

# 2:30 - A Stop-Motion Short Film

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## Abstract

2:30 (2025) is a five-minute stop-motion animated short film set in an anachronistic world, exploring addiction, obsession, and the myth of the tortured artist. In a dark and cramped attic, Luna, a moth with dreams of being a dentist, sets up her first professional practice at home. As she works, she discovers an intoxicating euphoria in the glow of her dental light, forming an obsession that fuels her craft and enhances her skills. As the days blur together, her fixation deepens and her artistry decays along with her sanity. This film is a haunting, tactile exploration of artistic obsession, existing within the horror and sci-fi genres. Through meticulously crafted puppets and sets, the theme of addiction within the art community and the breakdown of the myth of the tortured artist trope are both explored, uniquely drawing connections with the symbolism and beauty of nocturnal insects. Addiction and mental illness are investigated alongside research involving the craft of stop-motion animation. Through the pre-production process, sustainable fabrication, frame-by-frame animation, and post-production, this dark tale is told through a display of traditional animation, one infused with the essence of human touch, personal experience, and creative exploration.

## Introduction

Creating 2:30 has been a deeply personal and transformative journey, both as an artist and as an individual. This stop-motion animated short film, set in a dark, anachronistic world (having chronological inconsistency; belonging to a period other than that being portrayed), tells the story of Luna, a moth with a passion for dentistry

whose obsession with her craft spirals into addiction. Through Luna's descent into obsession, *2:30* explores the darker aspects of the creative process, particularly the destructive myth of the tortured artist, which often romanticizes the idea that suffering is essential for true artistic expression. This narrative delves into the complex relationships between addiction, mental illness, and creativity, and challenges the notion that personal pain is a requisite for producing meaningful art.

Drawing from my own experiences and extensive research, this project combines elements of traditional animation with personal reflection on the art of stop-motion. The film reflects the meticulous and tactile nature of the medium, where every frame of animation is crafted by hand, infusing the work with a sense of human touch and authenticity. From the creation of the puppets and sets to the final stages of post-production, I aimed to capture the essence of both the technical process of animation and the emotional depth of the story. The sound design and visual effects, too, were carefully designed to enhance the mood and themes of addiction, obsession, and artistic breakdown.

I will discuss the full scope of the production process for *2:30*, from the initial concept and research phase through to the final editing and sound design. By sharing insights into the creative choices made at every stage, I hope to convey how this film stands as a reflection of the intersection between the experience of addiction, artistic expression, and the technical craft of stop-motion animation.

## Conception

### 1.1. Ideas and Research

The initial idea for this story emerged from a blend of dreams, nightmares, horror themes, and personal experiences. While brainstorming concepts for my previous short film, *best friend*, in my Advanced Animation Techniques class, I was navigating a particularly dark period in my life. Many of my creative ideas stem from vivid dreams, and at that time I was having recurring ones involving insects, horror, and dentistry. I can't explain why those elements collided in my subconscious, but that combination sparked two concepts: one about a moth dentist addicted to light, and another about a lonely bunny surgeon, the latter becoming *best friend*.

Given the time constraints of that project, I realized a fully stop-motion short wasn't feasible. Despite my desire to bring the character to life as a fluffy and whimsical tactile puppet, I chose instead to pursue *best friend*, which used 2D animation with some stop-motion elements to reduce the fabrication workload. However, I knew the moth dentist story would stay with me. Later, I had the opportunity to take on an independent study with Professor Forest Gamble focused on stop-motion short film production. I knew immediately this would be the right time to revisit the moth character and tell this story.

For me, storytelling is a way to process and express my dreams, nightmares, and inner world, but also to share untold stories that could resonate with and support others. As vulnerable as it is to share personal experiences through art, I believe that art is about making people feel something and feel seen. Fear and vulnerability are

necessary parts of that. My own journey with addiction and recovery, paired with the lack of representation of addiction, especially within animation, compelled me to create a story that could be a point of connection. I wanted to tell a story that would be relatable for artists who face similar struggles. As an artist and animator, I've felt the pressures of a capitalist society that demands constant output, where rest is seen as laziness rather than necessity. These unrealistic expectations, both systemic and internal, often lead artists into burnout, mental health crises, and addiction.

There is a stigma surrounding rest. We're taught that we must always be producing. The system pushes substances, stimulants especially, as tools to help people keep up with these expectations. Historically, addictive substances like tobacco, caffeine, sugar, and amphetamines were used to fuel labor and warfare. There has long been an underlying expectation to perform beyond human limits, often at the cost of health and humanity. I began to think about how to express all of these ideas through a story. A character-based narrative about an artist experiencing addiction felt like a powerful vessel to convert these complex relationships. I knew approaching the topic too directly might alienate viewers, so I chose to convey these themes through a whimsical yet eerie lens: an anachronistic world where a cute moth dreams of being a dentist. The surreal setting offers enough distance for viewers to safely engage with difficult topics, allowing the story to gently invite reflection and conversation.

In developing this story, I also wanted to challenge the "tortured artist" trope. It's often romanticized that great art comes from suffering, that addiction and misery fuel creativity. But I believe this is a harmful myth. People point to Van Gogh as the ultimate example, yet many of his best works were created while he was healing. He was robbed of his future work when he died. The truth is, deceased artists can't make art. Addiction and mental illness can lead to suicide and overdose related deaths, and the idea that artists must suffer to create meaningful work is one that I believe needs to be dismantled. Art can emerge from healing just as powerfully, if not more so, than from pain.

