Pixilated figments

By: Roderick Mackinnon

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Abstract

Exploring animation as research creation, this project combines pixilation animation and analogue lenticular printing to explore how film can have a unique in-person viewing experience without screens. For artists working with the moving image as a medium, single-channel installation and projection have become the preferred modes of display. This project seeks to provide an untethered, re-materialized and immersive analogue viewing and making experience in an era of increasing digital interfaces. It reflectively analyzes the links between handmade art practices and the moving image. Personal experiences of time and memory will also be analyzed against the moving image and its mode of display. Although display formats of moving image work have long histories of change, the mode in which they are displayed and produced has largely remained tethered to screens or projections. Lenticulars are one technique I have used to explore this problem. Instead of screens and projections, they serve more as windows, windows into the wonder of discovery that pixilation has previously established in film. This paper questions expectations for experiences, especially pertaining to viewing moving image work in person. It questions people's engagement with moving image work and how this engagement might be made more inviting. It compares the modes in which we can transmit video and offers a contemplative proposal of a new life for the moving image. By using lenticular animation to bring the moving image into plastic practices, the thesis gives the moving image a unique container.

Key terms: Lenticular animation, Apparent motion, Slow movement, Pixilation, Analogue, film

OCAD University acknowledges the ancestral territories of the Mississaugas of the Credit, the Haudenosaunee, the Anishinaabeg and the Huron-Wendat, who are the original owners and custodians of the land on which we live, work and create.

Thank you to my advisors Ursula Handleigh and Philippe Blanchard for your patience and guidance in helping me move this project from concept to production. It would not have been possible without your support.

Thank you to Isaac King for introducing me to the idea of animation as research creation and for inspiring me to engage with the moving image in a more meaningful, hands-on way. And thank you to all my peers and instructors in the IAMD program that have made the last two years full of learning and growing. I am truly grateful for the experience.

Dedicated to Mom, Dad, Kat and Nin

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Introduction

This thesis paper accompanies my lenticular Installation *Pixilated figments,* exhibited at OCAD University, 205 Richmond St, March 14-19, 2024. This paper has been broken into 5 sections: (Play >) (Stop []) (Pause ||) (Rwd <<) (FF >>), as a way of creatively organizing this document. I was inspired by the semiotics of physical control buttons on VCR players and remote controls. Each chapter offers reflection and analysis of my exhibition that corresponds to the understood meaning of each control symbol. In (Stop []) for example, I halted my usual way of producing moving images and chose to explore Slow Photography, a part of the Slow Movement, a philosophical approach to image creation that prioritizes personal experience of making and quality over quantity. In (Pause ||), I discuss collecting films on VHS, David Campany's idea of the freeze frame as a memory of the moving image and the pause of Covid lockdown. In (Rwd <<), I review various works from the past, (Play >) is a project overview and (FF >>) a conclusion.

The concept of organizing my paper in this way was to emphasize a rather integral point to this thesis, user-driven experience and control. In my exhibition of *Pixilated figments*, the illusion of motion within the lenticular prints are only activated and revealed by the movement of the spectator. This untethering from screens gives the spectator physical control over the playback of a moving image, like the ways in which VR and AR technologies have given greater autonomy to users experiencing moving images and perceived environments. I am interested in exploring user driven experience and playback control with analogue lenticulars depicting a pixilated animation. But perhaps I need to give you more insight into *why* this is my interest and where I am coming from with this thesis idea.

How did I get here?

In December of 2019 I was excited to be graduating from OCAD with a BFA in Integrated Media. After spending 4 years learning about video art, filmmaking, photography and analogue processes I was looking forward to having my first solo exhibition scheduled for March 16th, 2020. Unfortunately, on March 17th, the Premier declared a state of emergency for the province due to the spread of Covid-19[1] and my exhibition would be canceled. As one could imagine, I was disappointed that no one would be able to see my work but I, as most, feared for the health and safety of those around me and understood it was for the best. As the pandemic raged on and the prospects for finding work dwindled, my apartment near Yonge and Eglinton was scheduled for demolition so I decided to leave Toronto and moved in with my parents in St. John's, Newfoundland. Although I was grateful for the opportunity to escape Toronto during this crisis, I quickly found myself falling into a period of stasis, not having the inspiration to produce anything, creatively or otherwise, even though I had an abundance of free time. During this time I decided to reflect on some of my past work from undergrad and noticed how unique an opportunity it was to be able to display moving image work in-person. Perhaps exacerbated by the pandemic, but certainly accelerated over the last decade of tech innovation, most moving image works like short films, animations or other single-channel videos are now shared on the internet rather than in-person. If video killed the radio star, then the internet killed the video store. Those of us that work with lens-based mediums and display in single-channel formats will have experienced, at one time or another, the technical difficulties associated with installing in a physical space. Beyond this, there is the constant challenge of attending to the projectors or monitors so that they function as intended. Even when everything goes as planned in terms of installation and maintenance, a single channel video still seems to require more attention from an audience and limits the agency of interaction. This opinion, of course, varies based on

[1]Ranger, Michael. "Timeline: A Year of Pandemic Life in Toronto." CityNews Toronto, March 11, 2021. https://toronto.citynews.ca/2021/03/11/timeline-a-year-of-pandemic-life/.

installation site and audience but I think the main issue is duration. Based on observations of my own installations from my BFA, most people seem to respond with greater interest when the video is short rather than long. Some durational moving image work needs to be seen from start to finish or some videos with sound elements may require headphones. Maybe some works have already begun playing by the time you walk up to them, and you must wait for them to restart. Whatever the hindrance to engagement may be, there appears to be an exponentially greater requirement of the audience's patience with moving image work when compared to the requirements to engage with a painting or sculpture. With all of this in mind, I was wondering if there was a way to reconsider how single channel installation can be physically produced and experienced that further invites audience participation and confronts the problem of duration of in-person display modes for the moving image.

