creativity and authorship solely to the director as part of the auteur theory and a range of other academic theories of authorship. Historical and economic conditions help account for the emergence of these individualistic approaches to authorship. Such concepts of authorship provided a marketing tool to promote and elevate cinema, and even mainstream film, as an art form, and thus it became a worthy object for critical academic analysis. Debates and approaches by film critics and theorists like André Bazin, Alexandre Astruc, François Truffaut, and Andrew Sarris centre around a single figure who is attributed creative agency, for example the director or producer. Such an individual is thought to be able to impose his or her unique creative position on

the entire film production process and its members, and thus, to be able to put a recognisable stamp on the resulting film. Walt Disney is an example of a studio head in the commercial animation feature film industry who claimed and received sole credit for his company's work. Framing himself as the author also had economic benefits for Disney and allowed him, in his own words, 'to establish the Disney name as a guarantee to the public of good family entertainment' (Bennis and Biederman 1997, p. 41), an ambition that certainly paid off and can still be said to function today. However, multiple researchers confirm Disney's claim of authorship, even though he was not the actual artist. According to Paul Wells, an author can also be defined as 'a person who prompts and executes the core themes, techniques and expressive agendas of a film' and as 'a figure around whom the key enunciative techniques and meanings of a film accrue and find implied cohesion' (2002, pp. 74). Considering such an author definition, Disney, who initiated and tightly guided the outcome of the work in accord with his vision of the films, could be called an author, even though he was not actively drawing the images. Tom Sito confirms this idea when talking about Walt Disney:

To weld four hundred egos into a tool that creates art that looks like it was made by one person has little to do with the ability to draw. A strong leader is needed to bring forth good work, usually using the power of his (or her) personality alone (Sito 2006, p. 52).

While Sito does not specifically talk about authorship or claims of sole authorship from the director/producer, it becomes clear that he does assign a large amount of credit to the leader and in this case to Disney, since he refers to below-the-line personnel as a 'tool' needing direction to produce good work. Group creativity researcher R. Keith Sawyer (2006) indicates that even though the director

might have a distinct creative vision, he is not able to create a film without the support of a large team. A commercial project on the scale of, for example, Disney's first feature-length animated film *Snow White and the Seven Dwarfs* (Cottrell et al. 1937) is without a doubt a collaborative effort. To finish an 83-minute animated feature, which required 250,000 hand-drawn images, could not be done by just one person in a cost-effective and timely manner (Bennis and Biederman 1997). Theories of collaborative authorship in film studies, like those introduced by Robert Carringer, Berys Gaut, Paul Sellors, and Martin Stollery, seek to account for the contributions of more than one person, and are more directly applicable to the study of below-the-line authorship.

Robert Carringer's book *The Making of Citizen Kane* is one of the earlier studies describing the collaborative process in film studies. He details the actions and contributions of individuals in the production process by using interviews, production records and other archive material. In his book he states that 'anyone who makes a distinguishable contribution to a film' is a 'collaborator' (Carringer 1996, p. x). Carringer defines a collaborator and the collaborative process as follows:

By collaborative process I mean the sharing of the creative functions by the director with others. A collaborator, in the most general sense of the term, is anyone who makes a distinguishable contribution to a film – from the writer or cinematographer down through the ranks to the wardrobe manager and casting director and even the still photographer assigned to the set (Carringer 1996, p. x).

Carringer's acknowledgement of the existence of collaborators and his definition of a collaborator as someone who 'makes a distinguishable contribution' (ibid.) are valuable ideas for the analysis of this study. Unfortunately, Carringer does not

explicitly describe what he means by 'distinguishable', and thus leaves the definition of a collaborator open to a subjective appraisal of the value of his contribution. However, he does give examples and explains where such important contributions are most likely to occur. He primarily refers to screenwriters, art directors, cinematographers, sound engineers, music directors and editors as work titles that might indicate collaborators. Nevertheless, he suggests that 'screen credits are not always a reliable guide' (Carringer 1996, p. x) to look for distinguishable contributions. For example, Carringer indicates the 'visual solution embodied in the background painting of Xanadu' (1996, p. 99) in *Citizen Kane* (Welles 1941) as a contribution of the special effects artist. Thus, Carringer clearly includes below-the-line workers in his 'collaboration analysis' (Tybjerg 2005, p. 44), as he calls his procedure, which makes his ideas especially relevant for my thesis. He extends the idea of authorship by acknowledging collaborators, and providing a more sensible insight into the contributions of the crew during the production process. He characterises the worker as an individual with agency and coherency who is 'free to take up a role or not' (Staiger 2002, p. 42). While Carringer does not deny the considerable influence of the director on the film and still allows for the view of the director as the primary author, he also believes that the 'quality of a film is partly a measure of the quality of its collaborative talent' (1996, p. 134). He further concludes that a specific director-collaborator combination is imperative for a particular outcome with regard to a movie, thus, a movie would seemingly not be the same with a different production team.

Carringer's ideas are primarily valuable to this study, because he acknowledges the existence of collaborators and includes both ATL and BTL practitioners in this concept. He also defines a collaborator as someone who makes a distinguishable contribution to a film, which will provide a starting point for the analysis of the contributions below the line. However, even though Carringer's

theory allows for below-the-line authorship, he still focuses on the director as the primary author who is supported by collaborators. This approach acknowledges other potential individual authors who could arise from the production team, but differentiates itself from theories of multiple authorship and collective authorship and instead analyses how individuals, as subjects with agency and coherency, work together (Tybjerg 2005). He therefore does not contemplate group or corporate creativity which could explain 'production as an ensemble of activities', as film and media studies scholar Manuel Alvarado (1981, p. 13) calls it. Thus, Carringer's concept is still very much rooted in individual authorship, since his primary focus is on a couple of individuals. Additionally, another key facet of production he leaves out is the idea of a negotiated process of production between above- and below-the-line personnel, a topic which has arisen from the interviews. These practitioners might not necessarily be 'collaborators', but instead try to confirm their own artistic agency, or try to keep and protect control over their authorship.

Another important philosopher in the area of collaborative authorship is Berys Gaut, who promotes the concept of multiple authorship. This theory maintains that there are many authors of a film and while they may or may not consent to the purpose of production, all notable contributors must be regarded as authors (Gaut 1997). Compared to Carringer, Gaut is less willing to allow that the auteur director should be regarded as the primary author. Since the role of the director is to direct and supervise others, 'artistically significant aspects of the film' are not directly the results of his actions and 'not attributable to him alone' (Gaut 1997, p. 156). Most film tasks are less specific, leaving room for the unique, artistic contributions of the collaborator executing the task, which limits the director's degree of control over the work. As an example, Gaut mentions the performance of an actor. If an actor reads his line, interpreting it a certain way, he makes an artistic contribution, as does the director who chooses to accept that specific interpretation. There are many

instances of tasks in special effects that leave the collaborators a lot of artistic freedom. For example, the character design of the fallen angels called 'Watchers' in the film *Noah* (Aronofsky 2014) were a result of a sculptor 'mucking around in the art director's backyard with some wax and sticks and stones' (Failes 2014). While there were some rough guidelines for those creatures, it was the interpretation of the sculptor that convinced the director, who welcomed his ideas. Stahl (2005) claims that animation studios are equally reliant on the creative input and authorship of animators. For schedule and budgetary reasons, and because of the fast-paced production process, studios count on workers to stand in and perform other job roles, including roles that require creative problem-solving, which imparts more authorial agency to the below-the-line practitioner.

Gaut's concept of multiple authorship brings film studies much closer to 'understanding production as an ensemble of activities' (Alvarado 1981, p. 13). He compares film to musical performances, especially to jazz, where all participants affect the result through their improvisation. The outcome of such a performance is greater than just the sum of its parts. Gaut calls it a 'cinematic pot-pourri' (1997, p. 165). However, this analogy of contributions of individual practitioners as a pot-pourri does not involve any indication of direction or urgency which is not as compatible with contributions in an animation studio which might have an order, an urgency as well as, possibly, a common goal. For example, a CTD's contribution primarily takes place at a specific time in the production pipeline indicating an order of certain events and contributions. A contribution is most always urgent, because of production pressures and deadlines.

Gaut's multiple authorship offers many key aspects which are valuable for my thesis. First, the idea that tasks in the film production process leave room and opportunities for BTL contributions is at the core of my research. The director's artistic vision is often not a tangible task, it requires interpretation. Holian confirms

that ‘this singular vision is articulated and executed through engagement with a host of creative problem solvers’ (2013). Thus, these practitioners often add their own ideas, making suggestions beyond just executing someone else’s concept.

Nevertheless, the belief in the all-encompassing director’s vision persists, reducing all workers in the animation industry to mere executants of this vision. Storyboard artists, for example, are often regarded as the mere renderer of the director’s artistic vision, even though carrying out the director’s artistic vision and collaboration are not necessarily contradictory. Therefore, the ‘authorship of below-the-line storyboard artists remains nonproprietary, officially unrecognized’ (Stahl 2005, p. 100). This study will explore how animators and CTDs negotiate the director’s vision and what strategies they employ to add their own ideas to the process. Adding the idea that studios actually rely on BTL contributions, I will investigate if the interviewed animators and CTDs are aware of the studio’s dependence on such contributions.

Second, Gaut’s understanding of film production as an ensemble of activities, but still with individual contributions, comes close to a usable methodology for my research. His comparison of film to a musical performance seems to be more applicable than his analogy to a cinematic pot-pourri, because it allows for the inclusion of direction and urgency in a definition of collaboration. Additionally, it amplifies the idea of collaboration being more than the sum of its individual parts. González (2008) suggests that being part of a project that is bigger than any one of them and greater than the sum of its parts provides a greatly rewarding experience in itself. Thus, this concept allows me to ask questions about why people engage in a collaborative process where they are rarely credited as creative. How do they feel about working anonymously, not being officially credited for their potential creative contribution, and sometimes even being rendered invisible? Filmmakers might find the collaborative process of film creation a valuable experience for its own sake. It is

an 'autotelic' (Csikszentmihalyi 1996, p. 113) activity: the reward lies in the doing of it. Directly related to animation, Bennis and Biederman answer the question about why people choose to work anonymously as follows:

Not for the money, surely, even with bonuses and the promise of profit participation. People work at Disney animation because they feel that they are part of something truly important, something insanely great (Bennis and Biederman 1997, pp. 61–62).

Working with Gaut as a model for authorship allows me to ask if being part of such an enormous creative collaboration provides opportunities for below-the-line practitioners to be creative in the production process, and if they feel authorship even though they are not officially credited for those contributions.

Paul Sellors, another key scholar in this research field, approaches authorship from the standpoint of collective authorship which understands everyone involved in the production process of a film as a unified whole with a collective goal and intention. The relevant component of Sellors' theory is his definition of the contributions one needs to make to be considered an author. Sellors regards everyone as an author who intentionally expresses 'a filmic utterance' (2007, p. 266), where expressing an utterance refers to any intended action which manifests or communicates some attitude by means of the film production, no matter whether below or above the line. At the same time, it is not important how poor or how small the intentional utterance is. While an animator might only contribute one shot to a movie, it might be that this scene and its interpretation is very significant for the movie. However, this definition also infers that not everyone in the film team is an author. Members of the team might not make an intentional utterance and thus not become an author. For this reason, Sellors refuses to

determine the 'membership of collective authorship' (2007, p. 269) just on the basis of work titles, but instead by understanding the contribution a person makes to the overall film. While intentionality is a fundamental concept in Sellors' approach to authorship, this concept is not going to be significantly relevant to my thesis. Below-the-line workers in film might not be conscious about their role in the production process and the impact of their decisions. Therefore, a practitioner's actions may or may not be intentional, and thus, the concept of collective intentionality is not at the heart of the authorship questions I am trying to answer.

Paul Sellors' concept is interesting since it is the only one that leaves the concept of individual authorship behind and approaches the production team as a unified whole with a collective goal and intention. However, while Sellors' concept of collective intentions is not relevant for my thesis, his idea of 'utterances' is. One of the themes that arose from the interviewees in the study was the question of whether a practitioner's creative and technical contribution is important enough to be worth mentioning, and for the practitioner to be considered an author. Sellors' approach allows for authors above and below the line with contributions, no matter how small they are in the scope of the entire film, and thus helps to analyse such questions.

While the examination of workplace power dynamics, hierarchies and control schemes is at the heart of my study, Carringer, Gaut, and Sellors do not put much emphasis on the notion of control. Sellors (2007) specifically asserts that intentions already indirectly imply the idea of control to rationalise why he does not add intention as a separate element of his definition of an author. In contrast, film scholar Martin Stollery believes that some 'degree of control or influence is necessary' (2009, p. 390) to make an intentionally tokened utterance and therefore make a proper assessment of a below-the-line employee's collaborative input. Films are collaborations and within those collaborations, some collaborators possess more

power, and thus control, over certain aspects of the production process than others (Stollery 2009). Additionally, Stollery specifically mentions the importance of control in relation to gender:

Structural inequalities and traditional assumptions about gendered occupations and working practices have historically denied female technicians the same extent of overt, formally defined control within production processes afforded to their male colleagues (Stollery 2009, p. 390).

Formally defined control is primarily designated through higher-level work and seniority. However, as previously outlined, statistical data about female practitioners and their participation in the film, and especially the animation industry of the past and present, suggests horizontal and vertical work segregation by gender. Thus, few women have achieved the higher-level work and seniority in the hierarchies of animation studios which formally assign control over the production process. Since this thesis has a special focus on female animators and CTDs, examining female participation numbers in key positions in the animation industry might prove to be a valuable criterion to compare men and women's individual creative and technical contribution to the collaborative process.

Stollery's ideas about collaboration and control are extremely valuable concepts for my research on the animation industry. Modern animation studios offer a 'true creative collaborative environment' (Holian 2013) as each individual is integral to the collaborative effort, differentiating animation production from other collaborations where parts of the process may be assigned to a single artist. Such studios are characterised by hierarchies that formally assign and distribute control within the production process. Since this thesis focuses on below-the-line animators, it will be crucial to my research to look at their place in the hierarchy and the control

they hold or think they possess. The notion of control and hierarchy will especially be valuable for examining the negotiated process of production. Are below-the-line practitioners struggling to obtain control, and above-the-line employees striving to retain control over the production process? Additionally, Stollery's theories will especially benefit the examination of creative control behind the scenes of animation studios by gender. Since the participation rates of women in the animation industry are lower than the participation rates of men, few women have been able to achieve the higher positions in the hierarchy. I will especially focus on female practitioners in today's 3D animation industry to examine whether they have been able to gain a similar level of creative control in the animation production process as male practitioners. I will also explore if there are potential inequalities or gendered stereotypes that might hinder or empower female practitioners to contribute creatively.

This section presented the main theories of authorship in film and animation and its key researchers. Each previously discussed theory offers useful elements for this thesis' methodology: Carringer's concept of authorship recognises both ATL and BTL practitioners as possible collaborators. He also defines a collaborator as someone who makes a distinguishable contribution to a film. Gaut's concept includes the idea that tasks in the film production process are less specific and leave room for interpretation. Therefore, they create opportunities for BTL employees to contribute. BTL personnel are part of an ensemble of activities, which suggests a result that is greater than the sum of its individual parts. For Sellors it is not important how large a contribution is compared to the full scope of a film. If the contribution is relevant, the person making the contribution is considered an author. Stollery adds that some sort of control is necessary to make a relevant contribution. Since some collaborators possess more control over aspects of the production process than others, he includes the assessment of control (including formally defined control

through hierarchies) as an important element for evaluating the collaborative input of below-the-line employees. After the review of these various theories, it becomes clear that one theory alone will not be able to answer all the questions my thesis is posing. Particularly, the idea of a negotiated process of production between ATL and BTL, which might allow below-the-line employees to claim authorship, needs to be accounted for. Thus, my thesis requires an adjusted model of authorship, which is more inclusive of below-the-line workers in the highly collaborative community of computer animation.

Summary

This chapter discussed the division of labour in the animation industry, its connection to questions of creativity, the division of the animation workforce by gender, as well as the theories of authorship and agency that focus on collaborative authorship below the line.

The allocation and definition of creativity in animation is highly intertwined with a practitioner's position in the social division of labour. The 'line' determines who can claim creative authorship and who cannot as it determines the employee's remuneration and authorship rights. It also defines if a practitioner's role is regarded as 'creative' (above the line) or 'technical' (below the line). Employing individual and group creativity theories, this thesis will interrogate the presumptions behind the contributions of below-the-line practitioners in the animation industry. Additionally, feature animation shows a history of a gendered division of the workforce, indicating vertical and horizontal segregation by gender. While recently, women have become more common and are hired in various capacities in animation studios, current female participation numbers still show slow change concerning gender diversity in the animation industry. My study will

include the voices of recent female and male professionals to approach some of the questions regarding their contributions and experiences in the industry. Finally, the chapter reviewed the main theories of authorship in film and animation. It becomes clear that not one theory alone will be able to act as a framework for the methodology used in this thesis. The collaborative authorship theories by key scholars like Robert Carringer, Berys Gaut, Paul Sellors and Martin Stollery all include valuable aspects for this study. While the theories focusing on the authorship of one individual are not immediately applicable to this study, they are useful to understand and analyse the interviewees' responses. Since individual work and creativity is highly valued in our society, and the idea of the individual author is indirectly reinforced by studios for economic and marketing reasons, the practitioner's definition of authorship is affected and influenced by those long-standing theories. Therefore, these theories allow me to gain a deeper understanding of animators' and CTDs' struggle in the 3D animation industry to theorise and claim authorship.

As the theories of authorship discussed above do not include the idea of a negotiated process of production between ATL and BTL personnel, a topic which has arisen from my interviews, my thesis needs to turn to the field of production studies which includes such a model. While outlining the theoretical framework for my research, the next chapter will introduce and discuss the field of production studies and draft a clear picture of the concepts I am going to employ in my thesis.

Chapter 3: Design and Methodology

Introduction

The design and methodology chapter introduces the theoretical foundations my research draws upon to establish a solid grounding for the research design. The theoretical framework is primarily derived from film authorship and production studies which is 'research about people who make television programmes [and films] and how these people work' (Davies 2006, p. 21). The chapter is divided into two parts: the theoretical foundation and the methodology. The first part begins by describing the overall approach of my research and offering a rationale. It then focuses on the field of production studies which my thesis primarily draws upon. I will introduce current concepts by key scholars in production studies and discuss how they relate to the main themes of my research: collaboration, authorship and gender. The second part of the chapter centres on the role of the researcher and describes how my personal experiences might have shaped the interpretation and findings. Next, I outline the methods used to collect and analyse the data. The chapter will end with a detailed description of the ethical implications of my study.

PART I: THEORETICAL FOUNDATION

Overall approach and rationale

This study uses a qualitative research approach drawing primarily on theories from the field of production studies, but to a lesser degree also from ethnography. The field of production studies offers a framework for 'studying the

industry's own self-representation, self-critique, and self-reflection' (Caldwell 2008, p. 5) by looking at industrial structures and cultural practices like professional rituals and everyday work routines. Unlike other theories of authorship in film studies, production studies theory includes a model for a negotiated process of production. The concept of above-the-line strategic authorship control schemes and below-the-line tactical authorial counter-pressures allows me to ask questions about how below-the-line animators in the 3D animation feature film industry communicate and collaborate with each other and how they barter and negotiate their value to claim authorship. Since such questions are at the heart of my research, theories from production studies seem to be most applicable for a useful methodology for my study. As I will outline further in the next section, the field of production studies itself employs various disciplines from film and media studies, over political economy, to sociology and cultural anthropology. Additionally, my study draws on the qualitative approach of ethnography. Ethnography's focus is to describe and analyse a culture-sharing group. A culture-sharing group is a group of individuals who share values, beliefs, behaviours and language (Harris 1968). The concept of culture-sharing is relevant, since the research participants in my study can be described as a group that shares such characteristics. Ethnographers often concentrate on concealed processes and are required to understand the rules and practices of the group under study. This is a useful idea for my thesis, which aims to uncover, describe and analyse the hidden processes of collaboration, creativity, authorship and gender below the line in 'the black box of production which is film production' (Roberts 2011, p. 6).

Production studies and ethnography employ fieldwork methods, like participant observation and interviewing, to gather data about concealed processes. Since my study attempts to analyse animation film production from within and to make industry practitioners' voices heard, qualitative interviewing is the most

appropriate method for data collection for my thesis. The aim is to better understand if and how below-the-line female and male animators and CTDs make creative contributions throughout the creation process. The interviews allow me to explore how the practitioners interact and collaborate with each other and how they reflect on the creative control they hold or think they possess. Focus groups or participant observation are less practical for the kinds of questions I was asking, which required confidentiality, however, interviewing, as qualitative research, 'offers an access to an individuals' attitudes, values and feelings and an exploration of suppressed views' (Seale 2012, p. 211). Since the voices of below-the-line 3D practitioners are not heard as clearly as those of above-the-line personnel, qualitative interviews are an excellent tool to examine 3D practitioners' often invisible function and role within the film production process. Kathryn Anderson and Dana C. Jack also write that 'oral interviews are particularly valuable for uncovering women's perspectives' (1991, p. 11), since their lives may combine conflicting views. For example, in the context of animation, if the experience of a female animator does not fit the dominant idea, which in animation is still predominantly male, she might 'mute her own thoughts and feelings' and describe them in 'publicly acceptable terms' (Anderson and Jack 1991, p. 11). In this regard, interviews offer several advantages like flexibility, depth and complexity, the possibility of approaching sensitive issues, and the opportunity to allow respondents to answer in their own words (Seale 2012). While my research embraces many aspects of production studies and ethnography methodologies as described, I chose not to employ participant observation, even though it is a commonly used data collection form in both fields. One of the reasons for this decision is that my study does not focus on one company's workings, but on the people themselves. Additionally, the non-disclosure agreements required in the industry and my own employment in animation would have made participant observation very difficult

and ethically questionable. Since I decided to refrain from any participant observation, I did not require the cooperation of a gatekeeper.

While this section offered a brief overview of the approach and rationale for my thesis, the next section will introduce production studies, the main methodology employed in my study, and how it pertains to the questions my research tries to answer.

Production studies

This section introduces the production studies approach which my thesis draws upon. In relation to the existing research, I will discuss the key points of my research which reflect themes of collaboration, authorship and gender. First, the section outlines concepts of production studies related to authorship and agency below the line, focusing on the negotiated process of production by key scholars in the field such as John Thornton Caldwell, Vicki Mayer, Miranda J. Banks, Bridget Conor and, for animation specifically, Matt Stahl. Then, it will consult key debates by feminist scholars to discuss current theories of inequality and work segregation by gender, including Proctor-Thomson's thoughts about gender stereotypes, Ball and Bell's gendered pathways in history, McRobbie's discussion of the characteristics of the industry and Gill's concept of the post-feminist problem. Finally, this section will turn to the closely related field of the creative industries to consider aspects of work in the animation industry, such as work-life balance and work security, which interviewees of my study reported to have an influence on the way they can contribute and collaborate.

Authorship and agency below the line

Production Studies as a cultural studies approach, especially in film studies, is a relatively 'new ... addition to [the] analysis of cultural industries and cultural production' (Hesmondhalgh 2013, p. 56). However, earlier research in this area can predominantly be found in other disciplines like anthropology and sociology, for example Leo Calvin Rosten's *Hollywood: The Movie Colony, the Movie Makers* (1941) and Hortense Powdermaker's *Hollywood the Dream Factory* (1950). Current production studies deviate from longer-standing production studies by emphasising the social and cultural perspective linked to the film production process including below-the-line labour. Today's production studies scholars employ a diverse set of methodologies from, for example, 'sociological and anthropological studies of meaning and ritual' (Hesmondhalgh and Baker 2011, p. 54), critical political economy, industry studies, cinema and media studies, as well as management and organisational studies. This may include observational fieldwork, interview analysis and textual analysis of industry material, also called paratexts,² like trade magazines or DVD bonus features. Current production studies emphasise the social and cultural perspective linked to, for example, the film production process, including below-the-line labour. This concept takes the 'lived realities of people involved in media production as the subjects for theorizing production culture' (Mayer, Banks and Caldwell 2009, p. 4). The sphere of production studies includes the examination of workplace power dynamics and control schemes which can be uncovered by looking closely at the production pipeline and the routines and rituals exercised. Working with in-depth interviews of below-the-line animators and CTDs in the 3D animation

² Materials like DVD commentaries, making-ofs, or behind-the-scenes programming that surround the main text are called paratexts. Jonathan Gray (2010, p. 6) argues that 'paratexts are not simply add-ons, spinoffs, and also-rans: they create texts, they manage them, and they fill them with many of the meanings that we associate with them'.

feature film industry, an approach informed by production studies seems suitable. The following discussion will introduce theories from researchers in production studies relevant for my thesis. After giving an overview of the key research, I will present the idea of authorship production and negotiation through everyday work routines like trade stories and rituals. The section will then turn to Colin Burnett's intentional flux model, which investigates the degree of creativity and authorship by analysing the style of communication between ATL and BTL. Finally, the section introduces Caldwell's concept of below-the-line authorship as a negotiated process involving ATL control schemes and BTL countermeasures, as well as the legal, economic and material conditions that influence the distribution of authorship.

Caldwell, whose work remains influential in the field of production studies research in the film and television industries, uses an 'integrated cultural-industrial method of analysis' which combines sociological and anthropological studies of meaning and ritual in production contexts with political economy approaches by employing textual, ethnographic, interview and economic/industrial modes of analysis. Caldwell claims that questions about individual and collective agency and authorship 'cut to the heart of how we study production cultures' (2013a, p. 352) and are fundamental to production studies, especially for studies focusing on below-the-line workers. The decision as to who is considered an author and who is not, is closely tied to the question of who has more power and control over the creative process, and thus, who is creative (Gray and Johnson 2013). For example, ATL personnel's position 'at the top of the production labor pyramid' (Caldwell 2008, p. 21) grants them the authority to claim more creative agency for themselves. As previously discussed, creativity is a predisposed term, frequently connected to originality, individuality, and uniqueness. However, it is also closely connected to crafts, which are generally thought to be a more anonymous and collective field (Sennett 2009). Thus, it appears that there is an intricate connection 'between

experiences and discourses of craft and creativity' and 'individualized and collaborative forms of work' (Conor 2014, p. 6) which relates closely to the subject of individual and collective authorship. This is a point I further develop in my research. It is important because it allows me to think about how authorship of employees in the American animation feature film industry can be said to function below the line. The kind of issues I explore include how practitioners think about their own creative contribution. Do practitioners feel that they have individual ownership and/or authorship over their work? Do they generally believe that they are contributing creatively? If not, what are the reasons for that? Would they like to contribute more creatively and if yes, what do they mean when they talk about creativity and art? Informed by the methodology of production culture studies as a cultural industrial method of analysis, the examination of the division of labour, and the exploration of issues connected to collaboration and creativity allows me to discuss questions of authorship in the animation industry and, thus, the contribution of below-the-line practitioners.

To explore such issues of authorship and to help interpret and analyse below-the-line relationships and work conditions, Caldwell provides a useful framework. For him, authorship is 'produced and negotiated' (Gray and Johnson 2013, p. 12) by everyday work routines like trade stories and rituals. Trade stories are the narratives that industry practitioners tell other practitioners (Caldwell 2008). Caldwell identifies several different variations which he categorises as above-the-line or below-the-line and characterises by assigning distinct cultural functions. Below-the-line genres primarily include *war stories*, *against-all-odds anecdotes*, *making-it-sagas* and *cautionary tales*. Above-the-line genres tend to employ *genesis myths* and *paths-not-taken parables*, but can also involve *making-it-sagas* and *cautionary tales*. Trade rituals are a method for practitioners to achieve 'personal fulfilment and career advancement' (Caldwell 2008, p. 104). Self-actualisation, that

is, realising one's own personal talent or potential, has become an important element of work and is an important reason for the appeal of the creative industries³. Trade rituals include practices like *pitching*, *networking* and *deal making*. Trade storytelling and rituals are both symptoms of the work conditions in the creative industries (Caldwell 2008). In an industry where jobs are less secure, workers need to repeatedly negotiate their own value by employing several strategies like networking and self-promotion. Trade talks and rituals are a means for the negotiation among practitioners to convey and prove to others and themselves that they possess certain skills that are valuable, unique and indispensable for the production process (ibid.).

While trade talks and rituals are not at the centre of my research, they remain relevant, since they are also employed by the practitioners interviewed in this study. Their accounts often use the trade storytelling genres that Caldwell (2008) names *war stories*, *against-all-odds anecdotes*, *making-it-sagas* and *cautionary tales*. They also describe practices that might fall into the trade ritual category like *pitching* and *deal-making*. Caldwell's framework for trade stories and rituals offers a way to interpret and analyse below-the-line relationships and work conditions. Paying attention to the way practitioners use such rituals provides an opportunity to make sense of the culture of the animation industry and its workers. *War stories* and *against-all-odds allegories*, for example, can give an indication of the struggle practitioners must deal with in the animation industry. Conor also states that such

³ The term 'creative industries' describes industries where 'brain work is the determining motif' and 'the outcome is intellectual property' (Howkins 2005, p. 119). 'Creative industries' also describes the field of research which studies such industries. David Hesmondhalgh includes in his definition industries which are 'centrally concerned with the industrial production and circulation of texts' (2011, p. 17), which encompasses industries like TV, film, music, print and electronic publishing, games, advertising, web design. The products of these industries are 'mainly symbolic, aesthetic, expressive and/or informational' (Hesmondhalgh and Baker 2011, p. 60) and less functional. This is in line with Bilton and Leary's definition, which distinguishes between companies that create 'products where value depends almost entirely on symbolic meaning (books, films, plays, music)' and companies with products that still hold 'some residual functional value' (2002, p. 50) like footwear production. According to these definitions, the industry under study (animation) is part of the creative industries.

stories include ‘tactics of resistance’ (2013, p. 52) describing the methods workers employ to bargain and push against pressures from above which can provide insight into work hierarchies and the ways below-the-line practitioners try to obtain more creative control. The primary purpose of *making-it-sagas* is to demarcate one’s professional territory, a practice Caldwell names ‘boundary and turf marking’ (2013b, p. 38). *Cautionary tales* are often used to warn other practitioners to not overstep their authority or about difficult situations they encountered, for example, with key creative personnel. Both of those types of trade stories can inform my study about the relationship between below- and above-the-line personnel and provide insight into the nature of their collaboration. *Pitching* and *deal-making* rituals might be able to specify how the collaborative process is negotiated and offer an understanding of whether studios encourage or discourage contributions of ideas from below-the-line workers. My research suggests that pitching is an extremely common ritual in animation studios for below-the-line practitioners to negotiate their ideas and creative input. Thus, this concept is highly valuable for my study.

Everyday work routines, like trade stories and rituals, are means to distribute and negotiate agency and authorship of below- and above-the-line workers. Colin Burnett’s intentional flux model also allows for the idea of a negotiation, or even collaboration, between ATL and BTL practitioners. While a director might start a project with a specific artistic vision in mind, the dynamic relationship with his crew in the production process can induce an ‘exchange of agencies between the author and his creative personnel’ (Burnett 2013, p. 127). This model recommends a study of authorship by investigating how a director, for example, communicates with his team. The style of the communication (autocratic, democratic, laissez-faire or paternalistic) can then be an indication of the ‘degrees of individual and collective creativity’ (Burnett 2013, p. 129). Since practitioners in my study often referred to the management and communication style of their superiors,

this concept is a valuable addition for my research model to explore the nature of the collaboration between ATL and BTL personnel in the production process. By examining their communication and relationships, I aim to gain an understanding of whether animators and CTDs are encouraged to contribute their ideas and whether ATL personnel are willing to share their creative control.

Burnett's approach still seems guided by the idea of an individual auteur in the form of, for example, a director. Thus, he is not specifically focusing on below-the-line authorship. Rather, he questions the idea of a fixed ATL authorial vision by one author who can be influenced by BTL workers during the production process to allow for collaborative authorship. In contrast, Caldwell uses a collective/distributed model to aim particularly for an understanding of below-the-line authorship. His model does not presuppose a specific characteristic of below-the-line authorship. Instead, he specifies that the production process should be seen as 'a dynamic process involving tensions and struggles between "strategic" ATL "control schemes," and "tactical" BTL counter-measures' (Caldwell 2013a, p. 361). Thus, he claims that authorship below-the-line is constantly negotiated between above-the-line personnel trying to keep and protect control over their authorship, and workers trying to confirm their artistic agency. This perspective strongly informs my approach. Questions that seek to understand the creative and technical contribution of below-the-line practitioners, their collaboration with BTL and ATL personnel, as well as their own views about credit and acknowledgement for their work, are at the core of my thesis. My study explores how and to what degree animators and CTDs can pitch and negotiate their ideas. It also pays attention to the differences reported between genders and the two work categories related to the opportunities they are given to contribute. This focus makes Caldwell's model of BTL authorship, which I will describe in the following discussion, especially relevant for my research.

Caldwell lists three factors that determine how BTL authorship is distributed

which he classifies as legal, economic and material conditions. Legal and contractual constraints from the top, like strategic intellectual property and copyright erasure, officially remove authorship from individual below-the-line personnel. Matt Stahl affirms this in his detailed analysis of the legal definitions of authorship, stating that such distinctions 'serve to produce and/or sustain particular (im)balances of power' (2009, p. 65). This is relevant because such legal and contractual constraints officially categorise BTL workers 'as mere executants of the conceptual work of others' (Stahl 2010, p. 284). I explore whether practitioners in the animation industry feel that contributing creatively is part of their job and if they do, whether there is potentially 'a mismatch between job description and job content' as Stahl (2010, p. 284) describes. Economic conditions, for example, the 'over-supply of qualified labour', 'crediting and discrediting' practices, as well as 'quid pro quo relationship-building and maintenance', however, cause BTL practitioners to reflect on their individual creative contribution to 'constantly reaffirm and sell personal distinction and individual agency' (Caldwell 2013a, pp. 355–357). These practices undermine management strategies like intellectual property (IP) erasure and function as tactical countermeasures to revive discussions about BTL authorship. Such economic characteristics of work are described in more detail by scholars in the creative industries field, and are discussed later in the chapter (Hesmondhalgh and Baker 2011). Since the interview participants are describing their experiences and actions at work often by referring to working conditions in the industry, this concept will allow me to investigate whether there are tactical countermeasures caused by economic conditions and if they allow these practitioners some level of claim over creative authorship. The material conditions can be described as three main changes in the production process triggered by technological developments: 'blurred and collapsed workflows', the 'pace of filming and work speed', and the increased 'production multi-tasking' (Caldwell 2013a, pp. 359–360). These shifts in

production can have different effects and either make below-the-line authorship less or more relevant as described in the following paragraphs. Strategic authorship control schemes try to retain authorship at the ATL level by limiting artistic freedom through notes and guidelines in pre-production, on-set visits during production and re-edits in post-production (Caldwell 2013a). Many of these strategies are a direct consequence of the switch to new digital production technologies, which made processes like pre-viewing footage and editing much easier and faster. On the other hand, the increased speed of production is the cause of ‘mostly unintended BTL “tactical authorial counter-pressures”’ (ibid., p. 363). For example, the fast-paced production process requires workers to stand in and perform other job roles, including roles that require creative problem-solving, which imparts more authorial agency to the below-the-line practitioner. The concepts of ‘giving notes’, a process that describes giving directions primarily from superiors or ATL personnel to employees lower in the hierarchy, as well as the need for ‘creative problem-solving’, are recurrent themes in the accounts of the interviewees. Caldwell’s model allows me to investigate if such control schemes and counter-pressures provide ways for below-the-line workers to negotiate their authorship and creative input.

All previously outlined legal, economic and material conditions provide a framework for the analysis of the interviewed practitioner’s view and theories of their own production practice. Caldwell’s concept of above-the-line strategic authorship control schemes and below-the-line tactical authorial counter-pressures enables me to ask questions about how below-the-line workers might achieve or perceive themselves as having creative control. Since my emphasis is on below-the-line practitioners in the pre-production and production process, I focus primarily on BTL counter-pressures in those phases of the animation process. While BTL counter-pressures might be unintended, this concept allows me to analyse the practices the interviewees of my study describe in respect thereof. I also examine if economic and

material work conditions indeed provide ways for below-the-line workers to claim authorship and whether BTL workers use them to barter and negotiate their value. While they are not being compensated in the form of IP rights, I investigate whether below-the-line workers in the animation industry still feel acknowledged and credited in other ways. To gain a deeper understanding I ask questions about what makes their work satisfying and what it is that might motivate them to contribute ideas.

This section outlined the theories of authorship and agency below the line in the field of production studies and how they are being explored in my thesis. The next section will focus on women in the animation industry. First, it will provide an overview of the representation of women in the field by presenting applicable statistical data. It will then introduce key scholars for feminist debates and discuss their main arguments to shine light on issues of discrimination and exclusion on the basis of gender.

Women in animation

While debates about authorship below-the-line are at the core of production studies, the field is also concerned with data about 'the distribution of resources according to cultural and demographic differences' (Mayer, Banks and Caldwell 2009, p. 4). The discussion that follows will provide a closer look at the participation rates of women and the distribution of job roles by gender in the industry. This allows me to examine whether women have been able to gain the same access to the various divisions of the animation production process as men. It also enables me to ask questions about the creative contribution of female animators and CTDs and lay the groundwork for my analysis of the experiences of the female and male practitioners interviewed for my study.

Current research suggests that despite the industry's reputation as being equal and meritocratic, 'women as a group are consistently faring worse than men' in many aspects of creative work, including the 'relative numbers in employment, pay, contractual status or seniority' (Conor, Gill and Taylor 2015, p. 6). The Animation Guild, the American labour organisation representing animation and visual effects artists, for example, published a report specifically about the animation industry mainly focused on the Los Angeles-based studios, stating that in March 2018 out of a total of '4,230 writers, artists and technicians' (McLean 2018) employed under a TAG (The Animation Guild) contract, 25.6% were women. Statistical data also shows an underrepresentation of women in key creative roles, like directors or writers. Women in Animation (2016), a more internationally oriented organisation dedicated to advancing women in the field of animation, reported that 17% of the mainly Los Angeles-based animation writers and only 10% of animation producers and directors in 2015 were female. While research on the 'celluloid ceiling' and extraordinary women, is of course valid and important, it is less relevant to my study, because it adds little detail to women's BTL contribution to the production process. However, it helps to make vertical job segregation by gender visible. Vertical segregation by gender refers to the segregation in low- and high-status work, for example the underrepresentation of women in key creative roles, like directors or writers. While segregation is not synonymous with inequality, it is related, since a diverse workforce can only be achieved by a balanced representation of women (and other minorities).

There is a strong association of some occupations within the creative industries with women and some with men, indicating horizontal segregation by gender. Creative Skillset (2012) reports that in film, women predominate make-up and hairdressing, as well as costume and wardrobe. Woman also fill a large percentage of marketing, business management and public relations roles. However,

in editing, lighting, animation and design, women are gravely underrepresented (Creative Skillset 2012). While Creative Skillset is an industry skills body which primarily provides data about the creative industries in the UK, a look at occupations within the American animation industry might indicate a similar pattern. Unfortunately, the majority of available statistics for the American animation industry are not specific enough in terms of the numbers concerning female employment by occupation. In 2007, the Animation Guild disclosed a very low number of technical directors in animation to be female (16%) which might indicate a form of horizontal segregation by gender when it comes to technical occupations (Hulett 2015b). The largest percentages of women in the field are 2D artists for animation and background (35%) and checkers (51.5%), which as the author points out 'has historically been a female-dominated sector in animation' (ibid.). However, in 2015 a report from the Animation Guild revealed that 17% of all their female members were technical directors and only 3% were animation checkers (Hulett 2015a). This indicates a change from the earlier statistics when most women were primarily employed as checkers. The numbers may be somewhat misleading as they only include members of the Los Angeles-based Animation Guild and do not differentiate between various technical director roles (materials, fur, character, effects, crowds, pipeline etc.). They also do not offer any details about the overall size of the departments, meaning that the number of technical directors could potentially have doubled while the number of checkers may have been halved, making the lower percentage of female checkers less significant. Additionally, Hulett's percentages from 2015 are in relation to the overall percentage of female employment, meaning that 17% of the 20.6% of women in animation in 2015 were technical directors. This does not give any indication of how many women were technical directors in comparison to men. Thus, the percentage of women who are technical directors might be lower than the percentage of women in other occupations, which would be

useful information for the examination of horizontal segregation by gender. Older employment statistics from the Animation Guild (2006) offer a more in-depth overview of the percentage of women per occupation. The following illustrates the numbers of the study in table form:

<i>Occupation:</i>	<i>Percentage of women per occupation (2006):</i>
Background	25.6%
2D animation	21.3%
3D animators and modellers	13.0%
Compositors	29.2%
Tech Directors	13.8%
Checkers	34.0%

Figure 1. 2006 Female employment percentages in the Animation Guild by occupation (Animation Guild 2006)

While seeking relevant participants for my study, differences by gender had already become apparent. Female practitioners were generally much harder to find, most likely due to the smaller number of women in the industry. However, female CTDs were particularly rare in the animation industry. For one animation studio (Sony) I was not able to find a female CTD, even after searching the film credits.

After this in-depth look at the current participation rates of women in the creative industries and in animation specifically, I will present some of the key points from feminist debates. Especially Proctor-Thomson's thoughts about gender stereotypes, Ball and Bell's gendered pathways in history, Gill's post-feminist problem, and the research by McRobbie and others on the work conditions in the industry, allows me to approach this subject from a different angle and have a base for the exploration of inequalities and potential reasons for participation rates of women in the animation workforce. First, I would like to discuss the theory of the

relationship between women's contribution to the production process and gender stereotypes. Proctor-Thomson and Hesmondhalgh and Baker describe how the difference of women and thus their unique contribution to the creative process tends to be connected to gender stereotypes. Originally, the idea that creativity, and thus creative work, requires a 'difference of thinking and diversity' (Proctor-Thomson 2013, p. 138) was connected to gender diversity. Being a woman was considered to potentially be an 'edge' and offer a different point of view with fresh creative potential. However, this difference is 'less likely to be taken as evidence of creativity' (ibid., p. 146). Instead, the differences that are emphasised tend to be connected to gender stereotypes. For example, women's different contribution to the creative industries is often described as bringing 'balance and a pleasant atmosphere' (ibid., p. 144), since women are thought to have a more caring nature and greater communication, listening and presentational skills that help to prevent conflict. A wide-held belief is that women are better at organising and multi-tasking (Hesmondhalgh and Baker 2015). While such views are generally positive, they accentuate facilitative contributions more than creative ones. Thus, it seems that while women are not actively denied their value to the creative process, they are more recognised as supportive to the creativity of others (Proctor-Thomson 2013). The question whether such or similar stereotypes are actually true is irrelevant if male and female workers in the creative industries perceive and accept them as true, since they will consciously or subconsciously act and react accordingly. I explore how my interviewees discuss and reveal their awareness of stereotypes or how they play into them in different ways around issues to do with communication, creativity, and authorship. For example, one animator stated that women are better at animating female characters. I examine if such stereotypes work for or against her and if she is trying to resist or embrace them.

Another theory to attempt an explanation of the slow rise of participation

rates and segregation by gender is based on the history of women in the creative industries. While some sectors of the creative industries, like video games or web design, are relatively new additions, film, television and animation have a longer-standing history. Ball and Bell (2013) describe the formation of gendered pathways in these industries, which potentially influenced the access of women to certain occupations in the UK. They demonstrate their theory in a report from 1975 by the Association of Cinematograph, Television and Allied Technicians, a British trade union (1933–1991), which shows that entry-level positions in film and television were still dependent on gender (ACTT 1975). The early animation industry similarly practiced such a gendering of occupations right from the job entry point. Women were not hired as character animators and, as a secretary of a big animation studio wrote in 1939, did ‘not do any of the creative work in connection with preparing the cartoon for the screen’ (Cohen 1997, pp. 155–156). Consequently, they were not accepted into the studio’s own training schools. Since at this point in time there were no special schools for character animation, at least not in the Disney style, women had few chances to learn the trade. For years, women were solely employed in the ink and paint department of the animation studios. I am curious as to whether the participants’ accounts show awareness of this history and if they theorise the participation numbers and their own access to the industry in terms of gendered pathways. I analyse whether employees believe that the hiring practices of the past and present have an influence on women and men’s experience. I also assess opportunities to obtain a level of creative control by examining if practitioners mention unfairness or fairness in relation to recruitment practices. Talk about the ‘Boy’s club’ in the industry or the reasons why a participant chose their particular work category might offer some indication of historically determined decisions and practices. This helps me to gain an understanding of the ways in which women and men have been able to gain access to the various categories of the 3D animation

production process.

While the analysis of the history of women in animation is not the primary focus of my thesis, it allows me to think about the work segregation and the accounts of practitioners from various age groups, from a historical point of view. A more applicable approach for my thesis is the concept that many of the characteristics assigned to the creative industries seem to constitute barriers for women to enter and sustain a career. The informal environment of the creative industries leads to what McRobbie terms the 'night-time economy of club culture' (2005, p. 385), networking get-togethers in pubs and bars after the work day. Gill explains that such an informal and sometimes 'laddish culture' (2002, p. 82), for women who primarily work in male-dominated teams, can make it particularly difficult for women to cope. The long hours, the precariousness, the flexibility, the networking and informal recruiting strategies seem to work against women who choose to become parents. That it is indeed particularly difficult for women in the industry who plan to have a family is a problem that emerges from my interviews. I will develop some of the points related to this issue later in my analysis.

Gill mentions another, more general concern, which she calls the 'post-feminist problem' (2002, p. 84). She defines this issue as the reluctance of male and female workers in the creative industries 'to understand their experiences as having anything to do with gender' (ibid.). She states that such an attitude is founded in the belief that feminism is a concept and a fight of the past which has been won and does not fit in an industry with the reputation to be equal, diverse and open to everyone as long as they are determined and talented (Gill 2013). Fortified by the confidence in such a meritocratic and equal system, gender inequalities become unspeakable (ibid.). Allen adds that they 'remain unspeakable' despite the fact that industry insiders are 'gender aware' (2013, p. 248) of imbalances and the occupational segregation by gender. My interviews reveal that women often question if a certain

experience is gender related. It is also interesting to explore if men see a connection between certain experiences and gender. My research suggests that, while there might be a reluctance to speak about gender in public and at work, the interview participants were extremely curious about the topic and many felt inspired to speak about it as part of the interview. Most participants, male and female, were interested to learn more about gender inequalities in the industry.

This section outlined current statistics of female participation rates in the industry, as well as the key debates of feminist scholars to discuss current theories of inequality and work segregation by gender. The next section will focus on the field of creative industries to consider economic aspects of work in the animation industry that influence how BTL practitioners can contribute and collaborate. Multiple interviewees confirm the industry conditions to have significant influence on their work and communication practices, which makes this discussion a valuable addition to my methodology.