Though it's ambitious to distill all of these ideas into a five-minute stop-motion film about a moth, I believe even scratching the surface can spark thought and conversation. I've always been drawn to insects, especially nocturnal ones, and I'm fascinated by horror: stories that unsettle us and force us to confront what we often avoid. I also love the *gurokawa* aesthetic, a Japanese concept that combines creepy and cute. Using a cryptid-like moth character inspired by the Mothman mythos felt like the perfect fit.

This film also builds on the universe I began in *best friend*. I liked the idea of introducing a moth dentist to a world that already housed a bunny surgeon. During the making of *best friend*, I was still in the midst of my own chaos. I realized I wanted to begin healing before telling this next story, and that now is the perfect time to share it.

The metaphor of this moth's attraction to light emerged naturally as I thought through the themes. In the story development phase, I also decided to make the character a moth woman instead of a man. Stories about addiction often center men, and I wanted to offer a different perspective. I named her Luna during storyboarding. While she isn't a Luna moth specifically, I learned from a friend who studies insects that Luna moths are born without mouth anatomy and die within a week from starvation. That felt symbolically relevant to this story of longing, hunger, and absence. I also

researched why moths are drawn to light. According to Graham, 2024, “Nocturnal insects appear drawn to artificial lights because they instinctively twist their backs towards bright objects. The instinct to tilt their backs toward the brightest thing available at night—the sky—allows insects to quickly figure out which way is up”. Metaphorically, substance use can feel like a kind of “light”, offering direction, control, or relief in times of disorientation, which is how people get hooked.

Before beginning production, I gave a lot of thought to the film’s aesthetic. My previous work often juxtaposed horror with bright colors. I wanted this world to be darker, more isolated and industrial, reflective of Luna’s internal state. I chose an anachronistic universe to emphasize the disconnection and loneliness that addiction and artistic obsession can cause. I pulled visual inspiration from some of my favorite sources: the video game *Machinarium*, stop-motion works by Robert Morgan (*Bobby Yeah*), Phil Tippett’s *Mad God*, and *The Maker* short film. I was influenced by the 2009 film *9*, as well as *Requiem for a Dream* for shot pacing and structure. I looked to David Lynch’s *Eraserhead* for set and sound design inspiration, and *The Cabinet of Dr. Caligari* for its distorted set perspective. For the title card, I took technical inspiration from *The Thing*.

Before I began scriptwriting and pre-production, I compiled these inspirations into a mood board (Fig. 1). I also dove into practical research on stop-motion filmmaking by reading the following texts recommended by Professor Gamble:

- *Stop-Motion Animation: Frame-by-Frame Film-Making with Puppets and Models* by Barry Purves (2018)
- *Stop-Motion: Craft Skills for Model Animation* by Susannah Shaw (2008)
- *Your Career in Animation* (2nd Edition) by David Levy (2021)
- *Creating Animated Cartoons with Character* by Joe Murray (2010)



**Figure 1.** A mood board compilation of all of the personal inspirations for the film 2:30, including images from the following: *The Cabinet of Dr. Caligari*, *Eraserhead*, *The Thing*, *Machinarium* (video game), Robert Morgan’s *Bobby Yeah*, Phil Tippett’s *Mad God*, *The Maker*, *Nuggets* (YouTube animation), *9*, *Requiem for a Dream*, and various character and set design inspiration images.

# Story

## 2.1. Logline

A moth dentist starts a professional practice from home where she discovers her obsession with light, leading her down a restless spiral of addiction.

## 2.2. Synopsis

In a dark and cramped attic, Luna, a moth with dreams of being a dentist, sets up her first professional practice at home. As she works, she discovers an intoxicating euphoria in the glow of her dental light, forming an obsession that fuels her craft and enhances her skills. As the days blur together, her fixation deepens and her artistry decays along with her sanity. Her work becomes bloody and reckless, and in a fevered haze, Luna makes a violent mistake sending her into a nightmarish spiral. When the light finally goes out, she is left in darkness, forced to confront the wreckage of her addiction.

## 2.3. Script

In all of my previous animated shorts, the production process was driven by storyboards rather than scripts. This was largely due to the highly visual nature of those films, which featured little to no dialogue. While *2:30* also contains no dialogue, I chose to begin this project with a written script before moving into the storyboard phase. Since this film was going to be longer and more complex than my past work, I wanted a clear, organized foundation to guide the production.

Rather than dialogue, the scripted text focused on detailed stage direction, descriptions of actions, emotions, settings, and sound. I included sound effects directly in the script to establish mood, pacing, and rhythm. My goal was for someone reading it to be able to imagine the film, even without visuals or audio.

I drew a great deal of inspiration from the script for the animated film *WALL-E*, particularly the opening sequence, which is largely silent. That script reads more like a novel, filled with rich visual cues and emotional nuance. I took a similar approach, treating the script not just as a technical document, but as a storytelling tool in its own right. Writing the script also helped me establish the aesthetic and emotional tone of the film early on, defining how Luna's world would look, feel, and move. This was especially helpful during fabrication, as I already had a strong visual and atmospheric map of each scene before beginning construction.

Pacing was another major consideration. I wanted the writing to reflect the rhythm of the film itself. I combined quick, clipped sentences during fast-paced sequences to capture the anxiety and urgency tied to addiction, contrasting slow, drawn-out moments of quiet and tension. The structure of the script became a way to mirror the energy of the story: bursts of movement, rapid shifts, and brief pauses for breath.