Theoretical influences

In my view, film has always struggled to portray time as it is subjectively experienced based on the limitations of how it can be creatively expressed. Cinematic language has certainly evolved after decades of established filmmaking standards. Various techniques like one shot takes and handheld/active cam (camera) make strong appeals to our senses as being realistic, yet they remain tethered to the manufactured experience of cinema. This experience can be understood as an empirical, measurable interpretation of time that exists in tension with a more subjective, “real” experience of time, but what does this mean? From an early text from his career, French philosopher Henri Bergson distinguished between time as we actually experience it, lived time which he called ‘real duration’ (durée réelle)[2] and mechanistic time like science, mathematics or a clock hand moving. If you walk up to the moving image midway, wait for the end, then watch it

[2]Phipps, John-Francis. “Henri Bergson and the Perception of Time.” Philosophy Now: a magazine of ideas. Accessed January 31, 2024. https://philosophynow.org/issues/48/Henri_Bergson_and_the_Perception_of_Time.

from the beginning again… how long is it? The problem with effectively communicating the experience of time with mediums such as film, video art or most moving image installation in-person is that they are often too long in duration for the viewer to fully take in. I've noticed that in my own work, even a super short film (under 5 mins) is still too long for in-person viewing. This is a shame since film often relies on pace and duration as a communication of narrative and tone. But how can these communications become even shorter, condensing information into the fewest frames possible? This can be a challenge because these works are usually shot/rendered and displayed at industry standard 24 or 60 frames per second (fps). This frame rate appears realistic to the eye and has been used since the introduction of film with sound. After a century of becoming familiar with the cinematic convention, any deviation from this frame rate elicits a sense of distorted time for the viewer. One could think of this convention of depicting time in 24 fps as mechanistic, like Bergson described mathematics and clocks as arbitrary empirical elements. The solution then to the problem of established durations, with in-person moving image display, is to move towards a more subjective experience of time, a "durée réelle". This concept of a subjective experience of time having tension with the empirical or measurable concept of time relates to what I understood from American film theorist Mary Ann Doane's book, *The Emergence of Cinematic Time*. In this book, Doane draws a connection between the emergence of cinema in the late 19th century and the time standards conference of 1884 in Washington D.C. which standardized geographic time zones. In an era of "making time visualizable"[3] Doane points to various examples of marks of time from early cinema, but one that caught my attention, especially when thinking about lenticulars, was the 1901 actuality film titled *A Mighty Tumble*, consisting of 2 brief shots, 17 seconds long in duration of a building demolition in New Jersey. I am personally interested in the duration of this actuality film. If this

[3] Doane, Mary Ann. *The emergence of cinematic time: Modernity, contingency, the archive*. Cambridge (Mass.): Harvard University Press, 2002. (Page. 6)

super short film were to be condensed further into 2 still frames, one before the demolition and one after, I wonder if the same information would be conveyed to the viewer as the fluid moving images do, with similar satisfaction. As Doane puts it, “Movement and change are the marks of time itself”[4] and if one considers the ability to capture duration as the unique characteristic of cinema, differentiating it from the limitations of instantaneous still photography, I wonder how the lenticular autopixilated image can act as a bridge between the moving and still image through the illusion of apparent motion produced by the spectator. Highlighting a key point of inspiration for me regarding the nature of spectatorship and the history of apparent motion picture devices was Tom Gunning’s lecture on *The Discovery of Virtual Movement*[5]. In this lecture Gunning cites, amongst many historical texts, an essay by 19th century British physician John Ayrton Paris, the presumed inventor of the Thaumatrope. The Thaumatrope is an apparent motion device that requires the spectator's participation to activate the optical illusion called an after image. In *Philosophy of sport* (1831)[6] Ayrton Paris shares his observations of apparent motion devices, such as the Thaumatrope, Zoetrope and Phenakistoscope. The subjective visual phenomenon of these “philosophical toys”, as Gunning would put it, “is less about what is seen but rather what is deduced. Before the eye can ascertain a body to be in motion it must observe it in two successive portions of time to compare its change of place.”[7] This short process of deduction and reasoning by the spectator in analyzing the difference between frames

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[4] Doane, Mary Ann. *The emergence of cinematic time: Modernity, contingency, the archive*. Cambridge (Mass.): Harvard University Press, 2002. (Page. 206)

[5] Gunning, Tom. “The Discovery of Virtual Movement.” YouTube, August 23, 2023. https://www.youtube.com/watch?v=hmZh1S6yFlk.

[6] Paris, John Ayrton, and Norman R. Ball. *Philosophy in sport made science in earnest: Being an attempt to illustrate the first principles of natural philosophy by the aid of popular toys and sports*. London: H. Colburn and R. Bentley, 1831.