Creative industries

After the discussion of women in animation, this section focuses on related cultural studies of media productions in the field of the creative industries. This is relevant, since many studies in the field analyse the economic properties and characteristics of the creative industries frequently brought up by interview participants, for example the long hours and the precariousness of their work. Debates in the field of the creative industries share many characteristics with production studies. It is based on critical scholarship – they investigate production as a culture, and they are concerned with ‘the micro and the everyday interactions of cultural production’ (Paterson et al. 2016, p. 9). Key researchers are, for example, David Hesmondhalgh and Sarah Baker who approach their work from the

perspective of critical political economy with strong ties to cultural and micro level studies. This type of research investigates the nature of companies that create 'products where value depends almost entirely on symbolic meaning (books, films, plays, music, animation)' (Bilton and Leary 2002, p. 50): the creative industries. The nature and the characteristics of work in the creative industries directly affect my research since the accounts of the participants of my study constantly refer to working conditions in the animation industry. The concepts in this field of research provide a valuable frame of reference to interpret and analyse the responses of the practitioners regarding their work environment. These ideas help to gain a better understanding of how the industry allows below-the-line practitioners to attain creative control and to contribute to the collaborative process of animation production, or how it prevents this from happening. Additionally, research in the creative industries suggests that several properties of the creative industries, among them positive and negative ones, make it especially difficult for women in this sector. These debates allow me to analyse and discuss the work conditions in the animation industry and their potential effect on the participation of female practitioners in 3D animation studios. I investigate whether issues like long hours, precariousness, flexibility, networking and informal recruiting strategies interfere with women's access to the animation production process and their opportunity to obtain a similar level of creative control as male practitioners.

While scholars in the field seem to agree about what the characteristics of work in the creative industries are, their interpretation and emphasis has generally been mixed. In some publications, the positive aspects of creative work have invoked euphoric celebrations of new labour as 'the ultimate in freedom and control for workers' (Gill 2002, p. 75). Others however, interpreted those positive characteristics as instruments to compel workers to accept the long work hours, lower pay, and insecurity in the creative industries. My interviews give me the

material to challenge these views as being too extreme, discounting either the positive or the negative aspects of work in the creative industries. David Hesmondhalgh and Sarah Baker's (2011) in-depth look at three cultural industries is very applicable to my own research. Their study of creative work in the music, television and magazine industries investigates the experiences of practitioners in those industries. While they admit that occupations in the creative industries are 'riddled with problems and inequities' (Hesmondhalgh and Baker 2011, pp. 220–221), often related to autonomy, work hours and pay, work security and work-life balance, they conclude that it is too cynical to regard all the positive characteristics as 'mere sugar-coatings for the bitter pill of precariousness' (ibid.). These ideas work well in relation to my study since many accounts of the interview participants discuss negative as well as genuinely positive experiences. By developing some of the issues above at a later point in my analysis, my study will question if the negative encounters cancel out all the positive, rewarding experiences in the animation industry, which include experiences of autonomy and authorship. I explore whether the collaborative process at work, as well as the sociality and networking required to maintain and gain industry contacts also leads to friendships and a work solidarity that might help workers to manage the extreme work hours and deadlines. My aim is to investigate whether there are real positive experiences that cannot be denied or dismissed which might even have the strength to counteract negative experiences. I also examine whether creative workers are aware of their labour conditions as Andrew Ross (2013) suggests, and if they are more inclined to defend their rights instead of being stereotypical victims.

This section turned to the field of the creative industries to discuss the economic aspects of work in the animation industry which have an effect on the way below-the-line female and male practitioners can contribute and collaborate. The second section of the chapter will lay out the methodology of my study, which builds

on the insights gained from the theoretical foundation.

PART II: METHODOLOGY

After outlining the more theoretical background of my research, the following second section will draft the methodology for my thesis. The methodological approach of my study draws primarily on the theories from the field of production studies, and to a lesser degree also from ethnography. Based on the theoretical foundation provided in the preceding section, I will, first, lay out and discuss my role as a researcher and practitioner studying my own industry. Second, I will give an overview of the method of and procedure for data collection for my study. Third, the section will introduce the methodology used for the data analysis. Finally, I will discuss some of the ethical issues that arose from my research, as well as my efforts to balance, minimise or counteract them.

Role of the researcher

This section will outline my epistemological position and the situatedness of my interview-based research. It will first provide a definition and rationale for these ideas, and present the role and perspective of the researcher. The section will conclude with a discussion of the advantages and disadvantages of the researcher being a member of the cultural group under study.

Informed by production culture studies methodologies, my study is based on situated practice research employing qualitative interviewing as a method for data collection. Interview research is situated 'in a particular time and place' (Heggen and Guillemin 2012, p. 469), and conducted with interviewees and researchers who have individual experiences, backgrounds, and interests. Thus, the data produced is

dependent on the context in which it was obtained and analysed. My work in an animation studio and my day-to-day life have shaped this research in a certain way. Therefore, my research is situated in a particular context, since I brought my individual background and life experiences to this project. This does not stop at data collection. Choices of which main ideas to pursue and which to discard are continuously made during the analysis and are dependent on the researcher's subjective opinion (Miles, Saldaña and Huberman 2014). This is very much in line with the basic assumptions of the epistemological position of contextual constructionism or contextualism which assumes that all findings are context-specific (McGuire 1983). Thus, I am taking a 'contextual constructivist' approach as described by McGuire (1983) and Madill et al. (2000). This position is 'particularly concerned with the relationship between accounts and the situations in which they were produced' (Madill, Jordan and Shirley 2000, p. 12). Contextual constructionism acknowledges that accounts are always partial and subjective and 'analysis is necessarily interpretative' (Madill, Jordan and Shirley 2000, p. 15). This stands in contrast to other epistemological point of views, for example a realist position, which assumes that there is only one true reality that exists in the world and which can be objectively described and analysed by the researcher. However, as an interviewer and industry 'insider', who has been working in the animation industry for years, I am affected by my experiences which inform both my questionnaire design and the progression of the interviews themselves. Another interviewer in another situation and at another point in time might have a different point of view. I am inevitably situated since I am part of the industry under research and share the situatedness in the animation industry with the interviewees. For that reason, the communication of the researcher's perspective throughout the research is required and it is important to address his or her role to reveal his or her situatedness.

Suzanne Tietze summarises:

In this regard research questions, research interests, choice of method and research instruments are interlinked with the researcher herself, with her life experience, and her development, background and values. Thus, becoming aware of the researcher's role in the research process is vital to understanding how such involvement shapes the generation of knowledge (Tietze 2012, p. 53).

The following paragraphs will provide an understanding of how my own histories, concerns and interests have shaped the research process.

I have worked in the animation feature film industry for more than nine years. While my job titles and responsibilities changed over the years, I have held the below-the-line position of a CTD or rigger, as well as the position of a character development supervisor and head of characters. I have witnessed a constant struggle for creative control, which is all about who has the authority or influence to push their ideas through and who needs to let go. This negotiation occurs, for example, between animation and design, animation and rigging or, of course, between production management and all of the above, which is more of a struggle for resources, but which affects the design. My personal background led me to my main research questions, which aim to understand the creative contributions and authorship of below-the-line animators and CTDs. The idea that individual authorship approaches, only allowing for a single author, are not sufficient to describe how authorship works in feature animation, was informed by my experiences in the industry. Thus, my background guided me to a collaborative approach to authorship. It also influenced the choice of the primary methodology employed in my study: the concept of the negotiated process of production of production studies. I also observed a difference in the opportunities and the studio

acknowledgment of their creative contributions for animators and those in other positions, for example, CTDs. While below-the-line workers are credited and featured in promotional material, there appears to be an emphasis on animators in DVD bonus material and even in studio-internal motivational speeches from the director or producer. At some studios, animators are treated more like actors, and thus, it is easier to acknowledge their creative input than that of a CTD. Nevertheless, personally, I have witnessed multiple examples of riggers and other technical directors having a creative impact. These experiences directly affected my decision to employ qualitative interviewing as my data collection method, since I felt that it was imperative to make the industry practitioners' own voices heard. These experiences also influenced my choice of interview participants, who are CTDs and animators in animation feature film, allowing a comparison of different work positions in the animation industry. Additionally, I observed a lower number of women in the animation industry. It seemed that the more technical and the higher in the hierarchy the job, the smaller the number of women involved. I often find myself in meetings where I am the only woman aside from possibly a coordinator or project assistant. However, because this is such a 'normal', day-to-day situation, it rarely stands out as unusual or irregular to me or to anyone else in the room. My daily experience led me to add the perspective of gender to my study.

All these personal experiences contributed to the idea for my study and research questions. Knowing the industry jargon and being familiar with job titles and their responsibilities provided an added benefit. I was also able to gain access to potential participants more easily since I already had connections in the industry and could more easily expand beyond my primary circle of contacts through recommendations or social and professional networking. However, being a member of the cultural group under study has ethical implications (see Ethical considerations in this chapter). It also raises multiple questions about the role of the researcher.

Suzanne Tietze (2012) writes that researchers who research their own organisations, or in my case, their own industry, are no strangers. They are familiar with the routines and practices and have to perform a ‘balancing act between “strangeness” and “familiarity”’ (ibid., p. 56). She also states that such researchers have to ‘find mechanisms that will distance themselves from what they already know’ (ibid.). For the interviews in my study, being an ‘insider’ proved to be useful for asking highly detailed questions and getting rich answers in return. This is confirmed by Caldwell who states that scholars who work in the industry they are studying have an ‘intimate working knowledge’ that allows them often to go ‘beyond the sometimes rudimentary questions’ (2009, p. 214) from researchers who have no direct knowledge of the industry under study. Nevertheless, being an employee in the animation industry myself made some participants more hesitant to discuss sensitive or studio-specific topics since they initially saw me as a colleague or a competitor from another studio. Also, participants often assumed that I knew what they were talking about. Additionally, I tried not to tell them my own thoughts before and during the interview to avoid them saying what they thought I wanted to hear. Personally, I felt that I needed to have enough distance from the interviewee that nothing was taken for granted. To achieve such a distance, I shifted between the role of a researcher and the role of a colleague in the industry. By consciously distancing myself to a certain degree and not exclusively being seen as an insider, I hoped that I was able to maintain a more critical outlook. This is very much in line with what other scholars who work in production suggest. Researcher Erin Hill, who also works as an assistant to writers, directors, and producers in Hollywood, for example, found it similarly necessary ‘to negotiate the space between academia and industry so that ... [she is] never fully in one camp or the other’ (Caldwell 2009, p. 222). Since the participants were fully aware that I am an industry practitioner, I explained at the beginning of an interview that I was taking more of an ‘outsider’ role by making

sure that he or she was aware that I was conducting this research on my own behalf with no connection to any animation studio. While this helped to make the participant feel less tentative and more comfortable to speak freely, it did not make her less inclined to assume that I knew what she was talking about. I attempted to receive richer answers by asking follow-up questions to trigger more detailed descriptions of processes.

While this section outlined the epistemological position and the situatedness of my interview-based research, the next section will provide a detailed description of the data collection process.

Data collection

This section will give an overview of the method and procedure of the data collection for my study. First, it will present a rationale for the use of semi-structured interviewing. It will then outline the structure of the employed interview guide and specify the interview process with the practitioners. Second, the section will detail the participant selection and sampling strategies introducing the concept of purposeful sampling employed by this study. Then, I will lay out reasoning for the sample size and specify the criteria for the selection process of the participants. Finally, I will describe my access to the participants and introduce the 'snowball', 'chain' or 'network' sampling strategies employed. Additionally, I will briefly raise the ethical considerations in the selection process. The section will end with a description of the research setting in which the interviews were conducted.

Interview structure

While there are multiple interview methods that could have been utilised, for example focus groups, structured and unstructured interviews, my study employed a semi-structured approach to interviewing. Because of the ethical concerns regarding confidentiality and anonymity of the research participants, using focus groups for interview data collection was immediately dismissed. Not only would focus groups not have suited the kind of questions I was asking, they also would have been impractical due to the restrictedness of the animation feature film industry, which requires employees to sign non-disclosure agreements. Structured interviews are primarily used for quantitative analysis and were also not appropriate for my qualitative study. Structured approaches to interview research involve strict questionnaires with pre-defined options for responses. Structured interviewing would therefore have prevented long and detail-filled answers from the participants and prevented a dynamic process from developing between the researcher and the interviewee. However, this research could have chosen unstructured interviews as a data-gathering method. Unstructured and semi-structured interviewing both 'encourage the interviewee to answer at length and in vivid detail' (Rubin and Rubin 2012, p. 31). They both are flexible methods that allow new ideas to emerge which can be followed up during the interview process. Nevertheless, as a researcher who works in the industry under study, I already had a sense about the specific topics I wanted to learn about as part of my research. In contrast to unstructured interviews, the semi-structured approach allowed me to prepare interview questions in advance that focused on ideas more narrowly related to my research questions. Since an unstructured interview could have been too open to make sure that I could cover all these concepts, I decided on a semi-structured approach. There are some potential limitations to this method. A leading question asked by the researcher can influence

the participants and possibly cause them to answer a certain way, maybe to impress the interviewer (Hesmondhalgh and Baker 2011). However, to counter such limitations, I selected participants from a wide range of companies and continually cross-checked the accounts of the interviewees or searched for evidence that might contradict them.

Qualitative semi-structured interviewing uses open-ended questions to encourage the interviewee to talk, without steering him or her too much in a certain direction (Seale 2012). Kvale and Brinkmann suggest two interview guides: 'one with the project's thematic research questions and the other with interview questions to be posed, which takes both the thematic and the dynamic dimension into account' (2009, p. 132). I created only one interview guide (see Appendix A), but followed their advice by dividing it into seven sections. The thematic dimension indicated which research questions and ideas potential interview questions might thematically correlate with:

1. Job tasks and structure
2. Collaboration
3. Contribution and control
4. Authorship
5. Gender
6. Job motivation and satisfaction
7. Credit and acknowledgement.

Each section contained multiple open-ended questions, the dynamic dimension of my interview guide. These questions were never all posed in one interview, since the participants, most of the time, answered them as part of other questions. These sub-questions were mainly used as a guide for myself, in case the interviewee did not provide enough detail in the initial question. However, often, especially in later interviews, I was able to detach myself from the guide completely

and just use one main question from each section in combination with follow-up questions. Follow-up questions varied and depended on the stories told by the participants. In addition to audiotaping the interview, I took handwritten notes of observations during the interview.

Most of all conducted interviews were in-person interviews, with the exception of two virtual Skype video interviews, and lasted approximately one hour per participant. Such face to face interviews are the most effective way to administer interviews for qualitative research, since body language can be observed and the respondent has less possibility of being distracted (Seale 2012). Before the interview began, I briefed the participant by explaining the purpose of the interview and the informed consent form (see Appendix E), as well as the use of the tape recorder, and asked if there were any questions before starting. Even though I had already provided the participant with the participant information sheet in the initial contact email (see Appendix C and D), I offered another copy at the time of the interview, so the document could be reviewed together, and to make sure that the participant had all the information to give informed consent. Additionally, the informed consent form was presented, explained and signed by both the researcher and the participant before the interview. After the interview, I made a copy which I scanned and emailed to the participant. The process for the Skype interviewees was very similar with the slight difference that a digitally signed informed consent sheet was emailed as a pdf file after the interview which they then returned to me with their signature added. I ended the interview with a short debriefing by slowly fading the interview out and asking if the participant would like to bring up anything else or if he thought that I should have asked something but did not. In most cases, those questions resulted in very interesting additions or revealed what the interviewee wanted to talk more about from the previously discussed topics. After the recording ended, every single interview transformed into an engaging discussion between

interviewee and interviewer.

Participant selection and sampling strategies

This research is an in-depth qualitative interview study which draws on the field of production studies, as well as ideas from ethnography. The purpose of my study is not to generalise its findings to a broader population, but instead to deepen our understanding of the experiences and issues of a culture-sharing group. Thus, my thesis does not employ a random-sampling approach, which is 'a statistical concept that depends on a very large number of participants' (Seidman 2013, p. 55). Rather, it employs the concept of purposeful sampling. Purposeful sampling allows the researcher to select participants for their study to 'purposefully inform an understanding of the research problem' (Creswell 2013, p. 156). This method was extremely relevant, since my participants needed to be members of the cultural group under study, and thus, needed to be selected according to the criteria I will outline below. Since the intent of my research was not to generalise the findings, but to collect specific, in-depth details about this group, the number of the participants did not need to be extremely large. Kvale and Brinkmann write that the sample size in common interview studies 'tends to be around 15 +/- 10' and is often dependent on the 'time and resources available for the investigation' (2009, p. 113). For my project, I chose a sample size of 25 participants. The sample size was manageable, and big enough, but not too small, to find out what I needed to know for my research. Since my goal was not to provide a complete overview of the animation industry, but instead to conduct an in-depth study of a culture-sharing group, the study did not require an extremely large number of interview participants. All participants were part of the cultural group under study. Thus, my sample consisted of 50% animators and 50% CTDs which were currently, or had been employed in the last 3 years, at

one of the major 3D feature animation studio in the United States (Pixar, DreamWorks, Disney, Blue Sky Studios, Sony Pictures Imageworks, Laika). The balanced sample group was based on my research questions which led to the following criteria:

1. Title (either animator or CTD)
2. Gender
3. Affiliation with a major 3D feature animation studio in the United States
4. Years of experience.

Interview candidates were to comprise 50% women and 50% men for each job title category (animator and CTD), because in order to understand the creative and technical contribution of female and male animators and CTDs, I needed to consider the experiences of men and women equally to see if some issues are or are not a matter of gender. This also helped to check myself against drawing easy conclusions. Unfortunately, female practitioners were much harder to reach for my study, which resulted in a slight gender imbalance of 13 male and 12 female participants. This was most likely due to the smaller number of women in the industry. However, women were also more likely to decline or not to reply to an invitation to the research than men (68.75% of all contacted women versus 38% of all contacted men). It is also worth noting that about 64% of the women who declined or did not reply to the invitation were currently employed by the same studio. However, the reasons remain unknown, and might have been related to that studio's busy production schedule. I also aimed to interview an equal number of participants from each of the main studios. However, since many of the participants had worked at more than one of the major studios, I was less concerned about maintaining an even studio distribution among the interviewees.

Since I am working in the animation industry, I had direct access to potential

adult participants. My study does not focus on one studios' workings, but on the people in the industry at various companies itself. Thus, I did not require the cooperation of a gatekeeper. This is in line with Seidman's suggestion that 'the more adult and autonomous the potential participants ... the more likely that access can be more direct, if a particular site is not the subject of the inquiry' (2013, p. 48). The so-called 'snowball', 'chain' or 'network' sampling seemed to be the ideal strategy for the selection of participants in my study. First, this involved using my own contacts in the animation industry to find suitable interviewees who then referred me to other possible participants. I also heavily relied on the professional networking service LinkedIn to contact potential candidates directly via the platform. Besides looking at the LinkedIn entries, there was no reviewing or screening of additional identifiable, personal information. While the interview itself lasted on average about an hour, the participant remained in the study for about 3 months from first to final contact. After an initial email or LinkedIn message to invite the potential candidates to participate in the study, I sent my participant information sheet if they indicated that they were interested (see Appendix D). This document outlined information about the study and explained potential risks and benefits. I waited about 1–2 weeks for their decision to be a part of the research or not and then either scheduled an interview or thanked them for their time and consideration.

Since I work for one of the larger American animation studios, I knew from the beginning of my research that some interviewees would likely be working at my studio. To avoid any conflict of interest, I did not interview any participants whom I directly supervised. I also refrained from interviewing very close friends and instead only selected participants from among my colleagues or former colleagues with whom I had minor or no personal relationships at the time. Furthermore, since I selected participants from different animation studios to get a more representative sample, I limited the number of participants who were currently employed at my

studio to about a fourth of the total number of participants (6).

Research setting

The interviews were conducted in New York, Los Angeles, and San Francisco where the major animation studios and the 3D practitioners I interviewed were located. I chose safe interview locations that allowed the participant to stay anonymous and to speak freely without having to fear being overheard. Most of the interviews were conducted in quiet, public spaces to achieve the best audio recording quality possible. Hotel lobbies were the ideal interview spaces, since they were mostly free from distractions, not frequented by colleagues of the participant, and relatively convenient for the interviewee, since I picked hotels close to their work place and let the participant choose a time and date, where possible. However, a few interviews were conducted in cafés or, when the participant was not completely unknown, at my home.

Data analysis

This section will introduce the methodology used for the data analysis in my study. First, I will provide a rationale for ethnographic analysis and discuss the applicability of template analysis to the primary research methodologies of production studies and ethnography that my research draws upon. Then, I will outline the practice of my data analysis process and the use of computer-assisted qualitative data analysis software (CAQDAS). This section will end with a description of the coding methods, and my efforts to ensure the quality of the research analysis.

As previously outlined, my study is drawing on the qualitative approach of ethnography to uncover, describe, and analyse the hidden processes of collaboration,

creativity, authorship and gender of a culture-sharing group. Thus, my thesis turns to an ethnographic data analysis and representation which aims at the description, analysis, and interpretation of a culture-sharing group (Wolcott 1994). Ethnographic data analysis begins similarly to other approaches, for example grounded theory, by organising the data, reading through the interviews, making notes and developing initial codes (Creswell 2013). However, it then describes the culture-sharing group and setting, which is not part of grounded theory analysis. The culture-sharing aspect and description of an ethnographic approach to data analysis is useful to my study, since I intend to draw a picture of the 3D animation studio community by describing the production pipeline and the 'daily work' of CTDs and animators, as well as their interactions. The next step in an ethnographic analysis is the search for themes and patterned regularities, which are then interpreted and made sense of to understand how the culture under study thinks and works. This is an applicable methodology for my study, which is using a production studies approach to ask how below-the-line animators in the 3D animation feature film industry communicate and collaborate with each other and how they barter and negotiate their value by studying cultural practices like professional rituals and everyday work routines.

A grounded theory approach did not appear to be as useful as a data analysis strategy for my thesis. The primary reasons are that this methodology does not allow for the selection of concept and themes before the analysis, and thus requires an 'enormous amount of coding' (Rubin and Rubin 2012, p. 204). The themes and codes in grounded theory emerge exclusively from the data during the coding process. They are constantly changing and are not focused on themes that are more central to the research topic. However, as a researcher who works in the industry under study, I already had a sense about the specific topics, themes and concepts I wanted to learn about as part of my research. Thus, my study required an approach that allowed for a pre-selection of specific concepts before the data analysis.

Template analysis, a form of thematic analysis strategy, is such an approach. It allows the researcher to develop a limited number of themes that are related to the research questions before looking through all the data (a priori themes) (King 2012). Those a priori codes are then used for preliminary coding on a sub-set of the collected data to inform an initial template. Through an iterative process of applying, revising and re-applying the initial template on the full data set, a final template is developed to help interpret the findings (ibid.). King's template analysis appears to work well with my research and background, since it is especially applicable when one is already, at least to a certain degree, familiar with the group under study and has a general idea of the research questions. It allows me to start with initial ideas and keeps me focused on my key research questions. However, it is still heavily grounded in the data and flexible enough to adapt to any particular study. Since it first tests the codes and themes on a sub-set of the data, it can be more efficient than other techniques that require all the steps to be carried out on all data from the beginning (King 2012). Thus, template analysis solves the two issues Rubin & Rubin (2012) identify in grounded theory: the enormous amount of coding and the lack of a distinction between themes more central to the research questions and those that are less essential.

While this technique was originally developed within the field of organisational research and was not created specifically for use with production studies or ethnography, it appears to be usable for various disciplines and within a range of epistemological positions. Catherine Kohler Riessman (2008) states that thematic analysis, of which template analysis is a version, is applicable to a wide variety of methodologies, like grounded theory, phenomenology, narrative inquiries, as well as ethnography. Additionally, King writes that his technique is specifically fruitful when examining 'the perspectives of different groups within an organisational context – for example, different professions working in a collaborative

setting' (2012, p. 447). Since my research is concerned with such perspectives, the above-mentioned elements of template analysis appear to be a good match as an analysis strategy for my thesis and appear to fit within an ethnographic and production studies methodology. One of the limitations of template analysis after Brooks et al. (2015) is that it focuses on across case analysis rather than within case analysis, since it does not lend itself well to detailed examinations within individual accounts. Thus, it is not appropriate for methodologies which are more concerned with the examination of how language is used in conversation, for example discourse analysis. Brooks et al. also mention that template analysis with its more flexible process of developing templates 'may feel less secure for relatively inexperienced researchers' (2015, p. 218). Other versions of thematic analysis have more explicit instructions on the initial coding, for example, to start with purely descriptive codes only, then move onto more interpretive themes. However, Brooks et al. (2015) write that they never came across this specific issue, but rather found that young researchers tend to view their constructed template as an end product and forget that it is only intended as a tool to make sense of their data. Since my research does not employ conversation analysis and focuses on across case analysis, my main concerns would be those regarding the novice researcher. Nevertheless, by being aware that template analysis is merely a tool, but not the goal of my study, I believe that I was able to navigate around this main issue. The following will outline the practice of my data analysis process.

After the data collection, the interviews were transcribed by a professional and confidential transcription service. I chose not to transcribe them strict/true verbatim which reflects all utterances, false starts, filler words and slang. The main reason for this decision was that I did not employ discourse analysis for my study which focuses on the use of language and speech mannerisms and would require that level of accuracy. Thus, it did not seem relevant for my research and would have

made the interviews unnecessarily hard to read. Once the interviews were transcribed, I added all transcripts and audio-recorded interviews into the software 'NVivo'. I also recorded all relevant participant information, such as job title, employer, and gender, under a pseudonym. I decided to use CAQDAS NVivo, since it allowed me to easily store, filter and search for large amounts of data. The sophisticated search functions made it easy to locate stored information, and retrieve associated memos and codes, as well as to visualise the relationships within the data. However, there are multiple issues that have been raised in relation to using software for qualitative data analysis. One of the concerns is the distancing and alienation of the researcher from his data, with the machine standing between them (Bazeley and Jackson 2013). While early software might have caused such a distance through slow interactivity and display issues, the latest software feels extremely close to the experience one might have with text on paper. Another concern is the automation of the process, for example automated coding, which might shift the researcher's input into the coding and analysis process to the computer. It is important that the researcher who uses the computer for this procedure does not let the computer decide what themes might emerge from the text. The software does not do the reading and thinking for the researcher; it primarily assists him to simplify the management of the data. However, since I already had an idea about some of the themes due to my situatedness, and because of the way I used template analysis with a priori themes, there was no potential for the computer to take over. Another issue raised is the focus on 'code and retrieve as a method' (Bazeley and Jackson 2013, p. 8). The concern is that CAQDAS focuses on coding and reduces the text to segments which will prevent the researcher to reflect and create links on the text as a whole. Nevertheless, NVivo provides an array of tools to allow for analysing and reviewing the text besides just coding. In my research, I used NVivo merely as a data management tool, a digital index card and sticky note to keep myself organised.

It assisted in organising data and thoughts in a more effective and space-saving way, but it did not replace the researcher's work.

After the transcripts were digitally stored, I followed Rubin & Rubin's (2012) procedure and listened carefully to each interview while comparing it with the transcription for familiarisation purposes, and to check for errors. I then summarised each interview, identifying the main points in a memo, and noting the pseudonym of the interviewee (*ibid.*). Herbert Rubin also recommends creating a separate file with notable quotations for later use. I found that to be a very useful practice, and created a separate category in NVivo to mark such quotes throughout the text. Similar to King's template analysis, Rubin & Rubin recommend to first 'examine your interviews', and then 'decide which themes and concepts to code for' (2012, p. 204). Once my a priori codes were identified, I made a list of the codes' names and descriptions to be clear what they entailed throughout my analysis. In the next step, I conducted a preliminary coding pass on a sub-set of the collected data (10 interviews), identifying the parts of the transcripts relevant to my research questions. During this process I created new themes and modified existing ones as needed, which resulted in an initial template (see Appendix B). In this initial template I grouped the themes into higher order codes which described broader themes. The initial template underwent an iterative process of applying, revising and re-applying to the full data set. From this process the final template was used to help interpret and write up the findings.

Throughout the analysis I wrote analytic memos to note and order my ideas, as well as to make sense of the data. Additionally, I utilised several coding methods as described by Saldaña (2013) and Miles, Saldaña and Huberman (2014), namely:

1. Attribute coding: descriptive information about the participants and sites for management purposes
2. Holistic coding: application of a code to a whole paragraph to get a sense of

the possible themes

3. Descriptive coding: description of the basic topic of a passage in one word
4. InVivo coding: use of a word or short phrase from the participant's own language.

I did not use the software NVivo to run reports, automatically comparing all interviews to each other. Rather, I examined the interviewees responses by codes manually, and then summarised what I noticed. For example, I analysed how individual participants defined the concept 'authorship' by looking at the interview sections marked with the code of the same name. I also examined how the variation in my interviewees impacted my findings by inspecting responses by gender and work role. This enabled me to compare and summarise the differences or similarities in the group under study. My approach for writing the analysis follows King's suggestion of 'an account structured around the main themes identified, drawing illustrative examples from each transcript (or other text) as required' (2012, p. 446). This presentation of findings uses both short quotes and more extensive passages.

In order to ensure that the quality of my research was as high as possible, I checked the transcriptions for errors, constantly compared my interpretations with the data, gave rich and full descriptions and evidence in form of quotations. Additionally, I reported all negative evidence, as well as reviewed and discussed my findings and interpretation with my supervisor. I repeatedly discussed my findings with five individuals from the industry throughout the last three years of my programme to ensure not to be blinded or have a set mind. This allowed me to stay open to what was discovered in the interviews and remain alert to surprises in the research, even though I am situated. Last, but not least, I reflected in detail on my personal preconceptions and biases and heightened my awareness of how my own experiences and assumptions might have influenced the research. The next section

will outline such personal biases and other ethical considerations related to my study.

Ethical considerations

This section discusses some of the ethical issues that arose from my research, for example the risks to the participant and myself and possible biases, as well as my efforts to minimise or counteract them. I will primarily focus on the ethical issues arising from my employment in the animation industry, and my status as an insider, issues related to confidentiality and anonymity, the practitioner's informed consent, as well as unexpected outcomes or adverse effects for the participants and the researcher.

One of the main ethical considerations, which caused most of the issues discussed below, was my own employment in the industry under study which marked me as an 'insider'. To counteract the effects, I tried to shift more towards a role between insider and outsider. For example, I made sure that at the beginning of an interview the participant was aware that I was conducting this research on my own behalf with no connection to any animation studio. However, since I am working for one of the larger American animation studios, it was unavoidable that some of my interviewees were employed by the studio I am currently working for. To minimise any conflict of interest, I did not interview any participants whom I directly supervised at the time. Such a power imbalance might have resulted in inaccurate and self-censored accounts, since the participants might have feared that their job was in jeopardy if they reported unfavourable data or private information. Even though I did not choose anyone I was directly supervising at my company, my 'supervisor' title might have had an effect on the people I was interviewing and were 'lower' in the hierarchy at another studio. They might have felt inclined to

participate, because they believed it to be beneficial for networking or for their long-term career and did not want to reject an enquiry into a potential future 'colleague', 'supervisor' or 'door opener'. To minimise this possible effect, I made it very clear that my study is not connected to any animation studio and is absolutely independent from my work in the industry. I also refrained from interviewing friends and instead only selected participants from colleagues or former colleagues who I had less or no personal relationships with at the time of the interviews. Friends might have assumed that I knew what they were talking about or just have said what they thought I wanted to hear. I needed to have enough distance from the participant that nothing was taken for granted. Furthermore, I selected participants from several different animation studios to get a more representative sample. I also limited the number of participants who were currently employed at my studio to about a fourth of the total number of participants (6). Another issue arising from my employment in the animation industry was that it might have made potential participants hesitant of what they could say to someone that is potentially a competitor in the industry. It could have affected a participant's responses and have had some influence on what they chose to reveal. To minimise this effect, I explained both of my identities (doctoral candidate and employee in the animation industry) and clarified that I was conducting this research in the role of an independent researcher.

Furthermore, the participant could be recognised later as being part of the study and depending on what he or she revealed, a company might accuse him or her of violating the non-disclosure agreement. However, I avoided talking about such sensitive material. Additionally, the interview data was anonymised unless the participant explicitly wished to be credited by name, which no one did. As a result, I did not discuss any names, locations or identifying particulars with anyone to protect the identity of the interviewees. I used pseudonyms for all names, studios,

cities, towns, and counties, and disguised the identity and employer in any published materials or presentations. Proprietary information about films or technology is not part of my study. When it came up in an interview, I made sure that project names and proprietary tools or procedures were disguised and not connected to a studio's name. Also, the study does not focus on one company's workings, but on the people itself. Moreover, I chose safe interview locations that allowed the participant to stay anonymous and to speak freely without having to fear to be overheard. Most of the time, such locations were in a relatively quiet, public space, not frequented by colleagues of the participant, for example a hotel lobby or lounge.

I gained informed consent in writing from all research participants and I personally decided if the participants had the capacity to give the consent. Since I focused on adults currently working in the animation industry, I anticipated participants to be able to give consent and I felt that all my interviewees were. If I had been unsure at any point, I would have consulted my supervisors at the University of Kent. Prior consent for access had not been obtained directly, however, since most candidates were connected to me via LinkedIn, which is voluntary and requires members to accept an invitation, my connections only shared with me what they decided to be visible to me anyway. Besides looking at those LinkedIn entries, no reviewing or screening of identifiable personal information took place. Written informed consent was obtained as described in the following paragraphs.

I designed a participant information sheet which outlined information about the study and explained potential risks and benefits (see Appendix D). It also clearly stated that participants are free to withdraw at any time during the project, no reason necessary. I sent this sheet to the potential candidates before the interview via email, so they had the opportunity to read through the information on their own. If they agreed to participate, I walked them through the information again when we met in person and asked them to sign the consent form to confirm that they

understood the participant information sheet. None of the participants had difficulties understanding the verbal or written information about my project. This was as I expected since communication is vital for animators and CTDs in their daily work routine.

Besides my PhD supervisors from the University of Kent and myself, there were no other key investigators/collaborators. However, I am the only person who has access to consent forms and other participants' personal data. The interviews were audio taped to help accurately capture insights in the participant's own words. However, no one besides me and a reputable and discreet professional transcriber had access to the recordings, and the participants' names were not recorded on the tape. The transcripts and audio tapes, as well as any information sheets and forms, remain in my direct physical possession in a lockable drawer.

I will provide the participants who indicated that they were curious about the study as a whole with a copy of my thesis once completed and submitted. Since I used pseudonyms and disguised all other identifiable personal information, I feel safe to send these documents to the participants via email. I will ask if the participants are comfortable with this method of submission, otherwise I will upload the documents to a secure FTP server. All potentially personal information is stored on my home, laptop and University computers, and those devices and accounts are all password protected. I strictly limited the use of any addresses, postcodes, emails or phone numbers of the participants. The identifiable personal information will be deleted from all computers and consent forms will be destroyed 12 months after the PhD programme has been completed. My research project will result in a dissertation which I intend to publish online or in print. I am also planning to publish my research or parts of my research in the form of articles or presentations and conference talks. Although direct quotes from the participant may be used in publications or presentations, names and other identifying information will be kept

anonymous.

I do not foresee unexpected outcomes or adverse effects arising from the involvement in my project. My research does not revolve around intimate or medical data and just touches on material that is personal and biographical by way of asking about the interviewee's work. For example, a participant might explain how she made it into the industry or what personal difficulties she had in her career. However, through a thorough briefing and debriefing I made sure that participants understood the purpose and the procedures of the study, that it is voluntary and that they have the right to withdraw at any time. I also made sure that they have my contact information in case that there should be any adverse effects to participants and they might need help.

Concerning the risks to myself, since I am working for an animation studio, I might be accused of violating my non-disclosure agreement by writing about the American animation industry in my thesis. However, since the study does not focus on one company's workings, but on the people itself, and since I avoided talking about such sensitive material in the interviews, this appears to be very unlikely. Also, all projects and proprietary tools or procedures were disguised or not connected to a studio's name. Additionally, because of the non-disclosure agreements in the industry, I have decided to refrain from any participant observation and thus did not require the cooperation of a gatekeeper. There is also a danger of identifying myself with the participants too closely since my choice of candidates is very close to my own role and position in the animation industry. This could result in not maintaining a professional distance and instead 'going native' by reporting and interpreting everything from the participant's perspective. To address this issue and validate my findings, I made sure to report multiple perspectives and contrary findings. I continually cross-checked my discoveries or looked for evidence which contradicted them. The variety and sample size of participants helped greatly with this practice

and forced me not to rely on just one or two individuals' statements. I even consulted some of the participants themselves to confirm that my analysis and interpretation of the interviews did not contain anything inaccurate. Additionally, I continually questioned my findings and consulted with my research supervisors to gain an outsider perspective.

There were no incentives for taking part in my research and no other benefits aside from buying a coffee for the interviewee and myself at the interview location. However, most participants found the project interesting and enjoyed answering questions about their work day. Once the study is finished it might allow present and future 3D practitioners, as well as film scholars, to get a better idea of the actual control and influence practitioners in the industry have on the animation feature film creation. This might help to promote the work of the many behind-the-scenes employees in feature animation and make them more visible.

Summary

The study utilises a qualitative research approach drawing primarily on theories from the field of production studies, but to a lesser degree also from ethnography, to better understand if and how below-the-line female and male animators and CTDs make creative contributions throughout the creation process. The area of production studies is extremely applicable to my research. Concepts in this field allow me to ask questions about how below-the-line animators in the 3D animation feature film industry communicate, collaborate, and negotiate their value and creative contribution. Examining their relationships and work hierarchies by paying attention to above-the-line strategic authorship control schemes and below-the-line tactical authorial counter-pressures, as well as to the way practitioners use rituals, provide an opportunity to make sense of the culture of the animation

industry and its workers. Paying attention to work segregation by gender and its potential causes, as for example stereotypes, gendered pathways in history, characteristics of the industry, and the post-feminist problem, allow me to ask questions about the contribution of female animators and CTDs and lay the groundwork for my analysis of the experiences of the female and male practitioners interviewed for my study. In addition to production studies and current feminist debates, I look at the closely related field of the creative industries. The concepts in this area of research helped me to gain a better understanding of how the nature of the industry allows below-the-line practitioners to attain creative control and to contribute to the collaborative process of animation production, or prevents them from doing so. I also draw on ideas from the qualitative approach of ethnography. This is a relevant approach for my research, since ethnography's focus is to describe and analyse a culture-sharing group to understand their often concealed processes and practices.

The method of data collection for my study is based on situated practice research, employing a semi-structured approach to qualitative interviewing. Since the purpose of my study is not to generalise its findings to a broader population, my thesis does not employ a random-sampling approach, but instead uses purposeful sampling which allows for the selection of participants by the researcher. I chose a sample size of 25 participants, with almost equal numbers of women and men, who were selected through 'snowball', 'chain' or 'network' sampling. As my study required an approach that allowed for a pre-selection of specific ideas before the data analysis, I decided to employ template analysis, a form of thematic analysis strategy, to analyse my interview data. I also chose to use CAQDAS NVivo as a data management tool to assist with organising the data and my thoughts in a more effective and space-saving way.

The primary ethical concern arising from my research was my own

employment in the animation industry, which marked me as an insider. To counteract possible biases and adverse effects, I tried to shift more towards a role between insider and outsider by clarifying to participants that I was conducting this research in the role of an independent researcher. Because of the non-disclosure agreements required in the industry, it was necessary to protect the confidentiality of the participants by keeping them anonymous and removing any identifying information.

Conclusion

This section provided an overview of key academic theories in film studies which reflected themes of the social division of labour, creativity, collaboration, authorship, and gender. It also developed a working model for the methodology of this thesis based on existing theories of creativity and authorship. While many elements of these concepts are relevant for my thesis, I found that the theories discussed in the previous section are not enough to answer all the questions my thesis is trying to answer. Since the process of film production is not visible and often referred to as 'movie magic', the creative contribution of technical workers is concealed. While referring to photography, philosopher Vilém Flusser describes the process of creating photographs or 'technical images' which result from a 'machine/operator' complex as a 'black box' (1983, p. 16). What is going on within that complex remains hidden. Ostrowska (2010) applies the concept of the 'black box' to film production by asserting that how a film is made and what efforts went into its production is mostly unknown. Often the focus lies on the output, the film itself, and not on the actual process. To analyse to which extent 'authorship', aesthetic 'control,' and 'expressive creativity' can be said to function below-the-line, it is necessary to study the industry from within 'the black box of production which is film production' (Roberts 2011, p. 6). This study attempts to 'crack open' the black box of animation film production to take an in-depth look at the animation studio environment to examine the work hierarchies below-the-line practitioners operate in. To do so, this thesis employs interview analysis to investigate the creative contributions of below-the-line workers in animation from within the animation community. This study is especially interested in approaching authorship by asking below-the-line employees how they contribute, interact and collaborate with each other and what they think about their own production practices. Thus, my

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theoretical model based on existing theories of creativity and authorship will be developed further through discussion of the interview material.

Several key points arose from the interviewees, which will influence the concept of collaboration, creativity and authorship this thesis will propose. For example, the interviews revealed the importance of trust as a new aspect of collaboration which has not been an element of current theories of collaboration. Additionally, many interviewees report that they are willing to work extra, often unpaid, hours to contribute creatively and pitch their own ideas. Thus, the idea of motivation and reward are important concepts for this thesis, as these ideas may explain why they are doing so. The analysis of two different positions within the animation industry shows that different employees experience below-the-line contributions of a different nature. Interviewees in the position of CTDs, for example, indicate that their technical problem-solving seems to be different from the artistic creativity required from an animator. Therefore, this thesis will explore if a definition of creativity should be extended to include multiple categories of creativity. Another interesting point is that the interviewees are generally hesitant to take authorship of their contributions. Thus, it is important for the analysis of authorship below-the-line to understand how the practitioners theorise their own production practices to approach the question of why they struggle with the thought of considering themselves authors. While many women in this study report difficulties to be heard when they want to contribute, they are hesitant to link those experiences to gender. To reflect this highly-discussed topic which emerged from the interviews, a discussion of gender in relation to equal opportunities for creative contributions was added to the methodology employed by this thesis. To answer these questions arising from the interviews, I will focus on the negotiated process of production as John Thornton Caldwell, one of the key scholars in the field of production studies, describes it. This concept of above-the-line strategic authorship

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control schemes and below-the-line tactical authorial counter-pressures allows me to ask questions about how below-the-line animators in the 3D animation feature film industry communicate and collaborate with each other and how they barter and negotiate their value to claim authorship. Do below-the-line animators and CTDs negotiate across the line? And if they do, what kind of techniques do they employ? Carringer's, Gaut's, Sellors' and Stollery's theories do not approach collaborative authorship from such an angle, which is why I turn to the field of production studies to answer the questions which cannot be met with the ideas of collaborative authorship in film studies alone. Production studies offers a framework for such an approach by looking at industrial structures and cultural practices like professional rituals and everyday work routines. For Caldwell, authorship is on the one hand 'dictated by industrial structures' (Gray and Johnson 2013, p. 12) like labour contracts and unions. On the other hand, it is a cultural matter, negotiated 'through a wide range of socio-professional rituals and habitual workday routines' (Caldwell 2013a, p. 350).

Summarising, the necessary intense collaboration in today's 3D animation feature film production, requires a fresh assessment of the creative contribution and authorship below-the-line. Some questions that arose from the interviewees cannot be answered with the current ideas of creativity and collaborative authorship in film studies alone. Instead, this study turns to the field of production studies which provides a model for a negotiated process of production between ATL and BTL personnel. This thesis will adopt such a collaborative and negotiated production studies approach to authorship to be able to undertake a more inclusive and comprehensive study of below-the-line practitioners in the American animation industry.

The following second section of my thesis consists of four chapters and will present the findings of the study. Chapter 4 will investigate the workplace

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hierarchies, power dynamics, and BTL autonomy within the 3D animation studio. The focus will be on the negotiated process of production between below-the-line practitioners, as well as between ATL and BTL workers, involving practices like ATL control schemes and BTL countermeasures. Chapter 5 will explore how authorship, creative control, and agency can be said to function below-the-line. I will examine the interviewees' understanding of what they consider a creative activity and how they define authorship. Finally, I will develop a collaborative authorship approach that can work for below-the-line contributions in the 3D animation studio environment. Chapter 6 will address the issues of low participation rates of women in the animation workforce, as well as gender inequalities. The concepts of gender stereotypes, gendered pathways in history, work conditions in the industry, and the post-feminist problem, will serve as a basis for the exploration of those topics. I will complete the second section by drawing a conclusion to my thesis and identifying its limitations, implications and suggestions.

SECTION II

Chapter 4: The 3D Animation Studio Community

Introduction

This chapter explores the negotiated process of production involving ATL control schemes and BTL countermeasures by examining the workplace hierarchies, power dynamics, as well as the degree of autonomy for professionals in the 3D feature animation studio environment. ATL control schemes are practices and rituals that seek to retain authorship above the line, while BTL countermeasures undermine these strategies and revive discussions about BTL authorship. By looking at these materials I give detailed insight into what is at stake for animators and CTDs in this negotiation. First, the chapter will offer an overview of the below-the-line practitioner's main tasks by providing an in-depth description of animators' and CTDs' daily work responsibilities based on the interview material. I will then examine the autonomy the practitioners have to make creative and technical contributions as part of their work practices. While some contributions are part of their official work tasks, I will demonstrate that others can be regarded as 'tactical authorial counter-pressures' (Caldwell 2013a, p. 363), determined by legal, economic and material work conditions. Second, the chapter will investigate the control mechanisms employed in the animation studios to manage the contributions from below the line. I will present monitoring rituals like formal meetings and notes-giving, which are suggestions or directions primarily, but not exclusively, given by ATL personnel and superiors. I argue that such rituals are less a means of communication than strategic authorship control schemes to manage and limit

artistic freedom in order to keep projects on budget and schedule. Third, this chapter will show that below-the-line animators and CTDs rely primarily on informal communication to create a collaborative environment, which allows them to team up with other BTL personnel to push their own ideas into the process. Through these routes we can see how BTL personnel find ways to claim degrees of authorship. After a description of how the practitioners interact and communicate with each other, I will introduce the concepts of trust and friendship as countermeasures to industry characteristics and ATL control schemes, as well as important ways in which collaboration and creativity thrive in the animation studio community below the line.

This chapter will deepen our understanding of the social division of labour and the negotiated process of production in 3D animation studios. I argue that BTL animators and CTDs are not mere executants of their assigned work tasks, but contribute creatively to the animation feature film, intentionally and unintentionally circumventing or countering top-down authorship control schemes. With the help of my interview material, I demonstrate that communication, trust and friendship below the line are crucial instruments, which allow practitioners in the American 3D animation feature film industry to collaborate and increase their opportunities to insert their own ideas into the process.