Below is an example from the script that reflects this approach to writing:

*She reaches for the light, hovers for a second before switching it on. Bright light floods the screen. Moth's eyes widen and brighten. She is in a spotlight: surrounded by darkness other than the light directly around her, continuing to brighten. Sound of her heartbeat quickening.*

**ZOOM INTO EYES:**

**INT. INSIDE MOTH**

*Moth is standing inside a dark room with the backs of her eyeballs coming through the walls behind her. She looks around. Screeching, ominous sounds in the background. Heartbeat continues to quicken.*

**ZOOM OUT OF MOTH:**

**INT. ATTIC**

*Moth sighs in a new sense of relief. The room & colors seem brighter. She is still holding dental tools.*

*Moth starts working fast, everything is upbeat. Puts dental mouth opener in the mouth, prying open plasticine gums, exposing more teeth. She finishes her dental work very quickly. The light is still on. Moth seems very happy.*  
*Cut to Moth closing the door, the patient has left. She goes back to her station and turns off the dental light and everything gets dark. The spotlight around her fades and the colors dull. Sound of her heartbeat slowing.*  
*Moth slumps on the bed. Everything is duller again.*

## 2.4. Character Study

As part of the writing process, I conducted an in-depth character study of both Luna, the main character, and Blue Bunny, one of her dental patients. Blue Bunny also appears as the protagonist of my previous short film *best friend*. I wanted to understand these characters as closely as possible, as if they were good friends of mine. By exploring every aspect of their personalities and internal worlds, I aimed to reach a point where I no longer had to guess how they would react to situations. This approach was heavily influenced by Joe Murray's book *Creating Animated Cartoons with Character*, which emphasizes the importance of truly knowing your characters in order to write meaningful, emotionally resonant stories. I wanted viewers to connect with and care about my characters on a deep level, and for that to happen, I had to fully understand who they were beyond their role in the story.

Using a list of character development questions adapted from Murray's book, I explored key traits, behaviors, and backstories. Some of the questions I asked included:

- Why are they interesting?
- Do I care about them?
- Do they make me laugh?
- Can I relate to them?
- What sets them apart?
- What are their quirks, ticks, or strange habits?
- What are their fears, desires, insecurities, and compulsions?
- Are they materialistic or minimalist? Rule-followers or rule-breakers?
- What is their upbringing, their worldview, their favorite food?
- Do I want to invite them into my home?

I had previously completed a character study for Blue Bunny during the development of *best friend*, but I revisited and expanded on it here. For Luna, I began from scratch. Luna is a complex and emotionally layered character. I envisioned her as

introverted, creative, and anxious, someone who avoids confrontation and seeks comfort in solitude. She is a homebody, bordering on agoraphobic, who finds safety in the dark and channels her emotional struggles into her craft: dentistry. She's sentimental and prone to collecting small trinkets, creating a kind of organized chaos in her living space. While she maintains a mostly neat and tidy life, she leans toward maximalism. Luna is self-aware, yet still vulnerable to unhealthy coping mechanisms. She falls easily into quick fixes and is nervous about starting a new job, especially because she's not used to pleasing others or conforming to workplace expectations.

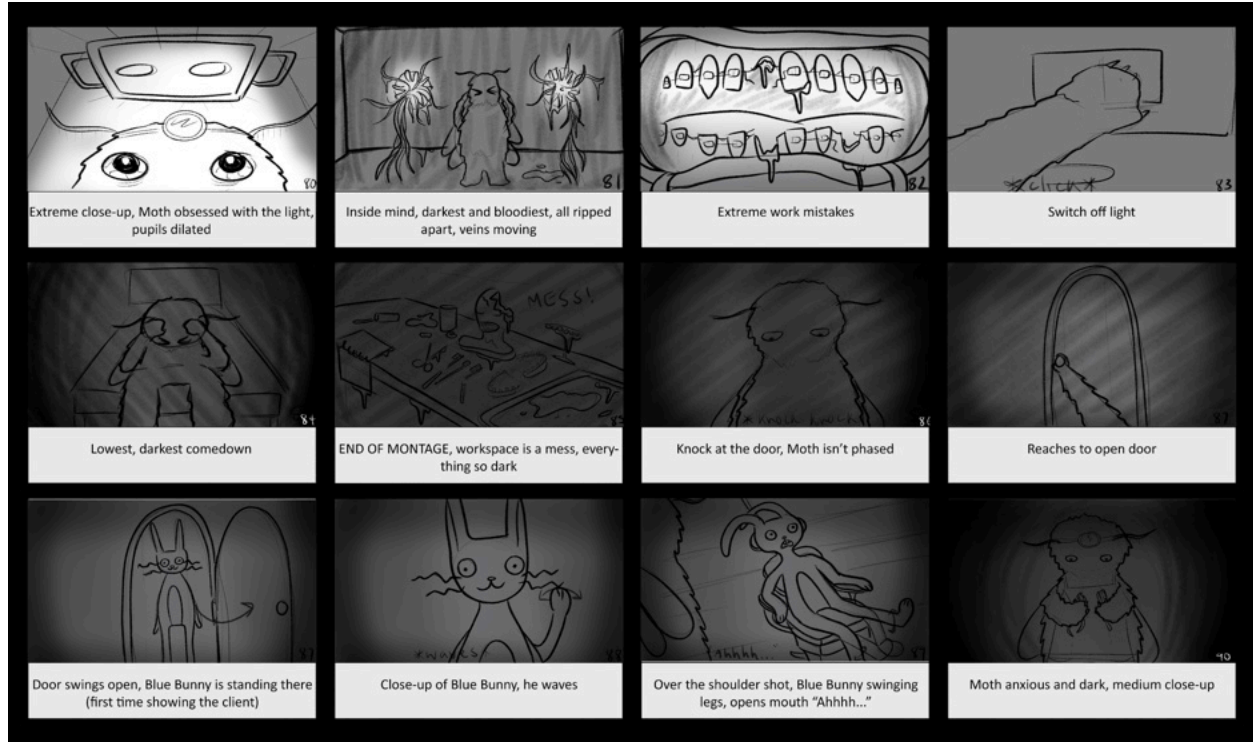
In contrast, Blue Bunny's personality is more open and expressive. He's cheerful, friendly, a bit naive, and deeply driven by a desire to create and connect. 2:30 is his origin story, taking place before *best friend*. The violence he experiences here in 2:30 leads him to isolate himself for a long time, ultimately pushing him into a spiral of loneliness and instability. In this earlier version of himself, we see a more hopeful side—he is curious, eager, and playful. From *best friend*, we can deduce that he is a crafter, a maker, and someone who just wants to find friendship and meaning in the world. By developing Luna and Blue Bunny on this level, I was able to write from a place of emotional authenticity. These characters are more than vessels for a story, they're mirrors of real feelings, experiences, and inner conflicts, which I hope will help audiences see parts of themselves in the film.

