CYCLE : SHORT FILM AND EXPLORATION OF ANIMATION TECHNIQUES

By

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Abstract

The goal of this project was to study animation and animation pre-production through the design and creation of a short film, with an emphasis on research and gaining familiarity with the process of animating over the total competition of the film. Each stage was completed in order to achieve technical and practical understanding of storyboarding, character and prop design, background design, rough animation, refined line and color, and video editing. A large amount of focus was given to learning animation workflow in Adobe Photoshop and Adobe After Effects, and to learning the fundamentals of traditional animation drawing. As a creative capstone in the completion of a Bachelor of Fine Arts in Visual Communication with an Illustration emphasis, this Honors thesis facilitated a gaining of supplemental knowledge in a relevant and ever-growing field of the arts. Animation complements and enhances illustration scholarship through learning to create the illusion of dynamic motion in still images and the problem solving required to successfully combine the various elements necessary for animation production.
SELECT CONCEPT DESIGNS  
(NEAR FINAL)  

CHARACTER CONCEPTS
Cyclist

SHAPESHIFTER
Artist Statement

In creating an animated short film for my thesis, my ultimate goals were to better understand the fundamentals of drawing for animation and the processes involved in developing an animation project from beginning to end. I intended to research the various stages of animation while exploring software options and techniques that would optimize my workflow, all while practicing applicable skills so that I could utilize what I learned in future films and collaborations. My main focus here was on learning animation basics and exploring the design and pre-production stages, making the end product secondary to the process. I knew how time and labor intensive animation was when I started this project, so the goal was to complete as much finished footage as I possibly could while learning as much as possible.

I researched several software options in the undertaking of this project and ultimately decided to use Adobe Photoshop for drawing and animating and Adobe After Effects for compositing footage. Unlike a lot of similar software, Photoshop allows for natural-looking brushstrokes and streamlined exporting of finished work, and After Effects possesses all of the tools needed for video editing and easy manipulation of video assets. Being made by the same manufacturer, they work well together because of their similar user interfaces, and I was already very familiar with the interface of both programs. I heavily referenced independent freelance animator Alex Grigg’s Photoshop animation techniques and his most recent short film, Phantom Limb, to find a workflow in these programs that was most efficient and easy-to-use for my own needs.

of Life for the basic principles and philosophy of animation. Force: Dynamic Life Drawing for Animators by Michael D. Mattesi provided additional tips for capturing compelling motion and flow in drawings of the figure. Before moving on to storyboarding, I spent the first few months of this project reading through these guides and practicing what I was learning, while also practicing my skills in the software I planned to use, until I achieved a certain level of confidence.

I wanted to maximize the types of technical and design elements I could incorporate in order to gain varied experience, so I started with a general premise on which to base the setting, characters, and overall action of the animation. I took inspiration from growing up around cars and motorcycles and from the fantasy and science fiction stories I’ve always enjoyed—combining the two would give me the opportunity to design vehicles and fluid “magic” effects as well as standard characters, props, and backgrounds. Learning to plan and execute action scenes from various angles was important to me in this project, and I had to take the time-consuming nature of frame-by-frame animation into account, so I kept the story very minimal and flexible to allow for changes, cuts, or additions that I would need to make to better accommodate the technical goals of this project. What I ended up with was the story of a portal-hopping motorcyclist arriving in a desert landscape to retrieve a mysterious magical object, only to have it snatched away by another strange rider, whom she chases further into the desert—they struggle, and the other rider crashes, only to rise as a monstrous shape-shifter and attack. The protagonist evades and manages to steal the magical object back and ride away, with the shape-shifter temporarily defeated. I drafted variations on the basic outline centered on a race with other drivers and even partially storyboarded that version, but ultimately cut it to two characters in order to better focus on the main actions and give myself adequate time to spend on each part of the project. I also considered adding sequences and lengthening existing ones, but those were also cut early on to keep the film succinct and manageable.

Once I had a general idea of what actions I wanted to take place and what elements to include, I began the storyboarding process. At this stage, I very roughly drew out each
important action and planned so that I would have a range of long, medium, and close-up shots and a variety of angles that would be interesting to animate (and to watch). This first pass at composition and timing provided me with an estimate of how many characters, props, backgrounds, and effects I would need to design, and guided my overall stylization choices.

In character and vehicle design, I aimed for a minimal, angular look with a focus on simple shapes that would fit my preferred drawing style while keeping details streamlined. I filled a project-specific sketchbook with research drawings of character sketches and different types of motorcycles, testing a multitude of designs and playing with different proportions and variations. I based the motorcycles on contemporary machines seen in Grand Prix motorcycle racing and similar, more publicly available models—it was important to simplify heavily while maintaining the right shapes for a fast, sporty motorcycle. I especially looked into vehicles made between the late 1970s and the late 1980s to get a certain retro feel that I also wanted to convey in the costume and colors for the riders, which are strongly influenced by 1980s skiwear and modern racing and motocross attire.