Tasks and contributions below the line

The following section will show that below-the-line practitioners in the animation industry negotiate their creative contributions intentionally and unintentionally through multiple conditions, which contribute to the distribution of authorship from ATL to BTL. The term 'unintentional' refers to negotiations which do not necessarily aim directly to claim authorship, but whose outcome nevertheless

generates agency and yields authorship, even though the practitioners involved do not expect it to. First, I will describe animators' and CTDs' daily work responsibilities. Interview questions asked for an outline of the participants' main tasks and specific examples of their contributions and ideas, allow me to present these findings in the interviewees' own words. Second, I will analyse these findings and demonstrate that there is a 'mismatch between job description and job content' as Stahl (2010, p. 284) describes. I will establish that the legal and contractual constraints that officially define work below the line as technical, do not accurately reflect BTL practitioners' daily work, which involves creative contributions. While legal work descriptions might say otherwise, the fast-paced production process and the blurred workflows interviewees report require workers to stand in and perform other job roles. These include roles that require creative problem-solving, which imparts more authorial agency to below-the-line practitioners. Such BTL tactical authorial counter-pressures provide ways for below-the-line workers to negotiate their authorship and creative input. However, my findings also indicate that the legal and contractual constraints in the animation feature film industry are fairly flexible and not an aggressive form of exploitation used to keep creativity purely above the line. Rather, creative contributions from below the line are often accepted and even relied on by above-the-line personnel.

As part of the study, I examined the roles of CTDs and animators, to provide an in-depth picture of below-the-line practitioners in the 3D feature animation industry. While these two professions are often closely connected, practitioners report that their main tasks are distinctly different. CTDs, also called riggers, specialise in the asset production part of the pipeline (see Chapter 1 for more details). While the individual job tasks and organisation thereof might vary from studio to studio, the core task of all CTDs is to provide animators with the necessary tools and setup to efficiently animate the characters during shot production. They

create the virtual 3D characters that are then animated by the animators in shots. Thus, the CTD basically creates the tool for the animator to do their work. This is accomplished by using the 'static' 3D model of a character or a prop and basically creating an underlying anatomy, comparable to a skeleton in real life, and connecting this anatomy to a user interface, so that those models can easily be animated. CTD Shane uses a comparison to puppets to explain the process:

That's basically the product, producing a virtual character, a virtual puppet for animators that would basically fulfil design requirements and, I guess, like animation interface requirements. I guess like it's really hard to explain.

The example of a puppet, especially a traditional wooden puppet on strings, is indeed a suitable one that facilitates the explanation of this process. In this comparison, the modeller would be the sculptor of the individual, wooden parts of the puppet, for example a hand or a head. The CTD would take those individual parts and connect them with joints, adding the anatomy into the puppet. He would also add strings, the controls, which the animator then can use to animate the puppet. CTDs often start by looking at the art direction of their character provided by the design department, especially expressions and body poses, to get a better idea of the performance requirements. At the beginning of their process they also work with the modelling department, for example when requesting topology adjustments⁴. Some interviewees also describe the need to interact with the simulation department and 'surfacing' (or 'materials' and 'fur' as it might be called in other studios), since those departments are all involved in the asset creation process. However, the closest

⁴ In 3D animation, the term 'topology' refers to the surface properties of a 3D model. When working with a polygon mesh, the topology is the layout or the distribution of points that describe a 3D object. Rigging requires a so-called 'clean' topology where the points are efficiently and properly laid out on the mesh, which is mostly determined by the location of high deformation areas like shoulders or the mouth and brow region of a character.



Figure 2. Static 3D character model. Image by the author.

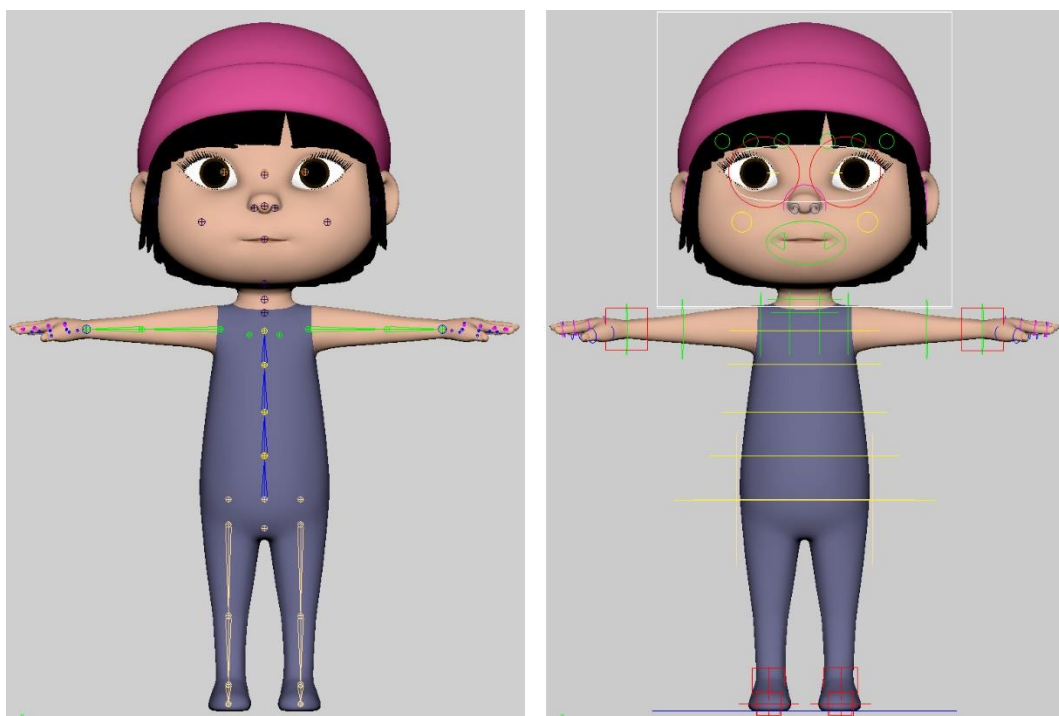


Figure 3. 3D model with underlying skeleton (left) and finished character rig with user interface (right). Images by the author.

interaction CTDs have is with animation. CTD Markus describes the process as follows:

Character rigging, basically starting off at the beginning of the, what do they call it, the front end of a show, which is asset building, and we start off with the animator. You'll do your pass for a few ... You'll grab your character from modelling, do your pass on it. After a couple of weeks, hand it back to the animator, or hand it to them for the first time. That basically begins the process of iteration, which depending on the character, can go on anywhere from several weeks to many months, up to a year, sometimes.

This account captures the iterative and sometimes lengthy process of character rig creation and testing with the animator. The collaboration between CTD and animator is an important part of the rigging process. After all, the rig is the animator's instrument for the character performance. During this process, animators test the rigs, trying to ensure that the characters are able to fulfil all the performance requirements of the film.

While some animators are involved in the rig-creation process in character production as described above, the animator's main task is in shot production where these assets are animated. During this process animators mainly interact with peers in their department. Collaboration with other departments seems to be less frequent and inter-departmental communication is often for the purpose of information or fixing. Aside from a few differences in organisation and naming, all animators interviewed describe the process of animation shot production similarly. Depending on the difficulty or length of the shot or sequence they are assigned to, animators work on a new shot every couple of weeks. Once they have been assigned to a shot,

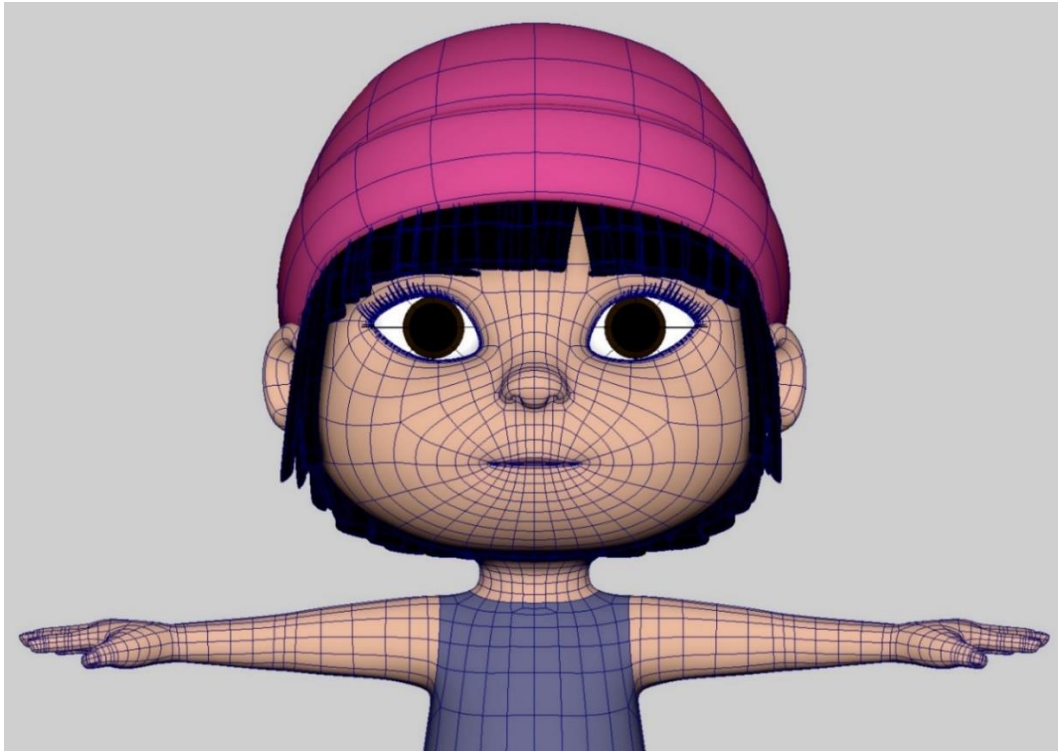


Figure 4. 3D character model with visible topology layout. Image by the author.

they have a director's kick-off meeting where the director explains what the shot is about, what the character thinks and what he generally would like to see, with the help of layout and storyboards of the sequence. The animator then begins to plan the shot, often by doing what is called a thumbnail, sketch or idea pass in 2D. This pass is then shown to the director and/or the supervisors who give notes on the idea. The animator applies those notes and ideally starts blocking out the shot in 3D⁵. This might also involve acting out the sequences and video recording themselves for reference. This blocking pass is then shown to the supervisors and directors who will once again give notes on the animator's work, which he applies to his shot. Once the blocking is in a good state, the animator starts refining and eventually splining the shot⁶. This pass is shown to the supervisor and director who will eventually give

⁵ 'Blocking' is an animation pass where the poses of the animation are not keyed on every frame, which is called 'on ones', but rather on fours, fives or sixes, depending on the type of shot. The interpolation between those poses is stepped, resulting in a choppy animation. Blocking is a less time-consuming way to get the main idea of a scene across.

⁶ The term 'splining' describes the process of converting the interpolation between the poses of the animation from stepped to spline which results in a smoother movement. While the term 'conversion' implies an automated process, splining requires a lot of manual work by the animator.

another round of notes which will then be addressed by the animator in a polish pass. While this description implies that the animator shows his progress to the director about three times during his work on one shot, this process is very iterative and, in reality, they might meet many more times, sometimes daily. Animators also meet frequently with their supervisors and lead animators to receive feedback. While this brief outline of the main responsibilities of CTDs and animators provides an overview of their more official work assignments, the following paragraphs will show that these tasks require or offer multiple opportunities for BTL practitioners to contribute creatively.

The opportunity and necessity to fill in and perform other roles in the studio if other departments do not have the capacity or the budget to do the work for which they are normally responsible, is a recurrent theme in the interviewees' accounts. This conforms to Caldwell's theory of how BTL authorship is distributed, especially to what he describes as the material conditions. As previously discussed, Caldwell describes the material conditions as three main changes in the production process triggered by technological developments: 'blurred and collapsed workflows', the 'pace of filming and work speed', and increased 'production multi-tasking', which can lead to BTL counter-pressures like 'production gap-filling' or 'location problem-solving' (2013a, pp. 359–360). In particular, the increased speed and the decreased production budget require workers to stand in and perform other job roles, including roles that require creative problem-solving, which imparts more authorial agency to below-the-line practitioners. For example, animators and CTDs express that they do not always have artwork for all aspects of the characters or sometimes even for all characters. The department's budget might have been used up, leaving no time to provide those drawings. This 'lack of information', as animator Justine calls it, makes it 'more difficult' for the practitioners in some ways, but also lets them 'have a bigger role' in others by standing in and performing the roles of animator,

designer, rigger and sometimes cameraman and modeller at the same time. This is quite interesting, since the legal and contractual constraints Caldwell and Matt Stahl describe officially categorise BTL workers 'as mere executants of the conceptual work of others' (Stahl 2010, p. 284). The following paragraphs will show that production gap-filling and problem-solving allow BTL practitioners to actively contribute their ideas to the production, providing more opportunities for their creative input than is usually stated. I will also establish that such BTL contributions are typical and accepted work practices of CTDs and animators in the 3D animation studio environment.

After taking a closer look at the work descriptions of the interviewed CTDs, it becomes clear that their tasks require a variety of skills from extremely technical programming knowledge to artistic sculpting skills. It is quite common for CTDs to be working on development tasks for new tools, rig setups or workflows, especially when they are not actively working on a production. But, not only can the skillsets of the employees vary, the job requirements for the position can fluctuate depending on how the studio defines and splits the work of a CTD. Sometimes, the modelling or animation department sculpts the facial expressions and correctives, but in most studios, for example Blue Sky Studios, DreamWorks and Walt Disney Animation, this is done by the rigging department as well⁷. Mark, a CTD from DreamWorks notes: 'Yes, we do everything with the facial rigging. We don't get anything from animation. All the deformations, blendshapes, all that is done on our side.' However, Pixar even goes as far as combining the role of the modeller with the role of the CTD, having them model and rig the characters. Larissa describes her experience with the combination of the traditionally separated roles positively:

⁷ 'Correctives' is a term that describes blendshapes, shapes that are hand-sculpted by moving the points of the character mesh, in order to correct for areas where other deformaters, like joint deformations, are not sufficient to achieve the desired form. Correctives are often used to preserve or build up volume, for example, 'for the bulging effect of compressed flesh' and muscles (Ritchie, Callery and Biri 2005, p. 227).

It's actually great. It's a lot faster if you have the correct software that allows you to preserve the weights, but what's also quick is the fact that you don't have to go through a person, you don't have to file a ticket. You're rigging, and you realise that line is just too far up, or I just want to move it just a bit. Guess what, you can do it right there⁸. I think it's definitely beneficial for the studio. You got basically one person doing two people's jobs, and I don't mean that in a bad way. It's just more efficient, but as an artist, it is definitely more challenging.

Here, the regular workflow from design to modelling to rigging has been collapsed to combine the tasks of a modeller with that of a CTD to make the process faster and more efficient. This account is interesting, since Larissa is not only explaining the benefits for her, but also outlines the benefits for the studio, describing this alternative workflow as a win-win situation. The benefits for the studio are the cost savings from combining two jobs into one, and the time savings from the increase in efficiency. While she finds that combining the two roles poses a challenge and requires a technical and artistic skillset that not everyone can offer, she enjoys the quick turnaround and the autonomy that this workflow provides. It seems that Larissa does not necessarily regard the increased challenge as a negative, since in return she gains creative control and more freedom. Instead of having to file a ticket and go through the official, management-controlled channels, she can act

⁸ Larissa describes the regular process between modelling and rigging. The CTD often requires a specific layout of points that describe a 3D object, the topology, or an adjustment of the shape of the object which might make it more efficient and flexible to rig and later animate. Since in the more common character creation pipeline the model is delivered by modelling, all changes the CTD requests need to go back to the modelling department which addresses those notes and then sends the adjusted model back to rigging. This can be a hassle if rigging work is already in progress, for example the binding of the mesh to a skeleton, a process that is called 'weighting' or 'skinning'. Often, the modelling department is not familiar with the tools and workflows of the rigging department, which can make it challenging in this back-and-forth workflow to preserve the work the CTD has already done.

autonomously without seeking permission. Thus, combining the roles for efficiency reasons gives Larissa an opportunity to claim more authorial control over the character.

CTD Hazel describes another instance where she was able to gain creative control and contribute creatively outside of the tasks defined in her regular work description:

There have been instances where we're asked to do something that's not drawn, and it's up to us to decide how that looks. Especially if the drawing is ambiguous, or the 2D artist is cheating a little bit, then the director will even tell us that they are asking us to show them what we think it would look like, and then we have the creative control.

Hazel outlines an example that can be categorised as production gap-filling caused by the increased speed of production. Hazel, a CTD, basically takes on the role of a designer or must provide an interpretation of a design that is not clearly defined. While Hazel might not make the final decision on the design, she is encouraged by the director to give her own ideas. It seems that she is not only executing the concepts of others, but contributing creatively to the process, contradicting the studio's official work description. This confirms the potential 'mismatch between job description and job content' that Stahl (2010, p. 284) describes. While this can be an opportunity for below-the-line practitioners to rise to the occasion and elevate their value to the company, not everyone welcomes this additional challenge. Animator Justine points out that it might not always be beneficial to do work that they have not been trained for. She describes:

In some ways it's nice to have that collaboration with the other departments and that openness, but when you have

limited time having to, for example, reshape your character on the fly because the modelling didn't have time to finish their stuff or they don't build appeal into model, then now it becomes a negative. It's really like if that animator happens to know modelling they can create something beautiful, but if that animator doesn't, then their shot doesn't look as good and now suddenly are they our worst animator? They may not be. They may just not be like a 3D artist where they have all these other traits, and should they have to be when you're hired for an animator...

Justine raises some interesting questions and concerns. If practitioners in other departments that are not specialised in a certain discipline have to pick up the work previous specialised departments could not finish because of time constraints, it does not necessarily mean that the practitioner will excel at it. This opportunity to contribute creatively and stand out among your peers could instead turn into a stressful experience that might reflect on the practitioner's skillset in an undesirable way.

While Caldwell primarily provides examples from above the line, I am describing that blurred workflows can also be observed below the line. This might not primarily be facilitated by digitalisation as Caldwell (2010) explains, but instead stimulated by the search for efficiency, as in the case Larissa describes. An example is the animator's main task, which is defined by the pipeline to be shot production. However, to make sure that the character rigs, which are the primary tool for the animator, are going to fulfil the needs of animation when completed, some animators are involved much earlier. This overlap allows the animator to have creative input in the character creation process. Animators who had the chance to also be a part of

the character asset creation or the early character shots at the beginning of animation production, often state that there are more opportunities to contribute during that process than in the middle of shot production. Additionally, several animators describe the character creation part of their work not only as a mere testing task, but as an exploration. Animator Doug explains:

The opportunity, I would say that as an animator, typically for an animator, your biggest chance of having an influence on character or story is in the pre-production phase. The reason being that the directors are often able to say to people who are working on pre-production, 'Okay, I want to see your ideas. Bring your ideas to the table here.' There are certain constraints for the character but go away and figure out how you think this character should walk, run, move, if you know what kind of behavioural, eccentricities, or movement characteristics they might have. Then at that point, you can pitch pretty much anything you want to the director and there's a chance that director might see what you've done and say either, 'Wow, you know, I love the way that character walks. We're going to incorporate that into the film. That's how I want it to be,' or even on a larger scale. If you animate a scene of a character doing something that you think is appropriate to the character, I've seen it happen before where directors might love what you've done so much that that particular action that you've come up with has been essentially written back into the script, into the story.

Doug states that there is an increased opportunity for animators to contribute in

pre-production⁹. Characters have not been fully developed yet from a personality standpoint and there is a lot of freedom for animators to experiment. Thus, Doug experiences his work during the asset production part of the pipeline as research to find and define the personality of individual characters, as well as the appropriate animation style that makes the character unique. Such ideas can even be outside the animator's main area of expertise. Animators mention the character's design and voice casting, as well as the story as areas into which they can provide input. This is indicative of a creative contribution, since it implies that there are still missing pieces in the conceptualisation of the character. The reason for such incomplete concepts might be time and budgetary constraints in other departments, which then offer the animator an opportunity to fill a gap. Finding these ideas is a creative activity and not just the execution of an already existing character building plan. Animator Astrid confirms this conclusion by mentioning close collaborations with the character designer and the quest to 'find what the character should look like' as part of her task in the character production pipeline. These responses suggest that this part of the pipeline allows animators a larger amount of creative autonomy, leaving the animator more room to contribute their own ideas than usual. It also seems that the pressure on the animators is different than in shot production where they must produce a certain quota of frames per day; the work in asset production is more task-based, indicating an increased level of workplace autonomy. Workplace autonomy is strongly connected to management and control structures and describes how self-determined and independent employees are at work. Creative autonomy has a stronger link to the product itself and how independent the workers' "art", knowledge, symbol-making and so on' (Hesmondhalgh and Baker

⁹ Animators often use the term 'pre-production' for their work in the character creation part of the process. However, this aspect of the pipeline is actually part of the asset 'production' process. Since animators are part of asset production and shot production, they might see asset production as part of the planning process, basically the pre-production for their shot work.

2011, p. 40) is from other influences. This implies a direct connection between the animator's work in the character creation process and authorship, since the more creative autonomy an employee possesses, the larger his or her individual creative contribution.

Interestingly, Doug's account also describes that the animator's ideas are highly encouraged at this stage. Directors specifically ask for the personal input of the animators and if the director likes the ideas, they might even go as far as adjusting the script to accommodate it in the story. While influencing the overall story more significantly is very difficult for animators, animator Dustin adds that there have been instances where individual animators have influenced the director's choice of voice actor. This shows that the creative contribution of animators is to some degree accepted and expected by ATL personnel. The combination of character modelling and rigging tasks described by Larissa is another example of a studio supporting increased autonomy for below-the-line practitioners. The studios support or even implement blurred and collapsed workflows and the resulting production gap-filling of below-the-line practitioners. While these workflows provide increased efficiencies for the company, they also help animators and CTDs enjoy more creative control.

So far, I have focused primarily on the creative opportunities for animators and CTDs arising from production gap-filling. The following paragraphs will discuss the contributions generated by the CTDs' and animators' problem-solving that is required because of the fast-paced production process. The need for creative problem-solving is a recurrent theme in the accounts of my interviewees. As previously discussed, the fast-paced production process requires workers to stand in and perform other job roles. These job roles often include tasks that require creative problem-solving, which imparts more authorial agency to below-the-line practitioners. CTDs often describe problem-solving as being related to a specific

technique, process, or tool. Animators primarily relate problem-solving examples to acting or story choices for the characters. CTD Joy describes a technique-specific contribution which is determined and triggered by the time constraints of the production schedule:

Some stranger solutions will come up, when you're getting towards the end of the movie, and the scheduling is tight. Other departments are off their budget. They can't do anything else. There's always a couple of things where you're like, 'What? We're doing that?' Whipped cream, we did. Some whipped cream in [the movie], which should have clearly been Effects, no question. We ended up rigging a big thing of whipped cream that comes out.

Joy clearly makes a connection between the schedule and her needing to come up with an idea of how to rig something that would normally not be rigged at all. This task would ordinarily be another department's responsibility. She had to think creatively to devise a solution that fulfilled the production requirements. Similarly, CTD Ben connects the necessity to innovate creatively with budgetary constraints. In his case, he was constantly required to come up with new techniques. Both Joy and Ben refer to problem-solving as a result of production speed and budget constraints. Since time to solve such issues is of the essence, inevitably more creative control needs to be delegated to individuals below the line. These individuals often need to quickly find a solution on their own, with minimum control from the top, which gives them more creative and workplace autonomy. However, not all problem-solving contributions related to techniques and processes are caused exclusively by production constraints. As CTD Brendan details below, some problem-solving is motivated by efficiency, as well as by qualitative improvements:

I felt like the way that we attacked, we basically worked on background characters, was not very efficient at the time, so I proposed a different way of creating background characters. ... I was asked to do the same thing on [another movie] because we had a lot more characters there and I took a lot of pride in just doing the background character work because I felt like there was sort a gap that, a big quality gap, that we wanted to close.

Brendan's contribution is intended to improve and increase the efficiency of the studio's background character creation pipeline and tools, while raising the quality of the characters.

CTDs describe two categories of problem-solving: solving process-led workflow problems or solving technical problems with tools. Joy's problem-solving is an example for a process-led solution as it is a direct result of the time constraints of the production process. However, Brendan's problem-solving case has more to do with the tools he needs to improve in order to make the work more efficient and high-quality. While Joy's problem-solving is necessary to quickly proceed with animation production, Brendan's tool is intended to increase efficiency and quality long-term. One of the CTDs describes another example of tool-related problem-solving that resulted from an animator's difficulties in easily achieving a graphic flow of the silhouette of the characters. This issue inspired the CTD to come up with a tool set that solved this limitation and allowed the animators to do just that. While he might not have been the only one implementing this tool in the end, he came up with the initial idea. Interestingly, this tool has gained a reputation among animators and CTDs in the industry, and animators in other studios have asked their developers for similar software. While this tool on its own might have made just a small difference

to the look of the film, it had an impact on the industry. This example shows that a BTL CTD was not only able to contribute to the production process of his studio through problem-solving, but to influence a wider circle of practitioners above and below the line. Since he did not create the tool on his own, he might not be able to claim full authorship of it, however, he undeniably can claim partial authorship.

While problem-solving/troubleshooting is a recurrent theme in the accounts of CTDs, it is also mentioned by animators. However, animators speak about problem-solving primarily in terms of finding acting solutions or story choices for their characters during shot production. Such problems can be small story issues or interpretations, for example, finding a gag that makes the shot more entertaining. Animator Dustin provides a good example of how he handles animation performances that require such contributions:

It was just how he was going to play with the bug. I had the idea how to make it like an insect. Like it was something that's in his hand. The note was just to hold it but I had him roll around his hand and he was playing with it and catching it. I pitched that as an idea and it made it straight in. They liked that little bit of business, as they called it. It made it into the film. It was just a small little thing to add to my shot.

While he points out that it was just a small detail, he made the decision to add this little extra to the shot, even though there was no indication of it in the script. Multiple animators report contributions like these. Such contributions are often not requested by the director but are offered voluntarily by the animator to make a shot that, performance-wise, is not very interesting a bit more entertaining. The impact of an animator's ideas can range from small acting details that make it into a single shot to acting choices that might become character traits applied to a specific character

throughout the film. Sometimes a small detail can develop into an idea that becomes iconic for a character as animator Andrew describes:

I did this shot where his [the character's] eye twitches. I remember a friend from New Zealand who was like, 'I know what shot you did.' I'm like, 'What are you talking about?' He's like, 'You did the eye twitch shot.' Because he only saw the trailer. He's like, 'When you get angry, your eye twitches.' I'm like, 'Really? I didn't even notice that.' But then one animator saw that, and they liked it, so they did the eye twitch. Then another animator did that, and they did the eye twitch. Now it's almost like part of the character. That's who the character is. At the end of a sequence he does a [interviewee makes a squeaky voice and twitchy expression]. That's completely the animators, the actors, like the director didn't have that in his head. It's kind of like, we added that little trademark thing that we all liked.

Andrew explains how the small acting detail of an eye twitch he made for one of his characters was picked up by multiple other animators and thus, became a character trait used in the film. While the director initially approved this acting choice, it was Andrew's idea. The animation crew liked his idea as well, started using it for their shots and thus helped push this idea forward. By depicting the reaction of his friend who immediately recognised the first occurrence of the twitch acting choice in a trailer shot as Andrew's idea, he implies how personal and recognisable his contribution was. Someone who knew him was able to attribute this idea to him by just looking at a sequence of shots. As the previous examples demonstrate, contributions by animators below the line can often result from trying to make a

shot more entertaining. Since not every action and performance of the character is described in the story, there is a lot of room for interpretation for the animator. This opens small or sometimes large opportunities for the animators to add their own ideas to their shot. As Berys Gaut describes, film tasks are less specific, leaving room for unique, artistic contributions of the specific practitioner executing the task. This imparts authorial agency to the animator, who can make his or her own interpretation, sometimes even taking on tasks of other departments and, thus, standing in to perform other job roles.

The previous examples demonstrated that the fast-paced production process, and the blurred workflows in the animation industry require CTDs and animators to take on tasks that involve creative problem-solving. During the process of problem-solving, creativity emerges, and below-the-line workers can obtain more creative control and authorial agency through these practices. These practices unintentionally work against the social division of labour and the primarily budget-driven push from production management to keep creative control above the line. However, even though interviewees are aware that creative problem-solving and standing in for other roles are activities in which they constantly engage, their opinions vary as to whether these practices are part of the jobs they are hired and paid to do. Some welcome such contributions as an opportunity to further themselves and the process, others see the lack of art direction as mismanagement by the studio. Multiple practitioners, CTDs and animators believe that contributing ideas is not expected for their work and is not part of the actual job role. CTD Mark states that his main responsibility is to 'just deliver a good rig to animation'. Animator Samuel summarises his thoughts on this topic as follows:

That's something extra. I don't think you need to do it. I think, to a certain extent, you have to contribute very little bit as our

day-to-day responsibility. It's definitely not a requirement. I would say the bare minimum requirement of our job is just to produce footage, as an animator. I think, just to make the project better, to just be more successful, to involve yourself in whatever you're doing, it takes a little bit of that extra going out there and throwing out ideas, thoughts, and suggestions, even if it's wrong.

Both Mark and Samuel identify a very simple core task and expectation for their respective disciplines. Even though the time and budgetary constraints often do not give animators and CTDs any choice in the matter, they regard the creative contribution as a bonus for them and/or the company, something additional that can make the work more fun and rewarding for them personally and improve the work at the studio. Animator Samuel explains that he finds the problem-solving element of his daily work greatly gratifying, since he knows how rewarding it is to come up with a solution. However, while the majority of interviewees enjoy the process of problem-solving, multiple people also report that it can be inherently stressful and frustrating if under time pressure a satisfying solution cannot be found. But it seems that the thrill of the, in some ways, risky and uncertain process, as well as the prospect of successfully solving the puzzle, is more rewarding than frustrating overall. A couple of the accounts connect studios' requirements and expectations for creative contributions to particular levels in the hierarchy, such as lead or supervisory levels. Only one CTD referred to the fact that his studio is signed to collective bargaining agreements with The Animation Guild, the union covering most artistic, creative and technical job categories in the animation process. He believes that creative contributions are not part of his job description and that the union discourages such additional contributions, since making them gives studios free

work. While he states that employees in animation studios should follow that recommendation, he also explains that it is hard to do so, because it is actually more rewarding and fun for him to contribute creatively, even though it is a benefit to the company for which he does not get paid. He is the only one out of 25 interviewees that reports this struggle between giving the company free work and enjoying making creative contributions. However, his account illustrates that although practitioners are neither paid nor credited for doing work outside their official job description, they find such work artistically rewarding and increases their job satisfaction. This is one possible explanation for why they might continue to contribute even though their extra work might not yield compensated recognition.

There are also many interviewees, primarily animators, who felt very strongly that creative contributions are an intrinsic element of their work. Animator Dustin says:

No, this is part of your job. It's actually what makes you good at your job. ... There are two ways of looking at it, particularly with animation. There is the very technical, what the spreadsheet says, you should work, you should do what the director asks for, and you should get it done. Then there's this X factor, entertainment value, that you should add. The good animators that do well, it's something special. It's something that you came up with yourself that nobody asked for.

Dustin claims that there are two different components to his work. The first component is to produce footage within a certain time frame, which is similar to Samuel's statement above. The second component, however, is something that was not art directed or directly requested, the contribution of his own ideas. Dustin regards the addition of the animator's own ideas as a fundamental element of his

job. Other animators agree with this assessment. Animator Doug states that, while not every animator might feel that way, he believes that the 'better animator' understands that coming up with creative ideas to entertain is a 'very, very significant part of their job'. Animator Stan even goes as far as declaring that the work of an animator and ultimately being hired by one of the big studios, is 'not so much about the finished product' or 'how polished' the animation is, but rather about the ideas. It seems that the contribution of ideas is used as a way to stand out through individual creative distinction, confirming their value to the company, and thus, making them more desirable employees.

While the interviewed practitioners do not agree on whether these additional contributions are part of their job, they consistently acknowledge that through the less defined tasks, such as standing in and performing other job roles and solving problems when required by the production process, they have contributed their own original ideas. Therefore, below-the-line animators and CTDs are not simply carrying out creative tasks and concepts defined by above-the-line personnel. This is relevant because their official categorisation as technical workers excludes any artistic control from their work description and, thus, precludes claims of authorship. This assessment confirms Stahl's suggestion of a disparity between the work description and the daily work the practitioners actually do.

Additionally, multiple CTDs report that a lot of their creative contributions like new technology and tools are being made in their downtime between films, or if there never is any downtime, in their spare time, and not during regular work hours. The reason why this is primarily reported by CTDs is probably because their work often involves process-led character rig problem-solving, as well as tool-related technical problems that they need to solve to improve their or the studio's workflow. This adds to the theory that such ideas are a separate, non-paid, contribution and not part of the expected work requirements of below-the-line practitioners in the 3D

animation industry. Interestingly, even though the creative contribution of below-the-line practitioners is not officially a component of their work role, several CTDs and animators confirm Matt Stahl's (2005) assumption that animation studios rely strongly on the creative input and authorship of animators. CTD Adam explains that, while he does not believe that innovating tools and workflows is expected by the studio, it is 'not discouraged at all because the goal is to either make yourself more efficient or to hopefully make the department more efficient'. Animator Justine states that those kind of contributions are even actively encouraged by the studio:

I feel like the studio wants and needs that to be successful to people, and the directors really want it, because, I guess, they trust the department to come up with something out of nothing. Even the supervisors do encourage you. I think there's definitely encouragement from all areas because there is total ... It's almost like a desperate encouragement because, 'We don't have the time to do all this so can you please, please, please come up with something out of nothing?'

Justine affirms that the studio and the directors rely on the creative ideas of the below-the-line employees, and feels that those contributions are actively encouraged by directors and supervisors alike. Her word choice of 'desperate encouragement' is quite interesting. Since the schedules are tight and the competition in the industry is increasing, the studio needs to find ways to work more efficiently. However, there is no time in the budget to spend on such improvements, and sometimes it even means that less time and money is allotted for certain departments or production as a whole. Thus, studios are often more than happy, or rather 'desperate' to accept and use the ideas and implementation the practitioners came up with in their own time. Justine implies the dependence of the studio on those contributions from below-the-

line practitioners. This account directly confirms the previously outlined observations and shows that the fast-paced production process of animation studios requires animators and CTDs to stand in and perform other roles, and to solve problems, often in their own time. Without the delegation of creative contributions to below-the-line personnel, the budgetary and time requirements of the animation studios could not be kept in a competitive range, which is why although they are not officially recognised, such contributions are generally accepted.

This section took an in-depth look at the tasks and contributions of below-the-line animators and CTDs and their mostly unintentional push against the social division of labour and production management to keep creative control above the line. The next section will analyse the control mechanisms employed in animation studios, like production meetings and notes-giving, to manage contributions from below the line.

Communication, management, and control mechanisms in the animation studio

The interviews uncovered two main management practices through which work from animators and CTDs is regulated. First, production meetings or rounds keep below-the-line practitioners on track. Second, specific tasks or notes are given, often as a result of such meetings or check-ins, which function as a means to manage and limit the artistic freedom of BTL personnel. The following paragraphs will, based on the interviews, examine how meetings and notes-giving work in animation studios. While they appear to be used as a means of communication, I argue that such practices are monitoring rituals intended to retain authorship at the ATL level. Although this idea is in line with Caldwell's theories, my findings differ in that control schemes, especially the process of notes-giving, are not limited to above the

line but are also commonly reported as occurring between BTL personnel.

The constant iterations and feedback cycles required for the work of both CTDs and animators necessitate a large number of meetings. There are many formal meetings and processes in place to obtain, distribute and manage information, ask for feedback or give and receive notes. While they have different names in different studios, they appear to have the same objective: to keep employees on track and on schedule and manage the time and notes of supervisors and directors. Animators and CTDs both attend kick-off meetings at the beginning of their tasks. Those meetings serve the purpose of giving the CTD or the animator the initial direction and information they need to do their work. Often, a character kick-off meeting includes all the below-the-line personnel that worked on some part of that character, such as the CTDs, animators, modellers, character designer, art director and the supervisors of each department. While in animation kick-offs the director seems to be always present, this is not always the case for character kick-offs. This is especially true for meetings of a more technical nature. Dailies or animation sweatbox meetings are daily meetings with the director and animation team¹⁰. These meetings are often used for animation kick-offs as well. During animation dailies, the director is shown the animation work in progress. This is also the appropriate time for animators to pitch their ideas and ask questions relevant to their task. Such sweatbox meetings for rigging exist as well. However, those are primarily without the director and intended for the exchange between CTDs, animators and other departments involved in the character creation process. The fact that the director is rarely in meetings where CTDs show their work, makes CTDs less visible to the director than animators. This might take away from the claims of authorship of CTDs

¹⁰ 'Sweatbox' is an animation industry term for a daily meeting where work-in-progress animation is shown. The name stems from the original Disney animation studio. Since there was no dedicated space for such meetings, the staff had to sit in a 'small niche in the hall' close to each other and to a hot projector, making the term 'sweatbox' 'very appropriate' (Culhane 1990, p. 328).

compared to animators and have an influence on the overall studio culture, including the visibility and featuring of the CTD's work inside and outside the animation studio. The topic of visibility of animators and CTDs will be discussed in more detail in the next chapter. Animators and CTDs also describe the concept of 'rounds' or 'walk throughs'. For example, there can be art director rounds, animation rounds, supervisor rounds, character lead rounds, or pod rounds. Those can mean multiple things, but mainly describe meetings with a higher-level, specialised person like the art director, animation supervisor, rigging supervisor, animation character lead or pod lead who has the authority to give feedback and/or notes. Rounds can be in meeting rooms or at desktop, depending on the group of people. One animator described a dedicated room, called by the intimidating nickname 'the war room', where animators are brought in one by one to show their work on a TV-like screen. Generally, the lower the participant's position in the hierarchy, the less formal the meeting needs to be. Meetings can even be voluntary in some instances and just serve the purpose of showing your progress to, for example, an animation lead to confirm that one's shot is moving roughly in the right direction. In one of the animation studios, CTDs could go into a dedicated room where the Head of Animation and some additional animators were situated. This allowed them to easily work together with animators when they needed feedback or an idea exchange. Such meetings, rounds or check-ins are generally without the director and can even be without supervisors. Animator Justine, for example, described the concept of pods in their studio as follows:

A pod is a group of animators and the lead is the person who is there to support that group of animators, so whereas the supervisors only come in and check your shot when you want them, when you feel ready to show them, the pod lead will go

every day and check up on where you're at, whatever you're doing and give you feedback if you want it. You could just be working on a head for two days and I'll just talk about the head, whereas you'll wait to get the whole picture done before you would show a supervisor.

Meetings such as pod rounds are led by more experienced senior animators who give advice and feedback to a group of animators before the animators show their work to supervisors. There seem to be several benefits to this structure. First, since animation supervisors are most of the time very busy, their time must be very organised and, thus, they are most of the time not freely available. In the pod rounds, less experienced animators can receive more frequent feedback and help outside of the times the supervisors are available. Second, the pod leads can guide the animator's work, hopefully in the right direction, before it is seen by the supervisors. Third, it formalises the brainstorming process of bouncing ideas back and forth and getting another 'eye' on an idea. The function of rigging mentors is similar to that of the animation pod lead. They offer feedback and help to less-experienced CTDs, just on a one-on-one basis. Animators from different studios also describe so-called peer polish meetings which are even less formal, providing an opportunity for animators to get together and talk about the shots they're working on without their supervisors. While this structure can offer help and guidance to animators and CTDs during their work on tasks, this workflow also indicates a highly layered system of control. Animators and CTDs often need to go through multiple levels of showings and approvals before showing to their supervisor, possibly the art director, and finally the director. These layers of control are implemented throughout below-the-line hierarchies to make sure that the work gets filtered and directed before it makes it to the person with the authority to make the final decision. While this highly

nuanced control structure can cause the ‘too-many-cooks syndrome’, as we will discuss later in this section, the feedback cycles on the lower level of the hierarchy can also be a positive experience. Often animators and CTDs seem to enjoy meetings with other animators and CTDs below the supervisor level. It provides a more open atmosphere and makes it easier for people to speak their mind, ask questions, and bring up concerns that they might otherwise be hesitant to voice.

Most of those meetings, especially, but not exclusively, the more official ones, result in specific tasks or notes that need to be assigned to an individual person or department. Such tasks function as a tool to manage the art direction and limit the number of notes given. One interesting way to restrict tasks and notes is to exclude certain practitioners from specific meetings to limit the opinions and thus, the ‘cooks in the kitchen’. While it is important that the right people who have the required information and knowledge are included in meetings to be able to identify and assign the correct tasks for the next steps, excluding certain people might prevent another person from suggesting additional steps and causing delays which translate to additional time and money. Sometimes this strategy can pay off for production management, but it can also result in even more delays and redos. CTD Melanie explains that in her studio, she and her department are often ‘not part of the character design discussion’. She tells the following story about a conversation she overheard from a small meeting to which she was not invited:

The modeller was selling to the production designer like, ‘No, don't look at this model I'm showing you. That's not what the character is going to look like.’ When I realised, he was saying that, I was like, ‘Are you kidding me? That is the character!’

It's not like he suddenly, when he's in the neutral state, transforms into a monstrosity. No. If his lips are just half

closed it's still the character. His mouth may be a little open. but just like a human that goes into that pose, you still recognise him. It's not a completely different thing.' That's how the modeller was convincing the production designer, I guess, that the model is okay.

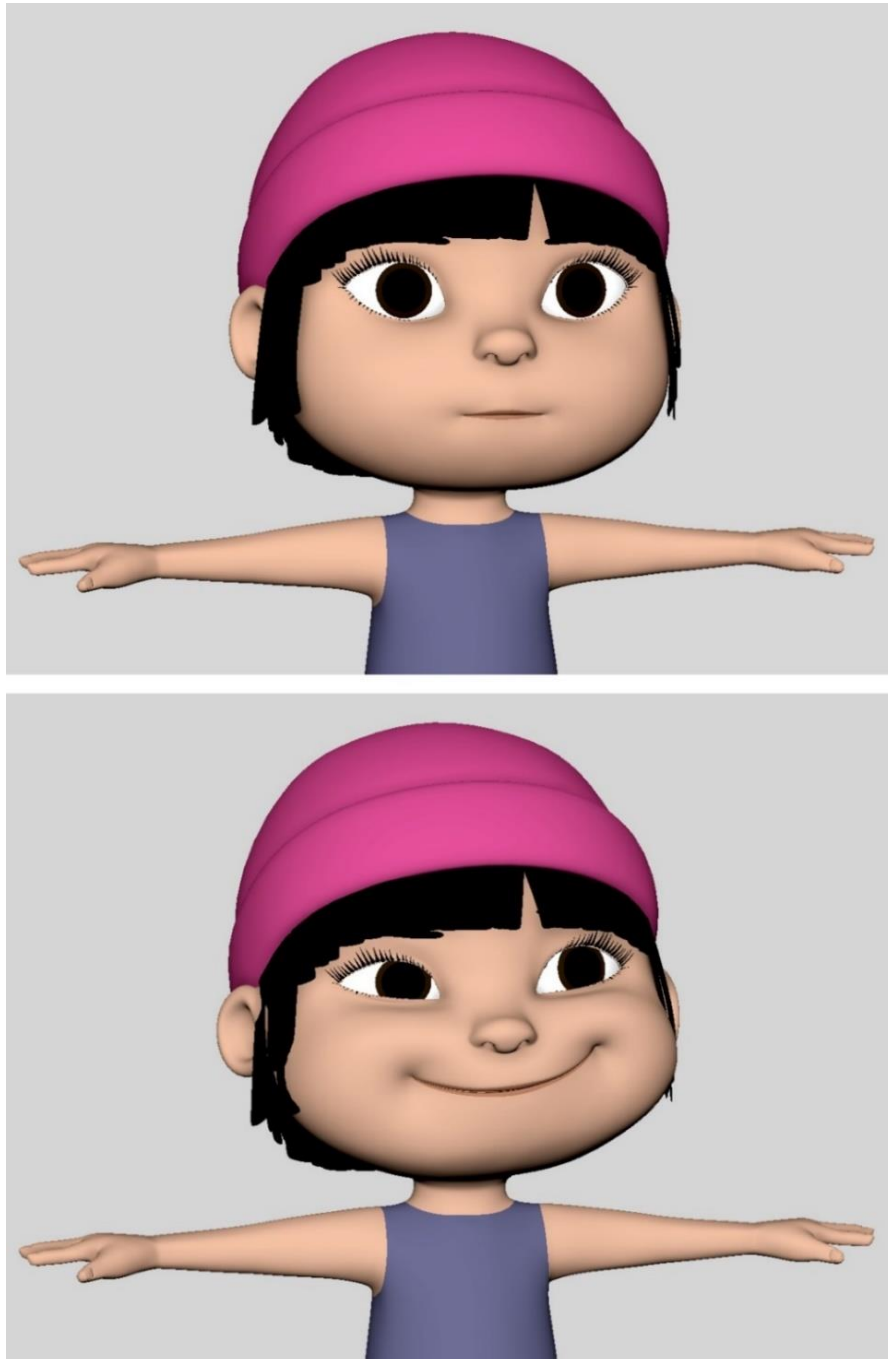


Figure 5. Neutralised 3D model (top) and posed model (bottom).
Images by the author.