## 2.5. Storyboard

Once the script was finalized, I moved into the storyboarding phase of production. I created the storyboard in Procreate, paying close attention to shot composition, angle, and progression (Fig. 2). I made sure to follow key cinematic principles such as the 30-degree rule and the 180-degree rule, ensuring that the visual flow would be coherent and intuitive for the viewer.

Before beginning the actual storyboard, I created reference sketches of my characters and drafted a floor plan of the set. This allowed me to maintain consistency in spatial layout and character proportions throughout the storyboard. The final storyboard consisted of 118 frames. My process involved two passes: in the first, I sketched the basic layout and framing of each shot. In the second, I refined the drawings for clarity, added shading to suggest lighting direction, and included arrows and notes indicating intended camera movements or actions to be added during production or post-production.

After finishing the storyboard, I imported the illustrated frames into Adobe Premiere Pro to assemble an animatic: a video compilation of storyboard frames meant to establish timing of each shot. The animatic allowed me to fine-tune the timing of each shot and incorporate motion cues, such as character movement and camera pans, as well as transitions like fades and dissolves. The first cut of the animatic ran approximately 3 minutes and 35 seconds.



**Figure 2.** 12 frames from the final storyboard for the film 2:30, showcasing shot composition, angle, and progression.

## Art Direction

### 3.1. Materials

Once I completed the pre-production and story development phase, I moved on to the fabrication of sets, puppets, and props. With both budget and sustainability in mind, I aimed to use primarily recycled materials and found objects throughout the process. Stop-motion fabrication requires a balance between visual aesthetics and practical functionality, which brings unique challenges and creative decisions.

One of the first choices I had to make was whether I wanted my sets and puppets to appear so hyper-realistic that the viewer forgets everything is miniaturized, or whether to lean into the small scale, handcrafted feel of stop-motion. For this project, I chose a blend of both approaches, leaning slightly more toward realism than I had in my past films. I also wanted to improve the structural integrity and overall professionalism of my set building. In contrast to my previous sets, which were built mostly from cardboard and shoeboxes, I constructed the set for 2:30 primarily from wood. This gave the environment a sturdier build and helped evoke the cozy, attic-like atmosphere I envisioned for Luna's world (Fig. 3).



**Figure 3.** A behind the scenes photo of the hand-built stop-motion set for the film 2:30, built mainly out of wood to have an attic-like atmosphere.

An important part of the fabrication process involves planning for movement, especially how the puppet will perform on set. I had to consider how the character behaves and what kind of motion would be required, which informed the construction of the puppet's joints, limbs, and features. Barry Purves' book provided valuable guidance in this area. For instance, if the character needs to walk, the legs and hips must have enough flexibility and support for walk cycles. If the character expresses emotion primarily through facial expressions or gestures, more detail and articulation is needed in those areas. For Luna, I needed to make sure her facial features, especially the eyes and antennae, could be animated convincingly.

Set design also demands consideration for what will move or remain fixed. Any props or furniture that stay static during the film must be securely fastened to avoid accidental movement and continuity issues during animation. For props that require interaction or repositioning, I used temporary adhesives like putty or plasticine, allowing them to be moved without damaging the set.

Clothing and fabric elements also required thoughtful planning. To maintain control over their movement while animating, I lined fabrics with wire, allowing for deliberate and consistent motion between frames. I believe stop-motion is, in many ways, the closest thing to real-life magic. You are breathing life into inanimate objects,

which means you need total control over every element of the set and characters. Even minor unintended shifts can disrupt continuity and break immersion.

In choosing materials, I had to reconcile visual appeal and performance with camera and lighting conditions. I used a number of metallic and reflective objects, which introduced challenges with glare and unwanted reflections. Lighting had to be carefully planned and tested to prevent those materials from interfering with the visual clarity of each shot.