I harmonized the look of the two cyclists by utilizing a similar triangular and striped motif on both of their outfits, but I gave the protagonist rounder, friendlier shapes to contrast with the antagonist’s sharper, leaner look. Though I decided on an overall angular stylization in the limbs of the characters, I kept the torsos soft and curved in shape to allow for organic motion, and to provide contrast against the rigid forms of the vehicles I had designed. I started with a neon color scheme and worked to soften it from there with a warm hued overlay to maintain a brightness in the overall palette without creating something too eye-searing, selecting the antagonist’s color arrangement so that it would be a little harsher and more jarring than the protagonist’s more analogous choices. Since I decided on using thick outlines on props and characters, I opted for a simple, painted style with an emphasis on light and color blocking for the backgrounds in this project, and looked to modern television animation backgrounds like Elle Michalka and Amanda Winterstein’s work on *Steven Universe* and Scott Will’s paintings for *Samurai Jack*. 
After completing most of the design stage, I took a second pass at the rough storyboards to fix timing issues, make cuts, and add new material where I felt it was needed using Adobe After Effects—in this way, I generated animatics, which are storyboards edited together to make timed-out guides with camera effects for creating final animations. I then organized all of the material I needed to animate into a spreadsheet, assigning scene and shot numbers and making production notes for myself to keep track of progress and prioritize my work.

The rough animation stage consists of sketches that map out the main action of the movement. Since standard film runs at twenty-four frames per second, “animating on “ones” consists of twenty-four individual drawings per second, and animating on “twos” cuts that work in half with a new drawing every two frames so that each drawing is shown for two frames consecutively. Starting rough animations, I alternated between working on “ones” and on “twos,” depending on the complexity and flow of the particular shot. More drawings means that animating on “ones” has a smoother feel and is usually used for effects and more organic movement that needs extra attention, while animating on “twos” is a little faster and suitable for most other motions. Because animation requires getting the motion of the drawings to feel “real,” timing out and drawing actions that looked appealing necessitated a lot of trial and error and proved to be very challenging. I had to refer back to the animation tricks that I had reviewed in my chosen textbook materials very often, and work to exaggerate my drawings and keep proportions consistent to give objects proper weight and momentum while maintaining plausibility.

After finishing a first pass at animating a shot, I was able to go back and draw more refined lines over the rough animation while adding necessary “in-between” frames for smoothness of motion, commonly called “clean-up” animation. This step, plus the addition of color, is a little less challenging because of the guidelines the rough animations have already established, but still requires plenty of time and work to complete. “Clean-up” work was exported from Photoshop and imported into After Effects, where I composited and arranged footage and backgrounds, adding color corrections, motion and camera effects, sound, and extra
Completing this project was a difficult challenge for me, as it demanded huge amounts of time, drawing, research, and practice. Overall, I feel a lot more familiar and comfortable with the animation process after all of the work I finished, and it forced me to manage my time better and speed up my drawing processes while learning a lot of useful skills in an area I had previously only studied on a surface level. My education as a Visual Communication major with an illustration emphasis focused on producing still images, but animation has always been an important influence on my illustrative work. Depicting dynamic motion and the appearance of fluid movement, even in singular still images, has always been a specific interest of mine. One of my long-time favorite quirks of animation is the animation “smear,” a term that refers to frames that are drawn stretched or distorted in order to better create the illusion of a motion blur. I have even incorporated this concept into some of my recent illustration work, and I was able to draw a few “smears” in context during this project, which helped me to better understand how they function and gain a new appreciation for the technical tools animators have developed over time.

Moving forward, the animation industry is ever-expanding and in need of artists and technicians in film, television, advertisement, and more—an animation project seemed like the perfect capstone for the type of artwork I want to make, either personally or commercially. For me, this capstone is the beginning of many future short films and, I hope, a career in a business that I care about passionately. I completed each step in the general animation process alone on this project, which is not usually the case in larger collaborations, but by practicing in all areas I better understand the kind of work needed for each step, and can continue to expand and improve my skill set.

This project finishes my schooling with a secondary source of knowledge and experience that I was not able to study in depth within my major, but enriches the core lessons on illustration that I learned and internalized as a part of my degree. Drawing for animation requires a comprehensive awareness of anatomy and creating believable forms from all angles while
taking motion into account, all of which are skills that lend themselves to creating compelling still images. Designing and drawing for animation purposes has given me new ways to think about methods of illustration and motivated me to continue to develop tangential skills that will improve and alter how I approach my craft. Alongside core classes, the Visual Communication program requires interdisciplinary study in various mediums and constant exposure to new techniques for creating illustrations in order to provide a well-rounded and comprehensive education. The study of animation principles in this Honors capstone extended that philosophy for me in a way that suited my own interests, fostering additional abilities that I can now apply practically and in combination with everything else that I have studied in my time at the University of Arizona.
Works Cited