[7] Paris, John Ayrton, and Norman R. Ball. *Philosophy in sport made science in earnest: Being an attempt to illustrate the first principles of natural philosophy by the aid of popular toys and sports*. London: H. Colburn and R. Bentley, 1831.(Page 141, Rotary motion paragraph)

alluding to the apparent motion produced by lenticular printmaking serves as the theoretical and creative entry point for this thesis and for further practice-based research.

Play >

In *Pixilated figments*[8] (Fig. 1), this concept of real duration is used to creatively interpret the experience of movement from hypnagogic states of rest such as the feeling of falling awake, called hypnic jerks, a benign sleep phenomenon that affects an estimated 70% of people[9]. Because of how common this experience is, I thought it would serve as an interesting entry point for others to identify with the feeling, rather than the character, which is me, or the setting, which is my bedroom. A curious feature of this phenomena is how the feeling of falling is perceived to be integrated into the dream environment itself, like falling backwards into a hole that came out of nowhere. In the case of my prints, climbing up a ladder into the attic only to fall into the sky (Fig. 2, 2a and Fig. 3, 3a). This sensation lasts only a moment, as conscious reality comes rushing into the subconscious landscape. This point, where two types of experienced time, reality and dreams meet for a moment in the mind and body, serves as a major source of inspiration for this project. We know what this feels like, but what does it look like? Depicting this moment visually can be challenging since you must rely on vague dream memory and cannot study it empirically by yourself. At first, I tried keeping a dream journal to attempt to document what this feeling of falling looked like using words, but this expression was limited. Relying on my body to remember the feeling, I used a technique I call *autopixilation.* I made a series of Polaroids, shot by myself using a self-timer, in an improvised re-enactment partially based on my recollection of

Figure 1. Pixilated Figments installed at OCAD University

[8] Appendix 1: Additional documentation of thesis exhibition

[9] Chokroverty, Sudhansu; Bhat, Sushanth; Gupta, Divya (2013). "Intensified Hypnic Jerks: A Polysomnographic and Polymyographic Analysis". *Journal of Clinical Neurophysiology*. **30** (4): 403–410. doi:10.1097/WNP.0b013e31829dde98. PMID 23912581. S2CID 38840788.

the feeling of falling. Whereas with regular pixilation, and animation in general, there may require a great deal of control and intervention by the director in manipulating the scene or character(s) action frame by frame, autopixilation is a self-directed performance of incremental action or movement in front of the camera. I then took these Polaroids, interlaced them on Photoshop, printed them 23” x 39" and folded vertically every 0.25” reducing the total size of the image to around 23” x 23”. Then, taking the reduced print, I adhere it with Mod Podge to a 23” x 23” piece of double corrugated cardboard, holding each peak at about a 65-degree angle, the ideal angle for producing the illusion of apparent motion[10]. Each board (Fig. 4) has approximately 75 lenticules, or individual vertical ridges. The intention of printing them at this scale was to create a more visually accessible frame size than the 4” x 4” Polaroid frame.

Figure 2. Original Polaroid 3

Figure 2a. Original Polaroid 4

Figure 3. Original Polaroid 5

Figure 3a. Original Polaroid 6

Figure 4. Early stages of preparing the substrate

[10] Appendix 2: Additional process documentation

I start by removing the outermost layer of paper from one side of a long sheet of cardboard to expose the corrugation (Fig. 5). Then, once most of the paper has been peeled off, the cardboard can be cut into 2 manageable 23” square boards (Fig. 6).

Figure 5. Mid stage of preparing the substrate

Figure 6. Finished substrate

Now that the cardboard substrates are ready, I begin to score the 23” x 39” inkjet print vertically every 0.25” using a ruler and razor blade. I only want to cut through the top layer of emulsion leaving the paper underneath intact, so I needed to be careful not to apply too much pressure when scoring (Fig. 7). Once all 150 vertical lines of the print are scored, I begin to fold and crease the print in an accordion style (Fig. 8). After the print has

Figure 7. Scoring the interlaced print

been folded it is now time to adhere the print down to the cardboard using Mod Podge and a glue brush. This part is done in small increments; only 6 or 7 rows of the print are fitted and tacked down at a time to ensure proper alignment (Fig. 9 and 10). Once the print is completely adhered to the substrate, I use heavy textbooks to press everything down, this ensures the print doesn't curl off the substrate and that each angle is as close to 65 degrees as possible. The final step in making these lenticulars by hand is to prevent any bowing or curling by reinforcing the substrate with an equivalent size Masonite board. Masonite is meant to take wet mediums like paint, and it will not curl as it dries over time. The added thickness is also perfect for attaching hooks for hanging.