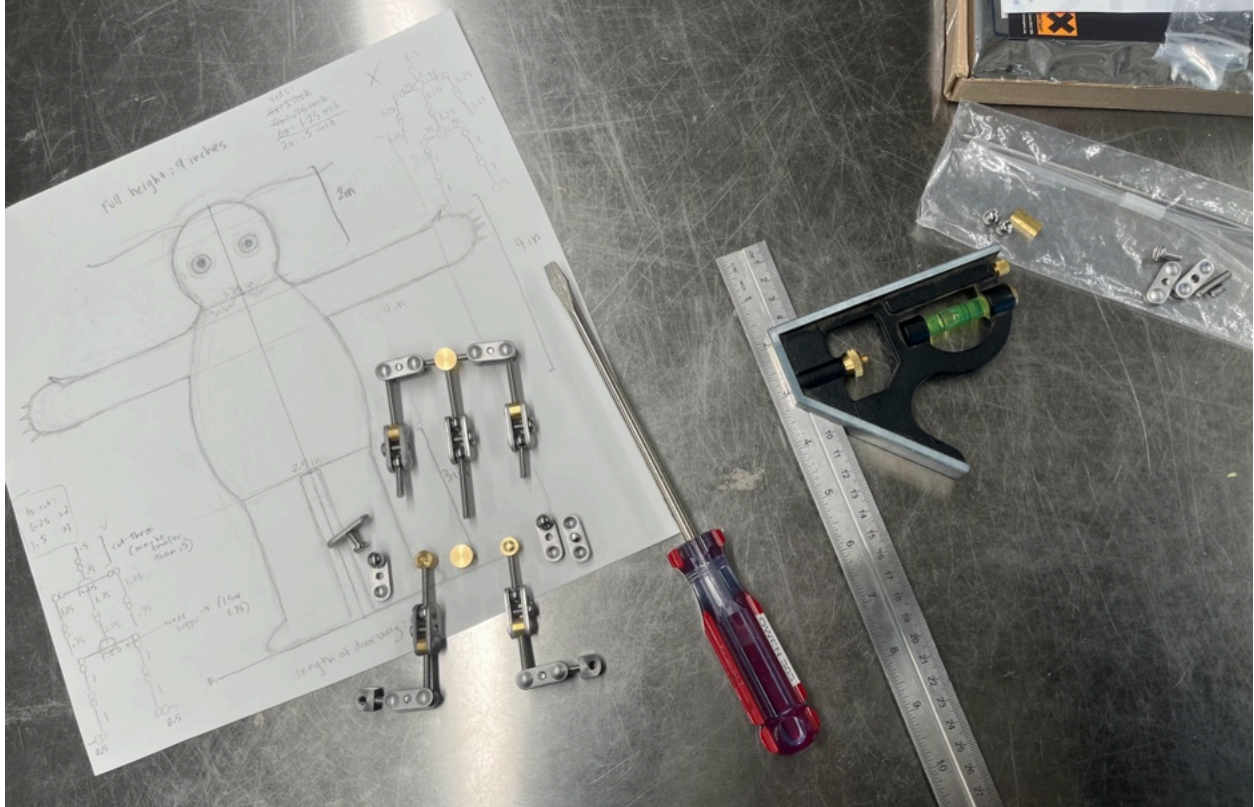
One of the most complex decisions was how to make Luna appear fluffy, like a real moth. I explored various options for creating this texture. However, using fur in stop-motion introduces a common challenge: fur moves slightly every time you touch it to animate, causing a visual effect known as “boiling.” This can be distracting if not handled with intention. I had to decide whether to switch to a different material, find a way to control the fur, or embrace the boil as a stylistic choice. I will go into more detail about that in the character design section.

## 3.2. Character Design

When designing Luna, I had a very specific vision, inspired by a character from my dreams. Her silhouette was key: short, stout, rounded, and cute, with large glossy eyes and long antennae as her only facial features. I also envisioned her with claw-like hands and feet, a furry brown body, and sheer, movable wings. After sketching out these ideas, the challenge was to bring this vision into reality.

One of the first issues I encountered was the difficulty of animating her walk cycle, given her short and rounded design. At 9 inches tall (roughly 5 feet in human scale), this size presented challenges for her mobility, especially with her limited range of movement. I had to adjust the animation to make it work by using creative illusions to stay true to her design while maintaining functionality. I was committed to preserving Luna’s rounded shape, as I felt this aspect of her design was central to her character—rounded characters are often seen as softer, more approachable, and more vulnerable compared to taller, more angular ones. This design choice also influenced how I would convey her emotions, as Luna would have minimal facial features—no mouth or nose, she would have to rely heavily on her eyes and antennae for expression. To compensate for her limited physical movements, I focused on making her eyes highly expressive and ensured her arms, head, and antennae had smooth, flexible movement.

In crafting Luna’s puppet, I aimed for greater stability than my previous puppets. Previously, I’d used aluminum wire armatures, but for Luna, I opted for a ball-and-socket armature. This provided the sturdiness and precise control necessary for the quality of animation that I wanted. After purchasing a ball-and-socket joint armature kit from AnimationSupplies.net, I carefully assembled the armature by sawing and smoothing threaded rods, and adjusting the tension of the joints for optimal movement (Fig. 4). Tight joints in the ankles helped keep Luna stable, while looser joints in her elbows allowed for more fluidity in her gestures.



**Figure 4.** The workspace layout while crafting the ball-and-socket joint armature for the moth puppet, Luna, for the short film 2:30. Cut-to-size threaded rods are shown attached with joint-like mechanisms made from metal plates and threaded balls, all atop a drawn-to-size diagram of the puppet with dimensional references.

Once the armature was constructed, I used dense, springy foam to build up the body, ensuring she was lightweight enough to avoid tipping over. I carved the foam into her rounded shape, and left her wire fingers exposed to give the appearance of claws. The head, which needed to be lightweight to maintain balance, was made from scrap wood and polymer clay, with sockets for the eyes and channels for her antennae. Julia Wright, a glassworker, crafted beautiful glass eyes, which I set in the head with a thin layer of plasticine and petroleum jelly to allow for smooth movement during animation (Fig. 5).