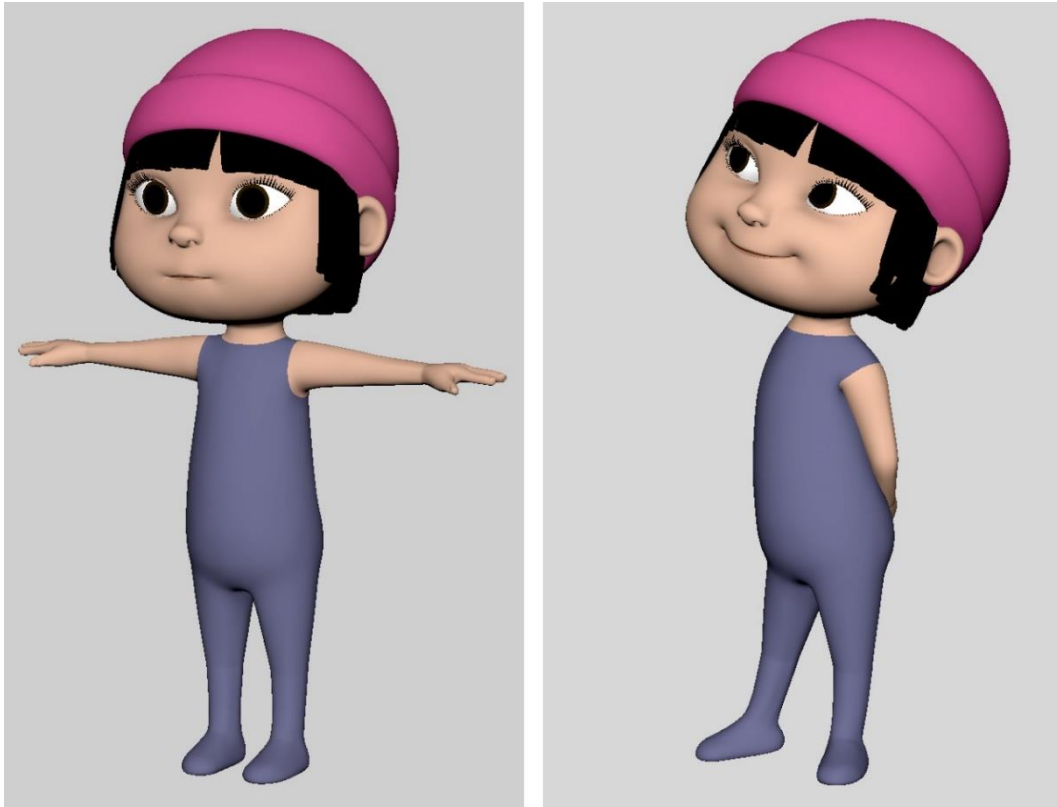


Figure 6. Neutralised 3D model in T-pose (left) and posed model (right).
Images by the author.

Melanie refers to the process of neutralising a character model for rigging. Depending on the workflow of the rigging team this can include requests like a neutralised, straight lip line, and eyes and brows in default states (no surprised or angry expressions). This process is necessary, so that rigs can easily support many different poses and facial expressions. However, this neutralising process can make it harder for designers, who often design the characters in appealing poses, to judge the model in such a default state. Melanie accidentally witnessed how the modeller was trying to sell an, in her opinion, un-appealing model to the designer, who justified the look of the model by saying that he had to neutralise it and that rigging and animation would make it look different later. Melanie feels that she should have been part of that conversation, since she absolutely disagrees, knowing more about what is possible in the rigging process. It would have been more efficient if the designer and modeller spoken to her beforehand to eliminate the need for

guesswork on their parts. While this probably resulted in more work for Melanie, the modeller was able to push the tasks further down the pipeline. It is not clear whether the BTL practitioner himself was aware of the consequences for Melanie of giving in to the top-down pressure to meet the deadline, or whether he did not know the correct procedure. Either way, the exclusion of other skilled personnel paid off short-term and the modelling task was finished on time.

Assuming the necessary people have been included in meetings and the correct tasks have been assigned, those tasks need to be addressed. Once that is completed, the result needs to be communicated to the management team which then initiates the next steps. Those notes and tasks and their status are often communicated via very specialised and standardised software systems, so that progress can easily be tracked and closely monitored by production management who keep an eye on the budget and step in when it is in danger of spinning out of control. Studios use a variety of ticket and notes systems, which might either be commercially licensed software or proprietary applications; some of them are web-based, others are stand-alone applications. Animator Andrew describes the rig notes software of his studio as follows:

We have another thing called rig notes, where it's this website, where it's really intuitive ... You can basically ... If I had this in Maya, we have our own software, we can take a picture of it, draw over top of it, then just drag and drop it into rig notes, and then just write a few notes. Then I can colour code it, red being urgent, yellow being, 'I need this fixed before it goes into production', Blue being, 'It could be better, but if it's not going to make it, that's okay.'

His comment illustrates features such programs seem to have across studios. They

allow the user to describe the issue, take screenshots to visualise the note, and set a priority. Additionally, the note or ticket can be assigned to a person. Studios employ such ticketing systems not only to track the assignment and progress of notes, but to maintain an overview of the number and importance of notes. Leads or supervisors filter and prioritise them, so that only issues deemed necessary are addressed. While this can still be subjective or difficult to judge, it provides a measure of limitation to the notes-giving process which might prevent notes that could fall into the 'art for art's sake' category (Caves 2002, p. 4). The 'art for art's sake' category implies that creative workers' output is larger because they value more than just the monetary outcome (ibid.). However, this can make it more difficult for managers and producers to find a balance between financial investment and return. An artist might continue to work on their animation indefinitely, trying out different versions, or continue to give notes to perfect a character rig, but that might not always be feasible from an economic standpoint. Additionally, the monitoring, filtering and prioritising of tasks (which is implemented throughout many layers) allows production management and ATL personnel to limit the artistic control of below-the-line practitioners. Most interviewees do not directly identify this process as a monitoring ritual to control a film's budget and the creative contributions from below the line. They acknowledge the ticket and notes systems as a necessary standardisation for reporting and tracking issues and tasks, particularly in larger studios. However, practitioners consistently stated that just working on tickets without any direct communication with others was too limiting and did not allow any work autonomy. The right balance between standardised, formal reporting and control structure, and personal communication and autonomy is crucial for practitioners to accept the system. CTD Drew describes:

The funny thing is a lot of people I worked there, I worked with at [the studio], I didn't even know, because [the studio] was so big and I had my own cubicle, and everything worked on a ticket system, so if something went wrong with a rig I would get a ticket. Actually, I wouldn't get it directly. It would come to like, say, the body rigging lead of the show or the facial rigging lead of the show, and then he would divvy it up to whoever [was] available. Again, [the studio] is very standardised, everything is done. I could get a rig, to fix a rig that my colleague did. It wasn't like if I did the rig, you have to fix it, like I had to fix it. It would be whoever got it, whoever was available would fix it, so it was very standardised how that was done.

Drew illustrates that the disconnection between notes-giver and notes-receiver causes an anonymity between the involved employees. This seemed to be enforced by assigning tasks by availability and not prioritising, for example, keeping one CTD with one character. CTD Mark states: 'I get say either the body or the face or the wardrobe or the hair, and just rig that part'. Drew comments that 'in terms of the job it was efficient, but in terms of like you don't know anybody. You're really just a cog in the machine.' The splitting up of tasks into micro-tasks that can be assigned to anyone, results in alienation from the actual work. Dividing the tasks in this manner allows the studio more flexibility with scheduling, and more control over the execution. While generally this form of notes management was less common in the interviewees' accounts, Drew compares the latter experience with his work in another, smaller, studio which was more personal, but chaotic, lacking any structure. While he prefers the more informal, personal environment of the second company,

he also stresses that ‘it’s very important to have structure and standards’, confirming the other accounts that a healthy studio environment is the result of a mix between the informal and the formal. It appears that the smaller company Drew describes, allowed too much autonomy which, without any direction or structures, led to a chaotic work environment. Aside from the negatives of too much control and not enough autonomy, structures serve the purpose of enabling good workflow and are necessary for an efficient animation pipeline and healthy work environment. After this close examination of task management to control contributions from below the line, the following paragraphs will take an in-depth look at the process of giving notes.

The concept of superiors and ATL personnel ‘giving notes’ to BTL workers is a recurrent theme in the accounts of the interviewees. ‘Notes-giving’ is extremely common in the animation studio pipeline and describes the constant process of giving suggestions or directions primarily from superiors or ATL personnel to BTL personnel. As previously outlined, notes are a daily occurrence for animators and CTDs alike, and are given and received constantly. This process happens, for example, as a result of meetings. Notes are passed from animation supervisors/heads of animation to animators, from animator to animator, from director to animation supervisor or directly to the animator, from animator to CTD, or from CTD to modeller. Most of the time there is a certain order and priority for notes, which is primarily determined by the work hierarchy. An animator might be showing and receiving notes from a co-worker, the pod lead, the sequence lead, the animation supervisor, the head of animation and finally, from the director. CTDs might receive notes from the animators they are teamed up with, the rigging lead, the rigging supervisor, the animation supervisor, in some cases the visual effects supervisor, and possibly the director. All these people involved might give notes at some point or another in the process. In Caldwell’s theory about authorship below

the line, notes serve as a mechanism ‘through which authorial control is gained or ceded’ (2008, p. 201). Such strategic authorship control schemes try to retain the authorship at the ATL level by limiting artistic freedom through notes and guidelines in the production process. Caldwell identifies ‘notes-giving’ primarily as a control mechanism which is mostly exercised above the line. As an example, he describes that this process happens when ‘an executive or producer sends suggestions to directors or writers about how to improve the direction of a production or series’ (Caldwell 2008, p. 216). While this example illustrates the notes-giving process from ATL to ATL, he does not exclude the notes-giving from ATL to BTL practitioners. As an example in film or TV series pre-production, he writes that producers and directors are ‘strictly controlling development and narrowing options via storyboards, pilots, series bibles, and ‘notes’’ (Caldwell 2013a, p. 362). My research findings extend Caldwell’s process of ‘notes-giving’ to also include the practice from BTL to BTL practitioner, that is, not only from superiors to lower-level workers, but also among practitioners on the same level. Since ATL to ATL as well as ATL to BTL ‘notes-giving’ is less represented in my interviews, the following will primarily focus on the analysis of the notes-giving process from BTL to BTL. The blurred and collapsed workflows which require workers to stand in and perform other job roles, as well as the multiple layers of control within the BTL hierarchy, result in a large number of BTL personnel giving feedback and notes to practitioners. This ‘too-many-cooks syndrome’ causes frustration and issues among BTL animators and CTDs. For example, BTL supervisors give conflicting notes to push their own agenda and take artistic control, making it difficult for the individual practitioner to add their own ideas. Notes can offer opportunities for creative contributions and can be perceived as positive or negative. The practitioners’ experiences with them are strongly tied to the individual supervisor’s management skill and style, their ability to communicate, as well as the animation studio’s structures and ways of dealing

with personnel. These dependencies connected to the notes-giving process are comparable to the earlier point of studios needing a good balance between direction, structures and work autonomy. If the direction of the notes is not sufficiently defined or communicated, it might leave practitioners all the artistic freedom and opportunities for contribution they desire, but it might also make them feel unclear about the requirements, resulting in stress and chaos. The following paragraphs will first look at notes given from BTL superiors to lower-level practitioners. It will then extend the analysis to notes from BTL to BTL personnel at the same level of the hierarchy. While both BTL notes-giving practices demonstrate very similar issues with the process, the interviews give a glimpse of how notes-giving at the same level can involve 'tactical' BTL 'countermeasures' through bonding and true collaboration between practitioners.

While multiple animators and CTDs perceive the notes process as necessary for improving their work, all interview participants reported serious difficulties and frustrations with notes. Those frustrations are primarily the result of changes based on story or layout, or the product of unclear or competing notes from BTL superiors. The former are high-level, overarching changes often coming directly from the director, which are frustrating, but are often outside of the influence of the animator or CTD and might hopefully benefit the film itself. This might be the reason why those kinds of issues coming from ATL personnel seemed to be less discussed and maybe more accepted as inevitable or, at least, more difficult to prevent. The main frustration with those kinds of changes is that they should have been foreseen or should have been solved before making it all the way down the hierarchy to the animator, and then becoming his or her responsibility. However, frustrations based on unclear or competing notes from BTL superiors or leads and other involved parties were a highly-discussed topic among the participants of this study. Animator Lukas describes the issues as follows:

We call it the too-many-cooks syndrome, which means, yeah, everybody is giving feedback and who is entitled to what. There is definitely a hierarchy of power, kind of thing, the director is at the topmost and then the supervisors. Then there are the character leads and the pod leads. That's something that I feel we need to work on actually, right now... because sometimes character leads will start giving animation notes to animators and that combined to a pod lead trying to give feedback to an animator, to supervisors, also giving notes that sometimes contradict or they feel like they contradict what the director wanted and it can be a big mess for animators sometimes. It can get ugly. Sometimes the morale of people is not the best because of that. Because they feel they're being pulled in different directions.

The 'too-many-cooks syndrome', as Lukas aptly put it, is a common theme in many of the accounts of both CTDs and animators. It describes the constant feedback practitioners must expect from multiple parties that might even be contradictory. Throughout the process these individuals try to push the practitioner's work in a certain direction. The reasons are manifold and will be discussed in depth in the following paragraphs. However, this constant pull in different directions can be explained by the fact that most of the decisions in the daily work of an animator and CTD cannot objectively be categorised as true or false. Unlike other work, creative work is most of the time not clearly right or wrong, but is strongly dependent on individual preference and personal taste. For example, in the case of an animator that could be a certain acting choice. Regarding the work of a CTD, personal taste might become evident in the sculpt of a character's smile or frown. The interviewed

practitioners are clearly aware of the fact that is not about the 'right' idea, since there is no such thing, but rather about the idea that is 'liked' best (animator Dustin).

Animator Justine employs an art metaphor and explains:

You could say, 'Hey, Painter A, paint me a beautiful rose,' and he does a beautiful job, and you say, 'Hey, Painter B, paint me a beautiful rose.' What does that look like? Is it going to be exactly like that guy's? It's not.

As a painting of the same flower might not be appealing to every individual, the same joke might not be funny to everyone. This is similar to building a rig setup where, as CTD Mark describes, some animators might prefer more micro-level controls while others request controls that are more broad. The correlation to personal taste makes this process especially frustrating for practitioners, since it basically enables employees who have the authority to do so, to push their own artistic agenda and limit the creative freedom of the individual practitioner at will. Most of the time, the hierarchy defines who has the authority to influence the direction and give notes. Primarily, those are the BTL supervisors, with the ATL director making the final call. Ideally, the supervisors are on the same page as the director. However, this process can become complicated when they are not and, even more so, when there are multiple supervisors with different opinions. When asked about conflicting notes in the animation shot production animator Christine replies:

It happens a lot, and it happens a lot especially now, because we don't just have one director and one supervisor. We have two directors and two supervisors sometimes looking at the shot at different shots and for all four of them. In this show more than others I felt a lot of that, where, 'Oh, this guy wants this. This guy wants that. This guy feels this. I've shown this

guy for a while and suddenly the other guy looks at it and he throws in his ideas.' I've actually had to deal with this, and I'm sure everyone has had to, throughout my entire career.

What Christine describes is reported by the majority of the animators interviewed. If there are multiple animation supervisors, they often do not have the time to review each animator together. Instead, they split up and one day it might be supervisor A and the next day supervisor B who gives his feedback to the same animator. This can result in conflicting notes that point the animator in opposing directions. Sometimes a supervisor differs with the director's vision, giving his own artistic direction or interpretation instead. In that case, there might be competing artistic interests at play. Since the animator has no choice than to go through the multiple BTL layers of monitoring, management and control, and address the notes given by the BTL supervisors to finally get the approval to show the director, the animator risks opposing notes from the director and possibly a redo of his work. As a solution, animators mention that they try to gather all the supervisors and show their work to all of them at the same time, so that they can resolve their differences in opinion directly and without making it necessary for the animator to actually implement the changes. If they cannot resolve it at that point, they need to talk to the director to ask him to decide. This is an example of BTL agency, demonstrating that below-the-line practitioners are not only waiting to be told what to do. They can intervene in some ways and do so.

While notes can offer opportunities for creative contributions and can be perceived as positive or negative, practitioners' experiences with them are strongly tied to the individual supervisor's leadership and communication skills. One of the CTDs reports that sometimes the notes delivered by the supervisors are not precise enough to fully understand what is requested. While, as previously outlined, tasks in

the animation industry are generally less specific, unclear notes might not necessarily leave room for unique, artistic contributions from the specific practitioner executing the task. Often, the supervisor has a specific idea in his mind, but might not be able to explain it well enough for the practitioner to understand. Then, the animator or CTD is left to guess what the supervisor meant to be able to get his approval. The desire for clear direction when it comes to notes is reflected in multiple accounts. However, this is highly dependent on the personality of the supervisor, as well as their knowledge or area of expertise. Animator Lukas describes his favourite supervisor as follows:

He was like the best supervisor we've ever had. He would sit down with you and chit chat with you and then give you down to the frame notes and draw on your screen and stuff. He was the like the best we've had with huge difference.

The supervisor, who was able to show him instead of only tell him the note by drawing directly at his desk helped Lukas to clearly understand what he meant. He also mentions that the supervisor would 'sit down' and 'chit chat' with him which indicates a high level of communication skills. It also illustrates a horizontal communication style, where both feel equal. This takes the pressure off the animator and creates an atmosphere that is comfortable enough to ask questions without feeling insecure. In contrast to Lukas' experience, animator Ellen describes an instance in her career where her work was extremely micro-managed by her superiors:

I've worked on shows where they're literally timing the lift of an eyebrow or how far an eye darts, or the shape of the fingers. Down to my new shift, I've worked on a show where the director had done reference for us to copy, so there's

nothing there really you could bring to it. You might as well put her in a motion capture suit. I would say, it totally depends.

Ellen describes a work situation where her contribution was extremely restricted. She does not feel like she was able to add anything to her shot because she was asked simply to trace the reference the director gave her. As these examples show, the way a supervisor or director manages his team can indicate the 'degrees of individual and collective creativity' (Burnett 2013, p. 129). Burnett for example suggests that an autocratic, downward communication style, where notes, for example, might just be delivered as orders to be executed, indicates an environment with little room for creative contributions by below-the-line practitioners. While a paternalistic management style might still involve downward communication, it allows for a more collaborative atmosphere for employees. If a supervisor or director employs a 'laissez-faire' management style, the communication between them and the crew might be horizontal and more equal, however, they still work 'in a highly individualistic manner' (Burnett 2013, p. 129). A democratic management style indicates both horizontal communication and a collaborative work environment. In Lukas' example above, the supervisor employs a horizontal communication style. It is not entirely clear, but the tone of the animator's account would suggest a democratic management style. While he gives very detailed notes, the supervisor does not seem to dictate his ideas and 'sits down with' the animator, 'chit chatting with' him. It shows that the animator is encouraged to contribute his ideas and that the supervisor is willing to share his creative control. Ellen's account, however, suggests an autocratic management style, limiting the creative contributions of below-the-line personnel.

While opportunities for creative contributions and a positive experience

with the notes-giving process are closely connected to the supervisor's individual management skills as shown in the examples above, they are also highly dependent on the individual studio's structure and the different ways of dealing with personnel. Animator Stan talks about one of his supervisors who believes in 'letting the ideas of the artists speak':

He's very, very conscious that he's there in the supporting role to support you as an artist and help you convey your ideas but not to stomp his idea stamp on top of your shot, if that makes sense.

Stan apparently perceives the practice of extensive notes-giving by supervisors as a limitation to his own artistic and creative contribution. This is very much in line with the idea that some supervisors might try to obtain authorship over the animator's shots by instructing them to follow the supervisor's own personal vision. Stan appreciates the artistic freedom he is granted by his current supervisor, which is only limited by the director's final vision. This seems to be primarily possible when animators have direct access to and direct communication with the individual that makes the final decision, most often the director. Whether below-the-line practitioners have such opportunities is highly dependent on the studio's culture, structure and the size. While some studios foster an open-door policy and make the director available to the practitioners, some studios do not support it and lean heavily on the hierarchy. Direct access is often easier in smaller companies, since everyone knows everyone and it might just be a matter of walking over to the cubicle next door. If the practitioners do not have any direct contact with the director or the person who has the authority to make the decision, it can become very difficult for practitioners to pitch their own idea or to confirm that they are moving into the right direction. Most animators that specify that they do not have direct access to the

director feel that having such access is crucial for resolving difficulties with this process. Multiple animators and CTDs state that if the notes are delivered by the supervisors or by a production assistant, the note from the director is being interpreted by the person who is communicating the note. However, the interpretation might not necessarily be what the director meant and the supervisor could potentially add his own personal opinion into the mix. That could possibly result in work that might need to be re-done later once the director gets to see the final result, which might not be what he imagined. Also, the more people the note is communicated through, for example from director to lead to practitioner, the more diluted the note might become. Several practitioners used the term 'telephone game' to describe how a note slightly changes every time it is delivered to another person. One practitioner mentioned that it is important to her to see the body language and hear the voice with its intonations when the director talks about her shot. This provides her with more information than just a simple list of notes delivered by supervisors. Having conversations with the director also gives her the opportunity to ask the questions that make sense to her.

While until this point I primarily focused on notes given from practitioners with roles higher in the hierarchy (BTL supervisors) to practitioners lower in the hierarchy (animators and CTDs), the following paragraphs will show that the process of 'notes-giving' is also exercised along the same level, from BTL to BTL practitioners. This is interesting, because Caldwell primarily identifies 'notes-giving' as a control mechanism that is mostly exercised above the line. The practice of giving notes to practitioners on the same level becomes especially apparent when looking at the relationship between BTL animators and CTDs and their work dynamic. Generally, the animator tests the rigs and comes back with notes which the CTD then tries to find solutions for. This process comes with its own difficulties and reveals an informal hierarchy, assigning the animator more authority over the process. This

might also be the reason why most of the difficulties with the notes-giving process from animator to CTD were primarily reported by CTDs. The reason is probably that they are on the notes-receiving side of the process, which puts a lot of stress on the CTDs who must come up with a solution within a certain period. As we will see in the following paragraphs, the issues in the notes-giving process from animator to CTD are very similar to the ones from ATL or BTL superiors to BTL: animators give conflicting notes to push their own artistic agendas, individual animators' communication skills strongly influence the experience of the process for the CTD, and studio structures impact the distribution of creative control.

CTD Mark says that 'different animators, they want different things'. Thus, there can be conflicting notes from character to character or sometimes even within a character rig process if there are multiple animators teamed up with one CTD. This can be an issue, since consistency between character rigs is important for shot production when animators need to animate multiple character rigs. If their setups are all different, then 'animators are also going to be confused when they touch that character' as CTD Melanie describes. However, in contrast to the notes-giving process between different BTL hierarchy levels, animators and CTDs working on a character are generally on the same level in the hierarchy, only in different departments. Therefore, it is not always clear who makes the final decision when there are conflicting opinions. While in those cases supervisors can be consulted, the relationship between animator and CTD, however, is often also determined by the studio culture. While all studios have a set budget for rigging a character, some studios allow more influence and time for notes by the animator. Thus, some CTDs reported that they had a hard budget and did not work together with the animator as much during the implementation, giving them the authority to make the decisions for the character rig primarily on their own. But CTDs reported that in many other studios, 'animation is king' and there is constant interaction, with the goal of giving

the animators what they like (CTD Claudia). In comparison to the notes-giving process from superiors where there is a formal hierarchy involved, the notes-giving process from animator to CTD shows an informal hierarchy with the animator being assigned more authority and creative control over the process than the CTD. While some CTDs were hoping for a more balanced approach, many CTDs actually preferred the animation-driven workflow. Most of them spoke about the work interconnection in terms of a client relationship: the final product is the rig that needs to be made to the satisfaction of the client. CTD Hazel, for example states that 'we're really there to aid the animators and to give them the product that they can use most to get their job done'. Shane even reasons that this animation-driven workflow is 'a good thing because it's driven by the client'. Throughout the accounts, it seemed that CTDs and animators enjoyed their work relationship, despite the reported challenges and frustrations. Several CTDs describe an admiration for the work of the animators, using their rigs in creative ways they could not have imagined. CTD Mark compares the creation of a character rig to the making of toys. He elaborates:

There's something supremely rewarding about giving somebody something they want or even better than what they want. Then having fun with it and doing amazing stuff with it. It's just like giving someone something that great is probably one of the best things.

Mark seems to find the creation of something that someone else enjoys and likes to use for their work as inherently satisfying. It appears that, even though the process of getting to the final result can be tedious, seeing their work being used, as well as the appreciation conveyed from their peers in animation, is a reward in itself. But there is a sense of something else in Marks' statement. Mark is not simply meeting

the needs of an animator, he explains that it is rewarding to create something 'even better than what they want'. This infers that the CTD produces something more than the animator anticipates, which is an important skill of the CTD. While the animator might still claim authorship over the idea and artistic direction through the notes-giving process, he or she would not have it without the CTD. The ability of the CTD to anticipate what is needed even though it is not directly spelled out by the animator, is an important creative contribution, even though it does not seem to be recognised, possibly not even by the CTD himself.

Similar to the practice of notes-giving between different BTL hierarchy levels, the clarity of the direction and notes is equally important. CTD Mark elaborates:

Yeah, and I would hope they [the animators] would actually say, 'I want this,' as opposed to ... 'I don't like it yet.' Then that would be the end of the conversation. You don't even know where to go from there.

If notes are not understandable and the direction is not clearly outlined, the CTDs might be confused and possibly head in the wrong direction. This might result in having to redo their work multiple times, since their direction is based on guessing what the animator might 'like' which is ultimately a matter of subjectivity and personal taste. The individual's communication skills strongly influence the clarity of the notes.

In contrast to previous examples of notes-giving which were primarily examples of notes between supervisor and practitioner within the same department, the professional language used by animator and CTD can be quite different. This is due to their different work specialisations. CTDs provide animators with the necessary tools and setup to efficiently animate the characters during shot

production. While this task can be quite artistic, for example when sculpting facial expressions, there are extremely technical elements to this work. Animators are often less technical and do not necessarily understand what is involved in the creation of a rig. On the other hand, CTDs might not be familiar with the concerns or requirements of the animation process. This can cause misunderstandings, when notes are being given. Many CTDs state that they need to 'interpret' and 'translate' the animator's idea into something that makes sense from a rigging standpoint. CTD Melanie explains:

You have to translate that talk into like, okay, it could work like this. You have to just go, okay, imagine if that's something that I wanted. How would it behave if I wanted that thing? Then you're like, okay, maybe this is what he wants. That happened last week and, yeah, that is actually what he wanted. He was like, 'Okay, yeah.'

This work seems to require CTDs to put themselves in the position of the animator to convert the meaning of, for example, a note, into something that can be implemented. Many CTDs describe that they often implement solutions such as quick prototypes as proofs of concept and to help animators visualise the end product. Those so-called 'mock-ups' are then used as the foundation for confirmation, negotiation or compromise on such ideas between BTL practitioners. This shows that creative contributions can also be negotiated between BTL practitioners. While in one account this process is described as a 'fight' and in another as 'tedious', it can also be a way to collaborate and push changes through the pipeline that for one animator, CTD or department alone might be hard to get approved. While Melanie describes the work with modelling and design she states that it is sometimes difficult to just say that something does not look good without a

reason. She explains:

Yeah. You can't say that to the modeller, you can't say that to the production designer. Now you have to figure out how to try and get it changed without offending everybody. The animator and I teamed up and then we were like, 'We're asking for this because we need it for the rig. We need it a bit thicker but it's for the rig.'

Melanie describes how she and an animator both wanted to push a change that would normally not be in their authority to request. However, since they teamed up they were able to get their note approved even though it might not necessarily have been for technical reasons, but for aesthetic reasons or the sake of simplification. This process appears to be a good example of below-the-line counter-pressures moving in a bottom-up direction, as described by Caldwell. He specifies that the production process should be seen 'as a dynamic process involving tensions and struggles between "strategic" ATL "control schemes," and "tactical" BTL "counter-measures"' (Caldwell 2013a, p. 361). Thus, he claims that authorship below the line is constantly negotiated between above-the-line personnel trying to keep and protect control over their authorship, and workers trying to confirm their artistic agency. Melanie describes such a successful BTL counter-measure where she and her team-mate were able to negotiate their creative input in the character by collaborating and pitching their idea. To engage in such a collaboration, the animator and Melanie had to be able to rely on and trust each other. If a trust relationship exists, it can facilitate suggestions, proposals for solutions, and possibly, collaborations on creative contributions.

This section discussed the management and control mechanisms in the animation studio environment. While they appear to be used as a means of

communication, control schemes like meetings and notes-giving are managing and limiting the artistic freedom of BTL personnel, in an ATL effort to keep the production on budget. Such practices regulate creative control through formal or informal hierarchies established by the individual studio's culture and also occur from BTL to BTL personnel. The next section will demonstrate that creative contributions below the line are highly dependent on the internal communication, trust and friendship of the people involved.

Inside the animation studio community: Communication, trust, and friendship

CTDs and animators seem to concur that personal relationships and good communication are key for their daily work. The following paragraphs will show that internal communication, trust and friendship are also paramount for the ability of below-the-line practitioners to contribute to the production process. First, this section will discuss various informal ways to communicate below the line. This direct and informal communication allows animators and CTDs to get their work done, form friendships and work around official meetings, which, as previously discussed, often function more as monitoring and control schemes than means of communication. Second, I will discuss the importance of trust and friendship in the 3D animation community. There are two main reasons specific to the 3D animation industry why friendship and trust become two of the most important elements inside the animation studio. The first point the interviewees raise is the precariousness and the increased competition in the industry as a result of the oversupply of qualified labour. The second reason is the constant feedback and criticism as part of the creative process causing vulnerability and insecurity among below-the-line practitioners. Both work conditions reinforce the stress and tension

among the practitioners making it more essential for animators and CTDs to stand out through individual creative distinction and to generate tactical countermeasures that allow practitioners some level of claim over creative authorship. Looking closely at the interviews, I will demonstrate that trust and friendship can counteract the negative experiences generated by these characteristics of the industry and establish that collaboration and creativity can thrive in such an environment.

The work of animators and CTDs is closely connected to each other and to other departments in the production process. Since most practitioners in the animation feature film industry have very specialised work fields, they constantly need to communicate with others to learn what another practitioner or department might need to finish their piece of the pipeline. Individuals are required to work together to create the result, which might be a smaller part of the final film like a character at first, and in the end the animated movie itself. All interviewees, CTDs and animators alike, agree that interaction and good communication is paramount, creating the foundation to be able to do their work. Generally, animators and CTDs prefer direct and informal communication over official meetings and other more formal types of contacts. There are various less formal and more direct ways to communicate and exchange information with other colleagues, for example, internal emails, instant messages and chats, phone calls or just walking over to the other person's desk. Animators and CTDs, for example, often report that they just call or send an instant message to find out if the co-worker is available and then go directly to his or her desk. However, while this seems the shared preference of the practitioners interviewed, whether it is so depends heavily on the individual's personality and habits. Some practitioners might never check their emails or their instant messages or the other way around and, might therefore be more responsive to phone calls. Others might be more introverted and prefer email communication only. The main reasons the interviewees state for their preference of direct and

informal communication are easier and faster access to information and problem-solving. The larger the meetings, the less specific they seem to be, and instead of problem-solving they seem to serve more of a presentational and monitoring function. Direct communication circumvents control schemes by production management and ATL personnel for example, the exclusion of certain practitioners from meetings. Smaller meetings or directly talking to the relevant person also seems to facilitate finding solutions to problems more quickly. Additionally, talking to a person directly makes them feel more comfortable to speak up, especially if someone might have made a mistake and discussing it in a meeting might have been distressing. Animator Samuel compares in-person communication with email communication and points out that the written word can often be misunderstood:

Going through email, email seems like such a slow, funky way to communicate and so impersonal. It tends to be taken the wrong way very easily.

Emails might lead to confusion and conflict, since without facial expressions or tone of voice, an email can easily be interpreted the wrong way. Many accounts also explain that informal communication and the in-person interaction with other colleagues facilitated forming friendships and, thus, helped create a more fun work environment that does not 'feel like work' (CTD Drew). While animators and CTDs prefer this direct and in-person communication, they are also aware of the disadvantages compared to standardised structures like the ticketing system, as animator Ellen shows:

If you request a piece of information from somebody who picks it up, because you talked to them directly and you get that person in trouble, because they should be working on something else that's more important.

Since ticketing systems are control systems from production management to limit the amount of notes that need to be filtered through multiple layers of the hierarchy to get approved, such direct, in-person requests, can also put more pressure on the person who might want to fulfil the request, but was not officially given the time to do so. Additionally, since there is often no written record of phone calls or personal conversations, it can be more difficult for practitioners to organise and track their tasks themselves.

One of the requirements for direct communication is proximity to the co-workers they need to interact with. This became especially apparent in the accounts of practitioners who worked on productions with employees and key personnel in different cities. First, they reported having difficulty building personal relationships with colleagues whose names they knew but with whom they had never interacted in-person. Second, not being able to go to someone's office and not even knowing where they physically are delays getting answers to questions, potentially slowing down the process. While physical proximity is especially an issue for practitioners whose production was split between two different cities, it is still a topic for employees who work in the same town. Several practitioners regard it as beneficial to be in the same building and have a seating arrangement that allows employees to quickly walk over to someone's desk when they have a question. Most interviewees stressed the importance of face-to-face communication for forming friendships and trust relationships.

CTDs and animators are in agreement that personal relationships and good communication are key for their daily work. While most of the practitioners interviewed acknowledged that establishing and maintaining these is a constant struggle and a balancing act, since so many individuals with diverse sets of personality traits need to be working together, many animators and CTDs describe a community that is characterised by camaraderie and close friendships. Furthermore,

characteristics of the animation industry, like long hours and increased competition, can trigger the formation of such personal relationships and make them necessary to sustain one's career. Animator Doug describes his experience within the animation community:

The relationship we have with the other animators is probably, to be honest, it's probably the best thing about working in that kind of environment. You get to become extremely good friends with the people that you're working on these things with because you're going through the same experiences, the same frustrations, and it can be a deeply frustrating experience. You learn to lean on each other a bit, and we go through periods of what's called crunch which is just intense periods of work usually towards the end of a production when things get very, very busy and deadlines get tighter, and you can literally be sitting, working for 12 or more plus hours a day in the vicinity of the same group of animators. Inevitably, you get to be pretty close friends with the people around you. It's sort of a joke but it's also actually true. Sometimes you end up spending more time sitting next to fellow animators in a day than you do spending with your wife or girlfriend or significant other. It's not unusual. You get to be pretty tight with people.

Since the animation industry is characterised by unpredictable patterns of work with long periods of 'crunch time', where practitioners need to work day and night, they spend a lot of time together. Doug describes that through those shared experiences and long hours co-workers form a special bond with each other. Often,

those tight bonds with colleagues develop while working together, sharing frustrations, overcoming challenges and supporting each other to meet deadlines. Such reflections on the characteristics of the animation industry, like long hours and unpredictable patterns of work, but especially the oversupply of labour in the industry are overwhelming in the accounts of the practitioners. This is especially remarkable since the interviewees were not directly asked about these issues. However, contrary to Doug's statement, in most accounts these characteristics are described as counter-productive to the formation of friendships and collaborative environments. The interviewees refer primarily to the oversupply of labour and the resulting competitiveness in the industry. Animators in particular, report very insecure work conditions. Mainly, they distinguish between permanent employees and temporary contract hires. Temporary contract hires are often employed at the end of a project to help finish a film. Many animators report that this can breed a lot of competition, since inevitably many people will be let go after the project has been completed and only a couple of people might be able to secure themselves a new contract or permanent position. However, multiple accounts detail that this is more often the case at visual effects companies than in feature film animation, where employment seems to be less volatile and more stable. They also report a higher competitiveness outside of feature animation studios and at studios that mainly employ temporary contract hires. The willingness to collaborate and communicate seems to decrease as animator Dustin describes:

At another company I worked at, everyone was a contract hire. Everybody could instantly be let out of their contract if a newer, better person came in. Which meant people were more competitive because you really were competing against the guy next to you. When you would go and ask for feedback

and help, unless the people were really secure, they wouldn't really be too keen to help.

Thus, it seems that a community that is characterised by camaraderie and close friendships, as well as collaborative work environments, is very dependent on the feeling of job security. In an environment where everyone is competing with each other, employees are less motivated to help or exchange ideas with others since they are more focused on doing the best job for themselves to stay employed.

However, while the willingness to contribute as part of a collaboration goes down as a result of the stress and pressure of competition from outsourcing and eager industry newcomers, the motivation and ambition for personal distinction and self-improvement might actually increase. Reaffirming and selling one's individual agency can help practitioners to stand out in an industry with an oversupply of workers (Caldwell 2013a). CTD Hazel describes her constant drive to improve herself and to be better and faster at her job:

I basically am competing against my own skill that I've had in the past, where I always want to do better than I was maybe a year ago, and to understand a problem faster to get to a solution sooner, to make something more appealing. It's more, I guess, internal.

While the high levels of competition are a catalyst for the desire to constantly strive for self-improvement, there also seems to be another aspect to this ambition which is rooted in the idea that work is a means to self-actualisation and realising one's own personal talent or potential. While the quality of the product is an important aspect in finding such a sense of purpose, the end result does not need to be pioneering or world-improving. Hazel describes simpler goals she aims to reach like 'understanding a problem faster' or 'to get to a solution sooner', and 'making

something more appealing'. This confirms that the work itself, the creative process, the craft or skill involved, can be satisfying on its own as Hesmondhalgh and Baker (2011) found. To discover and improve one's own creativity and talent has become one of the 'most desired human qualities' (McRobbie 2002, p. 109). However, such abilities are not just readily available, they need to be worked on constantly, as can be seen in Hazel's account.

The formation of personal relationships and friendships is also an important aspect of the industry's hiring practice. The reason for this is that the animation industry depends heavily on informal networks. The hiring process is generally informal, relying on recommendations from colleagues and word of mouth. This process counts on industry insiders to only recommend those they deem trustworthy, reliable, competent and good to work with (Wing-Fai, Gill and Randle 2015). Decisions of who to hire are primarily based on reputation, trustworthiness, reliability, competency, the capacity for teamwork, and often simply likeability. Thus, no personal relationships, a bad reputation or a low ranking can be damaging to one's career. A couple of practitioners spoke of so-called black lists existing in some companies. Practitioners that do not perform as well or were, as CTD Claudia describes 'difficult to work with', would be on the bottom of such lists and eventually let go. No matter if there literally is a physical list a company keeps, the practitioner's ability to form personal relationships or friendships with other practitioners is closely connected to their career prospects. The behind-the-scenes conflict of animators with the studio of the feature film *Sausage Party* (Tiernan and Vernon 2016) is an excellent example of how stressful only the threat of a bad reputation and being blacklisted can be for people in the industry, keeping them from speaking out about horrendous working conditions (Rainey and Lang 2016). After an article on Cartoon Brew with the directors Greg Tiernan and Conrad Vernon, the anonymous comment section went wild with outrage from former workers (Amidi

2016). Tiernan answered a question about the film's low-budget by saying that on previous productions he had witnessed how money was 'just needlessly thrown down the toilet' and that a film just does not need to be that expensive 'when you're well organised, and you have your mind set on the goal of what you want to do, and you get the job done with a small, determined crew' (Amidi 2016). Of course, that was not well received by some of the animators who revealed in the comments not having received payment for overtime, not being credited on the movie, and having been threatened by management with termination and the ruin of their reputation if they did not stay late. All the animators interviewed for the reporting article preferred to stay anonymous out of fear that they could 'hurt future job opportunities' (Merry 2016).

Despite the difficulties with these aspects of the industry, most interviewees describe the animation community climate as collaborative and friendly between co-workers. Several people feel that there is a good balance at their studio. Animator Andrew makes an interesting comparison between the competitiveness in animation and sports:

It's very collaborative. I feel it's a little competitive, but only because the artist puts that on themselves. I don't feel like ... They do everything they can to make it not competitive. But I think the animator and the artist, we're just competitive. It's like a golfer. Even though you have different people on the field that are golfing against you, it's really you against you. You know what I mean?

Andrew touches on a couple of themes. First, he states that artists themselves are inherently ambitious, wanting to do their very best. Second, he mentions that 'they', the studios, 'do everything they can to make it not competitive'. This probably refers

to the studio culture and studio initiatives he and several other interviewees mention, like collective lunches, game days and department get-togethers organised by the studio to promote collaboration and team work. Third, with his comparison to sports he infers that, as in every game competitiveness is intrinsic, competitiveness is intrinsic to animation itself. He also implies that there is a certain sportsmanship involved, which stands for fairness, integrity, and a rule book everyone plays by. His comparison reflects the accounts of multiple animators interviewed who describe the competition between co-workers mostly as positive, healthy and friendly, and enjoyed the informal and social character of the work that can lead to close friendships. The accounts also confirm Hesmondhalgh and Baker's suggestion that such positive experiences help employees 'to cope with the insecurity and precariousness of creative work' (2011, p. 155). The negative experiences discussed above, caused by the precariousness of the industry seem indeed to take on a less important role. Even though practitioners are aware of the insecure work conditions and the competitiveness of the sector and acknowledge the necessity to form personal relationships to succeed in the industry, those experiences do not appear to overshadow the positive experiences of friendship.

The more familiar the employees are with each other the more they can build trust. Trust is paramount to counteract negative experiences generated by the characteristics of the industry, and for the emergence of collaboration and below-the-line contributions. Many practitioners report the importance of becoming comfortable with each other and trusting the decisions and judgements of colleagues. Animator Yvonne elaborates:

It's very collaborative. You feed off ideas with each other, and trusting the people enough to be able to say what's in your mind, without any much filtering process. Trust saying, 'Okay,

I think that's not a good idea,' and not offend anybody takes trust. Having that kind of team is really essential.

To be able to collaborate and exchange ideas with others, trust is essential. Not every idea is a winner and one needs to feel comfortable enough to give or take unfavourable feedback. One of the CTDs, Joy, did not feel as comfortable within her department:

I wish I felt more comfortable, communicating more openly, more often. I have trouble, if ... Within the Rigging department, I have a tendency to do the least communication because I know that, I know so much less than everybody in the department. That, I don't ... I feel really uncomfortable. I like to try and figure it out myself first because I don't want anybody to think I'm dumb.

While Yvonne describes the studio environment and her own interaction with others as a happy and trusting experience, Joy feels less so. Since the members of the animation community are a diverse group of individuals, it depends to a certain degree on the individual's personality and personal relationships how they perceive their surroundings. However, collaboration works only in an environment where everyone feels safe to participate and ask questions. Like Joy, many people feel vulnerable, reporting insecurities about their contribution, their ideas or their skillset and hesitate to show their work or ask others for their opinion. This seems to be a very common phenomenon among animators and CTDs and is likely enforced through the constant evaluation, review and criticism employees are exposed to in the animation industry. Animator Samuel explains:

I think there's a fair bit of stress involved. I know every place is different, every studio treats us different, but I think this is

one of the more rare jobs where you're constantly being evaluated and judged and ranked, even if it's not formally, it's informally.

Unlike other work, creative work is most of the time not clearly right or wrong but strongly dependent on a sense that something works or does not. This sense is based on skill and experience, but also on individual preference. Thus, there is often no straightforward answer of how to achieve something, since even the result cannot be clearly described and can mean different things as long as it 'works'. This relationship between creative work and experience, skill and personal preference might be why creative work is constantly criticised. Practitioners in the creative industries need to expect negative feedback. The constant criticism can cause feelings of vulnerability and self-doubt as Hesmondhalgh and Baker (2011) observe. Animators in particular, describe feelings of doubt and insecurity as recurring aspects of their daily work. Multiple animators specify that they begin to doubt themselves and their ability to complete the task at a certain point in time during their shot work. Comments range from feeling 'very sad and inferior' and 'they made a mistake hiring me' (Dustin) to 'everything seems to be crumbling apart' (Doug). Ellen who has been an animator for more than 12 years illustrates her experience with this phenomenon as follows:

There's always new challenges and almost everybody I've talked to, every time they get assigned something, no matter how much experience there are, how kick ass they are, they're like, 'Can I do this?' I've heard that from so many people that I'm like, 'Okay, so it's not just me. Everybody is still going...' Because every shot is new. Every shot is a new challenge and it's scary.

Ellen's statement confirms other accounts stating that the insecurity the animators undergo does not fully disappear with work experience. Rather, it is related to the artistic and technical challenges every new shot brings. This type of insecurity seems to be obliquely related to the creative work of animators and CTDs. They feel insecure about their assignment, because their task is to create something that 'works', which is not a straightforward process, since the how and what is not clearly defined. Nevertheless, the knowledge that other people, no matter how talented, have similar confidence issues is reassuring and calming. Animator Doug explains that the shared experience with others helps him to overcome this feeling of insecurity and soothe his own doubts:

That's why you make such good friends with the people around you because you open yourself up to talking about those kinds of things with other people like, 'I'm not confident I can do this at all.' 'All right, you know what? I wasn't confident either like two days ago. I was going through exactly the same thing in my shot. I thought it's all going to be terrible and they are okay, so we're all kind of getting through the same thing.' That gets you through.

A trust relationship can help practitioners through such insecurities. Especially, since multiple animators and CTDs reported their desire to learn from colleagues and their pleasure when helping others.

Trust and becoming accustomed to each other is also the basis for the collaboration between animators and CTDs in the asset creation process. While the animation supervisor or head of animation approves the final character rig for animation, most interviewees report the teaming up between the CTD assigned to a character rig and at least one animator responsible for that specific character. The

animators in this team often hold the title of lead animator or character lead. In one of the studios the team members are called animation and rigging buddy, giving this relationship a friendly undertone. Those teams often work together from the beginning to the end of a character rig and interact in a cycle of implementing and testing. This interaction can often be very direct and informal as CTD Markus describes:

I mean, that's the basis of it. We don't just rig in a bubble. We're always constantly communicating. We, at least, talk to our animators two or three times a week, beginning and end, just to kind of say, 'All right, this is how we're starting. This is where we're going to be at the end of the week.' Then it's just the same thing every week.

Most animators and CTDs primarily describe their interaction as friendly and collaborative, even though there are difficulties related to notes as discussed in the previous section. While the relationship, the positive and the negative aspects, between animators and CTDs was more discussed in the CTDs' accounts, several animators commented on this connection in positive terms. Animators primarily report the enjoyment of learning from CTDs, and the aspect of approaching a problem from two different perspectives and creating something that they could not have come up with alone. Animator Justine summarises this aspect as follows:

I like the collaboration and the problem-solving and when you're working also with a really good artist in the rigging department, it's a good brainstorm of two different types of minds on the same problem, so you both can together come up with something that in isolation you wouldn't have. Then together when you give that to the director and the

supervisors there's a great sense of pride in accomplishing that, especially when, in an art company at least, it seems like everything is stacked against you with time and stuff like that.

Coming up with an idea or a solution that is better than one that a single person could have come up with on their own is one of the most frequently mentioned pleasures of collaboration. Some interviewees specify that the outcome of collaboration is dependent on the person one is collaborating with. This appears to be only natural as there are different personalities that might mix better with a team than others. Others also mention that collaboration can be difficult when the schedule does not allow for it. Brainstorming and listening to feedback from multiple people can be time consuming and make one insecure about their own ideas. However, aside from those difficulties, collaboration is seen as one of the most crucial and positive aspects of the animation production process. Interviewees agree that it does not only improve the quality of the final result, it also is one of the most gratifying and delightful features of their work.