Figure 8. Folding the scored and interlaced print

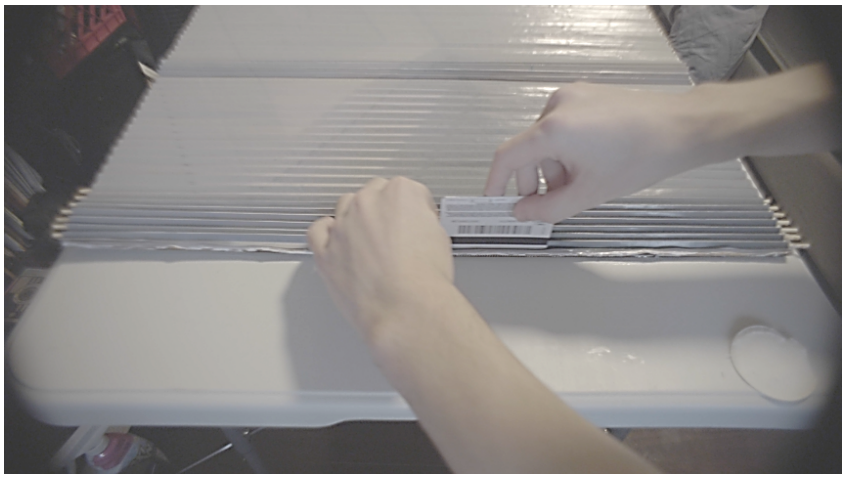

Figure 9. Gluing the folded, scored and interlaced print onto the substrate

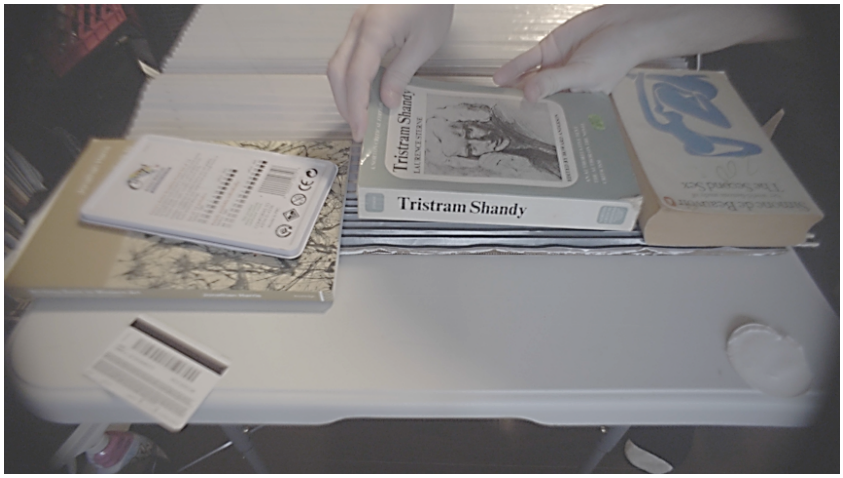

Figure 10. Pressing the completed lenticular

What is Pixilation Animation?

Pixilation, different from pixelation, is a stop motion technique in which live actors are used as subjects in frame-by-frame animation, by repeatedly holding pose while one or more frames are taken and changing pose slightly before the next frame or frames. This technique has been used to produce short films for over a century, such as Hôtel Électrique (1908) by Segundo de Chomon, but gained mainstream attention as a serious art form in the 1960s with Canadian filmmaker Norman Mclaren's Oscar winning film *Neighbours* (1967)[11]. In this film, there is a sequence where the men are moving around their yards appearing to levitate off the ground. They of course are not, and this effect is achieved by releasing the camera shutter as the actor jumps off the ground and stopping the shutter before the actor lands back on the ground. When played back at 24 fps the illusion, although not perfectly seamless, produces a motion effect that is unique and synonymous with Pixilated animation. Modern audiences might be more familiar with this technique from the popular app Vine, the 6 second video sharing platform that launched in 2013. The same levitation effect became a popular trend on Vine, except instead of using big cameras, paid actors and elaborate sets, people were using their smartphones, and filming themselves or friends in everyday environments like at school or at home. Unfortunately, Vine would shut down for good in 2017 taking with it all the many humorous memories and innovative concepts in short form video sharing. Reflecting on the impact Vine had on video creation, the many millions of users sharing their short, constrained, 6 second videos has been useful when thinking of how to design a very short narrative for in-person display.

[11]Mclaren, Norman. "Neighbours." National Film Board of Canada, January 1, 1970. https://www.nfb.ca/film/neighbours_voisins/.

Bedroom Studios

Between the technological advancements of the 21st century and the Covid-19 pandemic, there has been an indelible mark left on the way artists produce and display their work. One of the most notable and perhaps lasting of all changes to everyday life from the pandemic is the move from the workplace to the home office. A stark adjustment for many industries but a welcomed change for some workers. Years before the pandemic however, some artists such as musicians had already made the switch from recording studio to bedroom studio. Since the introduction of GarageBand, many pinpoint 2007 as the start of what is now referred to as Bedroom Pop. As the title suggests, "It's basically music crafted and recorded within the bedroom intimacy, outside of a traditional studio environment. It's generally characterized by a warm, reverbed, and hazy or sleepy atmosphere inspired by psychedelic and nostalgic sounds."[12] Warren Hilderbrand, a Canadian artist from Toronto, now based in New York City started the well-known indie label called Orchid Tapes. Described by Hilderbrand himself, "The music and artwork reflected in each release we help to put out breaks free of the established norm, disregards trends, reflects the dedication of its creator and provokes a strong emotional resonance within whoever's listening."[13] Of course, this type of lo-fi production for music and art is not necessarily new, as many might quickly point out the similarities between the artistic output by Orchid Tapes and the famous use of cassette recordings by Daniel Johnston in the early 90s or Richard Hell in the 70s. These D.I.Y. techniques have always been used by artists practicing outside of artistic convention with ranging mediums. With a new generation of young people like me that grew up in an era of evolving digital interfaces and fleeting physical mediums there exists a unique enthusiasm to engage with these material processes of making

[12] Music, Easykill. "What Is Bedroom Pop?" easykill music, September 22, 2023. https://easykillmusic.com/what-is-bedroom-pop/.