**Figure 5.** The carved wooden head for the stop-motion puppet of Luna the moth, with polymer clay formed around it, antennae attached, and sockets for the eyes lined with plasticine clay and petroleum jelly. Glass eyes made by Julia Wright are set into the eye sockets.

For her fur, I decided to use faux fur despite the challenge of "fur boil," where the texture shifts slightly with each movement in stop-motion. After researching films like Wes Anderson's *Isle of Dogs* and *Fantastic Mr. Fox*, both which contain fluffy stop-motion puppets, I decided to embrace the boil as an aesthetic choice but also use a fixative to maintain more control. I attached fur panels to her body, arms, and legs with hot glue, overlapping seams to maintain a seamless look (Fig. 6). For the head, I applied fur tuft by tuft by hand to ensure a meticulous, clean application around her eyes and antennae. I used Mod Podge as a fixative to keep the fur in place while still allowing slight movement for that living, breathing, boiling effect.



**Figure 6.** Luna the moth, the stop-motion puppet, during the fur fabrication process where fur was applied in panels across her body, and tuft-by-tuft on her head to wrap around her eyes and antennae.

The final details included a dentist costume: a fabric headband with a mirror made from hot glue and scrap metal, as well as an apron made from a recycled t-shirt. The fabric was lined with aluminum wire, giving me full control over its movement during animation. I also created a set of interchangeable eyelids for Luna, molded from plasticine, to animate blinking and add further expression to her character.

For the supporting characters, I used simpler construction methods due to time and budget constraints. They were built with aluminum wire armatures (since they required less animation), aluminum foil, and air-dry clay, then covered in plasticine (Fig. 7). The stylistic choice of creating all of the characters from plasticine, other than Luna, makes her stand out a lot more as a protagonist and also adds to the isolated nature of her character. For Blue Bunny, I added nuts to the bottom of his feet to help him stand, as he had more animation than the other side characters.



**Figure 7.** The puppets of the supporting characters for the stop-motion short film 2:30, including a yellow octopus, an orange fox, a green zombie cat, Blue Bunny, and a purple mouse with an eye patch, all built from aluminum wire armatures, aluminum foil, air dry clay, and plasticine.

### 3.3. Set Design

For the set design, I wanted to create a larger, more stable, and professional setup compared to my previous work. The aesthetic I envisioned was a dark, steampunk attic with warm brown tones. I began by sketching the design in perspective and as a bird's-eye floor plan, calculating the scale to match Luna's 9-inch height (Fig. 8). Using measurements from my apartment for reference, I designed a small, cramped room with a wood-paneled floor and a checkerboard-tiled corner. The walls would also be wood-paneled, featuring a door and a brick wall with a window at the opposite end of the room. Since the ceiling was rarely shown, I decided to simply paint a piece of poster board to match the walls, which could be laid over the set during the few ceiling shots.



**Figure 8.** Initial perspective sketch of the set design and color palette for the stop-motion short film 2:30.

I drew inspiration from the aesthetics of *The Maker* and *The Cabinet of Dr. Caligari*, wanting to incorporate warped perspectives into the set. Both side walls slanted inward, creating the illusion that the room was shrinking at one end. The window was designed with an abstract, crooked shape to complement this effect.

With the help of Forest Gamble, who provided scrap wood and cut it to size, I began constructing the floor. I left small gaps between each wooden plank to allow for room to drill holes for easy attachment of the puppet. After painting the floor dark brown, I used popsicle sticks (with the ends cut off) to create the wood paneling, ensuring the spacing would accommodate the screws for the puppet attachment. After gluing the panels, I applied a wood stain made from acrylic paint and water. I then painted a checkerboard pattern in one corner and finished it with a coat of high-gloss Mod Podge.

For the walls, I used popsicle sticks again for the wood paneling, staining them with the same wood stain. Forest helped cut holes for the window and door. The door itself was crafted from thin plywood, popsicle sticks, and tiny cabinet hinges. I also created a few wooden shelves with popsicle sticks and wood stain. For the brick wall, I carved a brick pattern into poster board using a white colored pencil and painted over it to add detail and wear. The window was designed with a frosted effect using a piece of cut gallon water jug, with popsicle sticks framing it (Fig. 9). To enhance the attic feel, I spray-painted plastic bendable straws silver, added rust details, and wrapped them

along the walls. Additional wear and tear were added throughout the set with acrylic paint.



**Figure 9.** The base of the set for the stop-motion film *2:30*, showing the floor and walls made of wood and popsicle sticks, one brick wall made from poster board, and a window made from a piece of cut gallon water jug. The side walls are shown slanting inwards, giving the illusion of warped perspective in the set.

Beyond the main set, I created two additional locations. The first was a dark, void-like room where Luna enters every time she absorbs light from the dental light. I wanted this set to evoke a sense of isolation and introspection. I used black paper for the seamless wall and floor, cutting holes for glowing eyeballs made from ping pong balls. I added veins and tendrils made from plasticine, aluminum wire, and fake blood, and lit the scene from behind to create a glowing effect for the eyes (Fig. 10). The second additional location was the hallway outside the attic door, which was more of a backdrop than a set. I created a small section of floor and wall using poster board, toothpicks, acrylic paint, and free carpet samples from Lowe's. This setup fit perfectly outside the door frame to give the illusion of a full hallway.



**Figure 10.** The filming setup for the dark void-like room with eyeballs coming through the walls shown in the stop-motion short film 2:30. A piece of black paper was used to create a seamless wall and floor, with holes cut for glowing eyeballs made from ping pong balls. Veins are crafted from plasticine and aluminum wire, and the scene is lit from behind to create a glowing effect.