This section demonstrated that communication, trust and friendship are paramount for the ability of below-the-line practitioners to contribute to the production process. Through direct and informal communication animators and CTDs get their work done, form friendships, and work around official monitoring and control schemes. While certain characteristics of the animation industry, like long hours and increased competition, can trigger the formation of such personal relationships, they also make them necessary to sustain one's career. Practitioners in the animation industry are aware of these work conditions and acknowledge the necessity of friendships and trust to succeed in the industry. Any negative experiences do not appear to overshadow the true and positive experiences of friendship. Trust is also necessary to counteract the feelings of vulnerability and

insecurity among below-the-line practitioners generated by the constant feedback and criticism that forms part of the creative process. Since collaboration works only in an environment where everyone feels safe to participate and ask questions, trust is the basis for the emergence of collaboration and below-the-line contributions.

Summary

This chapter explored the negotiated process of production involving ATL control schemes and BTL countermeasures in the 3D feature animation studio environment. It revealed different processes of negotiation which are fundamental to the animation film production process. Monitoring rituals from production management, like meetings and notes, aim to keep the production on schedule and budget by prioritising and limiting tasks and notes below the line. However, the fast-paced production process and the blurred workflows interviewees report, require workers to stand in and perform other job roles. Such job roles include responsibilities that require problem-solving, which impart more authorial agency to below-the-line practitioners. While Caldwell primarily identifies 'notes-giving' as a control mechanism which is mostly exercised above the line, this chapter clearly shows that the process of 'notes-giving' is also exercised from BTL to BTL practitioner. This becomes especially apparent when looking at the relationship and work dynamic between animators and CTDs. The issues in the notes-giving process from animator to CTD are similar to the ones from ATL or superiors to BTL and serve as a means of negotiating creative control below the line. But while the process can be challenging, it can also be a way to collaborate, team up and push changes through the pipeline that for one department or practitioner alone might be hard to get approved. One account outlined a good example for such a negotiation of creative contribution below the line, a BTL counter-measure where below-the-line

practitioners were able to negotiate their creative input by pitching their idea together. While my findings indicate a strong ATL effort to limit tasks and notes below the line, those endeavours are not specifically employed to keep creativity above the line. Instead, the primary goal of such control mechanisms is to keep the projects on budget and schedule. Often, creative contributions from below the line are accepted and even relied on by above-the-line personnel. However, even though control mechanisms in the animation industry might not be utilised for the purpose of strictly limiting below-the-line creative contributions, the outcome might nevertheless still affect the work autonomy and authorship below the line as a result of those practices. For example, since practitioners are urged and pressured from production management and ATL personnel to increase their work speed and finish their work on time or even earlier to keep the budget on track, practitioners can be stressed by too much creative freedom. The reason is the conflict between finishing their task on time, which is rewarded by production management, and the creative contribution which might delay the task, but be artistically more satisfying. Therefore, practitioners rely on informal and direct communication, sometimes working around monitoring and control schemes to accomplish their tasks and contribute their own ideas. However, the long hours, the precariousness and the increased competition in the industry as a result of the oversupply of qualified labour, can impede creative collaboration between below-the-line personnel. But, while these work conditions reinforce the stress and tension among the practitioners, they also make it more essential for animators and CTDs to stand out through individual creative distinction and, generate tactical countermeasures which allow these practitioners some level of claim over creative authorship. The characteristics of the industry make personal relationships and trust necessities for professionals to survive and to successfully contribute to the production process. For example, the formation of friendships aids animators and CTDs in coping with the

shared negative experiences of long working hours, to tight deadlines with competition. Even though personal relationships and camaraderie in the animation industry are not exclusively about the social aspects and benefits, the work-related necessity of those experiences does not appear to overshadow the true and positive experiences of friendship. Trust helps employees to overcome insecurities about their contribution and ideas, which is a phenomenon frequently reported and likely enforced through the constant evaluation, review and criticism to which employees are exposed. Collaboration works only in an environment where everyone feels safe to participate and ask questions which requires trust. Therefore, to understand the creative contribution and collaboration of practitioners below the line, it is necessary to expand the examination of the negotiated process of production with an analysis of the community's camaraderie, friendships and trust.

After establishing that animators and CTDs in the animation industry do indeed contribute creatively, the next chapter will explore to what extent authorship, creative control, and agency can be said to function below the line.

Chapter 5: Creative and Technical Contribution of Animators and Character Technical Directors

Introduction

This chapter examines to what extent authorship, creative control and agency can be said to function below the line. After establishing in the previous chapter that animators and CTDs in the animation industry do indeed contribute creatively, I explore their motivations to do so, as well as their understanding of what a 'creative' contribution is, and in what ways they do or do not claim authorship over such ideas. Through the analysis of my interview material, this chapter will establish that there is a mismatch between the practitioner's idea and expectation of what creativity and authorship is, and the practice of how these concepts function in the 3D animation studio environment.

First, the chapter will demonstrate that the aspects practitioners value about their work and the reasons why practitioners in animation feature film contribute their own ideas to the production process are profoundly related to creativity. Second, the chapter will take a closer look at what animators and CTDs consider to be a creative activity and how they define authorship. By analysing their understanding of their own contributions in the animation studio, I will show that their conception of authorship in all these aspects is highly influenced by definitions of creativity and authorship which focus on the individual. I will then argue that these traditional views and expectations about authorship and creativity conflict with the actual practice in 3D animation studios, which requires a collaborative approach to authorship. I will employ three analogies which emerged from the interviewees: hodgepodge, puzzle and nest, to make sense of the discrepancy between their expectations about authorship and the practice in the animation

studio, and to describe how authorship functions for them. After an in-depth analysis of these illustrations, I will develop a concept of collaborative authorship that can be applied to work below the line in 3D animation studios. While few collaborative authorship theories specifically discuss this topic, I will extend my theory of authorship to include the director's vision. My research will demonstrate that the director's vision can be regarded as an initial framework for the film, which BTL practitioners navigate through various strategies, allowing them to negotiate their own agency and authorship in the animation production process.

Credit and acknowledgement – Why are they contributing?

Animators and CTDs in the 3D animated feature film industry are below-the-line employees and are, thus, not considered creative personnel. This means that they are not compensated in the form of intellectual property rights and copyrights and cannot officially claim authorship over their work. However, understanding a creative individual as 'a person who regularly solves problems' (Gardner 2011, p. 33), animators and CTDs do contribute technically and creatively, as established in the previous chapter, since they constantly have to fill in and perform job roles that require problem-solving contributions. The practitioners continue to add their own original ideas to the production process even though they are not certain if contributing creatively is actually part of their job. The following paragraphs will investigate the motivations of practitioners in animation feature film for contributing creatively. I will present four primary reasons which are strongly tied to practitioners' experiences of reward, recognition and enjoyment: compensation, securing future work, esteem and care for the product itself. While the compensation and career related incentives are not unique to the creative industries, I will demonstrate that several motivations are profoundly related to the informal

crediting practices and the creative aspects of practitioners' work in animation studios.

There are multiple ways in which animators and CTDs are rewarded and recognised for their contributions. The following will establish the formal and informal, primarily community-based practices employed in the animation industry. These practices are important aspects of the animators' and CTDs' motivation to contribute their own ideas to the process. Animator Ellen summarises:

Officially, you can get your name in the credits list. That's one way you're credited. You can get compliments in dailies like, 'This shot looks really great.' They'll say it in front of a group. 'It's really working. I love what you're doing.' You get complemented by somebody saying, 'Take a look at what this person has done. Use this as an example, because this is working really well.' You can get credited with promotions and asking you to be a character lead or asking you to head up this department or that kind of thing. You get credit in the shots that you're cast.

Ellen names four ways to receive credit and acknowledgement in her studio: promotions, higher-level work assignments, credit by name in the credit list at the end of a movie and verbal recognition by peers and superiors. While promotions, higher-level work assignments and credit lists can be regarded as formal crediting practices, verbal recognition by peers and superiors is informal and community-based. Nevertheless, the mentioned practices are all important motives for practitioners to contribute creatively. First, they can possibly demand a higher salary. Second, they will be able to secure future work and boost their self-esteem by higher-level work assignments and credits, as well as endorsements through word of

mouth by industry colleagues. While remuneration can be a motive for practitioners in the animation industry, promotions are the only acknowledgement that might also directly lead to an increase in salary. However, the availability of this form of credit is dependent on the current openings in the studio and its budget. Before it comes to a promotion, the below-the-line practitioner's work is often credited by being awarded higher-level work, better shots or more interesting characters first. Those assignments are given as a reward, since they are more desirable to animators and CTDs. They allow them to show off their level of skill and prove themselves to current or future employers. The better the shots or characters of the animator and CTD, the more successful and appealing their demo reel will be. Demo reels are short compilations of the practitioners' best work and function as a visual resume. The more high-quality projects on the demo reel, the better the chance to land the next job. It also provides an opportunity to stand out from the mass of other practitioners and the collaborative work process by presenting oneself as a unique and knowledgeable master of their craft. The demo reel plays such an important role that online businesses like www.reelfeedback.com or www.reeview.it emerged offering professional animation reel review services by industry experts for a fee (about \$100–\$200 per item of feedback). However, while the assignment of more desired and challenging shots and characters is perceived as a reward, the release of those examples of work by the company to below-the-line employees for the purpose of using them on their demo reels, is seen by most practitioners as their prerogative. The reason for this is that the demo reel is vital for the acquisition of work. The standard resume of an animator or CTD takes a much less important role than in other industries. Additionally, practitioners feel a strong ownership over those shots or characters they have helped to develop. Most animation companies have policies that allow employees to request the shots they had worked on after the release of the film. However, if below-the-line employees are denied the authorisation to show

their work in this context, as is the legal right of the studio, animation employees strongly perceive this as unfair. Animator Barbara describes:

There is, [name of the studio], the production company for [name of film], apparently is not releasing the shots to the animators and they're not allowing them to put them on their reels. ... I think that's crazy. I don't understand that at all. Again, it's like they have ... I understand protecting that stuff until the film is released, of course, but once the film is out people have seen it, you should be able to say that, 'This is work I did.' It's like withholding someone's resume and saying, 'You're not allowed to give anyone this resume if we say so.' I don't know. How are you supposed to continue working if you're not able to say, 'Yeah, I did a huge part of this?'

Barbara is talking about another production company that did not authorise their animators to use shots of the film for their demo reel, even after the theatrical release of the film. It is clear from Barbara's reaction that she disagrees strongly with this policy. It seems that the material for her demo reel is as important and crucial as the salary, since it guarantees her future employment. This confirms Caldwell's (2008) idea that such visual credits together with on-screen credits can be viewed as a form of payment. Should practitioners not be able to receive those shots officially from the company, it is a well-known (if not quite legal) practice to find them online or digitally record them from DVDs for the purpose of adding them to one's demo reel. One of the interviewees confirms this by stating in a side note that it is important 'to get everything that you've done, legally or illegally, from the company'.

Several interviewees name the big release or wrap parties, as well as free

lunches, ice cream, free breakfast or cereal as official ways they receive credit and acknowledgement from the studio. Matt Stahl remarks that animation studios offer such free amenities 'in part to compensate for 'animation artists' exclusion from authorship and above-the-line privileges' (2009, pp. 61–62). While I am not able to provide evidence to prove or disprove this claim, those extra comforts are certainly provided to keep the employees motivated and distracted from crunch time and other negative experiences caused by the precariousness of the industry as discussed in the previous chapter. The studio's efforts appear to pay off, since the practitioners primarily perceive these extras as a positive bonus and a sign of appreciation and reward for their contribution at the company.

Being credited by name in the credit list at the end of a movie is the most obvious form of official credit in the animation industry, and functions as official proof and confirmation of a practitioner's contribution to a film. CTD Shane regards the full credit list at the end of the movie as 'a way of acknowledging the shared authorship' by the studio. While the studio might not necessarily intend to acknowledge shared authorship, the credit list is at least a recognition of the collaboration. CTD Adam says:

I'm always in awe of credits because it just shows the amount of people that worked on it. It was this big, huge process. It wasn't just the director and the producer that made the movie. It's all these people that were involved in and how they all contributed something. It's important to get that recognition. It's almost like your own award for working on the movie especially if the movie never gets any actual awards.

Adam deems the credit list as an important recognition of all the employees by the

studio. It is a reward that is important to him no matter if the movie is critically acclaimed or not. Often the credits are as important to the employees as the working conditions and salary. In the controversy around the animated feature *Sausage Party* (Tiernan and Vernon 2016), animators complained about not being paid for overtime and about management's threats to fire personnel and ruin their reputations if they did not stay late (Merry 2016). However, one of the main reasons for their protest was that they had not been credited when the film was released. If on-screen credit is not given, as in this case or in other cases where work is largely outsourced, the visual credit, and thus, the demo reel, becomes even more crucial. But, the importance assigned to on-screen credits varies from practitioner to practitioner. It seems to be strongly connected to the current stage of the employee's career. After being asked if it is important to get his name in the credit list, animator Samuel reveals:

It was at first. You see, I don't if it was so much important to me, but it was definitely novel, and it was definitely a fun thing. It's a reward thing to see my name in the credits up on the screen the first time. I don't know how many movies that lasted it for. ... Now, it's just sort of, it's just it's what it is. It's not as special anymore. It's not as important, I guess. It's not that it's not special. It's just not as important.

Samuel states that on-screen credits used to be more important at the beginning of his career. While it is now still a reward, it has lost its novelty and is not as critical anymore. Samuel summarises the opinion of multiple practitioners interviewed. However, this attitude is probably also a result of his job security and permanent position. Someone at the beginning of her career or with a temporary job might be more dependent on such official film credits.

While the credit list might decrease in value for more experienced practitioners, many interviewees report that informal, community and peer-related crediting practices, like verbal recognition and acknowledgement by peers and superiors, are now more important to them than official crediting practices like on-screen credits. This seems to confirm the findings of Hesmondhalgh and Baker (2011) that for some practitioners the professional opinions of peers working in the industry are even more important than ratings from critics or the general public. Most interviewees affirm that recognition and acknowledgement from their co-workers is extremely satisfying and rewarding. Animator Dustin recalls an incident where he observed one of his colleagues, who was watching a sequence of shots, laugh out loud when Dustin's funny shot came up. What Dustin intended with his shot had obviously worked and was entertaining, which made him feel good and confirmed his acting choice, and thus, his skill. Many practitioners describe that the verbal feedback and commendation from their superiors and peers gave them confidence and helped them to learn and improve their work. Several interviewees report that recognition by their peers can result in promotions or in new job opportunities by word-of-mouth. Some practitioners can even become more generally known to industry professionals and students for a certain animation style or rigging technique. Animator Doug summarises: 'You can't stop good work rising to the top from being noticed'. It is not surprising that practitioners are often less concerned with official rewards and acknowledgement by the studio, since this word-of-mouth peer recognition and endorsement as described by the interviewees seems to work extremely well to improve their reputation as a skilled workers and, thus, secure future work.

However, it appears that there is another factor that animators and CTDs value about informal crediting practices that inspires them to contribute creatively. As animator Dustin describes above, the pleasure and entertainment that an

animator's or CTD's idea can bring to their peers, brings enjoyment, satisfaction, as well as a boost of confidence to that practitioner. Esteem, the fact that others perceive their work as interesting and desirable, is an attractive aspect of working in the animation industry. This is not necessarily restricted to colleagues and animation insiders. Many interviewees, animators and CTDs describe the exhilarating feeling of seeing the film on a big screen with a large audience, talking to people about their contribution to the film or just showing it to their family. CTD Larissa summarises:

What makes me stay in it, is just it's so rewarding to work on a movie and have people talk about it and say how much they love the movie. You go and like, 'I worked on that movie,' and they're like, 'oh really? Oh, that's so cool!'

Larissa enjoys the admiration that seems to come with working on a feature film, which is often regarded as prestigious and desirable by the public. No matter if she only worked on a small part, just being a part of such an attractive project is enough to awe family, friends and even the general public. The feeling 'to have your work up there on the big screen with an audience' as animator Andrew illustrates, is extremely alluring and rewarding. He even adds that he would like 'to leave something behind', thus his motivation is driven by the desire to leave an artistic legacy. This confirms Hesmondhalgh and Baker's (2011) findings that social recognition and acclaim are some of the key factors professionals enjoy greatly. Ronald Inglehart (2008) reasons that this is due to a shift towards post-material values, like esteem and self-actualisation, in the Western cultures. Self-actualisation, realising one's own personal talent or potential, has become an important element of work. This is very much in line with Abraham Maslow (1943), an American psychologist widely known for his hierarchy of needs, who placed self-actualisation on top of his hierarchy that describes the path human motivation generally follows.

Once the more basic needs, physiological needs, safety needs, love/belonging and esteem, at the bottom of the hierarchy are satisfied, self-actualisation can become a strong motivating force (Maslow 1943). Particularly for younger people, earning money is as or even less important as finding their own identity through work (Deuze and Lewis 2013). The work in animation feature film can thus boost an individual's confidence and self-esteem, which represents another motivational factor to contribute technically and creatively to the animation production process.

While formal and informal crediting practices are a powerful motivational force for practitioners to contribute creatively, my research also revealed that official and unofficial modes of claiming authorship constitute a strong incentive. One of the few official modes of authorship below the line lies in the participation and promotion of below-the-line practitioners through marketing material, like DVD bonus material or industry talks and presentations. Some animators report for example, that the studio offers them opportunities to give interviews and presentations to students, at festivals or for DVD bonus features. DVDs and Blu-ray bonus features are a good example of such public and studio-coordinated presentations. Stahl regards this increased visibility on DVDs and Blu-rays as an 'affirmation of the place of the artist in corporate cultural production' and observes no ramifications on 'the relations of ownership or remuneration' (2005, pp. 103–104). While I agree that the participation of below-the-line practitioners has no effect on official authorship, ownership claims or entitlements to an increased salary or bonus payment, such portrayals and presentations can contribute to the artists' feeling of being credited and acknowledged and heighten their self-esteem and confidence. If they are being featured in such visible and public ways, I maintain that in some, of course not compensated, ways BTL practitioners can claim authorship. Even though such public, mass-distributed forms of information are clearly a marketing tool allowing the animation studios to push the public perception of the

animation industry in a direction that puts them in a favourable and desirable light (Sullivan 2007), participating in such activities is generally seen as a reward. One of the reasons is that they provide the practitioner with an opportunity to promote themselves and their work. Another is the fact that others perceive their work as interesting and desirable, which is, as previously discussed, an attractive aspect of working in the animation industry. Being able to talk about their contribution in interviews and presentations can be a motivational factor, boosting confidence and self-esteem. It also offers practitioners a welcome and exciting break from their regular day-to-day work, which can often involve long hours and cycles of crunch time. Therefore, I would argue that the opportunity to participate in such activities is regarded by many practitioners as non-monetary recognition for their work at the studio and a way to claim authorship, making them and their individual contribution more visible to industry insiders and outsiders.

However, animators and CTDs notice differences between their specialisations when it comes to the opportunities to take advantage of this official mode of claiming authorship. The visibility and the recognition the studio awards their employees varies between the two specific job roles. As I will argue in the following, there are two reasons for this disparity. First, several studios practice a culture of tradition where internally 'animation is king', a perception stemming from traditional 2D animation where the animator was responsible for most aspects visible on screen. This traditionally influenced cultural privilege of the animator's role is still retained in today's 3D animation industry even though the workflow and the organisation of the workplace has changed drastically in the digital era. Second, the role of CTDs is not as easily understood, externally and internally, and is associated with technical work. Since the perception of creativity often lacks its connection to technical innovation, CTDs are primarily perceived as technical personnel. One of the animators, Astrid, speaks directly about the difference

between the acknowledgement of animators and technical directors in relation to those two aspects:

I feel like animators get a lot of attention, more than other departments sometimes. Which isn't fair, really, because everybody's working so hard on something. ... My guess is it stems from the old traditional days, where the animators were basically doing almost everything. They were designing the character, they were drawing the character. There's other people that are in the mix, but so much of that was in their hands, story and animation. Where now, there is rigging. There is modelling. There's so many different departments that are creating a character. I don't know if it just comes from the legacy of that. I don't really know why. Even when you look at who's being interviewed for whether it's in the press, or whether it's on TV, or whatever, it seems like they're always interviewing animators. I don't know are they interviewing character TDs, maybe they are, and I don't know about it.

Astrid feels that internally the animation department receives more attention from the studio than other, especially more technical, departments. As an example, she illustrated that interviews or other presentations favour animators. Thus, CTDs, for example, are less visible in the studio and in the public. Astrid sees the reason for this different treatment as an inheritance from the traditional 2D animation where the animator was responsible for almost everything that was visible on screen. While even in the Disney era this was not accurate, since there were multiple separate specialists responsible for the animation, for example, in-betweeners,

inkers and painters, the character animators definitely had a large influence over their frames. However, similarly to the technical directors in 3D animation, the other professions were not featured by the studio. The public perception and the presentation of the work of an animator to the public reinforces the less visible role of the CTD. CTD Markus, for example, states that it is simpler for studios to ‘use one title for everyone’ and name all employees of an animation studio publicly as ‘animators’. Many CTDs argue that this is primarily due to the difficulties in explaining the work of a CTD to the public. Since 2D studio animators have been part of the workforce since the beginning of the 20th century, the term ‘animator’ has been familiar to the public for more than a century and does not require any explanation. Conversely, the role of the CTD is relatively new. It is a product of the change from the older analogue 2D animation tradition to a workflow needed for software-based computer animation and requires a very specialised skillset. The title ‘technical director’ itself is not self-explanatory and does not provide a definition of the role. The term ‘technical’ suggests that behind this role is a technician, not an artist. Thus, industry outsiders often have difficulty clearly understanding what the role of a CTD entails and associate them primarily with technical work, which is often not regarded as creative. For that reason, animation studios often simplify the increasingly complicated and specialised 3D animation pipeline in their public presentations by calling everyone an ‘animator’. However, these difficulties in fully understanding the role of a CTD can also extend to internal, above-the-line personnel as CTD Julia explains:

I think that within the sphere that I work, in this small ...
Working with both animators and modellers and texture
artists to a certain degree, I feel like I am acknowledged in
that sphere. As a character TD, as a larger environment, not

so much, but this is more inherent to being a character TD than anything else because people don't understand what we do. Even my family still doesn't understand what it is that I do, and it's very difficult to explain it. It can be disheartening within the studio system when you have directors and story people and overlords of production that don't know what we do and don't understand it and probably could care less. They don't want to know. They just want to know that it's getting done. We're the invisible department.

While Julia feels recognised by her co-workers from other departments, she does not feel acknowledged by creative and managerial above-the-line personnel. Julia does accept that people outside of the animation industry, like her family, do not understand what a CTD does. However, she appears to be very frustrated about higher-level industry insiders who she claims do not even want to understand as long as the work gets done. After asking her if this is demotivating, she answers that it is 'disappointing'. Julia calls the rigging department the 'invisible department'. This notion is supported by multiple accounts from CTDs, for example CTD Claudia. While normally at the release of a movie the producers will ultimately thank every department, Claudia reports an example where the rigging department was not even mentioned, which she reports was extremely disappointing to the whole rigging department who had worked as extremely hard on the film as everyone else. Claudia explains, however, that some studios are trying to make their above-the-line personnel more knowledgeable about the work of their staff. For example, Claudia describes that she had worked for an animation studio 'where they wanted the producers and the production managers to do a rigging class'. This helped them to understand the process better and increased the visibility of the rigging department

to the ATL personnel.

Another reason for this feeling of invisibility, resulting in fewer opportunities to claim authorship, might lie in the same predicament that Miranda Banks (2009) describes for costume designers. She writes that a costume designer's 'job is to visualize a character through a costume that should go unnoticed by the audience because it looks organic to the personality of the character' (Banks 2009, p. 91). Interestingly, this statement also applies to CTDs: a character rig is good if it is not visible and becomes just a tool to bring the character to life. If a character rig is seen, it is mostly when it fails and causes visibly bad deformations. Being invisible is the sign of a good character rig. Thus, it becomes the goal of a CTD to make their work imperceptible. As with the costume designer's work, the CTD's work should disappear to be successful. But there is another dilemma for CTDs. While a costume designer's work is something tangible and visual that can be directly pointed at on screen, a CTDs work is not. CTD Adam illustrates:

It always ends up being focused on animation because that's the product that you see after something has been rigged but not necessarily all the reason you're getting all these animations is because of what was in the rig. That's kind of an education thing. ... For the rest of the studio, more people can understand what animation is, what modelling is, lighting and things like that but since rigging is a stepping stone to or it's in between a model and an animation, it's just hard for people to grasp what it is exactly that is being done at that stage.

Adam describes the difficulty of exactly pinpointing his work as a CTD, since it is not directly visible on screen. A couple of CTDs mention that rigging is not as

'glamorous' as other parts of the pipeline, for example a design or a 3D sculpt or model of a character. CTD Hazel recounts that

Whenever they bring tours through they spend a long time on the models, the modellers, and they spend a long time on the animators, and they're like, 'There's the riggers, and they're probably coding at the moment so it's not very interesting to look at.'

With this statement, Hazel illustrates the reputation of rigging as an extremely technical profession. As previously argued, rigging is not as easy to understand as purely visual work, and thus, seems to be less creative, exciting or interesting for the studio to feature to animation outsiders. I would argue that this is directly related to the predisposition of the term creativity connected to fine arts. While this might be different in the fields of science and technology, in the animation industry the idea that writing a new tool or a piece of software could be considered as creative as drawing a picture does not appear to be an association that is easily made. In the next section, I will further discuss the difficulties with an inclusion of technological innovation into a definition of creativity by the interviewees themselves.

While CTDs report that they accepted this difference in acknowledgement and visibility related to the culture of tradition, as well as the association of non-creative work with CTDs, compared to other departments as part of the nature of their work, they still report being frustrated and disappointed by it. Most CTDs desire more exposure internally and externally for their role in the animation production process, including their own creative contribution. CTD Markus does not believe that the issue lies in the supposed disinterest of the public, but rather in the unwillingness of the studio to invest in the explanation of the whole pipeline. He mentions a behind-the-scenes bonus featurette with Steve Carell on *Despicable Me 2*

(Coffin and Renaud 2013) where the animation feature film pipeline, including rigging, is explained in a short and very entertaining way (Illumination Entertainment 2013). Thus, it is possible to make this complicated process understandable for the public if done correctly. As a result, the work of CTDs can become more visible and all practitioners might feel equally appreciated and acknowledged for their work.

Aside from motivations related to the formal and informal crediting practices and the modes of claiming authorship previously discussed, practitioners also mention their enjoyment of the creative activity involved in making a high-quality product itself as a motive to contribute creatively. Many of the previously discussed ways the interviewees feel recognised in the animation studio are connected to these creative aspects of their work. Higher-level work, for example, is not only a tool to allow practitioners to advance their career, secure future work and demand a higher salary. Animators and CTDs describe higher-level assignments as also offering more interesting, exciting and challenging tasks. Thus, remuneration in the form of salary or career advancement is not the only reason why practitioners in the animation industry often ask for higher-level work. Another contributing factor lies in the enjoyment of the creative challenge itself. Additionally, multiple interviewees mention enjoying the feeling of control, ownership and agency they gain with the freedom to contribute creatively. Animator Andrew describes:

You'd hate to be just a person on an assembly line. You know?

If it came down to them telling you what to do every time, you would have no ownership. You'd feel like anybody could do this, why am I doing this? It's very important. I definitely want my voice to be heard. At least considered.

Andrew is adamant about the importance of being able to introduce his personal

ideas into the process. Having an influence on his work and the process is a crucial element to make his work a satisfying and gratifying experience. Several other interviewees explain their desire to contribute by contrasting it with the example of an 'assembly line' production, being 'just a tool', or 'just a cog in the machine'. Those comparisons are all examples of 'mindless' work that do not require any contribution of the individual and could almost be replaced by a sequence of tasks executed by a machine. Animators and CTDs value the amount of influence they have and the freedom they possess, allowing them more agency in their work. Animator Yvonne even went as far as changing to a smaller animation studio where she is able to have more autonomy and control over the process. Many interviewees also report that they enjoy the collaborative process of animation feature film production itself. Csikszentmihalyi names this phenomenon an 'autotelic' (1996, p. 113) activity: the reward lies in the doing of it. Some interviewees explain that they enjoy the process of convincing and pitching their ideas to colleagues and superiors. Others explain that they find pleasure in interacting and collaborating with their peers and coming up with something much better and bigger than they could have achieved on their own. This confirms González' (2008) suggestion that being part of a project that is bigger than any one of them and greater than the sum of its parts provides a greatly rewarding experience in itself. Multiple interviewees state that collaboration and teamwork are the most fun aspect of their work in an animation studio, and motivate them to go beyond their expected contributions.

This section of the chapter demonstrated that the practitioner's motives for contributing creatively are intricately connected to experiences of reward, recognition and the enjoyment of the creative activity itself. The aspects that are valued in the animation studio culture are often related to creative contributions. The next section will explore what kind of work animators and CTDs consider to be creative and how they view their own contributions. I will also analyse how the

understanding of creativity influences practitioners' ideas about authorship and authorial control in the animation studio.

The understanding of creativity and authorship below the line

This section will focus on the interviewees' understanding of creativity and authorship and whether they feel like they have authorship over their work. Previously, I established that animators and CTDs in the animation industry do indeed contribute creatively as part of the negotiated process of production, and that the motives to do so are profoundly related to the creative aspects of their work itself. The following will show that below-the-line practitioners in the animation industry often have difficulty calling themselves artists, considering their own contributions as creative, and thus claiming authorship. The reason for this dilemma is rooted in the preconception of creativity as a highly individual, original, and artistic contribution. This understanding of creativity has a major influence on the interviewees' definition of authorship and their theories about authorial control in the animation studio being something pure and personal, originating from one individual creator. Through analysis of the interviews, I identified five aspects of a contribution: creativity, visibility, individuality, ownership and scope, which are highly related to such a concept of creativity and which define animators' and CTDs' feelings of authorship. I will then demonstrate that the collaborative environment at an animation studio conflicts with traditional views and explanations of creativity and authorship which focus on the author as an individual. I will therefore reveal a mismatch between animators' and CTDs' traditional expectations about authorship and the practice of the animation production process which requires a collaborative approach to authorship.

Animators and CTDs make frequent references to art and artists. However,

their opinions about self-identifying as artists vary drastically. As will be seen in the following paragraphs, the reason for this is the strong link the interviewees make between the term artist and being creative and the preconception of creativity as a profoundly individual, unique, and fine arts contribution. The practitioners' feeling of being able to claim authorship is heavily influenced by whether animators and CTDs believe their contributions to be highly creative, which is in turn determined by their definition of creativity. Thus, to understand the way animators and CTDs think about authorship, one must first understand how they define creativity and if they identify themselves as creative individuals. The connection between the understanding of creativity and authorship becomes clear in the following definition of creativity from CTD Shane:

I think creativity is like when you're given all the keys to the car and you're able to take whatever it is. Wherever you want. You can drive that wherever you want. You don't have a specific destination. You make your own.

When he is later asked 'it sounds like you were saying in your definition of creativity that it's basically having full control and full freedom?', he agrees with this assessment of his statement. Thus, he is connecting creativity with absolute control and complete freedom to follow your own vision. In his description of creativity, Shane instinctively uses elements that are at the heart of the theories of authorship, confirming how related the questions of authorship and creativity are. Shane further confirms this in his idea of authorship which he describes as a 'fuzzy thing ... unless it's 100% pure, like a pure idea from an individual'. The idea of the pure, authentic idea from an individual as author seems to be at the core of his definition of authorship. The following paragraphs will reveal similar preconceptions about the term artist, which is used as the embodiment of a creative individual.

Art metaphors comparing the creative process in animation to that of an artist or painter are frequently employed, especially by animators. Some practitioners use the word artist without any hesitation, for example animator Dustin who naturally assumes artist status when he generalises that ‘artists need to be inspired’, referring to practitioners in the 3D animation industry. Animator Stan uses the term artist similarly and justifies his claim by explaining that ‘we are not painting paint by numbers, we like to paint actual pictures’. His example seems to make a distinction between the traditional fine artist, who paints a new, authentic picture and the craftsman who just executes the vision of others. Interestingly, CTD Shane argues the opposite by stating that most 3D animation is ‘colouring within the lines’, since most films have the same look, inferring that their work is generally not original and, thus, does not deserve artistic status. As already discussed in the first section of this thesis, creative work is conventionally connected to originality and uniqueness. Crafts, on the contrary, are generally thought to be a more anonymous and collective practice (Sennett 2009). However, such a categorisation is problematic, since this separation is closely connected to status (creative work is considered more prestigious than technical work) and, as previously outlined, tied to how work is being compensated. Some interviewees are particularly aware of the problematic preconception of the term artist and creativity and choose to distance themselves from the association with the term artist for those reasons. Animator Doug, for example, explains in detail:

The word artist is just so loaded. It just comes with such a lot of baggage. I find it difficult to apply that kind of associations to myself in what I do especially as an animator. It’s fine if other people are like, ‘Oh, you’re an animation artist,’ or whatever like, ‘Yeah.’ Okay. Fair enough but I don’t think I was

ever comfortable with calling myself an artist, but I'm still and I'm painting and drawing, so what is that? Therefore, it says more about me than anything else. I'm sure there are a lot of animators out there that love calling themselves artists, but it's just not an association I was ever comfortable with.

While he accepts that others might grant him artist status or that his colleagues might associate themselves with that role, he clearly is not comfortable with identifying himself as an artist. His reasoning directly refers to the predisposition of the term artist itself. While others might not spell it out as clearly as Doug, they indicate a similar difficulty with the conception of the term artist. Animator Yvonne even reports that when she decided on a career in animation her parents were worried about her 'being an artist and feeding herself', referring to the 'starving artist' stereotype. The examples above indicate that the long-standing, traditional understanding of creativity and artist status have a large impact on the self-identification of 3D animation practitioners as artists. The non-commercial, individual, authentic fine artist seems to be the primary image that comes to mind when thinking about the term artist and creativity, making it difficult for practitioners to claim authorship in an animation studio environment involving hundreds of contributors.

While multiple animators, as previously discussed, hesitate to identify themselves as artists, compared to CTDs they nevertheless appear to have less difficulties to consider their contributions as creative and worthy of authorship. The interviews reveal two main reasons, which I will present in the following paragraphs. First, while the practitioners generally have difficulties identifying with the term 'artist', animators do not have any problem identifying with the term 'actor', which is considered a highly creative ATL role. Second, the contributions of CTDs

often involve technical problem-solving, which is not immediately associated with creativity. In the interviews of this study, animators frequently compare themselves and their work to actors. While it might be puzzling for researchers, this correlation is generally and widely accepted in the animation industry. This becomes especially apparent when animators describe their contributions, as we can see in animator Stan's description of his main responsibilities:

Together with the voice actors we are sort of the actors of the film. All the character animation or all the character movement that you see, that would fall under my responsibility.

Finding the personality and the behaviour of a character during pre-production, as well as acting out a shot in production are tasks that could also describe the responsibilities of live-action actors. Often, animators even do the so-called 'scratch track', a sound recording of primarily dialogue and noises used as a temporary placeholder. Famous animators like Chuck Jones have established this comparison between animators and actors. In an online interview in 1999 with art historian Ron Barbagallo, Chuck Jones comments:

The essence of any great animation is the animator's work. A director can guide and inspire the animator, but you can't substitute for what the animator must do. It's the same principle that exists in acting – a moving picture of a photograph is not the same as an actor acting (Barbagallo 1996, 1999, revised 2015).

Jones clearly regards the contribution of an animator and an actor as being on the same level. While he acknowledges the influence of the director on the animation, he imposes a limit on the director's influence on guidance and inspiration, which

implies a significant creative contribution on the part of the animator. Frank Thomas and Ollie Johnston, two of Disney's famous Nine Old Men, make this connection even earlier:

Basically, the animator is the actor in animated films. He is many other things as well; however, in his efforts to communicate his ideas, acting becomes his most important device (Thomas and Johnston 1981, p. 18).

However, Thomas and Johnston do observe differences between the two professions. An animator does not have the advantage of working with and reacting to other members of the cast or the audience. However, animators often report countering this by exchanging ideas about acting choices with others, possibly even recording reference shots together. While those animators primarily speak about 2D animation, the idea of the animator as actor is more prevalent than ever before. Books like Ed Hooks' *Acting for Animators* (Hooks 2017), which is currently in its 4th edition, and acting classes at animation schools like Animation Mentor and even at the studios themselves, for example, support this claim that animators and actors are similar roles and even profit from this correlation.

Academic researchers are not entirely opposed to this idea. Paul Wells, for example, sees the similarities between animator and actor in their motivation to 'extend the possibilities of the character beyond the information given or suggested in the initial text' (1998, p. 104). By projecting his 'inner life' and creating characters by animating the line, the animator becomes the actor. Donald Crafton observes that 'animated characters ... are actors who may convey strong emotions' (2013, p. 16): the animator who creates those performances is therefore the 'real' performer. However, he argues that animators do not possess full agency. He first introduces an analogy between animators and animal trainers, as well as between animated

characters and filmed animals, which have their own agency playing roles that figure them as human (Crafton 2013). While this is an interesting concept, Crafton's second idea, comparing an animated character to a puppet, seems to be more applicable. I agree with Crafton that 'there is an analogy between the mechanics of agency in the relationships among puppeteers, puppets, and audiences and those of animators, toons, and their audiences' (ibid., p. 63). Based on my interviews and experience in the animation industry, my insights confirm that Crafton's comparison to puppets is a better fit with the reality of a 3D animation production. While Crafton primarily speaks about one animator sharing dual agency with his creation from a performance standpoint, his theory will have to expand for today's 3D animation in which many more people are responsible for the character, and arguably its performance, like an effects and cloth simulation specialist. Nevertheless, after reviewing the industry's perception and the current academic theories in this regard, I would argue that while the work of an animator is not the same as the work of an actor, there is a connection between their contributions that cannot be denied. The scope of the creative contribution of an actor on the entire movie might be larger than that of an animator, however I contend that the contributions of 3D animators from a creative standpoint can to some degree be compared to that of actors. Since live-action actors are above the line and regarded as creative personnel, this might also explain why animators seem to be more likely to consider their contributions as creative than CTDs whose contributions are less related to the actual performance of the character in a shot. Since Paul Wells' and Donald Crafton's emphasis lies on the performance of a character, they primarily focus on the animator. Therefore, other practitioners in the animation industry, like CTDs, are not accounted for. An extended model of creative contributions and authorship in 3D computer animation also needs to include practitioner contributions that are not related to performance. This allows the CTD a place in this definition to possess

agency as the person that adds the strings and carves the different facial expressions. Even though actors are generally regarded as artists, most animators feel less comfortable to compare themselves to artists than actors as previously discussed. However, this is presumably because the term 'actor', unlike the term 'artist' relates directly to the performance of a character and to the animator's main responsibility.

The second reason why CTDs have more difficulties with calling themselves artists and considering their own contribution as a creative activity seems to be related to the nature of their work, which often involves less visual, and more technical problem-solving. While process-led problem-solving, which is a problem-solving activity that is a direct result from the production process as described in the last chapter, can sometimes include visual elements, problem-solving by CTDs, especially when it comes to tools, can be quite technical. Therefore, it is not immediately associated with creativity, since creative and technical are often utilised as opposites. After all, even the social division of labour employs these terms to separate workers into 'creative' above-the-line and 'technical' below-the-line employees. However, CTD Shane's explanation of what problem-solving is, which he describes to be at the core his work as a CTD, indicates a process that is inherently creative. He specifies:

I think to be a character TD or rigging person, you kind of have to be wired to solve problems and invent things. Invent ways of doing things that are different.

Shane's characterisation of the problem-solving process involves some of the key elements of creative work according to current creativity theories. Problem-solving is a process or an idea which seems to be new, indicated by the term 'invention', and has a value, particularly if the problem is solved. Howard Gardner (2011) even

includes the process of problem-solving itself in the definition of creativity. He describes a creative individual as ‘a person who regularly solves problems, fashions products, or defines new questions in a way that is initially considered novel but that ultimately becomes accepted in a particular cultural setting’ (ibid., p. 33). However, despite similar descriptions from other practitioners, most CTDs do not immediately regard problem-solving as a creative task and often used the term ‘technical’ problem-solving. Interestingly, after asking the practitioners directly if they do not consider problem-solving as a creative activity, several practitioners agreed that it was creative, but a different kind of creativity. CTD Ben states that it is more like ‘creative technical problem-solving’, Shane feels like it is creative, but not ‘artistic’. Markus asserts that problem-solving is creative, but not really an element of the creative part of a movie. A possible explanation for this differentiation and reluctance to regard problem-solving as a creative activity, might be rooted in the predisposed conception of the term creativity connected to fine arts. The idea that inventing a new tool could be considered as creative as drawing a picture, might be difficult to reconcile. It seems that the CTDs previously mentioned found a compromise in suggesting multiple categories of creativity which allowed them to differentiate the more artistic from the more technical, while still calling them both creative tasks. Thus, the definition of creativity by Gardner should be extended to specifically include artistic and technical problem-solving creativity. In such a definition, artistic problem-solving would represent the more traditional understanding of creativity of problem-solving connected to music, writing, and performance, as well as the visual fine arts, for example painting, design, and photography. Technical problem-solving creativity would include a new process or idea that solves a technical issue, or creates an innovative technical product, for example a software tool.

The traditional connection of creativity with fine arts, presuming a visual

contribution, directly influences the practitioners' idea of authorship. CTDs and animators who make contributions which cannot be directly identified visually, have less of a sense of authorship than those who can. CTDs, especially, tend to miss ways to visually pinpoint what exactly they contributed. CTD Drew explains this as follows:

You cannot visually say, 'Okay. That's me. I did that.' Like you could with the modelling or could with animation.

The difficulty of exactly defining what their contribution is seems to make some CTDs feel less authorship over their work. CTD Brendan confirms this by stating that:

It's nice to be in the theatre and say, oh, here I did [this character]. Or [that character]. Or whatever. It's sort of a thing where I felt like it was nice to be able to point to something specific or point to [this movie] and say look see all these kids, these are all my kids. Each one of them. Behind the scenes there's a name like one of my nephews. You know like, you see a big signature of yourself in the film.

Brendan enjoys the fact that he can point out his contribution visually. Since he worked on background characters, he was even able to name them 'behind the scenes' after some of his family members. This personal connection makes Brendan feel more authorship over his contribution. When the contributions are workflows or tools, it appears to be more difficult for the CTD to claim authorship. Such contributions are harder to understand by the public, as well as the studio, and are sometimes not intended to stand out. Often, they can be improvements to make processes faster or better and might not be noticed directly by the other practitioners in the studio, and especially not by the audience. Hence, while such

contributions might have a larger impact on the production workflow, they are often invisible to the eye, which has an effect on how some people feel about their contributions.

The individuality and ownership of a contribution are both closely connected to the concept of creativity as a highly individual and unique process, and the idea of the author as an individual. These aspects of a contribution strongly influence the interviewee's definition of authorship and their theories about authorial control in the animation studio. To approach such a definition of authorship, several interviewees use the example of the 'writer' or the act of 'writing' to talk about authorship. Animator Barbara, for example, talks about one of her contributions employing the latter term:

It wasn't anything that anyone told me to do so that I do feel, yes, I created that. I wrote that. I authored that. I do feel like I have authorship of that.

Regarding a writer as an author is a logical association and assigns a tangible image to the abstract term of authorship. A writer is most of the time envisioned as an individual working alone, being the primary creative force behind a book. Since the traditional concept of creativity and authorship is interwoven with a single person, the feeling of authorship increases the more a contribution can be attributed to one unique individual. However, in contrast to literary works, the production of a film is not as clear cut, since it requires decisions made by many people. While a writer comes up with an idea and executes it, doing both of those tasks is often not possible in a large-scale film production. CTD Claudia reflects on this idea:

I wouldn't say I authored it because he actually wrote it, but I guess I did in a way...

Even though you may not write the code, but you came up

with the process and the method and the idea, how to do it.

While Claudia is hesitant to say that she has full authorship over her contribution, since she did not both come up with the idea and implement it, she still feels like she has at least partial authorship. Her account begins to reflect on the conflict between the traditional views and explanations of creativity and authorship and the collaborative environment at an animation studio which rarely produces ideas that truly originate from one individual. CTD Shane specifies that he does not believe that a pure authorship stemming from one individual can exist in the 3D animation studio. Everything at the studio is influenced by and building on something that was developed or inspired by someone else. Thus, he believes that: 'The author really is the company'. Animator Lukas agrees with this idea of a studio authorship. He states that the movies they make are 'not even the director's movie, rather he sees the authorship with the studio itself. This concept is separate from collaborative authorship, which allows for multiple individuals to claim authorship. Instead, it is more in line with Jerome Christensen's (2008) theory of studio authorship in which he transfers the author status to the corporate studio. The studio itself becomes an individual with a personality and style. Employees working in such an organisation unconsciously adopt the personality of the studio while suspending their own (Arnold 1937). Animator Yvonne, for example, did not feel authorship over her work at Walt Disney Animation Studios and experienced it more that she was 'helping out to create a Disney film'. While the concept of studio authorship elevates the studio to be the author instead of an individual person, it still has its roots in individuality as it assigns a personality to a studio, making it a unique individual. However, as I will explore later, almost everyone, including Shane and Lukas, allow in their interviews for individual contributions of the film production team and a more collaborative approach. Thus, the studio authorship theory, does not seem to fully explain

authorship below the line.

Other interviewees connect authorship with the financial means to make a movie: Whoever is highest in the hierarchy, whoever gives the most money and whoever owns the film can claim authorship. However, ownership is problematic as a determinant for below-the-line authorship, since BTL practitioners do not own their contribution in terms of property rights as they are all working for the studio. Nevertheless, most interviewees of this study made a connection between authorship and ownership, stating that authorship implies a sense of ownership. Some interviewees even used both terms interchangeably. To illustrate the relation, CTD Adam employs the example from above of the writer as author who is also the sole owner of that creative product. Regarding the animation industry, however, it was generally agreed upon that the company owns the product financially in exchange for the practitioner's salary. The employee provides a product or service and gets compensated for it. Giving up their financial ownership and rights to claim creative agency and intellectual property seems to be accepted and deemed as a fair trade of the business arrangement. Some practitioners even stated that if one should want full creative freedom and ownership, they should not work at a big animation studio.

However, as discussed in the previous section, most people still value the opportunity to contribute their personal ideas. Additionally, despite the agreement on the monetary ownership of the final product, many practitioners reported that they felt a shared ownership or authorship over certain parts, for example a certain shot, or a part of a certain character's process. Animators often report to feel authorship over the performance in their shot. Ellen explains:

Obviously, there are a lot of other people bringing that character to life before working on fur and cloth, we're

working on lighting, we're working on the environments and the compositing. All those things, it's definitely a team effort, but I can personally take authorship of the performance that's on the screen, of the reaction that people that are watching it. Because without the performance, without the acting, it's a doll in a scene.