[13] Hilderbrand, Warren. "About." ORCHID TAPES. Accessed January 31, 2024. https://orchidtapes.com/about.

before they are gone for good. Even those who have worked with film for decades like director David Lynch see it as a dead medium. In a recent interview regarding his switch to digital filmmaking he said, ”Even though I love film, It's a dinosaur and everything about it is a dinosaur… soon to be gone pretty much forever… it happened in sound… everything's digital, the same thing with image.”[14] Describing the pitfalls of film as “a dinosaur, it scratches, it breaks, it's dirty–nothing but dirt on it and no two prints are the same… It's a nightmare.” For me, however, this is exactly the imperfection of material I am looking for and that is increasingly absent from most contemporary modes of moving image production. All the dust, scratches, light leaks, underexposed aberrations and grainy artifacts are physical marks of the medium and sometimes the making. This imperfect medium is perfect for representing the vague impressions of dream movement as it can be remembered. Although this thesis installation does not have an audio component, as most of my dreams do not, I wanted to speak to some of the inspiration I find in the analogue textures and preserved material processes that I see going on even with non-visual mediums like sound.

[14] Lynch, David: “The Idea Dictates Everything” (2006)
(clip) https://www.youtube.com/watch?v=w6Dyl1V_Hvg

Stop []

Slow Photography, a part of the Slow Movement, is a philosophical approach to image creation that prioritizes personal experience of making and quality over quantity, things that are often lost in the fast-paced world we live in. The Slow Movement was a cultural shift in the 1980s that has since inspired many fields of slow making and experiencing. Since then, it has been adopted by various fields including food, fashion, and cinema. With Slow Photography, various historical time-consuming photo-chemical processes are celebrated. Inspired by this approach while developing my material-based practice during this MFA thesis, I started working with emulsion transfers and lenticular printing, both from polaroids. I was interested in slowing down my approach to movie making by using various material techniques including printmaking and handmade animation. Slowing the process down is something that has always attracted me to explore film photography for its ability to inform more intentional decision making. As a teenager in high school, I was always inspired by the cinematic qualities of still photographs. I began to explore film photography to better inform my approach to making art. As I got older and continued to explore film in an era when Kodak[15] and Polaroid[16] were filing for bankruptcy, I felt some sort of urge to accelerate my exploration before these materials were no longer accessible. Without putting too much thought into it I was soon using film for all my projects, both still and moving work, whether it was warranted or not. Unfortunately, with the decline of these companies and the increasing scarcity of film, these practices have become much more costly. Bypassing the darkroom, I adopted a hybrid digital-analogue working model of digitizing film negatives so that I could edit my images on a computer to create as many copies as I liked

[15] Merced, Michael J. de la. “Eastman Kodak Files for Bankruptcy.” The New York Times, January 19, 2012. https://archive.nytimes.com/dealbook.nytimes.com/2012/01/19/eastman-kodak-files-for-bankruptcy/.

[16] Deutsch, Claudia H. “Deep in Debt since 1988, Polaroid Files for Bankruptcy.” The New York Times, October 13, 2001. https://www.nytimes.com/2001/10/13/business/deep-in-debt-since-1988-polaroid-files-for-bankruptcy.html.

and quickly share them online. I soon realized the irony of indulging in the slow pace of analogue photography only to exhibit them digitally, avoiding the joy of fully working with the tangible medium and exhibiting in-person. You could tell based on my compositions and the quality of the images there was not much pre-thought. This was a shortcoming I noticed in my own work, particularly in the way I wasn't fully using the medium for the reasons I had initially intended. I was participating in an economy of nostalgia aesthetics without fully realizing it. While I thought I was working within the resurgence of the material I still felt a sense of detachment from the handmade and grew frustrated with working through digital interfaces and software. Reflecting on some of the other historical analogue animation practices I remember from my BFA, stroboscopic photography came to mind. The many multiple still images sewn together to trace the movement of human action results in a ghostly, vague, blend of motion of overlayed images like the famous silver gelatin prints of Harold Edgerton[17]. This view of multiple movements blended into a single frame made me think about other formats that interrogate each frame incrementally. Stop motion animation has always been something I wanted to explore with film photography. As a technique that forces you to work slowly and make intentional, meaningful decisions throughout the making process was a needed adjustment to my current approach.

[17] Edgerton, Harold. Stroboscopic Study of Man Hitting Tennis Ball, 1949. https://www.metmuseum.org/art/collection/search/281780

Pause ||

Watching a movie on VHS is perhaps the worst way to watch a movie. Something about the physical object of the cassette with movable parts and the opaque magnetic tape, having been thoroughly consumed by decades of audiences, deteriorates in a particularly jarring way resulting in a poor image[18]. Warped sound, tinted colours, jumping frames, static scan lines and erratic motion are all common yet unique to VHS. I've always admired this mysterious, material quality to this late film format. While I developed the habit in high school, to this day I continue collecting VHS tapes from secondhand stores. It's hard not to when they are only a dollar. During the Covid pandemic, after I had exhausted most of the movies available on streaming platforms, I returned to my VHS collection. As I began rewatching these movies I came across an unfortunate glitch with my VCR player. At about halfway through playback the motor freezes and so does the frame it landed on. The freeze frame or pause of a moving image on VHS is a strangely compelling visual experience. Pixels suspended in time, shaking around on the screen have a strange living quality. I began recording these freeze frames of characters in motion and compiled them into a video titled, *Poetic mode.* Feeling similarly compelled by the experience was American filmmaker Harmony Korine who, in 2009 exhibited a collection of 79 photographs at Vanderbilt University in Nashville, Tennessee. Titled, *Pigxote*[19], this is not film but rather digital photographs of a television screen. The horizontal lines interlacing across the screen act as an artifact of motion. These images at one point moved around freely on the screen until they were frozen by the still photograph. Although the characters on the page are not literally moving the interlacing lines of the screen are visible in almost every composition acting as a record of origin and an artifact of motion (like how low-shutter speed or low-ISO film produce a ghostly blur where the subject is moving). This effect is unique to VHS mediums as well, if you pause a