To ensure the set was stable, I attached blocks of wood to the backs of each wall for support and clamped them onto a recycled wooden table. This setup helped secure the set and made it easier to drill holes for attaching the puppets during animation.

### 3.4. Props

For the props and furniture, I wanted to ensure everything contributed to the set's character and personality. The furniture was designed to match the wooden aesthetic of the walls and floor. I crafted the bed frame, cabinets, table, and bookshelf using plywood and popsicle sticks, staining everything the same color. The bed and pillows were made from foam, the same material used for Luna, and covered with recycled plaid fabric. I created the blanket from recycled knitwear, lining it with aluminum wire for animating. The oven was made using poster board, beads, a piece of a gallon jug, aluminum wire, and acrylic paint. The pot was created from a perfume cap and aluminum wire, while the prison toilet was sculpted from air-dry clay, with added details from beads and a plastic straw, all spray-painted silver. The calendar was made from cardstock, and the posters and drawings on the wall were hand-drawn in pen and stained with watercolor. The pictures on the wall were photos taken by me, framed with popsicle sticks and toothpicks, and painted with acrylic paint markers. The mannequin

head was sculpted from air-dry clay, and the tray was made from a piece of a gallon jug and toothpicks, spray-painted silver. The dental tools were all constructed using aluminum wire, hair elastics, plastic straws, earring backs, toothpicks, hot glue, and bristles cut from an old toothbrush. The clock was created from an old watch, air-dry clay, and aluminum wire. The notebook was made from cardstock, pieces of a gallon jug, and aluminum wire. The rug was a miniature dollhouse Persian rug.

Other props were made from found materials, including resin teeth, sustainably found insects, crystals, metal scraps and gears, bottle caps, and miniature glass jars. The mirror was crafted from an old makeup palette mirror, decorated with popsicle sticks, beads, and string, and painted with acrylic paint. Ceramic items like the miniature mugs and clown faces on the wall and shelf were made by my friend Julia Wright. The dental light was assembled from pieces of a gallon jug, toothpicks, aluminum wire, string, acrylic paint, a clothespin, a recycled light switch, and miniature LED lights. My most prized prop is the dental chair, inspired by old, worn red leather chairs. This miniature chair was made using foam, recycled red faux leather, aluminum wire, plywood, popsicle sticks, glue, and found metal scraps for the wheels (Fig. 11).



**Figure 11.** The dental chair prop used in the stop-motion short film *2:30*, inspired by old, worn red leather chairs and crafted from foam, recycled red faux leather, aluminum wire, plywood, popsicle sticks, glue, and found metal scraps for the wheels.

Finally, I created the mouths for the close-up scenes. These were made using cardboard boxes with holes cut out, resembling tissue boxes to create a sense of depth. I formed the mouths with plasticine clay and resin teeth, adding a plasticine tongue sitting inside the box. The setup was filmed from above on a black piece of paper. I made three variations of the mouths, including one for Blue Bunny and two others with fake braces and color corrections for different variations. I also created a miniature tongue out of plasticine clay and toilet paper soaked in fake blood for the ending sequence. The set, characters, and props I created for this project are some of my proudest work. Every detail contributes to Luna's character and the world she inhabits.

### 3.5. Lighting

Before beginning animation, I needed to decide on the lighting for my scene. I wanted the atmosphere to feel dark and cozy, reflecting the dimly lit attic where Luna feels at ease in the shadows. The only natural light would come from her window. I ended up using four light sources. First, an overhead light with a softbox provided dim, overall lighting for the scene. A second light was directed through the window to mimic natural light. The third light was used to illuminate the hallway, and the final source was the dental light, created using warm-toned LED string lights. This combination of lighting worked perfectly, with the contrasting tones mirroring the story's themes of addiction to light, comparing natural light with the stark, artificial light of the dental lamp. The lighting captured the mood I wanted and reinforced the film's motifs, making it a key element in setting the tone.

## Animation

Once the fabrication process was complete, it was time to bring everything to life, the most magical part of the project. I shot the film at 24 frames per second, animating in twos, using DragonFrame as my software and a Nikon D3300 camera. My goal was to create smooth animation, with a particular focus on making Luna's puppet as expressive as possible. The movement of her eyelids and glass eyes was especially crucial, as they added a great deal of personality. Through her eyes, eyelids, body movements, and antennae, I was able to convey emotions like sadness, fear, obsession, and desire (Fig. 12).



**Figure 12.** A behind the scenes animation shot during the making of 2:30, showing my hands moving Luna's antennae and eyelids to show expression during animation.

Before starting animation, I created detailed exposure sheets for each shot. These sheets included information such as shot numbers, duration of the shot, dialogue notes, camera movements, and specific timing of actions. They also featured storyboard images for reference. The exposure sheets helped keep me organized and allowed me to track progress by highlighting completed shots in green. I also created a filming schedule, breaking shots into sections based on camera angles, lighting requirements, and set setup. This allowed me to film efficiently without needing to rearrange the set constantly.

I filmed several reference shots of myself performing actions like brushing my hair, waking up, and sighing, which helped with timing and gravity, and also gave me the opportunity to add exaggeration while animating. Importing these reference videos directly into DragonFrame proved to be very helpful during animation.

I embraced practical effects throughout the animation process, staying true to traditional techniques and reducing the need for visual effects in post-production. For example, I used frame-by-frame zooming and camera movement, manually adjusting the camera and refocusing between frames. I also created a vignette/spotlight effect by cutting a hole in black paper and taping it to the camera lens. Additionally, I adjusted the brightness of the lights by hand between frames to simulate the effect of the dental light turning on and off, which I felt looked better than post-production editing.