While many other employees are involved in the process of creating a character, Ellen does feel authorship over the way the character moves, the timing, the spacing, and possibly the acting ideas that went into the shot. CTDs naturally claim more authorship over the functionality of a character, how it moves on screen. CTD Mark provides some insight into this idea:

It's one of the coolest things even just to give them a character and then you just see it moving even with the simple walk cycle. It's like, 'Oh, that's awesome. I made that.' Even though I didn't move it at all. I just made the parts or made the equipment that allowed to make it move. I think seeing my stuff moving is just awesome. Nothing's more rewarding than that, I think.

Even though Mark is fully aware that he actually did not make the character move, he feels authorship over the way it moves, because he contributed to the parts that made that movement possible and helped to make it look good in the character's performance. Providing someone else with his work and seeing it being used adds an additional measure of pride over his creation.

The feeling of authorship can increase with the impact or the scope of the contribution. Animator Doug reports that while he might feel authorship over a shot he spent several months on, it might not feel as satisfying as when he was a lead on a

character in pre-production and he had an 'influence over the way the character ultimately ended up on screen'. A shot might just be four seconds long and as Doug put it, if 'everybody blinks at the wrong time and they missed it'. However, as a character lead an animator's work might end up in all shots if the animator had a chance to develop the personality and behaviour of the character that the entire animation team must adhere to. Animator Lukas agrees and states that he might feel a different kind of authorship for a character he was a lead for:

Obviously, I have not animated all the shots with [the characters I was lead for] but being a character lead gives you a different kind of authorship on some parts of the movie and in this case on the character of the movie. People will come to me and say, 'Hey, [this character] looks awesome, he was really funny in the movie.' I do take pride in that, in that wow, I did manage to give people good feedback or to do a good preparation of the character during pre-production...

While he did not execute all the shots himself, a lot of the ideas that define the animation of the character came from Lukas' leadership. His contribution seems to be accepted by his colleagues as well, who credit him for the work he did. As discussed in the first section of this chapter, multiple animators feel that they can make a larger creative contribution in the pre-production, and thus, in the character development process. Animator Justine even limits her sense of authorship or ownership, which is used interchangeably in her account, to her work in pre-production:

Me, personally, I don't feel ownership unless maybe it, and that's like in-shot technique or a new technology or something I wouldn't, but if it was like in pre-production

where it's like a rig or character, then yes. I would feel ownership.

This also seems to be connected to the scope of influence or responsibility, since she describes in her interview that the reason for her taking ownership of a character is her official responsibility as a character lead to track the character throughout the movie to make sure it is being used properly. When working on a shot the responsibility and influence ends with the shot. In comparison, CTDs, whose primary work is in pre-production on a specific character, have a wider influence on tools for the studio pipeline and characters, and thus, usually have a larger scope of influence, since their work is in every shot the character is being animated in. However, multiple CTDs state that they have less of an opportunity to exercise their creativity compared to animators, who are doing the acting for the performances in shot production, which is considered inherently creative. Therefore, it appears that the scope of a contribution has a lesser influence on the practitioner's feeling of authorship than the perceived level of creativity. CTD Melanie also points out that, even though the scope of influence might be larger, there are many other co-workers in line who want to take credit for a character, for example the production designer, the animators, as well as all the other departments that worked on a certain character asset. She feels that 'for character TDs it's hard to get to be that person', implying that many other people are ahead of her to claim authorship.

This section analysed the practitioners' understanding of 'creative' contributions and its influence on the interviewee's definition of authorship and their theories about authorial control in the animation studio. Traditional ideas of creativity and authorship as highly individual, original, visual and artistic contributions dominate practitioners' expectations of what creativity and authorship is. However, the practice of how these concepts function in the 3D animation studio

environment is incompatible with those views. This becomes obvious in the fact that animators and CTDs still report that they feel a shared authorship over specific contributions they made, for example, a certain performance or a part of a character's process. Their feeling of a shared authorship conflicts with the traditional, fine arts related views about authorship and creativity, which are based on the author as an individual. The next section will explain and further reveal this mismatch and propose a collaborative approach to authorship which is more applicable to the negotiated process of production in the 3D animation studio environment.

Collaborative authorship and the director's vision below the line

When asking the interviewees directly about their sense of authorship, it is difficult to receive a straight answer, revealing a hesitance in taking authorship over their contributions. As discussed in the previous section, the reason for the difficulty practitioners have with the term authorship is the traditional expectation of authorship as a highly individual and artistic contribution. However, despite their preconception of what the definition of authorship should entail, they often feel strongly involved and responsible for a specific idea and contribution, making them question the applicability of their own traditional understanding of authorship. The following paragraphs will present three main characteristics of the 3D animation production process practitioners describe that make their own expectations of authorship incompatible with the day-to-day practice they experience in the animation studio. First, the scope of a project resulting in a 3D animated feature film makes it impossible to attribute the authorship to one individual. Second, the organisation of the animation studio production process is inherently collaborative,

including creative and technical problem-solving. As demonstrated in the last chapter, the fast-paced production process and the blurred workflows interviewees even require workers to stand in and perform job roles that impart more authorial agency to below-the-line practitioners. Third, animators and CTDs report the emergence of something greater than what initiated from a couple of individuals. Thus, the interviewees experience that the final product is greater than the sum of its parts, which cannot be explained with traditional concepts of authorship focusing on an individual. The section will then turn to alternate concepts of authorship, which are more suited to a collaborative understanding of authorship. I will first present the three analogies, hodgepodge, puzzle and nest, practitioners employ themselves to make sense of the conflict between their own expectations about authorship and the practice in the animation studio. I will analyse each analogy mentioned and utilise them to develop a concept of collaborative authorship that can be applied for work below the line in the 3D animation studio. Last, I will argue that such a theory should also include the director's vision. While few collaborative authorship theories specifically discuss this topic, I will demonstrate that an inclusion of the director's vision does not need to be a contradiction to a collaborative authorship approach. Drawing from the interviews, I will show that the director's vision is an important and necessary element of the negotiated process of production, which provides the initial idea and framework for the film. The director is regarded as a guide through this framework, which is more or less flexible depending on the director's management style. BTL practitioners navigate the director's vision by adding their own ideas through various negotiating strategies. While the strategies can vary, they often include pitching rituals with visual prototypes which practitioners use to sell their ideas to the director. Such pitching rituals can be regarded as tactical BTL countermeasures allowing animators and CTDs to negotiate the director's vision.

Several interviewees report that they can contribute something unique and individual to the process. They describe that some of their contributions can be extremely personal in nature and become more recognisable. Animator Andrew for example illustrates that one of his friends immediately recognised his acting choice and was able to attribute this idea to him by just looking at a sequence of shots. Andrew also reports that employees often gain a certain reputation and are casted to shots depending on their specific sensibilities. For example, someone might be more talented for funny, cartoony performances, others might have a better grasp of extremely emotional shots. Animator Barbara connects her specific personality traits with the ideas she contributes:

I tend to be playful and childlike. I have that energy about me, so I would bring things to ... that character that were more in that realm, and I think people really responded to that... I would come up with things that maybe the director wasn't even thinking because of his experiences and his background, and the way he was thinking about these characters and I think that just makes it all better.

Barbara's contribution is extremely personal and allows her to bring something unique and special to the performance of the character. She states that she even surprised the director, who was not thinking about the character the way she did. This confirms the idea that below-the-line practitioners indeed make personal contributions that can be attributed to a specific individual. However, most interviewees agree that the scope of a 3D animated feature film project and the intense collaboration that is required because of it, often makes it difficult to attribute ideas to a specific individual. Animator Dustin explains:

People always talk about, when they're brainstorming, whose idea it was but a brainstorm, really, is just the culmination of that group activity that the idea happened. It might have been your idea, but your idea was sparked by someone else's idea. Really, who has authorship there? Was it the guy who said the first thing or the guy who said the second thing?

Like Dustin, multiple animators and CTDs explain that a lot of their ideas are a result of the input of several colleagues and that without the help of their peers they could not have built a tool or come up with a certain acting idea, for example. The collaboration they illustrate is generally embraced and regarded as an extremely positive and valuable experience, benefitting the animation production. However, it is also described as a necessity to be able to successfully complete such an enormous project. Additionally, the collaborative process required to develop a feature-length 3D animation makes it often impossible to assign authorship to one individual, explaining why many interviewees struggle with traditional preconceptions about the term which presume that the author is an individual. Nevertheless, while practitioners state that their ideas might not be purely theirs, animators and CTDs welcome the brainstorming and the mixing of ideas that could come from anyone and naturally happen in this collaborative process.

Another dilemma with the traditional idea of authorship arises from interviewees' experience of the emergence of something greater than what was initiated by a couple of individuals. Animators Barbara and Ellen explain:

Barbara: it becomes something very different from maybe what you originally [were] going for. It's always better, at least in my experience it's always been a good thing.

Ellen: Nothing was ever made by one person. You're bringing

a lot of different people with their own experiences and their own strengths and their own gifts to a project. You allow creative people to bring that much of themselves to it. You'll see something greater.

There are many quotes along the same lines as Barbara's and Ellen's. The practitioners all describe that the outcome is always something better and greater than they would have been able to come up with in isolation. Everyone offers their own ideas, based on their individual experience and personality. Those ideas are then combined or expanded upon to form something new. This is very much in line with the theories of group creativity. The collaboration of such a large number of individuals on an animated film, each in their own way, 'can't be explained with individualist approaches' (Sawyer 2006, p. 197). Some interviewees even mentioned that it is rare and nearly impossible to come up with better solutions solely on your own. The reason for this is that collaborative team work is required in the animation studio to successfully realise an animation feature film. Thus, working in a team is also where collaboration and authorship emerge. Animator Andrew confirms this and clearly states his preference and the necessity of the collaborative approach for achieving the best result possible:

I wouldn't want it to be completely me. I don't think my idea is the best idea. I think when you collaborate, and you bounce off ideas it becomes better. Yeah, I definitely feel like it's me up there on the screen. I don't feel like I got there alone. I don't feel like I did it by myself. I feel like it was everybody. Other animators that I ... Off to the side rather than my sup and my director, I'd be like, 'Hey, what do you think of this?' Throw that in there. Then you kind of throw ideas around

with people in the department. Then you show the director. He might have a few ideas. Then you get what ... It's like a hodgepodge of everything.

To approach an alternate understanding of authorship that can account for the collaboration emerging in a team at an animation studio, Andrew uses the visual analogy 'hodgepodge' to describe the result. This term implies a mix of different ingredients which are distinctly different. The idea of a hodgepodge of identifiable, individual contributions seems to reflect Berys Gaut's collaborative authorship theory of multiple authorship. Gaut himself calls it a 'cinematic pot-pourri' (1997, p. 165). The analogies of a hodgepodge or pot-pourri are comparable and appear both to assigning authorship not to one, but to multiple individuals. A pot-pourri's components do not blend into one new substance, the elements mix, but stay as separate, individual pieces. This is similar to the idea of a hodgepodge. However, it is important to note that as previously discussed most all practitioners report that their 'hodgepodge' of ideas changes into something greater. While individual contributions might still be recognisable, the final idea or product seems to have transformed into more than just the sum of its individual parts. Additionally, the analogy of a pot-pourri or hodgepodge does not involve any indication of direction or urgency, thus creating a chaotic mix of individual contributions. This is not compatible with contributions in an animation studio, since they almost always have an order of operations, an urgency in the form of production pressures and deadlines, as well as a common goal, often guided by the director's vision. Therefore, these authorship analogies do not quite account for all aspects of the collaborative process in the animation studio. Gaut's own comparison of film to musical performances, especially to jazz, seems more applicable. While a musical performance might not necessarily have an urgency, after all the primary goal is

generally not to finish as quickly as possible, a performance always has a tempo. Even though individual musicians might have an influence on the tempo, it is normally determined by the conductor. I argue that this is very comparable to an animation production. A production always has a specific tempo as well, which is primarily determined by the director and potentially the producer who is responsible for the schedule and budget. I will discuss the influence of the director and the director's vision in more depth later in this section. Another reason why the comparison to a musical ensemble is suitable is that the result of a musical performance exceeds the sum of the individual participants. The way a saxophone might feed off the improvisation of a singer or another instrument is a synergy that adds an additional quality to the performance. Thus, while the contributions are based on an individual, the outcome is greater.

CTD Hazel compares herself and her contribution to a 'piece of the puzzle', with the puzzle being the animated movie. This is more applicable than the hodgepodge analogy, since it accounts for all aspects of group creativity and collaborative authorship, including the idea of an outcome that is greater than its parts. While each puzzle piece has its own shape and size, which represents a unique contribution with a larger or smaller impact on the end product, they altogether result in something more, in one unique image. Every piece counts, small or large, and is needed to create the desired outcome, thus the scope of the contribution does not matter. Paul Sellor's (2007) idea that it is not important how poor or how small a contribution is works well for this analogy and makes sense for a theory of authorship for 3D animation below the line. For example, while an animator might only contribute one shot to a movie, it might be that this scene and its interpretation is very significant for the movie. The puzzle analogy also allows for individual contributions, since each puzzle piece represents a unique addition to the final product by a specific individual. As previously discussed, practitioners report that

they can contribute something unique and individual, sometimes even recognisable, to the process. These accounts of the practitioners in the animation industry stand in contrast to Paul Sellors' concept which leaves the concept of individual authorship completely behind and approaches the production team as a unified whole with a collective goal and intention. Thus, Sellor's theory is less applicable. Group creativity researcher Dean Keith Simonton's (2004) theory, however, is very much in line with my findings. He asserts that while many individuals contribute to the animated film, those individuals 'retain a certain degree of identifiable individualism' instead of completely 'submerging in that collective creation' (Simonton 2004, p. 1498).

CTD Shane mentions another interesting metaphor for individual contributions and their impact on the final 'giant collaborative product', as he calls it:

Would those ideas have an impact on the film? Yes, they are seen. Do they have a large impact? If they didn't exist, would the film get done? Most of the time yes, absolutely. It's kind of like a flock of birds building the nest. Everybody's putting a string in and it becomes a nest. You missed or whatever, a twig.

The analogy of building a nest together supports the previously discussed idea of individual contributions (individual twigs brought by individual birds) that stay separate, but form something new and much larger when combined (the nest). While some birds bring more or larger twigs, and thus make more significant contributions to the final product, all twigs are shaping the final product. Thus, all contributions, small or large, influence the final film. However, Shane does not necessarily believe that the contribution of a specific individual is crucial for the process. He does not believe his contribution to be insignificant, since it undoubtedly helps shape the final product, but he regards his impact to the overall product as

small. He continues to elaborate:

It's insignificant in the fact that if I wasn't there to contribute it, there'd be someone else who would come up with maybe a totally different solution that is equally effective.

If Shane would not be there to contribute his ideas, someone else would offer theirs instead. His statement also infers that there would always be someone who could find another solution. Thus, the logical conclusion is that on a larger scale the contribution is not as significant. Someone else would always fill the gap. The film would still be made. However, while it is likely that in a large team somebody would step up and find a solution, it is not a given. I also argue that the result would not be the same. Another solution or idea might not be as effective or might be even better. The team naturally changes with its people and so does the outcome. To describe it using Gaut's concept of a jazz band, even though a performance might be based on the same composition, the improvisation can change the outcome drastically.

Animator Justine suggests:

You have to pick the right people, so it can be very beneficial, and it can really change a whole movie if you got the right person in those shoes.

Thus, it seems that the contribution of any individual, below-the-line included, can indeed matter. The BTL practitioner finding solutions or making suggestions in such ways has agency, and to a certain degree authorship over his or her contributions.

Animator Dustin agrees with this assessment and adds that it is the sign of a good director to know that the outcome of their movie is dependent on the talent and the collaborative abilities of the team they surround themselves with. Thus, there seems to be an understanding among the practitioners that while legally they might not be able to claim authorship, a 'good' director appreciates the value of the crew and

knows that their combined contribution is what makes the film and his vision come together.

The belief in the collaborative process and the acceptance below and above the line might also be the reason why most interviewees acknowledge the importance of the director's vision in some way and do not see a contradiction between collaborative and the idea of the director's vision. For example, CTD Brendan's understanding of the director's vision is intricately intertwined with the collaborative process of production and thus, is not something that is constant and just from the mind of one person:

There is not one director working in this private bubble and everything, it's just machine execution. I think there is ... Films become alive because there's so many different creative strings that fall into one knot, that the director knows how to follow, you know?... On the set, the director wants something but the DOP [Director of Photography] has certain ideas about certain things and so they come to one page but it's all a mix of ideas that are all among the core of the director's vision.

Brendan's description of how a movie comes together and how the director's vision plays into it has collaboration at its core. In his description, the director's vision acts as a framework for all the different contributions that are made throughout the process of the film production. It seems like he also implies that this framework is not rigid but is a flexible construct that allows for compromises and changes. This idea is supported by researcher Heather Holian who confirms that 'this singular vision is articulated and executed through engagement with a host of creative problem solvers' (2013). Animator Andrew describes that he regards his work as a

combination of the director's and his ideas. While the director might not immediately think or even like his idea, he states that they often find 'a happy middle ground'. However, while compromises to the director's vision might be welcome, multiple practitioners state that the vision of a film should never completely change during the production process, as this most likely would create chaos and impact the budget greatly. This is also the reason why the director's vision is in many interviews referred to and accepted as one of the most crucial requirements for successful film production, since it is often connected to the management and leadership of the director who creates a framework for the overall product. This is notable, since few collaborative authorship theories specifically discuss this topic, reconcile or specifically integrate the director's vision. Instead, many film studies theories focusing on the author as an individual discuss whether the director's personal artistic vision can be imposed on below-the-line personnel. This is the case in longer standing theories like the auteur theory which suggests that an individual, for example the director or producer, can impose his unique creative position on the whole of the film production process and its members, thus putting a recognisable stamp on the resulting film. Nevertheless, there are more recent discussions about authorship which refer to some sort of creative vision. Paul Wells, for example, defines an author as 'a person who prompts and executes the core themes, techniques and expressive agendas of a film' and as 'a figure around whom the key enunciative techniques and meanings of a film accrue and find implied cohesion' (2002, pp. 74). While he does not explicitly use the term vision and if we assume the director to be an author, Wells's definition clearly implies a person's coherent plan and motivation which seems to accurately describe a director's vision. Several interviewees describe the impact the director's vision and leadership has on their contributions and authorship. Generally, they confirm the need to have some sort of structure and clear intent in order to know the expectations for their work.

Animator Barbara explains:

If the project was really loose or kind of improvising as we go along, that would be very difficult, I think. It's nice to have a structure and to know what the director's intent is, and then you can just ... It's just a framework for you to explore a little bit, but I think it's really important to have that framework because without that it's like too many options. I get overwhelmed just at the grocery store having to decide between what cereal I'm going to get.

Barbara prefers a vision and a clearer guideline to unlimited freedom and options. This is very closely connected to the balance between too much and not enough freedom to contribute depending on the personality and the management style of the director. Too much freedom and no director's vision can constitute a huge stress factor, since below-the-line practitioners might have to experiment to discover the desired direction which might have implications on their schedule. A very restricted management style, however, might make practitioners feel like they are just 'a person on an assembly line' with no opportunity to contribute at all (animator Andrew). Some directors have a background in animation, some do not, the skills and experiences of a director form his vision and might also guide his management style. For example, a director who has never animated might be more inclined to leave some acting decisions up to the animator. The reports from animators and CTDs range from experiences with directors and production designers who do not know what their vision is, who have an extremely clear, personal vision that does not allow for any variation, to directors with a more relaxed vision who foster an open and collaborative environment. Animator Ellen elaborates:

Some movies and directors don't want people to be messing with their original plan, their original story. They want the animators to fit inside their vision. That's totally fine. It's a challenge in and out of itself to understand what the director wants and try to deliver that. When it's a little bit more open-ended, then there's ways to bring a little bit more of yourself into it. ... If you're able to bring a little bit of yourself too, you feel like you're contributing, more so than the feeling somebody else's vision, and just checking out the boxes and ego.

While Ellen accepts directors with a very clear vision who do not allow for much collaboration, and recognises its own challenges with that approach, she clearly prefers to have room to add some of her own ideas into the process. The preference of the various management styles might vary from person to person, but generally, productions with directors who do not have a clear vision seem to be the most difficult for below-the-line personnel. This approach allows for the most freedom to contribute and to claim authorship over the ideas, but it also requires practitioners to not only interpret, but come up with an artistic vision of their own. A director who knows exactly what he wants might only allow the practitioners to render and execute the director's artistic vision without any opportunities to contribute. While this might appear easier, since everything is extremely clear and already figured out, practitioners might feel alienated from their work, since only the most minimal personal contribution is permitted. It seems that the most ideal version for below-the-line animators and CTDs is a clear director's vision that allows for collaboration. This is also the most common version of the director's vision reported. One could interpret the three different analogies to approach an understanding of BTL

authorship, hodgepodge, puzzle and nest as previously discussed, as an indication of the management style. A model of authorship below-the-line in a production with a director who does not have a clear vision, could be describes as a chaotic hodgepodge of individual contributions missing an overall direction to form a coherent result. Since there is no strong overarching idea, the final product cannot grow to become more than the sum of its parts. BTL authorship in a production of a director with an extremely strong vision, might limit the flexibility of the individual contributions. Individual contributions need to adjust to fit into the overall project as only specific puzzle pieces can complete a specific image in the finished puzzle. Lastly, a more balanced approach by the director, which gives direction where needed, but also allows for creative contributions to arise, might look like a nest. In contrast to a puzzle, the nest as the finished product can consist of a non-predefined number of individual sticks of many shapes and sizes. However, while the final product might change in shape, it can always be recognised as a nest, since everyone knew what they were set out to build.

While the authority, necessity and collaborative nature of the director's vision is not questioned, most interviewees do not see a conflict in adding their own ideas and supporting the director's ideas at the same time. This makes sense, since, as outlined in the previous chapter, processes of negotiation involving ATL control schemes and BTL countermeasures are fundamental to the animation film production process. However, the way employees below the line negotiate the director's vision varies from person to person. First, practitioners do not try to bring their personal preference into the mix. Second, they make their own interpretation of the director's vision with the intent to improve and strengthen it. Or third, they suggest their own, sometimes conflicting, ideas with the aim to convince the director or find a compromise by employing trade rituals like pitching, networking and deal-making. Some interviewees report that they primarily want to make the director

happy and execute exactly what the director wants, preferring not to mix their personal aesthetic concerns with those of the director or supervisor. Others describe that responsibility is to not merely execute, but to 'plus it' (animator Lukas) by adding their own spin on the director's vision with the intent to improve the idea. However, trying to find out what exactly the director wants can be a challenge in itself and often require an interpretation of the director's vision. As Berys Gaut (1997) describes, most tasks in the animation production process are not as specific as tasks in other fields of work. For comparison, Gaut provides the example of an architect who can define the work very explicitly. A director in a large animation feature film production, however, is not able to make a blueprint to define all tasks in detail leaving room for unique, artistic contributions of the specific below-the-line employee executing the task. Animator Stan explains:

They have a general outline, but they haven't figured out exactly, exactly to the smallest little detail of how it's going to work. Then that's your job of coming in and providing the solution to those problems I think.

As demonstrated in the previous chapter, such creative problem-solving tasks as Stan describes impart authorial agency to the BTL practitioner, who can make his or her own interpretation, sometimes even taking on tasks of other departments and, thus, standing in for other job roles. Especially, the 'pace of filming and work speed' Caldwell (2013a, pp. 359–360) describes as part of the material condition which determines how BTL authorship is distributed, has an effect on assigning this responsibility to below-the-line employees and the studio's reliance on the creative input of animators and CTDs. While this limits the director's degree of control over the work, he still makes an artistic contribution, as well, since he is the one choosing to accept the idea and interpretation of the overall artistic vision of the below-the-

line practitioner. Sometimes the director might not have an idea about what exactly needs to be done to make a shot or a character work. Depending on the director's background, his strength might lie in a different area and he might not have the skill to suggest a specific solution. For example, if a director has a background as a writer or story artist, he might not be intimately familiar with the design or animation production process. If instead he has a design background, he might not know as much about story development. Additionally, the production for an animated film involves so many individuals and is comprised of so many different tasks, that it seems to be impossible to rely on one person who has all the answers, and thus, the ultimate authorial control. Animator Justine mentions one of those situations as a character lead where she and a CTD had worked together to solve the issues of a problematic character:

One of the things the director said with [the character] when I first showed the animation test after we fixed her was, 'When I saw this test I breathed a sigh of relief because I had been very stressed out for a long time that this character wasn't going to play on the movie.' He hadn't seen her yet and it was that one test that made him rest easy that, 'Okay, the movie will work because the character is there.'

While the director obviously was very concerned about that specific character, he did not know how to resolve the issues and relied heavily on his team to come up with a solution. It appears that this is a good example of an artistic contribution where the below-the-line practitioner can claim partial authorship over their work. It is partial authorship, because the completion of the task involved a collaboration with other members of the team. Since the director accepted the practitioners' finished result and the interpretation of his vision, he or she also has partial authorship.

Sometimes, the ideas and opinions of animators and CTDs and the director/superior might not be in line. As I will outline in the following paragraphs, in these instances practitioners employ trade rituals like pitching and deal-making, which often involve visual prototypes, to suggest their own ideas with the aim to convince the director or find a compromise. This practice can be described as an informal but acknowledged method of negotiation since it has a well-established place in the production process. The practitioners sometimes feel strongly about their ideas, believing them to be better or more relevant than the director or other above-the-line personnel. Interviewees state they feel that way because they are closer to and more involved in the details and more familiar with the production requirements, of a character, for example. While sometimes the practitioners might just not have the time in their schedule to wait for a decision from the director or supervisor and just move forward, which could represent a large risk, they try to convince the director or supervisor in such cases. Of course, not all ideas from below-the-line personnel are immediately welcomed by the studio, even if those ideas might be more efficient, feasible, or clever. This is especially the case when the ideas are not saving time and money, or if it is not immediately apparent that they would. Sometimes, the director, art director or supervisor just has a different preference. Additionally, multiple CTDs describe their difficulties to innovate or introduce changes that affect the pipeline. Often, these adjustments can be time consuming and far-reaching. Because of that, most studios are conservative or reluctant about introducing such profound changes to a long-established pipeline that might change the current standards. The director is often not even aware of such ideas or suggestions. In those cases, the studio or supervisors need to be persuaded that the practitioner's idea is worth devoting resources to. Below-the-line practitioners report several ways to convince the studio to invest in an idea and grant money and time to develop it further. Meetings like CTD town councils, for

example, and smaller projects like short films are officially-funded breeding and testing grounds for new ideas and developments. If the new approach for an animation style, a certain look or a rig is successful in a short film, it might be developed further and become a part of a feature film. In those instances, the studio might decide to grant a certain amount of time to the practitioners to develop their idea. An extremely common way to convince supervisors and management to introduce new ideas or workflows into the studio is 'pitching'. CTD Brendan describes:

Everybody individually is hungry to try out new things. On a larger scale everybody is sort of conservative about trying new things and so you needed to sometimes go get some people together to make a prototype and then show it to people and then people get excited and you can kick off the conversation better.

Brendan first characterises the motivation of the practitioners to innovate and the cautious stance of the studio that needs to be persuaded to invest in those new ideas. He then gives a good description of the pitching process which is mentioned by the majority of interviewees, animators and CTDs equally, and can be defined as a sales talk or presentation to a superior or committee. CTD councils or similar meetings can be used as a forum for such sales pitches. However, multiple interviewees state that one must be very proactive to introduce their ideas. Especially when it comes to CTDs, the studio will not seek them out and ask for their ideas most of the time. One has to be engaged and well prepared to pretty much sell the value of one's idea. Caldwell relates the practice of pitching to trade rituals which function is primarily to achieve 'personal fulfilment and career advancement' (2008, p. 104). Trade rituals like pitching, networking and deal-making are often specific to particular spaces.

Caldwell, for example, uses pitching rituals to analyse the ‘private space of creative executives’, while he explores the ‘semi-public professional space of film/video trade shows’ via networking rituals and ‘off-the-lot spaces’ (2008, p. 70) by looking at deal-making and negotiation rituals. However, while Caldwell discusses pitching, networking and deal-making in relation to above-the-line personnel, my research suggests that those rituals are a fundamental practice of below-the-line practitioners as well. Originally, pitching rituals might have primarily been employed in sales talks or presentations to sell a movie to executives. However, my interviewees confirm that an animator, for example, can also pitch an idea to the director, or a CTD can suggest a new technique to the studio leadership. Thus, it appears that pitching is indeed observed from below-the-line to above-the-line personnel. Animator Lukas describes:

I’ll keep pitching ideas to my podlings or to the director or the supervisors and sometimes it’s going to be inspiration from a movie that I saw the night before. Sometimes it’s going to be from an artist I love, or sometimes it’s going to be something that I’m talking to my wife about and I’ll be like, ‘Hey, wouldn’t it be cool if ... Blah, blah, blah.’ Or to people around me. Yeah, there is always idea sharing and idea pitching.

While Lukas directly speaks of pitching different, sometimes very personal, ideas to directors and supervisors, he also states that he pitches to his ‘podlings’. A pod is a group of animators led by a more experienced senior animator. This suggests that pitching even happens among below-the-line practitioners.

Brendan’s description above mentions one of the most crucial components of a pitch, which is making a ‘prototype’. Many other CTDs and animators illustrate the

necessity to make demos, presentations, mock-ups, a quick blocking, a 2D pass, or some other kind of visualisation of their idea. While the success of a pitch depends on multiple factors like, for example, the relationship a practitioner has with the superiors he is pitching to or the timing of the pitch, the visualisation appears to be a key element in this process. This seems to be especially challenging for more technical ideas from CTDs. CTD Drew elaborates:

That's one of the problems I'm still having now is that like they're asking for a visual target every few weeks. I'm like, 'It doesn't work like that in rigging.' Especially, if you're rigging from scratch. ... To you it doesn't look tangible, but it's a huge thing, a foundational thing that I'll need later on. If you don't work in it, if you don't see something shiny, visually shiny to it, it's almost like it doesn't exist. ... If it's not visual, it doesn't exist.

Since Drew's work requires a solid technical foundation to build new tools for his rig, it can be challenging to show progress to superiors that might not be as intimate with his work or the process. Because the pitching practice is strongly related to the request for time and money, production personnel is often part of the target audience of the pitch. However, production personnel are usually not familiar with the extremely technical aspects of the work and thus, it can require additional effort for practitioners to demonstrate an idea or progress. Since a visual prototype is something that everyone can easily understand, such mock-ups often become a requirement to successfully sell one's idea. Drew continues:

The difference is now that I have to show a visual target every few weeks, and so I'm making these demos really just for the sake of demos. I find that counter intuitive because I have to

take time out of actually designing something properly to do that.

Since the act of convincing his superiors requires constantly building visual demos to prove the worth of his contribution, Drew has less time to focus on the actual implementation of his idea, and thus, the main project. He perceives this as an extremely inefficient and, as he calls it, 'counter intuitive' process. His description does indeed sound quite wasteful, since the visual prototypes are not re-usable and do not seem to be compatible with his actual implementation. While Drew's example also indicates a high level of micro-management, other interviewees describe similar experiences related to the extra time and work they must spend on proving their concept to others. CTDs Claudia, Hazel and Brendan, for example, all report how they sometimes mock-up multiple versions. This can either serve the purpose of convincing others that their solution is better, or be used as a conversation starter to improve communication between rigging and animation or rigging and design. CTD Mark reports how he made a prototype in his spare time to create his own opportunity to contribute his idea:

The only opportunity you have is kind of like, I'm just going to do this on the side without telling him, and then sort of sneak it in as like, 'Hey, I tried your way, but also, just had a little bit of time to try this which works a little bit better.'

Mark believed that his idea was the more efficient way to do something. However, he knew that if he had mentioned his idea beforehand and asked for time to work on it during work hours, it would have been difficult to receive approval to do so. Thus, instead of asking, he just created it in his spare time to heighten his chances of introducing his concept into the character rig. Animators report similar instances of additional work required to negotiate and convince the director or supervisor of

their idea. They often report collecting or filming reference video, or preparing a quick blocking or 2D pass of their acting idea. While those visual demos are to some degree part of the schedule of animators, the extent of the idea determines if it fits within the budget or if additional work will need to be done. The process of making prototypes to negotiate their ideas which Drew, Mark and some of the animators describe, is extremely contradictory: on one hand, this practice involves some real positives that make it worthwhile for practitioners to engage in this negotiation. If they are successful in convincing their superiors that their ideas are relevant and worth investing in, they might not only improve their workflow and make their normal tasks easier, they might also add something to the production process that is important to them. Additionally, the practitioner might get approval and budget, possibly even a team of professionals, to develop his or her idea and, thus, get the opportunity and agency to work on something that they came up with and can take authorship over. On the other hand, this process comes at a cost to BTL practitioners, since it relies heavily on the investment of their own voluntary, and often unpaid, time and energy. Furthermore, this effort might be in vain if the studio is not convinced of the usefulness of the idea. Therefore, while BTL practitioners need to weigh the cost to them versus the potential benefits before they engage in this practice, the studio primarily profits from such pitching practices as it does not bear the initial cost of these visual prototypes for new ideas and concepts.

The previously described pitching practices of animators and CTDs can be considered as tactical BTL countermeasures as a tool for the constant negotiation between BTL and ATL personnel. BTL practitioners navigate the director's vision by adding their own ideas through these negotiating strategies, thus shaping and changing the final product through their individual contribution. Since the collaborative work environment is acknowledged and accepted, animators and CTDs do not perceive the director's vision as contradictory to a collaborative authorship

approach. Rather they see the director as a guide who provides an initial framework for the film. This framework is regarded as a flexible construct which can be navigated and challenged through pitches, which often involve visual prototypes to convince ATL personnel of their ideas. As previously described by the practitioners in this study, pitching is often welcomed by the studio and the director and even relied upon, since the pace of production requires BTL practitioners to fill the gaps and stand in and perform other job roles. However, pitching ideas can be draining and requires an enormous amount of energy if there is a resistance from the studio or supervisors to spend the time and resources. CTD Melanie uses the word 'battle' to characterise pitches that require such effort. The description of the production process with language related to 'war' is very common in the creative industries. For example, the use of words like 'battle', 'fight', or 'having survived' in this context indicate this relationship. Conor calls such narratives horror stories and states that such narratives serve as 'a potent form of currency' which allows practitioners to 'prove one's own endurance and longevity' (2013, p. 52). They also give an indication of the struggle practitioners must deal with to navigate the animation industry's negotiated production process. Conor describes that these stories include 'tactics of resistance' (2013, p. 52) describing the methods workers employ to bargain and push against pressures from above. As described above, such tactics can include making multiple versions of an animation, a rig or a shape, maybe spending more time on the version the practitioner herself prefers more to increase the chances significantly that this is the one that the director or supervisor chooses. It can also involve joining forces with other BTL employees and using the coercion of a group to push against pressures from above and convince the director to agree to a certain idea for a character or acting choice. In some instances, the director can be swayed by the group and such tactical authorial counter-pressures from below the line.

This section demonstrated that the scope and organisation of the project involving hundreds of individuals requires a collaborative approach to authorship. Practitioners report that through collaboration the product results in something greater than just the sum of its parts, which cannot be explained with traditional authorship approaches focusing on the author as an individual. However, this section also outlined that a collaborative approach to authorship in the animation studio does not necessarily conflict with the director's vision, which functions as a flexible framework for the film, and can be negotiated by below-the-line personnel through tactical BTL countermeasures like pitching.

Summary

After the last chapter established that animators and CTDs in the animation industry do indeed contribute creatively, this chapter has established that the reason why they contribute creatively is intricately connected to informal crediting practices and their experiences of reward and recognition, as well as the enjoyment of the creative activity itself. Further, my research showed that the aspects that are valued in the animation studio culture influencing the practitioner's motivation are, not exclusively, but often, related to creative activities and the enjoyment of creative contribution itself. Since the motivation and the aspects people value and enjoy are tied to creativity and their agency to engage in such activities, I would argue that the element of enjoyment or positive experience should be added to a definition of a creative activity. While the outcome of a creative activity might not be pleasing, for example a film might be bad, one's creative contribution to the process of making an aspect of the film was probably still enjoyable. Mihaly Csikszentmihalyi describes such an activity as 'autotelic' (1996, p. 113): the reward lies in the doing of it. My research indicates that creative contributions in the collaborative process of

animation feature film are valuable experiences for their own sake. Thus, the aspect of enjoyment should be reflected in the definition of a creative contribution.

The chapter revealed that the practitioners' understanding of creativity influences their ideas about authorship and authorial control in the animation studio. It also uncovered a mismatch between the interviewees' expectations of what creativity and authorship is and the practice in feature animation. While traditional concepts of creativity and authorship as highly individual, original, visual and artistic contributions still dominate the practitioners' expectations, the collaboration necessary to create a project of the enormous scope of a 3D animated film involving hundreds of people, is incompatible with such views. The definition of creativity needs to be adjusted to accommodate the practice of how these concepts function in the 3D animation studio environment. Therefore, activities like problem-solving should be regarded as creative activities and be included in a definition of creativity, especially when researching creative contributions below the line in a collaborative environment. The mismatch between expectation and practice becomes especially visible in the conflict of the 'feeling' of authorship the animators and CTDs experience. While their expectation of the term authorship is tied to one individual author, the interviewees still report that they feel a shared authorship over certain contributions they make, which stands in conflict with their preconception of the term. Practitioners also describe that because of the collaborative process the product results in something greater than just the sum of its parts. Since this experience cannot be explained with traditional authorship approaches focusing on the author as an individual, the practice in the animation studio requires a collaborative authorship approach. A suitable model of authorship in the animation studio emerging from this research could be described as a bird's nest. Such a model supports the idea of individual contributions (individual twigs brought by individual birds) that stay separate, but form something new and much larger when combined

(the nest). This idea supports Berys Gaut's (1997) collaborative authorship theory of multiple authorship. Few collaborative authorship theories specifically account for the director's vision, since the director is often an intrinsic element of authorship theories that focus on the author as an individual. However, this study challenges existing ideas about authorship by proposing a theory of collaborative authorship below the line which includes the director's vision as a non-contradictory element. Instead of the traditional understanding of the all-encompassing director's vision which can be imposed on below-the-line personnel, the director's vision in feature animation is a flexible framework and guide for the final product. In this context, the director can be understood as the conductor of a musical performance who did not necessarily write the music by himself, but instead guides the orchestra at a specific tempo to the end of the performance. This framework is navigated by below-the-line personnel using negotiation strategies and tactical BTL countermeasures like pitching. My research revealed that BTL practitioners are far from being passive executants of the director's vision. Animators and CTDs might have a set of competing agencies which they negotiate with ATL personnel, but also with themselves. Since their efforts to engage in negotiation practices like pitching rely entirely on the investment of their own voluntary, often unpaid, time and energy, BTL practitioners need to weigh the cost to them versus the potential benefits before they engage in this practice. In contrast, animation studios profit exclusively from the desire of most animators and CTDs to be part of a successful production that allows them the agency to contribute their ideas.

The next chapter will take a closer look at gender below the line in the animation industry. I will explore whether women have been able to gain the same access to the various divisions of the animation production process as men. I will also discuss questions about the creative contribution of female animators and CTDs and examine the experiences of female and male practitioners interviewed for this

Chapter 5: Creative and Technical Contribution of Animators and Character Technical Directors

study.

Chapter 6: Opportunities for Female and Male Practitioners in the Production Process

Introduction

Triggered by the low participation rates of women in the animation industry, this chapter explores the opportunities for female and male practitioners to contribute to the feature animation production process. After establishing in the previous chapters that animators and CTDs do contribute creatively, and developing a model for authorship below the line, I will take a look at the interviewees' observations and ideas about the current participation rates of female practitioners in the animation industry. The chapter will then turn to the experiences of female and male animators and CTDs from different studios and explore whether they encountered any gender inequalities. I will examine and analyse the practitioners' accounts from various angles employing theories and key points of feminist debate. Proctor-Thomson's thoughts about gender stereotypes, Ball and Bell's gendered pathways in history, and research by McRobbie and others on the work conditions in the industry will serve as a base for the exploration of inequalities and potential reasons for participation rates of women in the animation workforce. The chapter will conclude with an examination of the dilemma, which practitioners report they have, with ascribing the issues experienced to inequalities related to gender. This exploration will also include a discussion of Gill's theory of the post-feminist problem.

Before beginning the analysis of the practitioner's views on gender in the animation industry, I will provide a short overview of the general interest in and initial reactions of the below-the line interviewees to this topic. This study interviewed 25 participants who were currently, or had been in the last three years,

employed at one of the major 3D feature animation studio in the United States. The sample consisted of 12 female practitioners (6 animators and 6 CTDs) and 13 male practitioners (6 animators, 7 CTDs). While candidates for interviewing were planned to consist of 50% women and 50% men for each job title category (animator and CTD), female artists were generally much harder to find, most likely due to the smaller number of women in the industry. Female CTDs were particularly rare in the animation industry. For one animation studio (Sony) I was not able to find a female CTD at the time the interviews were conducted, even after searching the film credits. However, women were also more likely to decline or not to reply to an invitation to the research than men (68.75% of all contacted women versus 38% of all contacted men). It cannot explicitly be explained why about 64% of the women who declined or did not reply to the invitation were employed by the same studio. While one of the male animators from that specific studio was equally puzzled and not able to provide an explanation either, he pointed out that some people at the studio were currently in a high-pressure period. This might explain why some practitioners did not reply. These difficulties resulted in a slight gender imbalance of 12 female and 13 male research participants.

While my study is less concerned about numbers and the generalisation of findings, when talking about current participation rates of female practitioners in the animation industry, it seems appropriate to provide an overview of the number of interviewees who believe that gender inequality might be an issue to understand if this is indeed relevant. Eighteen of the research participants (10 women and 8 men) conceded that gender inequality could be an issue in the industry. Twelve of those interviewees (10 women, 2 men) either experienced a situation themselves where that idea had crossed their mind, or they had talked to someone in the industry who felt that way. It is interesting to note that all six female CTDs interviewed report that they had experienced instances where the thought had

crossed their mind that they or someone else was treated differently because of their gender. However, it is important to point out that often those instances are questioned, doubted or attributed to personality differences or the way the individuals were brought up instead of ascribing them solely to gender inequalities. Seven people (2 female animators, 5 men) of the 25 practitioners interviewed did not believe that inequality based on gender is an issue in the animation industry.

While those numbers might be interesting for a general overview, they have to be viewed with caution. The answers to the topic of gender inequality suggest a very sensitive discussion of the issues, since there is no clear-cut answer to a lot of the questions that arise. The following paragraphs will provide an in-depth description and analysis of the practitioners' experiences to provide a more comprehensive approach to this topic. To introduce the subject to the interviewees, I first asked if they were familiar with Brenda Chapman, one of the directors of Pixar's *Brave* (Andrews, Chapman and Purcell 2012). Originally being the sole director and story writer of the film, she was later removed, but still credited as co-director. I then read a quote from her in a *New York Times* article, and asked if they agreed with her statement:

Sometimes women express an idea and are shot down, only to have a man express essentially the same idea and have it broadly embraced (Chapman 2012).

This approach allowed me to ease into the topic by first thinking and commenting on someone else's experience and then slowly starting to reflect on their own. The reactions were diverse. Most practitioners expressed that this was a difficult subject to talk about. Some interviewees felt uncomfortable talking about topics related to gender and stated that they were glad that the interview was anonymous. A couple of interviewees even asked for the audio recorder to be turned off and no notes to be

taken. A few people did not want to talk about it at all, because they stated that they had not experienced anything in that direction and did not feel like they had much to contribute. Eight of the 25 interviewees found the questions related to gender so interesting that they returned to this topic at the end of the interview, specifically asking to continue the conversation about that. Many people welcomed the topic and most everyone was unusually interested to hear more about women and possible inequalities in the industry. Most people thought that it was a good idea to discuss this topic, since it would increase everyone's awareness of potential issues, which they believed would be the primary factor to improve and prevent possible gender inequalities in the future. While it has become difficult to imagine that there were times when women were extremely rare to non-existent in animation studios, I find the topic of gender equality still utterly relevant, since the animation industry is still far from reaching a gender balance. In order to comprehend the contribution and collaboration of all below-the-line practitioners, I consider it important to 'crack open' the black box of 3D animation film production to look at the opportunities and experiences of male and female animators and CTDs. By examining the interviewees' own thoughts and ideas on this topic, I intend to close the existing gap in literature on the contribution of female below-the-line animators to the collaborative creative process in contemporary studio animation, as well as remodel our knowledge of women in the current animation industry in general.

There are three main issues connected to gender that the participants identify: the difference in the credit or voice in meetings (as with Brenda Chapman's experience), the difference in salaries, and the low female participation rates. The low number of female practitioners in the animation workforce is mentioned by most every interviewee. While women in the industry are generally seen as a minority, practitioners also note the absence of female workers in senior roles or among above-the-line personnel, like directors. Aside from DreamWorks, which was

pointed out as a studio with a good amount of female leadership, studios are generally reported as having few women in leading roles. The next section will take an in-depth look at the practitioners' discourse about these numbers. To attempt an analysis I will utilise theories of gendered pathways in history, as well as inspect the industry conditions and how they might affect the number of women in the animation workforce.

Where are the women?

While many interviewees note an increase in female practitioners in the animation industry over the last few years, all interviewees confirm that women are still underrepresented in the workforce, in senior positions and among the ranks of directors. A female animator at Walt Disney Animation Studios reports:

When I got there, I think there were only like 4 of us, where now, there's probably I don't know, maybe 10, maybe a little bit less. It's probably around 10. It's growing, but I think that's also why there haven't been many female supervisors, just because the ratio is so low. It's a pretty long journey to get to that point for most people. Most people don't walk into the studio and supervise 5 years later.

Her observations are in line with the current statistical data. The Animation Guild and Women in Animation, a more internationally oriented organisation dedicated to advancing women in the field of animation, reported that 17% of the mainly Los Angeles-based animation writers and only 10% of animation producers and directors in 2015 were female (Wolfe 2015; Women in Animation 2016). For comparison, this study finds that in 2015, below the line, 23% of all animators were

women. This not only demonstrates the low percentage of women in the industry in general, but also reveals a vertical segregation by gender with fewer women in above-the-line and key creative roles. Vertical segregation by gender refers to the segregation in low- and high-status work, for example the underrepresentation of women in key creative roles, like directors or writers. While this study does not directly support the interviewees' observations at the supervisor level, Creative Skillset, an industry skills body for the creative industries, which provides data exclusively about the UK, discloses that compared to men, much fewer women made it into senior positions (Skillset 2010). The interviewees' observations seem to confirm the findings in the UK for their experiences in the American animation industry.