[18] Steyerl, Hito. In defense of the poor Image, e-flux journal #10, 2009. https://www.e-flux.com/journal/10/61362/in-defense-of-the-poor-image/

[19] Korine, Harmony. Pigxote, Nashville, 2009.

35mm negative on a projection reel for too long, the emulsion melts and the film catches fire, destroying the image, whereas the VHS freeze frame lives on in a constant state of deterioration; yet still vaguely visible, like a memory. However, it can be contentious to equate any specific medium as the materiality of memory, as David Campany points out in his essay, *safety in numbness*, “Television and cinema make regular use of photographic snapshots and freeze-frames as a kind of instant history or memory that they, as moving images, are not. Indeed, it seems plausible that it is this kind of use of still photography that has cemented the popular connection of photography with memory, rather than there being some intrinsic relationship. There is nothing like the ‘presentness’ of the moving image to emphasize the ‘pastness’ of the photograph. It does this even more effectively than the continuum of life itself because as a technology the still is a part or a ghost of the moving image, its memory or ancestor. Yet to presume that the still image or the freeze-frame is inherently more memorable or closer to the nature of memory, is to overlook the fact that the very operation of our memory is changing. It is shaped by the image world around us. The structure of memory is, in large measure, culturally determined by the means of representation at our disposal. As our image world shifts in character, so do our conditions of remembrance.”[20] At the start of my MFA, I began to incorporate this thinking of the freeze frame as a memory of the moving image into my practice. I started with Polaroid emulsion transfers, searching for a material photographic process that felt visually related to memory and the process of recollection. Instead of some discoverable, intrinsic link between memory and material, I had to think of memory and recollection for what they are, an individual subjective experience that for me is often in motion. These lenticulars are viewed in a way that relates to the experience of dreaming where the mind and body are free to move around as they perceive images. In this way I feel that moving around a moving image physically is more akin to a dream than sitting in front of a screen. In my

[20] Campany, David. “Safety in numbness.” Accessed January 31, 2024. https://davidcampany.com/safety-in-numbness/.

experience, illustrating this motion, like the feeling of falling in a dream, can elude accurate depiction. Although cinema has been the dominant mechanism for depicting memory, there exists a less passive and more subjective viewing experience in lenticular printing.

Rwd <<

Many of us may already be familiar with Lenticular printing whether it's from commercial billboards that flip when we drive past or fridge magnets from the Dollar Store that become animated when we open the door. This printing technique is usually employed to be more visually engaging than static two-dimensional images. Unlike holographic or 3D images, lenticular printing produces the illusion of motion between two images that have been interlaced. While their purpose for being used by the ad industry is efficiency and profit savings, for my project, I am more interested in how this printing technique can be used for storytelling that experiments with the compression and decompression of time. For this reason, my research is focused on the use of Lenticular printing as a form of Slow Animation. Lenticular printing in the context of Cinema has its origins in the 1930s with the Autostereoscopic apparatus designed by Herbert E. Ives. While this device failed to gain mass appeal, subsequent iterations of similar technology would flourish in this era, most notably Nickelodeons. The original logo for the Nickelodeon television station depicted the word in bold typeface with the silhouette of a man standing next to the letter “N”, peering downwards into what is an homage to the Kinetoscope, an early motion picture exhibition device. The use of this device in various converted storefronts marked the first use of indoor space dedicated to the projection of motion pictures. The name “Nickelodeon” comes from these devices being used to display very short films, called peep shows, for the cost of a nickel. These short movies would often use humor or cartoons to engage a broad audience. While Kinetoscopes are certainly a thing of the past, the type of constrained filmmaking that it produced, combined with the unique affordances for audience participation with single channel video, served as a first contact point of inspiration for this thesis. Another project I find a lot of inspiration from is Bill Brand’s public installation *Masstransiscope* (1980), in which he turns the abandoned Myrtle Avenue subway station in New York City into a movie machine, presenting a colourful, animated moving picture to commuters as their train moves through the tunnel. The images are viewed through a series of

vertical slits within a constructed housing built in front of the prints following the principle of the Zoetrope, a 19th century optical toy[21]. Canadian artist Brad Caruk used a very similar approach in his patented technology called *Sidetracks,* which is used to display advertisements within the tunnels of the Winnipeg subway system as the train car moves through them. A version of this technology that doesn't require special lighting, or any power at all, was used in Rufus Seder's *LIFETILES* (1990) that used a form of lenticular printing for large scale murals at the Smithsonian Institute. While all these examples from the past help give context to the history of moving images created by apparent motion, they remain underused with in-person display and audience movement. When they are used in this way, they seem to have a manufactured perfection to them. There are contemporary artists currently being featured at commercial galleries in Toronto like Nick Veasey[22], David Drebin[23] and Patrick Rubinstein[24] that appear to display their original artwork using lenticular prints frequently. Their prints are usually displayed in window fronts, facing out towards the people walking past. I have even noticed some of their prints in glass enclosures along the corridor walls of shopping malls. I think it is an interesting idea to place art that becomes activated by movement in places where people are already moving and looking. However, as a critique, I feel almost distracted by the manufactured perfection to some of these analogue lenticular prints, as if the substrates and ridges were machine made and the prints were lasered on top. Some even appear to be an enlarged version of the lenticular prints you see at the Dollar Store and yet they are on sale for thousands of