For puppet stability, I had used magnets on previous projects to secure the characters, but I found this method less effective than drilling holes in the set. I used threaded rods and wing nuts in 2:30 to attach the puppets' feet to the floor, which provided better stability. Holes were simply edited out in post. I also used an animation rig for this film, solely for the mouth close-up shots. The dental tools were attached to

the rig, which was secured off-camera to allow for smooth, controlled movement. I didn't use the rig for character animation, as I preferred manual manipulation for those shots.

For the title card and credits, I wanted to use traditional cel animation techniques. Inspired by the title card from *The Thing*, I created a digital animation and then traced each frame onto clear acetate sheets. I painted these frames with acrylics and photographed them on a lightbox to create the animation. I was thrilled with how the effect turned out and plan to explore more cel animation in the future.

Lastly, I incorporated digital 2D animation into the film. Although I initially wanted to keep the film entirely stop-motion, I realized that 2D elements would add a mixed-media quality that fits my art style in my other films. I love the unpredictability and beauty of combining animation techniques. I added 2D animation over the mouth scenes and created a hand-drawn sketchy 2D sequence for the film's ending. This sequence, meant to convey chaos and mania, contrasts the rest of the film and symbolizes a surreal, out-of-body experience. My inspiration for this style came from an animated scene in the last episode of *Adventure Time* which was done in a black-and-white, hand-drawn sketchy style. I animated all the 2D elements using Procreate.

## Post-Production

### 4.1. Editing & Visual Effects

With the animation complete, it was time for post-production. I had a lot of work ahead of me to clean up the film, perfect the timing, add visual effects I couldn't achieve practically, color correct, eliminate flicker, and mask out any imperfections. I began by compiling all the images for each shot into separate After Effects files as image sequences. To remove flicker, I manually corrected the brightness of some frames and then used a Digital Anarchy plugin called Flicker Free, which is excellent for eliminating flicker from stop-motion shots. Once the flicker was removed, I used dynamic links to import the After Effects files into Premiere Pro to start assembling the film. From there, I adjusted the timing of each shot, re-shot scenes where necessary, and put together the first draft. It's normal for the initial timing to change during editing, and this process involved fine-tuning each scene to get it just right.

Next, I moved on to masking. I used masks in After Effects on each individual shot to edit out drilled holes in the set, accidental camera bumps, slight prop movements, and other imperfections. Once that was done, I focused on color correction to ensure the white balance was consistent across all shots, matching the color and lighting throughout the film. I also added transitions between shots, such as zooms and crossfades that I couldn't achieve practically. Other effects, like vignettes and additional camera movements, were also incorporated. The 2D animated sequences were then composited with the stop-motion footage, and finally, it was time to add sound.

## 4.2. Sound

The final element that brought my film together was sound. Sound effects, music, and voice acting are crucial in conveying the right mood, and I knew sound design would play a key role in achieving the feeling I wanted for my film. For my previous project *best friend*, my friend Skylar Januszkiewicz helped with the sound production, creating the title theme and many of the dark, synthy-screechy sound effects. He also voiced the character of Blue Bunny. His excellent work and distinctive style were such a perfect fit that I asked him to collaborate again on *2:30*. Skylar produced the title track, many of the sound effects, and once again voiced Blue Bunny. The rest of the sound effects were sourced from Freesound.org and Zapsplat. For the sound design, I drew inspiration from steampunk music due to the anachronistic aesthetic tied to the film. For the title, I envisioned an eerie synth track mixed with sound effect samples such as lights flickering and a clock ticking. Skylar understood my vision and crafted the perfect track that emphasized the horror and suspense elements of the film.

I aimed for stark contrasts in the music throughout the film. For instance, in the dark room within Luna's mind, I wanted the music to feel dreamlike and ethereal, inspired by the euphoria associated with drug use. This contrasted with the more rugged, organ-and-string-heavy music that Skylar produced for the montage and 2D sequence in the film. In the end, sound design was what truly brought the film to life. It not only enhanced the visuals, but was also instrumental in telling the story. Without sound, the film would lose much of its clarity and tone, and the film's personality would be lessened. The sound gave it depth, character, and energy, making it complete.

## Conclusion

Working on *2:30* has been a deeply personal and transformative process. The hands-on nature of traditional animation—whether crafting puppets, building the set, or creating props—gave me the opportunity to connect with my work in a way that felt incredibly authentic. There's something unique about physically interacting with every element of a film, knowing that each movement, every detail, is a direct result of your effort. It feels like magic in its own right.

Throughout the production, I often reflected on my own life experiences. Luna's struggle with light mirrored my own complicated relationship with control, desire, and comfort. In many ways, the process of making the film was therapeutic. It gave me a way to channel those emotions into something creative, helping me better understand my own experiences. The collaboration with peers and mentors also reminded me of the importance of connection. While animation can be an isolating process, working with others who share your vision adds an entirely new dimension to the work. It reinforced the idea that, even in an often isolating art form like stop-motion, collaboration amplifies and deepens the impact of the final product.

Through this project, I've learned more than I ever expected about the process of stop-motion animation, from lighting and camera work to the technical details of animation rigs and practical effects. But what stands out the most is how much I've grown as an artist. Making *2:30* wasn't just about completing a film, but about understanding my own creative process, confronting personal challenges, and realizing

how much I still have to learn and explore in animation. In the end, 2:30 is a beautifully horrifying reflection of the growth within my artistic journey, an experiment with form, a deep dive into emotion, and a testament to the power of hands-on, traditional animation.

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