The statement above also suggests that women have just not arrived in the higher status and leadership positions yet, since they are still relatively new to the industry. Animator Christine expresses a similar thought:

Animation almost feels like a new career. It's like back when I wanted to do it when I was in high school everyone just thought I was crazy. ... My parents thought it was crazy. If it's that new then maybe women being in it is still new too, and hopefully it will change, and there has been a growth if I were to compare it. There has been more compared to like ten years ago, I guess, which is how long I've been working. Maybe it's getting better.

This idea suggests that the lack of women and especially senior workers might be founded in the history and the gendered pathways of an industry which just started to recruit young women and thus few women were previously able to make their way into the industry (Conor, Gill and Taylor 2015). Compared to other creative

industries like video games or web design, animation has a longer history, if 2D and 3D animation is regarded as one category. Thus, it seems reasonable to consider the influence history might have had on women's access to the animation industry. Ball and Bell (2013) describe the formation of gendered pathways in the British film and television industry, which potentially influenced women's access to certain occupations, for example to editing, camera, sound and grading. A report from 1975 by the Association of Cinematograph, Television, and Allied Technicians, a British trade union that existed between 1933 and 1991, provides some insight into hiring practices at that time (BECTU 2016). While equal pay had been introduced in the 1930s and women and men were free to choose any occupation, the report states that entry-level positions were still dependent on gender. Young men were hired as post room workers, which led to jobs in editing, camera and sound. However, young women were employed as clerks who would later become secretaries and production assistants (ACTT 1975). Other restrictions were observed in laboratories, for example in the role of 'grader'. Women were not able to work as graders, because the job required one to have previously worked as a drier. However, women were not given the position of a drier (ibid.). Similarly, applicants for technical jobs were primarily male, since they were expected to have a technical background which was traditionally associated with male skills, like 'fiddling around with radios' (ibid., p. 6). The early animation industry practised a similar gendering of occupations right from the job entry point. A secretary of a big animation studio wrote in 1939, that women did 'not do any of the creative work in connection with preparing the cartoon for the screen' (Cohen 1997, pp. 155–156). As a result, they were not accepted into the studio's own training schools. Since at this point in time there were no special schools for character animation, at least not in the Disney style, women had few chances to learn the trade. There were also not many other studios where women could hope to be hired and learn. Thus, for years, women

were solely employed in the ink and paint departments of animation studios.

Anonymously painting, and as in the case of the Disney studios, working completely separated from the men, spatially, only some female artists like Phyllis Craig and Helen Nerbovig 'established themselves as artists in their own right' (Furniss 2007, p. 234). To avoid sexual discrimination in the animation industry, several women like 'M.J. Winkler, Dalia Merrick (Dale), as well as sometimes La Verne Harding (Verne) used initials, masculine-sounding or gender-neutral working names' (Furniss 2007, p. 234). Ball and Bell (2013) report a similar practice in the UK where women used names to mask their gender or family connections to enter the industry. Animator Dustin adds to the historical context:

Back-in-the-day-Disney, the females did the inking and painting and the men did the animating. I wonder if that's just an offset from that and it's just years of the way things are slowly drilled into people and it's continued to be that way.

Animator Dustin is very aware of Disney's hiring practices in the past when women were not hired as character animators and not considered to have any creative contribution to the animated film. Multiple animators are familiar with the history of 2D animation in this context and make a connection between the history and the participation rates of women in the animation industry.

While the previous paragraph outlined the history of 2D animation, a closer look at the much shorter history of 3D animation might give us another idea of why the numbers of female employees in the animation workforce are low. CTD Brendan suggests that the technical nature of the industry at the start of 3D animation shapes today's participation rates:

When I studied animation, a bigger part of the class was women. If I would go down to the animation department of Pixar, I would say it wasn't quite equal. I think there were more men than women, but a big part of that was because it's an old studio and lot of people who started in the industry early had to be very technical and I feel like not so many women came at it at a technical direction.

Since CGI originated in computer sciences, the beginning of computer animation was characterised by scientists and programmers. Traditionally, these 'more technical' positions have had lower participation rates of women than other roles. Thus, few women were in that initial group of 3D animators. Tasha Wedeen, an animator at Pixar, for example, reports that in 1998/99 'at Pixar of 60 animators, nine are women' (Rodriguez 2002). In my study, many CTDs still point out the absence of women in the more technical departments. The difficulties in finding female CTDs who could be potential participants for my study, as well as a further look at the statistics of the Animation Guild from 2007 which discloses a very low number of technical directors in animation to be female (16%), confirm that idea (Hulett 2015b). This seems to indicate a form of horizontal segregation by gender when it comes to technical occupations. Horizontal segregation by gender refers to the strong association of some occupations within the industry with women and some with men. For example, in live-action film, women predominate in make-up and hairdressing, as well as costume and wardrobe (Creative Skillset 2012). Women also make up a large percentage of marketing, business management and public relations roles. However, in editing, lighting, animation and design, women are gravely underrepresented (Creative Skillset 2012). While Creative Skillset focuses on the creative industries in the UK, a look at occupations within the American animation

industry implies a similar pattern. Unfortunately, the majority of available statistics for the American animation industry are not specific enough in terms of the numbers concerning female in comparison to male employment by occupation (see Women in animation in Chapter 3). Statistical data from the Animation Guild in 2006 provides one of the only in-depth tables of the percentage of female employment by occupation in the Los Angeles-based animation industry (see Figure 1). However, the lowest ratio of women can be found in the professions of 3D animators, modellers and technical directors, indicating an underrepresentation of women in more technical roles.

Looking at these histories, it might not come as a surprise that key creative, as well as technical, jobs have low participation rates of women. The correlation between the gendered pathways of the past and the current occupational segregation by gender is just too close to deny this historically based influence on the access of women to certain occupations. Nevertheless, the gendered pathways in animation's history do not provide a sufficient explanation as to why the numbers of women in the industry have not been growing faster. Just looking at the percentage of female students (60%) in animation, who now outnumber their fellow male students, one might think that women should make up more than 25.6% of all animators as a recent report from March 2018 by the Animation Guild states (Women in Animation 2016; McLean 2018). The novelty of the industry and the gendered pathways of the industry do not provide an explanation for the findings that young male professionals seem to progress faster with their career than female beginners (Wing-Fai, Gill and Randle 2015). However, the Skillset (2010) study offers another reason based on the lower age profile of women, which was found to be another working pattern in the British creative industries. The majority of women in the industry were found to be significantly younger than their male colleagues. Thus, the report suggested that women have been leaving the industry in their late

30s and 40s. Hesmondhalgh and Baker's (2011) participant observation study in a British television production studio confirmed this conclusion by noticing a distinct lack of women in that age group. They observed that women in the company under study were either extremely young and in junior positions or much older and working as executives. Another finding by Skillset (2010) is that women in the creative industries were less likely than men to be living with dependent children under the age of 16. For the total of all workers of all industries under study that meant 35% of the men, but only 23% of the women had dependent children in 2010. Specifically, for the animation industry, with 36% of the men and 11% of the women the numbers were even more drastic. This data combined with the lack of women in their mid-30s to late 40s might suggest the theory that women who have children are leaving the creative industries. It might sound later than average, but many women in the creative industries seem to have delayed motherhood to build their career beforehand (Willis and Dex 2003). Some women postponed having children indefinitely (McRobbie 2002). And others decided to take on 'real' jobs with 'regular hours' to be able to support their family and find more time to take care of them (Jones and Pringle 2015).

While the studies mentioned above provide data specific to the British creative industries, the practitioners of this study indicate that this might be a pattern in the American animation industry as well. As discussed in Chapter 4, the practitioners mention multiple characteristic working conditions in the animation industry, like long hours and unpredictable patterns of work, which might make it harder for women to sustain a career in this sector when they have children. Animator Lukas describes an example of a female colleague who left the department shortly after she started a family:

Actually, [the female animator] who left recently, one of the reasons she left was because she couldn't keep up. She got stuck in her position as a junior animator and she felt like she was dragging behind because she had to take care of her children. She couldn't spend as much time doing the work or concentrate on what she liked. ... I don't think it should be gender specific but for whatever reason, women do take more of the nurturing role and that can hinder their possibility sometimes and I think that's a terrible thing.

This observation would confirm current research that suggests that the long hours and the precariousness of the work do not seem to agree well with women who choose to have a family (Allen 2013). Lauzen (2012) indicates that the reason for those difficulties is that motherhood is seen as a choice that a woman is free to make, but if she does, she will also have to deal with the consequences on her own, which might mean leaving the industry. Thus, motherhood and childcare are the worker's personal problem.

Many interviewees mention the difficulties of parenting, mainly in relation with women. Wing-Fai, Gill and Randle also observe this assumption of an 'automatic connection between gender and childcare' (2015, p. 59). Some practitioners mention that this is primarily due to the physical connection that women are the ones who carry the baby, a connection that might impact and possibly change women's priorities in life. Such a life-changing event might cause some women to shift their focus from work to their child and leave the industry. However, it becomes difficult to explain the lower participation rates of women in the animation industry with that reasoning alone. After all, this change in priorities would be true for all women and other industries do not seem to have the same low

numbers of female workers. It is interesting that parenthood does not seem to affect men's careers negatively, at least when looking at the statistics. Therefore, it becomes almost impossible to discuss women in the creative industries without discussing their parental status and without looking at the specific characteristics of the industry (Wreyford 2013). But one needs to be careful about treating childcare and women as a given, natural relationship. Childcare is not a gender specific responsibility; it is culturally determined (Gill 2013). Nevertheless, it is still primarily assumed by women (Wing-Fai, Gill and Randle 2015).

Since women are still seen as the primary caretaker, it might not come as a surprise that many characteristics like, for example, the long hours and even the more flexible working hours make it difficult to balance those responsibilities with their jobs. Often more flexible hours mean that it is less important at what time of day you finish your work than it is that it is finished by the deadline. However, especially in the creative industries, and particularly in the animation industry, that means to stay as long as it takes to finish a shot on time. Animator Barbara addresses her struggle and fears in that regard:

There are a lot of things that are very difficult for women. I'm considering having a baby at some point soon and I don't know how that's going to work. There are artists working at Disney that I know of that are doing 12 hour a day, plus Saturdays, and they're at their wit's ends. They're making good money but at some point, your work is just suffering, I think. When you're working that hard you're not really able to contribute to the best of your abilities and that's a sensitive thing for me in this industry but I still love the work. I'm still going to do it.

While animator Barbara is extremely worried about the compatibility of her starting a family and her role as an animator in the studio, she is also concerned about the quality of her work. While she is not sure how to be able to do it all, she expresses her commitment to make both of it work at the same time. Work has priority and most of the time employees are so extremely committed to their job that working such long hours is taken as an unquestioned fact (Gill 2013). Willis and Dex confirm that this caused a lot of pressure for women who felt that the demanding and competitive work they used to be exclusively committed to was now competing with their 'new commitments to the demands of household and family' (2003, p. 131). The long and often unpredictable hours make it hard to find nurseries that are open during those hours (Wing-Fai, Gill and Randle 2015). Finding private home childcare might be more flexible, however, of course such childcare comes at a high financial cost. This is of course true for men and women with children. However, since childcare responsibilities are primarily assumed by women, the pressure seems to be experienced more by women than men.

Nevertheless, couples have found several ways to deal with the difficulties of childcare and working in the creative industries at the same time (Jones and Pringle 2015). For example, one parent could work in a more secure sector to compensate for the risk of the creative industries. If both parents work in the creative industries, they might be able to arrange their home and work responsibilities by taking turns. Animator Astrid, one of the few female animation supervisors, describes how she and her husband found a way to arrange their work and family life to circumvent some of the pressures of the industry:

My husband is in the industry as well, and that makes it a little bit more challenging, because we're both under the same production pressures. We've alternated shows, the last

couple shows, so that's made ... I miss that. We collaborate on a lot of things, so I miss that, but it's way better for our daughter. When he's crazy, I'm not, and when I'm crazy, he's not.

While Astrid and her husband had to sacrifice their collaboration at work, which they seemed to have enjoyed very much, alternating shows and, thus, offsetting their crunch times, allows them to take care of their daughter more efficiently. In the interview, Astrid mentions that it is exhausting to make both commitments work without sacrificing either time at home with her daughter or her career. She sometimes needs to go to work at 5am to be able to finish all her tasks. However, Astrid feels that it is worth it because she loves what she does. She also reports that the studio helps in some ways by allowing her to do her overtime work from home and by prioritising her shots when the director meetings go long into the evenings. Female practitioners in senior positions like Astrid who are able to combine their career with a family are still hard to come by in the animation industry. However, depending on the woman, some might decide to not have any children at all. In this regard, it is important to note that the creative industries with their large potential for self-actualisation and gaining self-esteem possibly offer women for whom work provides an alternative to 'traditional marriage and domesticity' (McRobbie 2005, pp. 376–377) a way to work in a satisfying and rewarding industry.

Summarising, there are multiple factors that seem to affect the low participation rates of female employees in the animation industry in general, and particularly in senior and technical positions. The gendered pathways of the animation industry in the past seem to provide an explanation for the observed horizontal and vertical segregation by gender. Additionally, many of the characteristics assigned to the animation industry seem to constitute barriers for

women to enter and sustain a career. The long hours and the expected flexibility and dedication do not seem to agree well especially with women who choose to become a parent. The next section will discuss the hiring practices in the animation industry, as well as the idea of gender stereotypes and the 'boys' club', in order to examine if they might influence the experiences of women and their opportunity to contribute.

Trying to get into the (boys') club

While the previous section primarily focused on the history and the current work conditions of animation studios to approach an explanation of the low participation rates of women, this section will focus on the hiring practices and the idea of the boys' club which the participants of this study mention. While all those topics might influence the number of women in the workforce, they also seem to offer an insight into the current opportunities for female and male employees to contribute creatively.

The informality of work in the creative industries is highly valued, by employees and employers alike. However, it can also generate issues in the recruitment process and in the evaluation of work which cannot as easily be defined as good or bad, since it is often a matter of opinion. Much of the current research indicates that informal recruiting practices are not beneficial for women. Instead, women apparently prosper when more formal and transparent recruitment mechanisms are in place (Conor, Gill and Taylor 2015). Even though they were not directly asked about the recruitment practices, the interviewees in this study brought up this topic on their own, primarily in relation to the low participation rates of women in the animation industry. The following paragraphs will provide an insight into their discussions and an analysis of their theories.

Connected to the previously discussed topic of women and childcare, some

employees in the study assumed that there was a possibility that men might be hired over a woman at the supervisor level, for example, with the same qualifications for the possibility that she might take more time off or go on maternity leave at some point in the future. Even though not every woman decides to have children in her life, a few practitioners in the study suggested that just the potential might cause inequalities for women's careers. Also, Wing-Fai, Gill and Randle (2015) suggest that the time women take off to have and care for their child might indirectly become a disadvantage in the recruiting process, since such time would create a gap on the curriculum vitae, which seemed to be one of the reasons why women return to work soon after having a baby. Nevertheless, most interviewees mention that the recruitment process in the animation industry is solely based on merit. Animator Dustin summarises this widespread opinion as follows:

I know for a fact that a person wouldn't get hired over another person if they were a man or a woman. They only get hired based on their reel. They don't even look at the name, they look at the work first.

Dustin points out that the initial evaluation of a demo reel is often done without looking at a name or resume, focusing on the work only. However, Dustin reports that while the applicants are international, the overwhelming majority of applicants are white males. This makes it harder to create a more diverse workforce in the animation industry, since there is no diversity in the pool of applicants. Several other interviewees confirm the feeling that an applicant is judged and chosen by work quality alone. This affirms current research in the creative industries and especially in the film and animation industry, that there is a strong belief in 'meritocracy based on talent and determination' (Jones and Pringle 2015, p. 39). It is assumed that a person with enormous talent, who is not giving up when suffering minor setbacks,

will be noticed and rewarded. However, several interviewees revise this opinion when it comes to senior and supervisor positions where it might become 'a little more political' (animator Doug). This acknowledges that there are sometimes other factors that contribute to such choices. Additionally, the decision if someone is competent and does outstanding work might sometimes not be such an objective judgement as demonstrated in the following paragraphs. As previously outlined, the recruitment process is generally informal, relying on recommendations from colleagues and word of mouth. Interviewees frequently report the importance of personal connections and recommendations. Sometimes a friend, colleague or supervisor from a previous job brings them in on a new project. In other cases, it was a matter of meeting the right people at the right time. All those experiences have in common that they stress the importance of connections and personal relationships. This focus on personal trust is a risk reduction strategy, which is highly connected to notions of confidence and predictability (Wreyford 2015). Decisions of who to hire are primarily based on reputation, trustworthiness, reliability, competency, the capacity for teamwork, and often simply likeability. While these selection criteria are not directly discriminatory, they can contribute to 'the reproduction of the predominantly white, male, and middle-class social order' (Gill 2013, p. 198) and the slow change in the participation numbers as Gill specifies. One of the reasons for this is that there are fewer women, and especially fewer women with a demonstrable track record attached to them, than men. Thus, the search for experienced hires with a reputation will result, as Dustin confirmed above, in a large percentage of men who then in turn will have even more credits to show for if hired (Wreyford 2015). The reliance on personal contacts favours nepotism, which is commonly accepted and viewed as a legitimate practice in the creative industries (ibid.). Many practitioners in the industry teach classes on the side at online companies like Animation Mentor, AnimSchool, or local colleges and universities.

One of the animators, for example, mentions that he is now actually working with many of his students at his company. CTD Brendan describes the resulting issue on a tangible example:

Pixar teachers will give classes. Then out of 2,500 applicants only 11 get taken for a Pixar internship. Then there's a lot of nepotism in there, too, right? ... People make calls on who they know and their environment, who they're working with, who fits with their group, and automatically bring in sort of always the same people. It grows in the same direction.

While employee teaching and employee recommendations are established and acknowledged ways to find good and trustworthy potential employees in the animation industry, it is normally only the students that the teacher trusts and likes that are recommended. Other students in the same school or from all over the world might still be extremely good, but because one naturally favours people who agree with one's personality type, it cannot be truly objective. But then, this seems to be expected and welcomed, since eventually one might have to work with each other in the future. After all, it is an inherently collaborative process as demonstrated in the previous chapters. The more harmoniously people work together, the better for the studio's atmosphere, morale and work ethic. Of course, this does not mean that students from other schools might not be considered. Most large American studios go directly to the schools to recruit the best students for internships or entry-level jobs. However, only the larger, more famous schools in the animation industry are part of those recruitment trips. While from a business perspective this makes sense, students who are not able to study at those schools might have a more difficult time to get their foot into the door. While all of this might not disfavour women, it might not contribute to a diverse workforce either. CTD Brendan elaborates further:

If we can get a programmer in and he's a white guy and the guy interviewing him knew him from college or whatever, it's always going to be clear who has the furthest in, right? Like people just referencing out of their people, the people that they know.

Brendan suggests that people tend to recommend people from their own personal environment. While they might not consciously choose a 'white guy', they might lean towards someone who they know, trust and are familiar with. This could be referring to gender, but also to the cultural background. Of course, this goes two ways.

Wreyford, for example, discovered in his study sample the tendency of employed women to find 'a large percentage of opportunities through other women' (2015, p. 93). Thus, in a female-dominated occupation, for example nursing, the issue might be reversed. Additionally, research suggests that especially if a work history or reputation cannot be established or trusted, employers tend to fall back on hiring people who are similar to themselves (*ibid.*, p. 93). Kanter finds that such homophily is common in 'conditions of uncertainty' (1977, p. 49). Therefore, it makes sense to regard homophily as another risk reduction strategy. If there are no suitable candidates available one might trust by having worked with them previously, hiring individuals in your own image comes closest to this trust relationship. Similarity of gender, race, and education can facilitate communication and exchange, as well as predictability and decision making, since they might share a cultural background and similar opinions (Ibarra 1992). However, it might unknowingly re-enforce the status quo of the white, male worker in the animation industry. After all, even when the initial selection is made by only looking at the demo reel without any names attached, at the end it comes down to the in-person interview, which in the animation industry is mostly conducted by the primarily male department heads

and senior employees.

The difference in salaries, one of the main issues which the participants identified as connected to gender inequality, is closely linked to the hiring process. Multiple interviewees brought up the issue of the so-called salary gap. While generally practitioners seemed well informed on this issue, mentioning it as a general problem in society, there were also several interviewees who directly experienced unequal pay in the animation industry. Animator Christine, for example, reports that when she was hired early in her career, she was paid significantly less than her male colleagues. She describes that initially she did not realise it, but when she became friends with several of her co-workers and started to spend more of her spare time together with them, they began talking about the things they wanted to do with their money. When Christine mentioned that she would not be able to afford those things, her friends were surprised that she could not and told her what they were earning. While they had the same qualifications, were doing the same work, had a similar level of experience and had started working at the company at the same time, all her male colleagues were making significantly more money. At first, Christine reports, she did not think of gender inequality:

It took me a while to understand why, because I didn't really ... That's not the first thing I went to. I didn't go, 'It's because I'm a girl.' I just thought I wasn't good enough, so it became more of like a, 'Oh, I must be not so good at my job.'
But no. It wasn't that at all. It was because I was a girl.

Instead of assuming a gender related injustice, Christine initially thought that she was not good enough. Especially, at the beginning of one's career this seems to be a very natural reaction. This makes unequal pay particularly painful for the practitioner, since it is much harder for a young animator to estimate his or her value

when one does not have ten years of experience in the industry. Feeling inadequate and less competent than her friends in the industry has serious implications on one's confidence. Christine, however, decided to talk to more of her friends and pay close attention to the feedback and reviews she received regarding the quality of her work. Sharing and receiving similar experiences from others led her to the inevitable conclusion that it was not her fault that she was paid less, but that it was because of her gender.

CTD Shane also reports that his wife, who also works in the animation industry in a comparable role to his, was offered much less than he was when they decided to work at a different studio. He immediately assigned this to the salary gap related to gender. He explains:

What else could it be? We are in different disciplines, but she had the same title as I did. Senior in my discipline. We are both senior technical artists, or technicians, or whatever you want to call us. That's the world we live in. I don't think any male is exempt from that. Again, it's obviously not right because as a team, my wife and I, I'm not going to accept the fact that she's going to get less paid. She was willing to accept it. That's the other thing. She was willing to accept it.

Shane is probably in the most optimal position possible to make a direct comparison between salaries of men and women. Since he reports that he and his wife are in similar positions and have a similar amount of work experience, there are few if any other reasons that could explain such a drastic difference he reports. Christine and Shane were not the only practitioners who reported having experienced the salary gap. Animator Ellen encountered similar issues, not only for her, but also for a female co-worker in the industry. Interestingly, she reports that her friend is justifying the

difference in salary with possibly not being experienced enough, instead of saying 'I deserve this.'. The inclination to find the reason in oneself instead of assigning it to inequality exercised by the company seems to be a recurrent theme in the reports. Shane describes a similar behaviour by his wife above, who wanted to accept the lower salary instead of fighting until she received the same or comparable amount as her husband. While some practitioners identify this behaviour as a personality trait, some practitioners suggest that it might be related to women tending to be less aggressive. I will describe and discuss this and other gender stereotypes in a later section of this chapter. Animator Dustin describes the salary gap as unjust and unacceptable:

I've been reading up, women get paid \$80 to every \$100 men do. ... There definitely is an inequality out there. Being a white male, I'd be on the upper end of it. Do I think I deserve it? Absolutely. Because I'm a man? No.

Similar to Dustin, most female and male practitioners are very conscious and aware of the salary gap and identify it as a gender inequality. While this inequality is not an issue unique to the animation industry, multiple detailed examples confirm its existence in the industry under study. Because of the general taboo against speaking about salary and the differences in skill and experience, it often becomes difficult to compare salaries, and thus, to recognise the salary gap as a gender inequality. Especially at the beginning of one's career, female practitioners fault themselves and justify their lower salary by attributing it to their own, seemingly lower, skill and competence.

While the difference in salaries and the low female participation rates are the main issues connected to gender that the participants identify, the difference in the credit or voice in meetings, comparable to Brenda Chapman's experience, was

another concern discussed. This issue is directly related to the workplace culture. The following paragraphs will discuss the interviewees' experiences of how this impacts their professional work in the collaborative production process. Since the topic was introduced with Chapman's statement about gender inequality concerning the credit and voice of women in the industry, it is one of the first issues that was greatly debated by the interviewees. Compared to the salary and participation rates related gender inequalities, many interviewees are not entirely comfortable to link this specific topic to gender specific issues. The reasons are manifold, but are primarily founded in the difficulty to pinpoint exactly what is happening in every specific situation, since there are so many different factors that play into human interactions at work. However, all six female CTDs interviewed, detailed examples where the thought had occurred to them that they were treated a certain way because they were women. CTD Claudia reported that at one the former studios she worked for, which employed few women, she felt that several men had difficulties with her in a lead position. This was not the case with her last employer which had a large female leadership. CTD Melanie equally discloses that she was faced with a lot of resistance when she made suggestions in meetings. CTD Julia observed a similar behaviour as Brenda Chapman with other women that she had worked with. She explains that she saw them 'present ideas that took a lot of explaining and were not really being received very well, and then a male colleague would word it differently and then things would progress'. CTD Larissa felt that one of the male colleagues was speaking to her differently than to other, male, colleagues. She felt that he wanted to intimidate her and asked herself 'if I was a man, would he still talk to me like that? It's hard to know'. CTD Joy and others report that they are sometimes being 'talked over' by some male colleagues. She also describes a situation where one of the male colleagues who talked over her took credit for her idea by showing her concept and prototype and not acknowledging her for it. CTD Hazel also provides a detailed

example of how her contribution was ignored once she handed her work over to a colleague:

I've had instances where I've written a tool and I've really done the majority of the work. The initial idea was pitched to me to write, but I wrote the entirety of it, and later on when all questions are asked about it they're not asked to me.

They're asked to the person I passed it off to, who is a man.

They don't really know the questions, so I still get included in the meetings, because I'm still answering the questions, but they're never directed to me.

While Hazel did not provide the initial idea of the tool, she is the most familiar with the intricacies of the tool, since she wrote it. Hazel is not looking for any specific credit, however, by being circumvented when it comes to answering questions about the tool, her contribution is not acknowledged.

Most all of these women mention that they are not sure if those experiences are 'really' gender related or rather personality or communication based. Often, the women are extremely reluctant to immediately jump to the conclusion that the issues experienced are gender related when they talk about them in their interview. Especially for women who work in a male-dominated industry, it is not simple to reach that conclusion. The reason for this is that many issues relate to the workplace culture in animation studios, as I will outline in the following paragraphs. Therefore, connecting their experiences to gender feels uncomfortable and awkward, and is immensely difficult to talk about. Since it reveals part of their emotional life, it leaves practitioners vulnerable, and nobody wants to feel vulnerable, particularly at work. Some women decided to talk privately to other colleagues about their concerns to better understand what is happening. Talking about the resistance she had met in

meetings, CTD Melanie notes:

I started mentioning it to some people and then they started seeing it too, it's a bunch of men, but it's not like it changed anything. I still know that. As soon as you are unfortunate to call it out you feel like then it becomes a thing. It's tough.

Since others could see the behaviour as well, she received the confirmation that it was not just in her head. However, she describes that it did not necessarily help her or change her situation. She mentions that speaking out loud that she felt not being treated fairly and connecting it to gender, made it in some ways harder for her. The informal and 'cool' character of the sector can make it more difficult to talk about gender inequality. In an industry where so much is dependent on reputation, no one wants to appear difficult or spoil the party by asking such questions in a 'hip' and 'fun' environment (McRobbie 2005, p. 382). The uncomfortable situation Melanie experienced when she spoke out loud about the issues might be related to this idea and contribute to the hesitance of the participants to link this particular topic to gender specific issues. On the other hand, CTD Hazel had a very good experience when she talked to her supervisor. She reports:

So what I did in that instance was I approached the head rigger, who was also in the meeting, and I asked his feedback. I asked for what he would suggest to do in the future, and he said that he didn't really even realise what was going on but he was going to try and pay closer attention. Since then, he's made a point of always crediting me whenever some things come up, which I really appreciate.

Hazel's supervisor handled the situation in a very admirable way. He listened, admitted that he was not even aware of the situation, but instead of being defensive

or dismissive, he paid attention in future meetings and made sure that it was not happening anymore. While not everyone might be as lucky as Hazel as we can see in Melanie's account, it almost always pays off in some way or another. In Melanie's case, she might not have had someone who was able to support her directly, but at least, by talking to others, she was able to confirm her suspicion that there was indeed something happening, which re-established her self-confidence and, at the same time, made others aware of it as well. Making others more conscious and attentive to unfair treatment by talking to them about one's concerns will make people more aware and hopefully end most issues. However, this requires trust in superiors and colleagues, which helps practitioners to be more comfortable to talk to each other (see Chapter 4). Some female practitioners mention that they feel more comfortable to talk to women about some topics than to men. CTD Larissa states:

We bonded over the fact that we were also women. We could talk about some stuff that I don't want to talk to some man about. The whole female gender issue, I definitely, yes, feel it everywhere I've been. Still do.

While male practitioners did not mention that it was easier for them to talk about some topics to a colleague of the same sex, it just might be less obvious for them, since they are constantly in the majority at the workplace. I remember a situation at work when a colleague and I went for a coffee break. The kitchen was teeming with women, caused by a marketing event in the studio we were working for. After we had picked up our coffee and had left the kitchen, my (male) colleague said to me: 'Now, I understand how you must feel every day!'. I was surprised by that remark, because, even though I thought it was unusual, I had not felt much different in the crowd of women. It became clear to me that for him it must have been just so different, because it was the opposite gender and because he was not used to being

surrounded exclusively by women every single day. This also made me realise that I was so accustomed to being in meetings with primarily men that the reversed situation I experience every day did not feel unusual to me. CTD Joy observes that her behaviour in a group of women is very different than in a group of men, since she feels that different behaviour is acceptable between the two genders. Thus, if there is a whole group of women or a whole group of men, the behaviour is often determined by the majority. Joy describes that in a group of primarily women, there would be a different 'vibe'. The acceptable behaviour and communication is very dependent on the culture as well and might vary from one society to another.

Animator Barbara speculates that men are more comfortable talking to each other as well. She hypothesises that women might sometimes be holding back their ideas and be less forward, because they are in the minority. This might also be due to the more 'laddish culture' as Gill (2002, p. 82) names it. The language used in male-dominated teams often differs from language used in more balanced teams. CTD Julia describes an incident where one of the CTDs was making a comment about girls which made her feel awkward since she was one of the only women in the room. She illustrates:

He meant it as humorous, and it wasn't derogatory. Even though it sounds like that, he was kind of cute about it. He did not mean to sound like a jerk, but there it is.

While Julia says that it was not insulting or hurtful, she still remembered the situation and a certain uncomfortableness. This dynamic is interesting, because in some ways it seems like the group has accepted Julia as 'one of the guys', so they feel free to talk the way they would in a group of male CTDs. But it can make it harder for a female CTD to fit in and feel comfortable to contribute. To blend in with the department and be visually more 'one of the guys', CTD Joy mentions that she avoids

dressing 'too girly' at work and does not want to 'stand out too much as super female'. She feels that this helps her to feel more confident not to be treated any different. One of the female animators reports that she sometimes does feel a little excluded by gendered team events:

Like, if they have a guy's night. It's like you want to hang out or they're doing something cool like watching a zombie movie, and I could like watching a zombie movie, so what if I'm not a guy?

While guys' (but also girls') nights are not uncommon, in a workplace such gender specific events can make people feel isolated. This is especially the case when the majority of the workforce consists of one particular gender. While none of the participants report instances of overt sexism, the idea of the animation industry to be a 'boys' club', which is hard to get in for women, is mentioned by multiple interviewees. However, CTD Brendan and multiple other interviewees believe that it might not always be as clear cut and easily assigned to gender. Brendan uses the example of Brenda Chapman's experience on *Brave* (Andrews, Chapman and Purcell 2012) as an example to illustrate that it might not necessarily be a 'boys' club', but rather just a 'club'. Pixar has a so-called 'Braintrust', which is a group of people (originally John Lasseter, Andrew Stanton, Pete Docter, Lee Unkrich, and Joe Ranft) who advise Pixar's directors in matters of storytelling (Catmull and Wallace 2014). Directors pitch their stories continuously to the Braintrust and receive critiques and suggestions in return. Brendan theorises in relation to Brenda Chapman's experience:

Now Brenda comes in. Brenda is the first external director, apart from, you know, Brad Bird, who actually was an old friend, and she was given a film and I think the first version of

the film that she showed which was so uncompromised in terms of the Braintrust. It was all her vision. I saw that it was ... I walked out there with tears in my eyes. I remember thinking this was the best Pixar film that I have ever seen.

Brendan explains further that it might just have been hard to refuse the changes and notes coming out of the Braintrust. While the Braintrust has no authority to force the director to follow these suggestions, it might be pretty difficult to tell animation veterans like John Lasseter or Lee Unkrich that she likes her vision of the film better than their proposal. So, she might have tried to make it work, compromising her own vision. While the group of people in the Braintrust has changed over time, until Brenda Chapman it has always been a group of men. Brendan acknowledges that it might have been extra hard for a female director to push against the Braintrust wishes. However, he details that there were other male directors who left Pixar frustrated for similar reasons. Thus, he rather feels that it was more due to the fact that she was not able to defend her idea against the Braintrust. After all, it primarily consists of friends who have been working together for a very long time. Brendan states that to break into this clique from the outside and make your ideas heard would have been hard for anybody, no matter whether male or female. Indeed, Brenda Chapman was not the only original director taken off a movie at Pixar Animation Studios. For example, Jan Pinkava was removed from his film *Ratatouille* (Bird and Pinkava 2007). Borys Kit from Reuters writes:

The transition wasn't all rosy, however, and Pinkava, though earning a 'story by' credit, left the project and Pixar (Kit 2007).

This idea of such a close-knit group of people who decide who is in and who is not is closely connected to the previously discussed importance of personal relationships

and connections in the animation industry. As practitioners and employers tend to fall back on hiring individuals who they know, like or have worked with previously, the people allowed into the 'club' are the ones that are known to them. However, since the members of the club are primarily male, as for example the Braintrust at Pixar, this can result in homophily, and women will have more difficulty getting in. This seems to be confirmed by accounts like those from animator Ellen and CTD Melanie who describe very similar issues as Brenda Chapman. Both felt that it was due to their gender that their ideas were rejected or less heard, since similar ideas to theirs, rephrased by male colleagues, were later accepted and praised. However, as previously mentioned, all practitioners debate and question the relationship of those issues to gender and ask if it is more a question of personality and personal relationships, similar to CTD Brendan's suggestion. The discussion of gender versus personality will be discussed in depth in the following sections.

While this chapter discussed the hiring practices and the idea of the boys' club to approach an explanation of the low participation rates of women, the next part will focus on associations of gendered personality types and take a look at gendered stereotypes conditioned by the society and culture of the participants. This will approach the topic of creative contributions from female and male practitioners, as well as the vertical occupational segregation by gender in the animation industry from a slightly different angle. It will also discuss the difficulties the practitioners experienced with this topic in general and in making any connections between inequalities and gender.

Gender or not: The dilemma at the root of the problem

This section will take a closer look at the implied differences between gender mentioned by the interviewees in this study. I will also discuss the question asked by

most practitioners: if some of the issues are less related to gender and more to personality. To attempt an explanation of the reasons for the practitioners' uncertainty, this section will take a closer look at gendered stereotypes and analyse the hesitance of the practitioners to connect their own experiences in the industry with gender. It will also reflect on the importance and advantages of a diverse workforce for practitioners and studios alike. While the participants hypothesise diverse roots for potential differences between male and female employees, for example, conditioned by biology, society and culture, as well as simply personality, my focus lies not in the validation of the origins. Rather, I will treat all reported differences between male and female practitioners as gendered stereotypes. My study does not aim to rationalise, prove or disprove those stereotypes and generalisations to be true or not, since it is ultimately irrelevant. If male and female workers in the creative industries perceive and accept them as true, they will consciously or subconsciously act accordingly. Thus, I will analyse the kind of gendered stereotypes mentioned, which allows me to explore how they are used and if they hinder female and male practitioners to contribute creatively and equally. Another reason why gendered stereotypes are interesting for this study is the fact that some of the originally advertised benefits of the creative industries for women, which the animation industry is a part of, were in some way based on gendered stereotypes. One of the prominent reasons given by early policy makers for why the creative industries were supposed to especially promote women was that being a woman was considered to potentially present an edge and offer a different point of view with fresh creative potential. Aside from creative ideas, it was also believed that women have certain character qualities that can 'balance, tame and civilize the workplace' (Proctor-Thomson 2013, p. 143). The following paragraphs will examine whether those supposed beneficial assumptions are indeed helping women to contribute or hindering them from doing so.

The practitioners in my study discuss several connected characteristics attributed to gender. Many female and male practitioners associate more confident, competitive and aggressive behaviour with men than with women. Women, however, are attributed more sensitivity and listening skills, as well as being more willing to compromise and being less confident and technical. Multiple women describe that they feel sometimes less confident about their work, doubt themselves and feel more hesitant to offer their ideas. Animator Astrid describes:

I think speaking from the few women that I do know in animation, they aren't always the most confident. I think it takes them a little bit of pushing to do it, because they feel like other people are going to do a better job than them, so they don't even go for the roles.

While most every practitioner admits that there are exceptions to those characteristics, it still seems to be accepted by many as a truth for their experiences with the majority of people. Multiple men and women offer a possible explanation for those impressions in the different upbringing of men and women. While those can be determined by culture and society, they might also be influenced by the generation they grew up as. No matter if there is an element of truth in the stereotypical personality traits for men and women, the fact that it is considered to be the norm, can subconsciously have an effect on the behaviour of the practitioners and how they are perceived by others. It needs to be said, however, that this does not mean that attributing these previously mentioned skills to women needs to be condemned as sexist. After all, several characteristics like being sensitive and considerate are extremely valuable skills for any work environment. Some female employees value these abilities and are proud to contribute and stand out in this way. I agree with Hesmondhalgh and Baker (2015) that rather such qualities should

be more respected and seen as something to aspire to by men and women equally.

A couple of practitioners refer to a subconscious bias triggered by the stereotypical personality traits attributed to men and women. CTD Larissa describes one of her experiences:

I went to a person as a rigger to animation to provide help. Then the person kind of assumed I was an intern. She was like, 'oh just sit there and wait,' and I was like, 'no, I'm there to help you.' She was like, 'oh, okay.' Then again, you don't know, right? It could have been a combination. The fact that I was female, but I was also young, and I guess I look like an intern.

Larissa's experience is based on several assumptions the female animator she was supposed to help makes, which are conditioned by the occupational segregation by gender in the industry, as well as related stereotypes. While the animation industry has overall few women, women make up a large percentage of marketing, business management and public relations roles. The rigging department, however, has a very low participation rate of female CTDs. Additionally, the role of a CTD is considered extremely technical. One other stereotype that previous research reported is that women are perceived as less competent or interested when it comes to science, math and technical subjects (Hesmondhalgh and Baker 2015). Some interviewees in my study confirm that this is a common stereotype. In addition to those conditions, Larissa reports that she looks quite young, which infers less experience and a lower position in the studio. Thus, the age of Larissa, paired with the low participation rates of women in technical departments and the gendered stereotypes, make it almost logical for the female animator to assume that Larissa was a non-technical, inexperienced intern.

The assumption made by the female animator was most likely not intended to be sexist. Larissa even mentions later that she was not upset about this incident. The female animator did not reflect on the reasons for categorising Larissa. She made a hasty decision without knowing all the facts. However, it does indicate that the gendered stereotypes, as well as the occupational segregation by gender, influence people in the industry to think and act a certain way and, thus, contribute to inequalities. Such generalisations might also feed the gendering of jobs like CTDs or production assistant roles, since they call forth certain associations. For example, CTDs are technical, but technical skills are more connected to men. Production assistant roles imply good communication and organisation skills, which are instead more likely to be attributed to women. This might influence the way people judge a practitioner's competency. CTD Brendan theorises:

For example, for nurses. ... When you say, which nurse do you want, the male nurse or the female nurse? I think people will just feel like, a certain association with a sex, with a gender. The same thing for technical jobs, for programmers, for things because we haven't seen so many.

Brendan gives the example of an occupation which is gendered female to explain his point. Generally, the first picture that comes to mind when people think of a nurse is a woman. Thus, if there are no other facts or personal connections, people might rely on their initial association and be more likely to trust in the competency of a female nurse. While such work segregation by gender is not the equivalent of inequality, it is associated with it in several ways as Hesmondhalgh and Baker point out. First, gendered occupational segregation often relies on 'social stereotypes' (Hesmondhalgh and Baker 2015, p. 25). These stereotypes are then reinforced by continuing to segregate men and women into 'gender-typical' positions. In most

societies, certain professions have a stronger association with one gender. This might not be the same from one culture to another and is socially constructed. Second, segregation by gender makes it more complicated for men and women to match their talents with an occupation of their choosing (Hesmondhalgh and Baker 2015). While everyone is 'free' to pursue any desired job, men will be less likely to choose an occupation that is gendered female and women less likely to pursue an occupation that is gendered male. Third, occupations gendered female are often less compensated (*ibid.*).

The previous examples refer to the horizontal segregation by gender. However, gendered stereotypes might also have an effect on the vertical segregation by gender in the animation industry. While vertical occupational segregation is also not synonymous with inequality, it is related, since a diverse workforce can only be achieved by a balanced representation of women (and other minorities). Characteristics like confidence, determination, and ambition are often connected to men. But, these characteristics are also strongly associated with leadership roles. Thus, this could influence the access of female practitioners to higher-level jobs like, supervisors, directors or art directors. Allen and Wing-Fai, Gill and Randle also claim that such stereotypes make it difficult for women to act more confident and assertive, since they clash with traditional female identities (Allen 2013). This seems to be in line with a point animator Justine brings up. She feels that people in the industry talk about and judge women in higher positions differently, even though they might have a similar personality as their male counterpart. Her impression is that female directors, for example, are judged more by their personality, and less about their directing abilities. She also mentions that a 'strong-armed' female director is quickly called a 'bitch', but a male director is not judged that harshly in the same situation. This might be due to the idea that certain personality traits are more accepted for a specific gender. CTD Joy reports a related experience in a situation

where someone took credit for work she had done. When I asked her if she talked to that person afterwards, she answered that it can be difficult for women 'to stand up for something', because one 'can look really petty'. I then asked her if men would not look petty in the same situation, she thought that this was a good point, but seemed not too convinced. She then immediately brought up that it might be her own fault by not having the right communication skills for those situations. The reason why this seemed interesting is because it would have required her to confront the person who took credit for her work, which requires a confident and forceful demeanour more attributed to male stereotypes. Joy felt like she could not respond that way, because she feared that the reaction, even though she was in the right, would have been perceived negatively. She made a very clear connection between the negative outcome and gender, which seems to confirm the above claim that acting opposite to traditional female identities, going against the stereotype, can be quite difficult for women.

Despite some of the previously discussed concerns with gendered stereotypes, some researchers have found that the difference of being a woman and being able to visibly stand out from the primarily male labour pool can be advantageous and become a 'Unique Selling Point' (Allen 2013, p. 244). This can place individual women in an advantageous position. However, the benefit is individual, based on the fact that women are in a minority position and is not contributing to add more female employees to the workforce. Additionally, this refers to the physical difference of women. Accounts that seek to promote the participation of women accentuate a supposed innate difference benefitting the diversity and creativity needed in this industry. Interviewees in this study do not mention that they feel they have an advantage based on their status as a minority, thus not confirming or contradicting this previous research. Instead, several female animators report that there are a few opportunities where they believe that they can

contribute a different creative point of view to the process. Animators Yvonne and Barbara describe that sometimes a scene can be interpreted very one-dimensionally from a 'boy's point of view', since that will naturally be the take of a male animator. Both animators explain that as a woman they can bring a different way of thinking to the table, adding ideas into the process that might have been missing or overlooked. CTD Ben and Animator Lukas similarly point out that it is crucial for more women to be in the industry, since it's important to have such varied viewpoints, especially in creative areas, to make sure that a wide audience can be reached and attracted. As previously mentioned, this was indeed one of the primary reasons why the creative industries were originally praised as especially attractive for women. Ben and Lukas both see a more balanced participation rate of women and men as a chance for the studios to make a better product and potentially more profit by speaking to a wider audience.

It is interesting to note that multiple animators provide the same example to describe how women can contribute a unique perspective to the process. Primarily, they mention that women are better at animating female characters. However, they also acknowledge that they knew some men who successfully animated more feminine actions. Animator Justine reports that while she has seen more women animate female characters successfully, she suspects that this might generally be more of a stereotype than a fact, since nobody has the same issues with animating male characters:

I think gender can be an advantage for women when there's female characters because a lot of times directors and supervisors will believe a female can animate a female better, whereas nobody questions who's going to animate the males in the shot. ... I think there's probably a stereotype in there...

While it is a stereotype, it actually seems to work for the women in animation and somehow enables them in this case to add their own ideas into the shot. However, it is interesting that Justine mentions the fact that nobody feels the same about animating the male characters. Are male animators not regarded as adding a comparable value in this instance? While the fact that the benefit of male practitioners is not specifically mentioned might be the result of women being in the minority in this industry and the focus on increasing female participation, it is important to point out that segregation by gender is closing doors for men as well. Not to the extent of women, but diversity can only be achieved when all work is made available to women as well as men without the feeling that they can only occupy specific positions appropriate for one's gender.

The discussion of gender inequalities in the industry appeared to be an extremely difficult topic for most interviewees to talk about. While all interviewees were otherwise very open about their work environment, this topic made most practitioners somewhat uncomfortable and initially more careful with their wording. As previously stated, some interviewees noted that they were glad that the interviews were anonymous, some even asked for the audio recorder to be turned off and no notes to be taken. However, aside from some practitioners who did feel that they had nothing to contribute to the topic, since they had not experienced anything in that direction, most interviewees were extremely interested and wanted to discuss the topic after they were initially startled by the question. All practitioners who reported to have experienced inequalities in some way, questioned if their experience was related to gender or due to other influences like personality, confidence, and communication skills. CTD Joy, in the example above about appearing petty, immediately brought up that it might be her own fault by not having the right communication skills for those situations after she made an initial connection to gender. Animator Barbara who reported instances where she felt

intimidated by 'the guys in the room' states in the same sentence that she would probably 'still feel intimidated' if it was all women, thus, discounting her initial reaction. CTD Larissa describes the dilemma all interviewees report:

It's a touchy subject. I'm always thinking, is it because I'm a woman, or is it because of the situation?