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[21] *Bill brand's Masstransiscope - Court tree*. - Court Tree. (1980). https://courttree.com/Bill-Brand-s-Masstransiscope

[22] "Lenticular." Nick Veasey. Accessed March 6, 2024. https://www.nickveasey.com/lenticular.

[23] "The Magic of Lenticular." David Drebin Accessed March 6, 2024. https://daviddrebin.com/.

[24] "Lenticular art." Patrick Rubinstein Accessed March 6, 2024. https://www.patrickrubinstein.com/en/elementor-16272/.

dollars. They look perfect. Perhaps that is the expectation of art that is displayed in commercial galleries, that they are perfect objects for sale. Of course, if one were to make these lenticulars by hand there would need to be a certain amount of care in the construction process so that the illusion of apparent motion is still functional, but I believe that there is room for intentional imperfection. When I started this MFA thesis, I was first working with Polaroid emulsion transfer printing (Fig. 11). I was fond of the imperfect distortion that this material printing process has on the image, especially as it dries. To me the damage to the image represents the alteration and decay that happens to memory through the process of recollection and time. I explored this material process more by using multiple Polaroids shot from different but similar perspectives and then piecing them together like a puzzle (Fig. 12). Although using Polaroids in this way gave the effect of deterioration of time they were limited by their size, scalability and their capacity to imply movement. The Lenticular, however, gives me the ability to translate both the deterioration of memory as well as apparent motion.

Figure 11. Polaroid emulsion transfer on water colour paper

Figure 12. Polaroid emulsion transfer on Bristol paper

FF >>

As time goes on and available mediums change so do the ways of making art and connecting with audiences. There is a prevailing trend in contemporary lens-based art that strives for perfection, spectacle, and efficiency, all while excluding the mark of the artist. All moving image formats have some artifacts that give clues to their making, but the subjective interpretation of time is being lost to the empirical flattening of digital interfaces. From the nostalgia aesthetics of film emulating filters on Instagram to multi-projection immersive experiences it is hard to predict what the future of lens-based art will be. I am criticizing these trends because I feel unconvinced by them, as I am unconvinced by the manufactured perfection of some lenticulars. I am reminded of what American theorist Sianne Ngai says about gimmicks or rather our aesthetic judgment of gimmicks in art. “At the same time the gimmick enables us to indirectly acknowledge this power to enchant if one, to which others, if not ourselves, are susceptible.”[25] And evidently, the exponential rise in immersive experiences indicates that clearly people are enchanted and clearly people are looking for an expanded cinematic experience beyond the ordinary modes of display. What is the role of the artist in this increasingly technologically fetishized world? This desire to place the user experience at the center of tech and innovation, especially in the arts, is concerning to me as someone studying to become an artist. AI image generating programs like DOLL-E, and more recently, Lensa ai quickly flood the timelines of our social media sites. Like most gimmicks, the fact that it is new is its most compelling feature to generate usership. However, because of the rate at which the internet cycles through trends, these programs and images have a short life. But with each passing trend there is a constant element of excluding the artist from the creation of art. In some ways I see a parallel between what's happening with AI art and modern filmmaking i.e Scorsese v. the Marvel Cinematic Universe. Martin Scorsese makes a distinction between his movies (true cinema, allegedly) and

[25] [25] Ngai, Sianne. *Theory of the gimmick: Aesthetic judgment and capitalist form*. Cambridge, MA: The Belknap Press of Harvard University Press, 2022. (Page. 55)

the rise of popular superhero films which he compares to amusement parks[26]. I think he is making an aesthetic judgment of the gimmick here and in some ways, albeit rather elitist, he is concerned for the future of auteur filmmaking and perhaps art creation as a whole. The lifetime of trends seems to be cycling more rapidly than ever before. There is a constant desire to be presented with an experience that is new and exciting as conventional cinema viewed in theatres or at home becomes more ordinary. The problem with viewing moving image work in-person is the attempt to recreate the theatre setting which is less effective for engagement with non-feature length films. In-person display modes attempt to solve this problem by mimicking the theatre setting. In gallery setting for example, constructed rooms with partitioned walls create a dark atmosphere for projection or installation, yet offer only a semblance of the theatre experience because the audience is not in a static state viewing the entirety of the film's duration. The way people move in a gallery is different than the way people move in the theatre. Theatres position the viewer in a static state, facing the screen in silence, while in a gallery setting, people move around the artwork, talk, and leave when they have had enough. As one possible solution, this thesis makes a lenticular animation that is activated through the movement of the audience by the non-empirical representation of figments of the imagination. While the future remains a mystery for AI art creation, filmmaking and in-person viewing I would implore all emerging artists, especially lens-based, to consider applying a Slow Movement component to their practice. This is not a blind rejection of technology or digital interfaces entirely but rather a conscious resistance to the detachment one can experience when working and viewing exclusively through them. It is the hope for this project that the audience has a positive experience engaging with the work and like the philosophical toys that preceded cinema, I hope these lenticulars last in a contemplative way in the mind of the viewer.