It is an impossible question to answer directly, since there are infinite situations and many factors that play into it. Every person is different, no matter if male or female, and thus, a generalised answer would be presumptuous. However, women are caught up in a dilemma, because they can see the possibility of gender inequality to be an issue, so they have to ask the question: 'is this because I'm a woman'. Men do not seem to operate in the same way. None of the male interviewees mentioned that they would ask themselves: 'is this because I'm a man?' Animator Dustin further explains that he would never base his negative experiences on gender inequalities, but instead base it 'on if I'm good enough or not', thus his skill and competence. But, there is also no indication of a negative impact and inequality related to being a man in the animation industry. Therefore, it seems to make sense that men do not ask themselves this question since it is not an issue that needs to be considered. It is interesting to note, though, that men and women report similar difficulties to talk about inequalities for women. While men in this study did not experience inequalities themselves based on their own gender, gender inequality is a topic that is as delicate for them to talk about as for women. Animator Doug explains:

I have to try to think about that very carefully because I know that if I say no, it might be because my eyes weren't open enough to recognise when that might have happened which is maybe more of an issue with me than anything else.

Doug is reluctant to say there are no inequalities based on gender in the industry,

because it might be his fault for not being sensitive or attentive enough to notice. While the women above fear that they are interpreting or perceiving the situations they experienced incorrectly by connecting it to gender, Doug is similarly concerned that he is not recognising and interpreting situations correctly when inequalities based on gender occur. Thus, the men and women interviewed are hesitant to understand their experiences in the industry as being connected to gender.

Rosalind Gill makes similar findings in her research. For her, this hesitance to make a connection between some of the previously mentioned experiences and gender is founded in the belief that feminism is a concept and a fight of the past, which has been won and does not fit in an industry with the reputation to be equal, diverse and open to everyone as long as they are determined and talented (Gill 2013). Thus, she calls this reluctance the 'post-feminist problem' (Gill 2002, p. 84). In her research, Gill (2002) found that 88% of men and 75% of women did not believe that anyone is disadvantaged when entering the industry, which included gender, but also people with disabilities and other minorities. Gill identifies the strong confidence in the meritocratic system of the creative industries as a contributing factor to this problem. As previously mentioned, it is a common assumption that a person with enormous talent will be noticed and rewarded through performance alone, no matter what gender, colour or sexual orientation that person has. However, even though Gill and Allen found that their research participants knew that their sector was not always meritocratic by pointing out many of the same difficulties I outlined previously, their participants were reluctant to entertain the idea of discrimination or gender inequality (Gill 2002; Allen 2013). As a result, Gill (2013) claims that the post-feminist problem, which stands for the belief that feminism and sexism are a matter of the past, fortified by the confidence in a meritocratic and equal system contribute to making gender inequalities unspeakable. Allen adds that they 'remain unspeakable' despite the fact that the

industry insiders are 'gender aware' (2013, p. 248) of imbalances and the occupational segregation by gender.

Many of Gill and Allen's findings are confirmed in my study. My research also demonstrates that the practitioners are 'gender aware' and are familiar with the vertical and horizontal segregation by gender in the workforce. Male and female workers report the imbalance in numbers and the underrepresentation of women in male-dominated teams. They are also knowledgeable of the salary gap, even the interviewees who have not experienced it themselves. The practitioners generally acknowledge the low participation rates with its occupational segregation, as well as the salary gap, and do not have difficulties to talk about those in connection with gender. Those issues are accepted as facts and few were uncomfortable to talk about those topics. However, as previously outlined, when it comes to the subtler issues of gender inequalities, which are more difficult to quantify like, for example, disparity in the credit, acknowledgement or voice in meetings, the practitioners become more hesitant to understand their experiences as connected to gender. This is surprising, since 10 out of 12 female interviewees (all 6 female CTDs among them) reported that they had experienced instances where the thought had crossed their mind that they or someone else was treated differently because of their gender. The same is also true for the hiring process. The majority of interviewees acknowledge that personal connections often provide a benefit during the selection of new hires, however, the belief in a meritocratic system is still extremely strong. Few practitioners see a connection between the hiring process and the low numbers of women in the industry.

This contradiction between the practitioner's gender awareness and their hesitance to connect their own experiences in the industry with gender, seems to confirm Gill's theory of the reluctance of industry insiders to make any connection between the current participation numbers in the industry and inequality. However,

being confronted with the reality of the unspeakability of this topic through the practitioner's response was a very different experience than reading about the more abstract concept of Gill's post-feminist problem. The most surprising aspect my research revealed was a discrepancy between the unspeakability in a work environment and the actual desire to talk about this topic in a safe, private sphere, which adds a new dimension to the concept of unspeakability. While the interviewees were hesitant to make the connection between their own experiences in the industry and gender, most did open up to talk about their personal experiences and discuss the possibility that they might be related to gender. Often, the interviewees were initially startled by the question, presumably because it is not a topic that can be discussed openly in the company, which might support the claim that it is unspeakable in the work environment. The relief about the anonymity of the interviews and some requests to turn off the voice recorder might be another indication of this. However, the interviews also opened an opportunity for discussion. Most all of the interview participants were extremely curious about the topic and several felt inspired to return to this topic after the interview had ended. Many interviewees thought that it was an important part of my research and they expressed the wish to hear more about what other people in the industry thought about this topic. Some female interviewees explained that they had talked to other female co-workers or friends about some of their experiences; however, they also confirmed that it is not a topic that they would like to discuss with male colleagues, and definitely not openly at work. While some studios made efforts to increase awareness and diminish gender inequality through presentations and anonymous surveys, the industry structure does not seem to allow a place for this kind of conversation. Women and men alike are apprehensive to discuss gender related issues, since the collaborative production process as well as hiring decisions are highly influenced by personal relationships and trust, which they fear to risk by

raising such topics. Thus, the unusual interest of male and female interviewees alike to hear more about gender and possible inequalities in the industry gave the impression that they wanted to take advantage of an opportunity to talk openly with someone about this sensitive subject. The interviews gave them permission to discuss the topic in a safe, anonymous environment. Thus, I would argue that while it is unspeakable in a work environment, there seems to be a desire to discuss gender inequalities, as well as the wish to become aware of inequalities when they are experienced by others to help support their co-workers. Therefore, while their concerns might be unspeakable in public, they seem to be discussed between friends and colleagues in a more private sphere, and these discussions formed a welcome part of the interviews.

Whether the experiences the practitioners report are truly related to gender inequalities is in some ways a moot question. Since every person and every situation is different, it might be difficult to know what thoughts, motivations or subconscious decisions are at play. Animator Dustin asks the following question:

If the person who it's affecting feels that it's happening to them, is it happening? Is it not? They feel it is, so to them it is.
Right?

Dustin brings up an interesting concept. He wonders if it is important whether or not a practitioner felt disadvantaged based on gender. If a practitioner perceives it as such, it makes it real for that person. We might have been asking the wrong question trying to find out if the practitioner's experience is indeed connected to gender or not. If such a thought comes to their mind, it is a reality for them and, thus, something must be amiss and should be treated as such. Awareness, and the ability to speak about those experiences openly without being judged can help to clarify and resolve such issues. The promotion of an open environment and the ability to

make those issues speakable, and thus solvable, seems to be directly connected to a diverse workforce with a more equal balance of male and female practitioners. If women were not in the minority in the animation industry anymore, it might become 'easier to be heard' as CTD Julia describes. As previously discussed, some women also feel more comfortable to talk to other women about specific topics, and especially when it comes to potential gender inequalities. Thus, more women, might allow female practitioners to talk about issues more openly, since they do not have to feel like they are on their own or cannot talk to anyone else about their concerns. One of the practitioners describes an additional benefit of more women in the industry: Some female-specific difficulties, for example pregnancy parking, might be more considered by the company. While she mentions that it is just a 'silly little thing', she illustrates how she has to 'walk from the fourth floor in the basement to get up the stairs to go to where my desk is on the eighth floor'. It is easy to imagine that this might not be such a small thing for her, as she must cope with it every day. If more people in the company would be affected or could relate, the company might be more likely to make adjustments to accommodate. Some interviewees also believe that with a change in the participation rates and more equal numbers, potential inequalities would become scarce. As CTD Mark states: 'It's hard to be treated differently when the department is pretty much an even mix.' A diverse workforce has the potential to not only benefit employees, but also employers by, for example, increasing productivity, creativity, and improving the corporate culture and image of the company (Green et al. 2015). CTD Ben and Animator Lukas both point out that it is crucial for more women to be in the industry, since it is important to have diverse viewpoints, especially in creative areas, to make sure that a wide audience can be reached and attracted. As previously mentioned, this was one of the primary reasons why the creative industries were originally praised as especially attractive for women. The prominent idea that creativity, and thus creative work, requires a

'difference of thinking and diversity' (Proctor-Thomson 2013, p. 138) was connected to gender diversity. The difference of being a woman was considered to potentially present such an edge and offer another angle with fresh creative potential. Ben and Lukas both see a more balanced participation rate of women and men as a chance for the studios to make a better product and potentially more profit by speaking to a wider audience.

More women would also increase the number of female role models in the animation industry. Multiple men and women in this study state that they feel this would help to expose women to the manifold opportunities the animation industry offers. Animator Andrew illustrates:

They're starting to see people like Brenda and other people, being like, 'Hey, I'm stepping up into these roles,' and maybe they're starting to say, 'Hey, I can do that too.' They're looking at the opportunities.

Seeing women succeed can inspire other women to feel like it is achievable for them as well. Many contemporary independent filmmakers state that they were inspired by female animators like Alison DeVere or Caroline Leaf, proving that it was possible to have a career in animation and create their own films. Chang and Keifer-Boyd's (2011) research suggests that female role models seem to have a large influence on the motivation and ambitions of women who are interested in pursuing a career in animation. However, female role models, especially women in senior positions who are able to combine their career with a family, are still less common in commercial, feature animation. Animator Barbara explains that female industry newcomers do not have many female mentors to look up to and network with. While she says that she had some amazing male mentors at the beginning of her career, she personally would feel closer to a female mentor. If more women in the industry will result in

more female role models and mentors, and if Wreyford's finding that there is a tendency of employed women to find 'a large percentage of opportunities through other women' (2015, p. 93) is correct, then we should see an accelerated growth of the numbers of female practitioners in the industry. However, not every woman who moves up in the animation industry might want to be seen as a role model or accept the issue of gender. For example, Jennifer Yuh Nelson, director of *Kung Fu Panda 2* (Nelson 2011), answers the question of where the female story artists are with the following:

People have brought it up, asking me, 'What did you do?' I don't really know. I puttered along, did my thing and gender has really never been an issue (Sperling 2011b).'

With her statement, Nelson does not acknowledge that gender could be an issue, since she did not experience it. While it might be difficult to know what she really thinks, since this is a public statement which also serves a promotional function, she does mention in another interview that she does not 'think about the gender thing very much' (Jao 2017), confirming that at least in public she rejects the issue of gender. However, the idea that women in the animation industry need to be a role model for other women is a problem in itself. It is the general structure that should change. Role models might help to induce and accelerate it, but it is the outlined inequalities and characteristics of the animation industry, which seem to provide barriers for women to enter and sustain a career, that need to change.

This section discussed the practitioner's difficulties to link their own experienced issues to gender. Many participants rather connect their experiences to other influences like personality traits. Practitioners associate confident, competitive and aggressive behaviour with men, and sensitivity, listening skills, as well as being more willing to compromise and being less confident and technical with women. The

question if such stereotypes are true or not is irrelevant if male and female workers in the animation industry perceive and accept them as true, since they will consciously or subconsciously act and react accordingly, which might contribute to inequalities. Such generalisations can also feed the gendering of jobs like CTDs or production assistant roles, since they call forth certain associations. The contradiction between the practitioner's gender awareness and their hesitance to connect their own experiences in the industry with gender, confirm Gill's theory of the reluctance of industry insiders to make any connection between the current participation numbers in the industry and inequality. While gender inequalities seem unspeakable in a work environment, practitioners are extremely interested in discussing them in a more private sphere, since they feel that it is an important topic to become more aware of. The promotion of an open environment and the ability to make gender issues speakable, and thus solvable, seems to be directly connected to a diverse workforce with a more equal balance of female and male practitioners.

Summary

Despite the animation industry being perceived as equal and meritocratic, women and men seem to report gender inequalities in some aspects of work, including the representation in the workforce, the level of salary, and seniority. Women are underrepresented in key creative roles, like directors or writers, and there is a strong association of some occupations within the industry with women and some with men, indicating a vertical and horizontal occupational segregation by gender. While segregation is not synonymous with inequality, it is related, since a diverse workforce can only be achieved by a balanced representation of women (and other minorities). One of the explanations for the slow rise of participation rates and the segregation by gender is based in the history of women in the animation

industry. In the past, many industries, and especially the animation industry, formed gendered pathways, which influenced the access of women to certain occupations. While there seems to be a correlation, the gendered pathways of the past do not provide a sufficient explanation as to why the numbers of women in the industry have not been growing faster. Another reason for the low representation of women in the workforce is that many of the characteristics assigned to the animation industry seem to constitute barriers for women to enter and sustain a career. The long hours and the expected flexibility and dedication do especially not seem to agree well with women who choose to become a parent. Additionally, the idea of the animation industry being a 'boys' club', which is hard for women to enter, is mentioned by multiple interviewees. However, the interviews confirm a strong belief in meritocracy based on talent and determination prevalent in the animation industry, even though practitioners acknowledge that hiring decisions are highly influenced by personal relationships, trust, and likeability. These selection criteria might not disfavour women or other minorities, but they might not contribute to a diverse workforce, since they can contribute to homophily.

The previously outlined structures and characteristics of the animation industry provide barriers for women to enter, advance, and sustain a career. A diverse and balanced workforce in the animation industry can only be achieved through a change of this workplace culture and increasing the awareness of gender inequalities in the animation industry. There appears to be a reluctance among practitioners to discuss gender inequalities. My research confirms that it remains a topic that cannot be discussed openly in the studio, and thus remains unspeakable in a work environment. The reality of the unspeakability revealed through the interviews with the practitioners signals this as an important issue. However, my research also revealed that there is a discrepancy between the unspeakability in a work environment and the actual desire of the practitioners to talk about this topic

in a safe, private sphere, which adds a new dimension to this concept. To have a conversation about the emotional life of the workforce requires emotional labour. At work the practitioners are not willing to engage in such a discussion that might leave them vulnerable. My interviews, however, allowed them to discuss and ask questions in a safe, private and anonymous environment. Even though the difficulty to discuss gender and inequalities openly at work remains, I would not go as far as to argue that the animation industry leaders are exerting what Lauzen calls 'privilege of denial' (2012, p. 314), a strategy to disregard uncomfortable statistical data. Organisations like *Women in Animation* and Lauzen's own *Center for the Study of Women in Television and Film* help keeping their findings in the media and make it, in my opinion, impossible to completely disregard the facts. Practitioners in my study also report studio initiatives to increase awareness and diminish gender inequality with the help of presentations and anonymous surveys. In some studios, female practitioners meet regularly to talk about issues or just to bond. I have personally experienced several such initiatives to increase awareness and visibility of women in the animation industry and have been encouraged to participate in panels to discuss the state of the industry in this regard. Additionally, several organisations now offer mentorship programs, for example *Women in Animation*, *Hollywood Professional Association* or *Women in Film*, to just name a few, which connect young women with established professionals who can offer advice and guidance related to the industry. Research shows that successful female mentors and role models, who gave them an example of what they could become, were an important part of women's careers (Skillset 2009). Such programs could provide a way to make gender inequalities 'visible, understood and 'speakable'' (Conor 2014, p. 129) and eventually non-existent.

Conclusion

The intense collaboration in today's American 3D animation feature film industry required a fresh, in-depth assessment of creative contribution and authorship below the line. Inspired by my own experiences working in animation production, I was primarily interested in the collaborative production process and production practices below the line, with a special emphasis on female and male animators and CTDs. My primary research objective was to understand how and to what extent BTL practitioners are able to contribute to the 3D animation production process. I started out with an initial list of questions about how communication and control structures function within the studio community, how practitioners collaboratively manage the creative process and achieve production goals, as well as to what extent authorship and creativity can be said to function below the line. Since my approach was to conduct an in-depth study of a culture-sharing group, my interview-based study examined women and men who work in two different below-the-line professions, namely, as animators and CTDs, to explore if employees experience contributions differently depending on their role and gender.

My interview material set up a list of challenges for existing film studies theories and concepts regarding the social division of labour, creativity, authorship and gender. Several themes emerged from the experiences of the practitioners working in the animation studios which did not resonate well with my critical framework and were not met by current definitions of creativity and modes of authorship. Consequently, I turned to the field of production studies, which offered a theoretical framework that allowed me to analyse the experiences of BTL practitioners. Utilising a production studies approach, Chapter 4 revealed that vertical (between BTL and ATL), as well as horizontal (between BTL) processes of negotiating BTL contributions are fundamental to the animation film production

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process. My study found that monitoring rituals and control mechanisms from production management, like meetings and notes, for example, aim to keep the production on schedule and budget by prioritising, but also limiting, input from below the line. However, triggered by the fast-paced production process and blurred workflows, below-the-line practitioners are often required to stand in and perform other job roles that impart more authorial agency to them. These job roles can include responsibilities that require, for example, problem-solving, and thus, BTL contributions, counteracting the control mechanisms from production management and ATL personnel. While these findings are consistent with previous research in production studies, for example by John T. Caldwell, there are several areas in which they differ. The control mechanism concept of 'giving notes', for example, is a highly-discussed and difficult process that is intrinsically tied to the feedback and collaboration processes in the animation industry. While Caldwell identifies 'notes-giving' as primarily exercised above the line, my research reveals that it is also frequently utilised between below-the-line practitioners. Thus, I conclude that the negotiation of authorship and control in 3D animation is also a horizontal negotiation. This challenges existing authorship theories which primarily discuss vertical negotiations between BTL and ATL personnel. Additionally, my research establishes that the primary objective of monitoring rituals and control mechanisms from production management is not to keep creativity, agency, and authorship at the ATL level, but to keep the production on budget and schedule. Therefore, creative contributions from below the line are accepted and welcomed as long as they speed up the process, allowing the studio to profit from imparting authorial agency to below-the-line practitioners. While this situation opens opportunities for creative input from BTL, it also creates a dilemma for the animators and CTDs. Since the primary aim of the studios is to keep the production on schedule, ideas from below the line might not be welcomed and accepted if they impact the budget, and often

Conclusion

have to be worked on during the practitioner's spare time if they do. Thus, practitioners need to decide between wanting to contribute their ideas and investing their own time and effort for an uncertain success.

Another main conclusion of Chapter 4, emerging from my interview material, was that collaboration can only work in an environment where everyone feels safe to participate and ask questions. This requires trust. Trust can also cause employees to overcome insecurities about their contribution and ideas, which was a phenomenon frequently reported. Trust and personal relationships are also necessary to cope with the negative characteristics of the animation industry like long hours, precariousness, and increased competition. Therefore, I conclude that the notion of trust, which has not been an element of current theories of collaboration, should be added as a new aspect of collaboration below the line.

Furthermore, my thesis infers in Chapter 5 that the practitioner's idea of authorship is highly guided by their understanding of creativity, leading to a mismatch between their expectations and the reality of how creativity and authorship function in a 3D animation studio. My study found that animators and CTDs were hesitant to call themselves authors even though they did confirm their contributions and expressed their feeling of authorship over parts of the process. Many practitioners struggled with the traditional idea of the individual creator, and the understanding of creativity as a non-commercial, original, and artistic contribution, when trying to determine their own creative contribution. The question as to whether only the initial idea of an individual can be considered as a creative contribution or whether everyone who might extend or change the initial idea in the collaborative process, can be regarded as creative, was highly debated. Similarly, authorship was often regarded as something pure and personal originating from one individual creator. Thus, my research draws the conclusion that the practitioners' understanding of creativity influences their ideas about authorship

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and authorial control in the animation studio. It also uncovered a mismatch between the interviewees' expectations of what creativity and authorship is and the collaborative practice in feature animation. While traditional concepts of creativity and authorship as highly individual, original, visual and artistic contributions still dominated the practitioners' expectations, the collaboration necessary to create a project of the enormous scope of a 3D animated film involving hundreds of people clashed with such views. Furthermore, the result of this collaborative endeavour that is, as the practitioners described, 'greater than the sum of its parts', combined with their feeling of shared authorship, further reveals the disparity between traditional expectations of creativity and authorship and the reality in the collaborative production process. Initially, the interviewees were not aware of this mismatch between the traditional expectations and their observations. However, the more they elaborated on their answers, the more they began to unpack their thoughts and develop an understanding of authorship in the 3D animation industry.

Chapter 5 also helps to arrive at the conclusion that the experience of contributions and authorship below the line can vary depending on the work position in the process. An animator's contribution, for example, lies primarily in the interpretations of the story and acting choices for characters. One of the most crucial parts of a CTD's contributions, however, is technical problem-solving. While the idea of an interpretation is regarded as a creative contribution and has been part of theories of collaborative authorship (for example Gaut's), the concept of problem-solving as a creative activity is rarely specifically included in the definition of creativity. Howard Gardner is one of the few who mentions this idea by describing a creative individual as 'a person who regularly solves problems, fashions products, or defines new questions' (2011, p. 33). Since it is an intrinsic part of their daily work, the idea of problem-solving as a creative activity was discussed frequently by the practitioners. Generally, the interviewees felt that technical problem-solving is

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different from artistic creativity, which is regarded as superior to the former kind of creativity. Therefore, I suggest extending a definition of creativity to include multiple categories of problem-solving, like creative and technical problem-solving, to accommodate the collaborative practice and contributions below the line in the 3D animation studio environment.

Additionally, Chapter 5 concludes that pitching, networking and deal-making are fundamental practices of below-the-line practitioners to negotiate the director's vision in the 3D animation industry. Most interviewees of the study acknowledged the importance of the director's vision as a necessity to provide some sort of structure or framework for the film. However, while the authority of the director's decision was not questioned, interviewees also did not see a conflict in adding their own ideas and supporting the director's ideas at the same time. Often, the less specific tasks of animation production allow for such creative contributions below the line, which the studio, because of tight schedules and resources, relies on to occur. To negotiate the director's vision the practitioners reported various strategies. For example, below-the-line practitioners were able to negotiate their creative input by pitching their idea to their superiors or ATL personnel. Although these findings are compatible with Caldwell's concept of pitching, networking and deal-making in relation to above-the-line personnel, my research concludes that those rituals are a fundamental practice of below-the-line practitioners as well. The sales talks described by the animators and CTDs in my study are often extremely laborious, since they can involve making a prototype or another form of visual aid, which is often done by BTL employees outside of regular work hours. These ideas are reflective of both Caldwell's and Gaut's theories, but it is important to note that there is another element that arose from my analysis: studios seem to rely on their employees to solve issues and contribute ideas they realise in their private time, and practitioners are willing to sacrifice their own time to do so. This is an interesting

Conclusion

unspoken dynamic, which raises the question of why the practitioners contribute. While my research concludes that official and unofficial credit and acknowledgement is important for their motivation to contribute, it seems that they experience the collaborative process itself as a rewarding experience. Thus, my research suggests that the element of enjoyment should be added to a definition of a creative activity as my findings indicate that creativity is an 'autotelic' (Csikszentmihalyi 1996, p. 113) activity: the reward lies in the doing of it.

Lastly, Chapter 6 concludes that gender inequality in the 3D animation industry is still an issue and a topic that remains unspeakable in the work environment. While women and men observed gender inequalities in some aspects of work, including the representation in the workforce, the level of salary, and seniority, indicating a vertical and horizontal occupational segregation by gender, most female and male interviewees perceived the animation industry as equal and meritocratic. Additionally, even though many women in this study reported difficulties in the process of contributing their ideas, they were hesitant to link those experiences to gender. These findings are in harmony with those of researchers such as Bridget Conor, Rosalind Gill and Stephanie Taylor. Additionally, my findings confirm previous research that gender inequality in the 3D animation industries is still an issue and a topic that cannot be discussed openly in the studio, and thus remains unspeakable in a work environment. However, the reality of the unspeakability revealed through the interviews with the practitioners signals this as a very real issue which feels more palpable than the more high-level, abstract concept of Gill's (2013) post-feminist problem founded in the belief that feminism is a fight of the past. My research also revealed that there is a discrepancy between the unspeakability in the work environment and the actual desire of the practitioners to talk about this topic in a safe, private sphere like my study's interviews, which adds a new dimension to this concept. The notable sense of the unspeakability of gender

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inequalities warrants the call for more potential research in this area to further explain and understand the issue and find solutions.

Summarising, my study offers suggestive evidence that below-the-line female and male animators and CTDs do contribute creatively and can be said to have agency and shared authorship over their contributions. While their experiences depend on their role in the production process, female and male animators and CTDs navigate control schemes by production management and negotiate their contributions and value through below-the-line countermeasures like pitching. The purpose of my research was to make this process of production visible. The main conclusion following my research findings is that below-the-line practitioners in the animation industry have a set of competing agencies and are far from being mere passive executants of their work. Thus, the findings of my study appear to support my argument for a change in the existing model of authorship and the extension of current definitions of creativity as outlined above, so as to approach a better understanding of how BTL authorship and contributions function in animation feature film.

My research adds to the wider sphere of cultural studies of media production which includes the field of production studies, media industry studies and creative industries (Paterson et al. 2016). These fields share their concern with investigating production as a culture 'to understand how people work through professional organizations and informal networks to form communities of shared practices' (Mayer, Banks and Caldwell 2009, p. 2). This study offers contributions to the understanding of the culture in the American 3D animation feature film in several ways. First, it affirms the significance of below-the-line personnel by revealing complex processes involved in 3D animation production. BTL practitioners have a set of competing agencies and add their own ideas into the production process through vertical & horizontal processes of negotiation like pitching and notes-giving.

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Studios appear to rely on such BTL contributions which the practitioners often realise outside of work hours, sacrificing their own time to do so. Second, this thesis offers an understanding of the terms and conditions of collaborative authorship and creativity by challenging the traditional definitions and separation of creative and technical labour. My research uncovers a mismatch between the practitioners' expectations of what creativity and authorship is and the collaborative practice in feature animation. Third, the study adds to the understanding of the degree of gender inequality in the American 3D animation industry and its reasons by offering an analysis of the low participation rates of female employees, as well as their varied experiences within the animation industry. The thesis revealed a discrepancy between the unspeakability of experiences related to gender inequality in a work environment and the actual desire of the practitioners to talk about this topic in a private sphere. In accordance with production studies which often centre around 'core themes that resist top-down hierarchies, that highlight production at the margins, and that make visible hidden labor' (Banks 2018, p. 157), my study adds to this research tradition by revealing the practices of below-the-line practitioners through their own voices and revaluing their contributions. This study also offers a model of collaboration and authorship that might potentially be applicable not only to the 3D animation industry, but to a wider range of cultural studies of media production.

While questions of gender, equal opportunities and the low participation numbers of women in 3D animation could not be answered fully, this thesis was able to approach the topic, reiterate and confirm that this is still an issue, and offer ideas for discussion. Unfortunately, the size of my data sample does not allow me to generalise the findings of my research. Additionally, I should stress that my study has only been concerned with two specific kinds of below-the-line professionals in American animation film studios, namely animators and CTDs, to keep the scope of

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the thesis manageable. A similar study focusing on different roles in other locations might yield other results. However, as was the purpose of my study, the results offer a qualitative, in-depth glimpse into the black box of 3D animation feature film production limited to the scope of my interviews. I should also make clear that I exclusively relied on interview data and have deliberately refrained from participant observation, even though it is a commonly used and often combined data collection form in production studies and ethnography methodologies and could have validated my findings further. There were two reasons for this decision. First, my study did not focus on one company's workings, but on the people themselves. Second, the non-disclosure agreements required in the industry and my own employment in animation feature film would have made participant observation very difficult and ethically questionable.

Future research in 3D animation might usefully focus on creative contributions in other contexts. It might, for example, be interesting to compare the community below the line and its contributions in the production processes of visual effects (VFX) companies instead of feature animation. The competition in VFX companies is even fiercer than in the large 3D animation feature film studios, since they need to go through a bidding process to obtain the effects work offered by film studios. Many VFX shops all over the world are participating and often underbid on projects to stay competitive and be successful. Therefore, despite the high quality standards, the timelines are shorter and the project and employee turnover is faster, increasing the precariousness of the visual effects industry. It could be interesting to explore how such an extremely fast-paced and intense environment changes BTL contributions.

Another avenue for further study could be research into other specific roles within 3D animation, like story artists, 2D designers, editors or lighting and rendering TDs. While the visibility of the BTL practitioners was not a focus of this

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study, my research suggests a discrepancy between the visibility of animators and CTDs inside and outside of the 3D animation studio. A possible area for further research could concentrate on the visibility of below-the-line personnel and employ paratext study of DVDs and other bonus material to investigate how practitioners are presented by the studio to the outside world. Additionally, my research only focused on the perspective of below-the-line personnel, however, it would be interesting to shift the perspective and explore how above-the-line personnel think about their authorship in relation to the collaborative process and below-the-line contributions. My research was able to explore some possible explanations for the low number of women in 3D animation and especially in departments that are considered more technical, but I was not able to completely explain this phenomenon. Thus, there is still a need to fully understand and answer questions connected to gender diversity. However, during the analysis I became curious as to whether the lower numbers of women in technical jobs might be because those positions are not considered creative. My study offers suggestive evidence that artistic creativity is regarded as superior to technical problem-solving, and that creative activities are considered enjoyable and rewarding. Therefore, jobs considered technical might be less attractive to women. It might be interesting to explore this theory and its implications further. Also, while this study only investigated the contributions of women as a minority group in the 3D animation industry, it is extremely important for future research to examine the participation of other minorities. Even though the group of interview participants in my study was quite international, most interviewees were Caucasian. Only one participant was African American. Without further research into this diversity problem, it will not be possible to identify and address the reasons for this issue.

The conclusions of my study motivate a few recommendations and suggestions for practical application. While below-the-line practitioners in the 3D

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animation industry have learned to cope with the negative experiences of long working hours, tight deadlines, and competition, these industry conditions cause multiple issues for the studio community and production process. First, increased competition and job insecurity are counter-productive to the idea of collaboration. However, as this study demonstrated, collaboration is the fundamental concept that animation studios rely on and require to function and create good work. Instead of fostering a culture of overtime and competition, studios might actually profit from a shift towards inclusion, trust and increased work security, while being mindful of the work-life balance of their employees. I am not suggesting a scenario without any overtime. However, paid overtime, as well as an adjustment of the attitude that overtime is expected, demanded and required to be successful in the animation industry, could make an enormous difference to increase the collaboration among practitioners which is the foundation of the success of an animation studio. Additionally, studios should keep in mind that credit and acknowledgement is regarded as a form of remuneration by BTL practitioners. Sometimes, names in the credit list, inclusion in presentations and marketing, demo reel material or just a simple 'thank you' can be as important as monetary compensation. Thus, giving credit where deserved and trying to make all roles in the production process similarly visible and respected will motivate the team and create an engaging and productive atmosphere.

Second, the studios' reliance on work and ideas that below-the-line practitioners often develop in their spare time creates a dilemma for practitioners who must decide if they want to and can invest their own time and effort for an unknown outcome. The studio might potentially lose innovative ideas that could save them more time and money than they save by not offering paid development time. While some studios allow a forum for pitches, these should be open to everyone, and include ideas for new workflows and tools, not just for new films or

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shorts. Also, it might be beneficial for the studios to allow for workflows and structures that shift more agency and autonomy to BTL practitioners as part of their regular work tasks. More agency can enhance practitioners' feelings of authorship and ownership, make their day-to-day work more satisfying and increase their motivation to go beyond what is expected.

Third, relinquishing a culture of overtime and competition, which is especially hard on employees who take care of children, might allow more women to participate and remain in the 3D animation community. While many animation studios already engage in initiatives like presentations, meetings and anonymous surveys to increase awareness and diminish gender inequality, they might need to deepen their willingness to invest in such a culture transformation to be able to change the animation industry in the long-term. Female and male industry practitioners can help to make gender inequality more speakable by acknowledging the issue, as well as by being aware, proactive and open when they are approached by colleagues, or experience issues themselves. It is my hope that by connecting inequalities to, as Conor suggests, 'subjective, personal accounts of the work' (2014, p. 129), my research will inspire studios and practitioners in the animation industry and contribute to the goal of making gender inequalities eventually non-existent.

Appendices

Appendix A – Interview Protocol/Guide



INTERVIEW PROTOCOL

Title of project:

3D artists and their individual creative and technical contribution to the collaborative process in the American 3D animation feature film industry: a production studies approach.

<p>Time:</p>
<p>Date:</p>
<p>Place:</p>
<p>Interviewer:</p>
<p>Interviewee:</p>
<p>Company of Interviewee:</p>
<p>Position of Interviewee:</p>
<p>Years in industry:</p>

Introduction:

1. Thank the individual for participating.
2. Introduce myself, my role and the topic.
3. Explain informed consent:
 - a. Discuss tape recording
 - b. Discuss if interviewee would like to be identified or not
 - c. Discuss if interviewee is interested in a summary of the findings
4. Ask to sign informed consent
5. Thank the participant again, assure that there are no right or wrong answers, just interested in their experiences, what they have to say and what they think
6. Ask if the interview can begin

INTERVIEW PROTOCOL

Questions:

1. **Job tasks, hierarchies and communication structure (formal and informal)**
 - a. Tell me about your job. What do you mainly do and what main tasks do you have?
 - b. With whom do you work the most? Could you describe your relationship with them?
 - c. With who outside of your department do you work? Could you describe your relationship with them?
 - d. Could you describe your interaction with your supervisor?
 - e. Do you work with the art director or director as well? If not directly in form of meetings or any other way? How is the relationship with them?
 - f. How important is communication generally for your work?
 - g. How do you mainly communicate with each other? (walking over to desk, scheduled meeting, phone, email, im)? Formal or Informal?

2. **Collaboration**
 - a. To what extend does your job require to collaborate with others? Could you give me an example of an instance where you needed to collaborate?
 - b. How well do you think that everyone works together?
 - c. What do you like most and least about your job, and more specifically, about your work with others?

3. **Creative contribution and control structure**
 - a. How much influence do you feel you have on creative decisions? Could you give me any examples?
 - b. Who in your opinion offers the main ideas for the film?
 - c. What happens if there are conflicting opinions on what is the best idea? How is such a dispute resolved?
 - d. Who makes the decisions on which ideas are included in the final film?
 - e. Earlier we were talking about informal communication, what about informal decisions?
 - f. What kind of compromises have to be made between co-workers, directors and producers?
 - g. To what extend does the production process provide opportunities for you to contribute your ideas?

INTERVIEW PROTOCOL

- h. Is there a process in place for animators/Character TDs to bring up your ideas? Could you step me through that process? If there is no defined process, how would you go about to suggest your idea?

4. View and theory of their own production practices

- a. Did you ever have a suggestion that was accepted and made it into the film? If yes, could you describe it to me? Could you describe how that made you feel?
- b. Did you ever have a suggestion that was rejected? Do you know the reasons? Could you describe how that made you feel?
- c. If you were to think about what authorship meant to you, what would you say it was?
- d. Where do you see yourself in this definition?
- e. Do you feel encouraged or discouraged to contribute your ideas, and what are some of the reasons for that?

5. Advantage or disadvantage of gender

- a. Not sure if you are familiar with the director Brenda Chapman, who was removed from “Brave”. She wrote in the NY Times that “Sometimes women express an idea and are shot down, only to have a man express essentially the same idea and have it broadly embraced”. Would you agree? Do you think that gender makes a difference?
- b. Could you describe an experience where you felt that your gender may have provided an advantage or disadvantage? In collaborating and communicating? In contributing ideas?

6. Job motivation and satisfaction

- a. What motivates you to do your best work?
- b. How important is it for your work satisfaction and motivation to be able to contribute your ideas?
- c. Do you feel that contributing creatively is part of your job / part of what you are paid to do?
- d. Would you like to contribute more creatively or do you feel that you have enough opportunities to contribute? If you would like to contribute more, what is preventing you to do that?

7. Credit and acknowledgement

- a. How are you credited for your work on the film?
- b. How do you feel about those acknowledgements/recognition of your work?

INTERVIEW PROTOCOL

- c. Could you describe how your creative contribution is credited?
- d. Thinking back over your career, was there ever a moment where you felt that your work and creative contribution was really meaningful to you?
- e. Was this also a time where you felt that your contribution was recognized in a way you wanted it to be?
- f. If someone asked you whether working in the 3D animation industry is a rewarding or a not very rewarding experience, what would you answer?

8. Closing (return to more descriptive part of interview)

- a. What is the most fun aspect of working here?
- b. What is the least aspect of working here?
- c. Now that you know what the research is about, is there anything that you think I should have asked but didn't?

Ending:

- 1. Thank the participant for the time and ideas they shared "This has been great. You have given me a lot to think about."
- 2. Assure him or her of confidentiality of responses.
- 3. Do you think I could contact you if I had any further questions?
- 4. Thanks again!

Appendix B – List of Codes

Code Name	Sources	References
Communication	26	191
Competition	13	34
Confidence	15	54
Getting in	8	21
Informality	18	49
Personal Taste	11	27
Relationship ATL	23	76
Relationship BTL	19	49
Relationship Rigger - Animator	19	86
Security	16	43
Notes giving - Changes	19	84
Trust	10	22
Camaraderie	8	19
Frustration & Stress	25	148
Motivation & Satisfaction	26	222
Satisfying	5	5
Acting	7	12
Art	12	35
Authorship	27	117
Collaboration	26	122
Collaborative Process	18	48
Creative Contribution	29	268
Creative Decision	23	81
Creative process	10	26
Credit & Acknowledgement	26	135
Pitching & Selling	16	54
Problem-Solving	18	55
Visibility - Featured	12	41
BTL Counter measure	5	18
Union	2	3

Appendix B – List of Codes

Negotiation	1	2
Gender	25	199
Pathways in History	6	7
Return to Gender Question	8	8
Stereotype	12	27
Quotes	29	182
Autonomy	14	24
Compensation	15	44
Demo Reel	4	10
Esteem	15	23
Long Hours	14	33
Multitasking	2	2
Name drop	2	2
Personal Enrichment	17	27
Recruitment practices	11	26
Risk	8	17
Merit	5	6
Age	8	19
Work-life Balance	13	27
Physical Condition	2	6
Anonymity	2	2
Intense and Time-consuming work	8	14
Schedule	13	46
Networking	1	1
Legacy	1	1
Experience	14	42
Studio Culture	12	41

Appendix C – Sample Initial Contact Email

Hi [participant's name],

My name is Sabine and I am currently working at Blue Sky Studios. I don't think that we have ever met in person, but we do know several people in common on LinkedIn. I would love to connect with you directly, since I think that you have a very interesting profile and am excited to meet a new [Animator / Character TD] in the industry.

I am writing to you, because I was wondering if I could interest you in participating in my research project. I joined a PhD program in Film Studies while working full-time at Blue Sky and I am currently working on my thesis. Over the years as a Character TD, I found myself curious about the way people other than the director or producer can influence the creative direction of a 3D animated movie. So I decided to make this my research topic.

My project involves around 25 participants from 3D animation studios all over the US and I would like to invite you to be one of them. I wouldn't take much of your time and it is anonymous unless you should wish to be credited by name. It would only be one interview, lasting no longer than an hour, at a convenient time and location for you.

Please let me know if you would be interested. I thought that as [an Animator / a Character TD] with your experience, you would be a great participant for this project, and I would love to send you some more detailed information to answer any questions you might have.

I am looking forward to hearing from you! I know how busy it can get, so thank you very much for all your time and consideration!

Best wishes,

Sabine

PARTICIPANT INFORMATION SHEET

3D artists and their individual creative and technical contribution to the collaborative process in the American 3D animation feature film industry: a production studies approach

Introduction

I would like to invite you to participate in this project, which is concerned with how you interact and collaborate with your colleagues at work. I am especially curious in how much you feel you can contribute to the overall 3D animation process and if there are any differences in opinion between men and women.

What is the purpose of this project?

The project is part of my PhD program at the University of Kent in Canterbury, UK. My aim is to work the insights gathered by you and other participants into a written dissertation on the outlined topic. This study is completely independent and is not connected or affiliated with any animation studio. It is solely sponsored and approved by the University of Kent.

Often, academic research and popular media focus on the director or producer of animation feature films. Instead, it is hoped that this research could help to shed some light on the creative influence of the women and men behind-the-scenes and reveal the impact they might make on the final film.

Who are you?

I have been working in 3D animation for more than 9 years and am still currently employed in the American animation industry. Over the years as a character technical director, I found myself interested in the way people, which are not all the way on the top of the hierarchy, can influence the creative direction of a movie. That is why I joined the PhD program at the University of Kent as an external researcher to pursue this idea academically.

What will I have to do if I agree to take part?

Please reply to my email (sh649@kent.ac.uk) so that I know that you are interested.

1. We will make an appointment between now and December 2016 to meet at a convenient time and location for you.
2. Before we start the interview, we will review this sheet again and I will ask you to confirm that you have read the information and understand the interview procedure.
3. There will be one, single interview with myself which will be audio-taped and during which I will ask you questions about your work practices, for example how you interact and collaborate with your colleagues. The interview is expected to last no longer than an hour and is a one-off event.
4. When I have completed the interviews I will produce a summary of the findings which I will be more than happy to send you if you are interested. If you are curious about the study as a whole, I will provide you with a copy of my thesis once completed and published.

How much of my time will participation involve?

One interview lasting no more than an hour.

PARTICIPANT INFORMATION SHEET

Will my participation in the project remain confidential?

If you agree to take part, the interview data will be anonymised unless you should explicitly wish to be credited by name. I will not discuss any names, locations or identifying particulars with anyone. Our talk will be audio taped to help me accurately capture your insights in your own words. However, your name will not be recorded on the tape. No one besides me and a reputable and discreet professional transcriber will have access to the recordings. I will use pseudonyms for all names, studios, cities, towns, and counties, and disguise your identity and employer in any published materials or presentations. Though direct quotes from you may be used, your name and other identifying information will be kept anonymous.

The transcripts and audio tapes, as well as any information sheets and forms, will remain in my direct physical possession in a lockable drawer or lockbox.

What are the disadvantages and advantages to take part?

It could be that you are not comfortable talking about how you feel about your work practices and the things you do to contribute to the animation process.

However, you may find the project interesting and enjoy answering questions about the things you do during your work day. Once the study is finished it might allow present and future animators, as well as film scholars, to get a better idea of the actual control and influence artists in the industry have on the film creation. This might help to promote the work of the many behind-the-scenes employees in feature animation and make them more visible.

Do I have to take part in the study?

No, your participation in this project is entirely voluntary. You are not obliged to take part, you have been approached because you are a member of the industry under study with a view that you might be a great participant for this project, this does not mean you have to.

If you do not wish to take part you do not have to give a reason and you will not be contacted again. Similarly, if you do agree to participate you are free to withdraw at any time during the project if you change your mind.

What happens now?

If you are interested in taking part in the study please reply to my email (sh649@kent.ac.uk) to let me know. I will then contact you so we can arrange to meet at a time and place that is convenient for you. If you decide you would rather not participate in this study I would appreciate it very much if you could send me a quick email. Then, simply ignore this letter and no further contact will be made. Thank you very much for your time and consideration to take part in this research. Please feel free to ask me any additional questions you might have.

Researcher:

Sabine Heller, Postgraduate student (Film Studies)
School of Arts, University of Kent, Canterbury, Kent CT2 7UG, UK
Email: sh649@kent.ac.uk
Phone: [REDACTED]

Supervisor:

Dr Aylish Wood,
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Appendix E – Informed Consent Form



CONSENT FORM

Title of project: 3D artists and their individual creative and technical contribution to the collaborative process in the American 3D animation feature film industry: a production studies approach

Name of researcher: Sabine Heller

Participant Identification Number/Name for this project:

Participant email address:

Participant cell phone number:

Please initial box

1. I confirm I have read and understand the information sheet for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.
2. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason. (Contact phone: [REDACTED] or email: sh649@kent.ac.uk).
3. I understand that my responses will be anonymised before analysis. I give permission for members of the research team and a professional transcriber to have access to my anonymised responses. (Direct quotes will be anonymized by using pseudonyms for all names, studios, cities, towns, and counties, and disguise the participant's identity and employer in any published materials or presentations.)
4. I agree to take part in the above research project.

_____ Name of participant	_____ Date	_____ Signature
_____ Name of person taking consent (if different from lead researcher)	_____ Date	_____ Signature
_____ Lead researcher	_____ Date	_____ Signature

Copies:
When completed: 1 for participant; 1 for researcher

Appendix F – List of Participants (Pseudonyms)

Name (Pseudonym)	Age Group	Sex	Occupation	Current Company	Previous Company	Years in Industry
Adam	30s	Male	Character TD	DreamWorks Animation	Not Applicable	0-4
Andrew	40s	Male	Animator	Pixar Animation	Blue Sky Studios	20-24
Astrid	40s	Female	Animator	Walt Disney Animation	Not Applicable	15-19
Barbara	30s	Female	Animator		Sony Pictures Imageworks	5-9
Ben	30s	Male	Character TD	Sony Pictures Imageworks	Not Applicable	5-9
Brendan	30s	Male	Character TD		Pixar Animation	15-19
Christine	30s	Female	Animator	Blue Sky Studios	Rhythm & Hues	10-14
Claudia	50s	Female	Character TD	DreamWorks Animation	Walt Disney Animation	25-29
Doug	30s	Male	Animator	Not Applicable	Blue Sky Studios	5-9
Drew	30s	Male	Character TD		Sony Pictures Imageworks	10-14
Dustin	30s	Male	Animator	Blue Sky Studios	Walt Disney Animation	10-14
Ellen	30s	Female	Animator	DreamWorks Animation	Sony Pictures Imageworks	10-14
Hazel	20s	Female	Character TD	Laika		0-4
Joy	30s	Female	Character TD	Blue Sky Studios		10-14
Julia	40s	Female	Character TD	Walt Disney Animation	Laika	10-14
Justine	40s	Female	Animator	Blue Sky Studios		15-19
Larissa	30s	Female	Character TD		Pixar Animation	5-9
Lukas	30s	Male	Animator	Blue Sky Studios	Freelancer	15-19
Mark	20s	Male	Character TD	DreamWorks Animation	Reel FX	5-9
Markus	20s	Male	Character TD	Walt Disney Animation	Nikelodeon Animation	0-4
Melanie	40s	Female	Character TD	DreamWorks Animation	Various	15-19
Samuel	30s	Male	Animator	DreamWorks Animation	Blue Sky Studios	10-14
Simon	40s	Male	Character TD	Blue Sky Studios	Sony Pictures Imageworks	15-19
Stan	30s	Male	Animator	Pixar Animation	Walt Disney Animation	5-9
Yvonne	50s	Female	Animator		Walt Disney / Disneytoon Studios	20-24

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