---

[26] Sharf, Zack. "Martin Scorsese Compares Marvel Movies to Theme Parks: 'That's Not Cinema.'" IndieWire, October 4, 2019. https://www.indiewire.com/features/general/martin-scorsese-marvel-movies-not-cinema-theme-parks-1202178747/.

Cinematic conventions established more than a century ago have set the expectation for most of our engagement with the moving image both as makers and spectators of media. Attempting to conceptually suspend these conventions to analyze and explore a more non-traditional, subjective interpretation of time using handmade lenticulars and autopixilation animation techniques, this thesis intends to question the nature of spectatorship and in-person moving image display.

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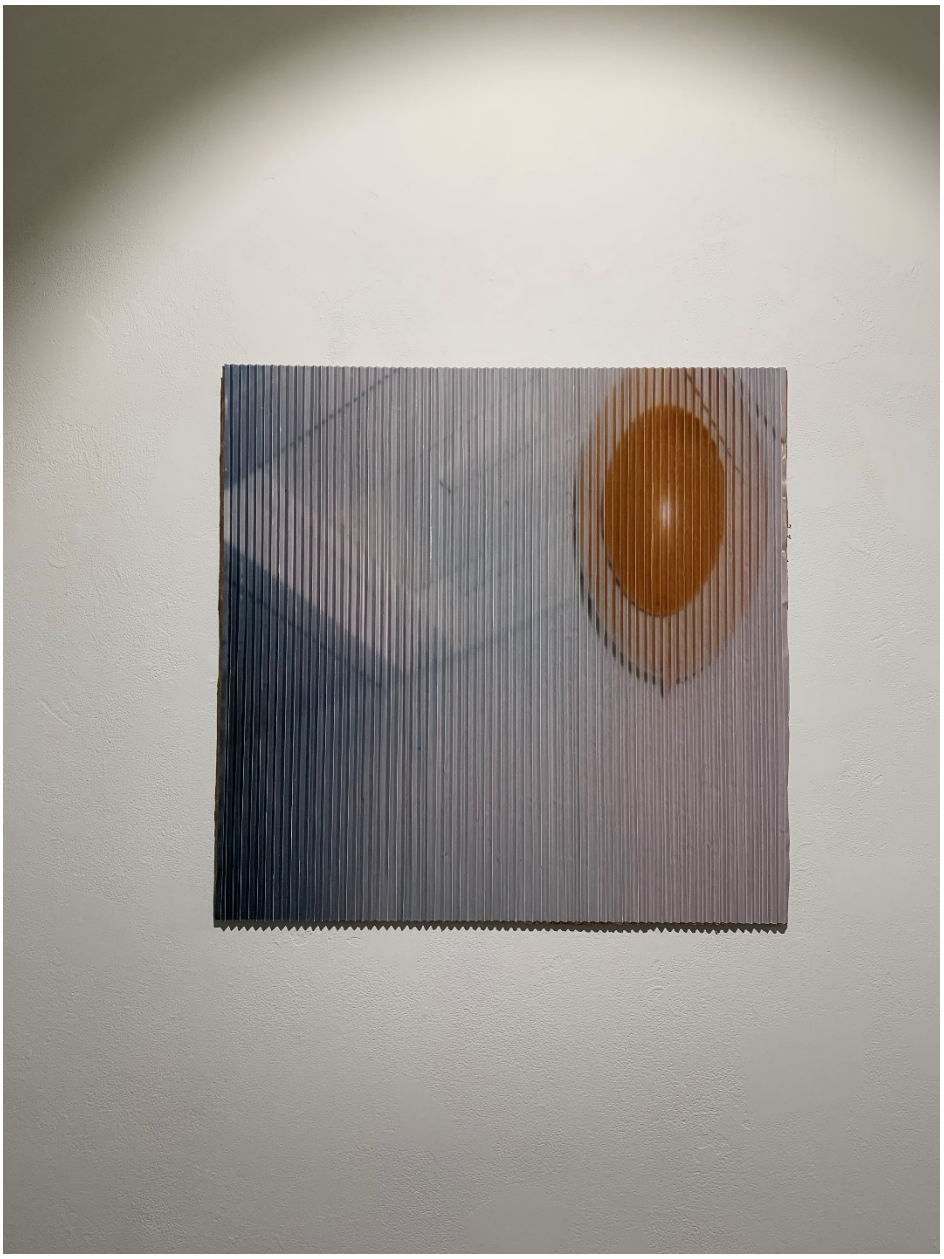
Appendix

Appendix 1: Additional documentation of Thesis exhibition

Lenticular 1: viewing from left.



Lenticular 1: viewing from centre.

Lenticular 1: viewing from right.

Lenticular 2: viewing from left.

Lenticular 2: viewing from centre.

Lenticular 2: viewing from right.

Lenticular 3: viewing from left.

Lenticular 3: viewing from centre.

Lenticular 3: viewing from right.

Appendix 2: Additional process documentation

Image 1: preparing corrugated cardboard for lenticular base.

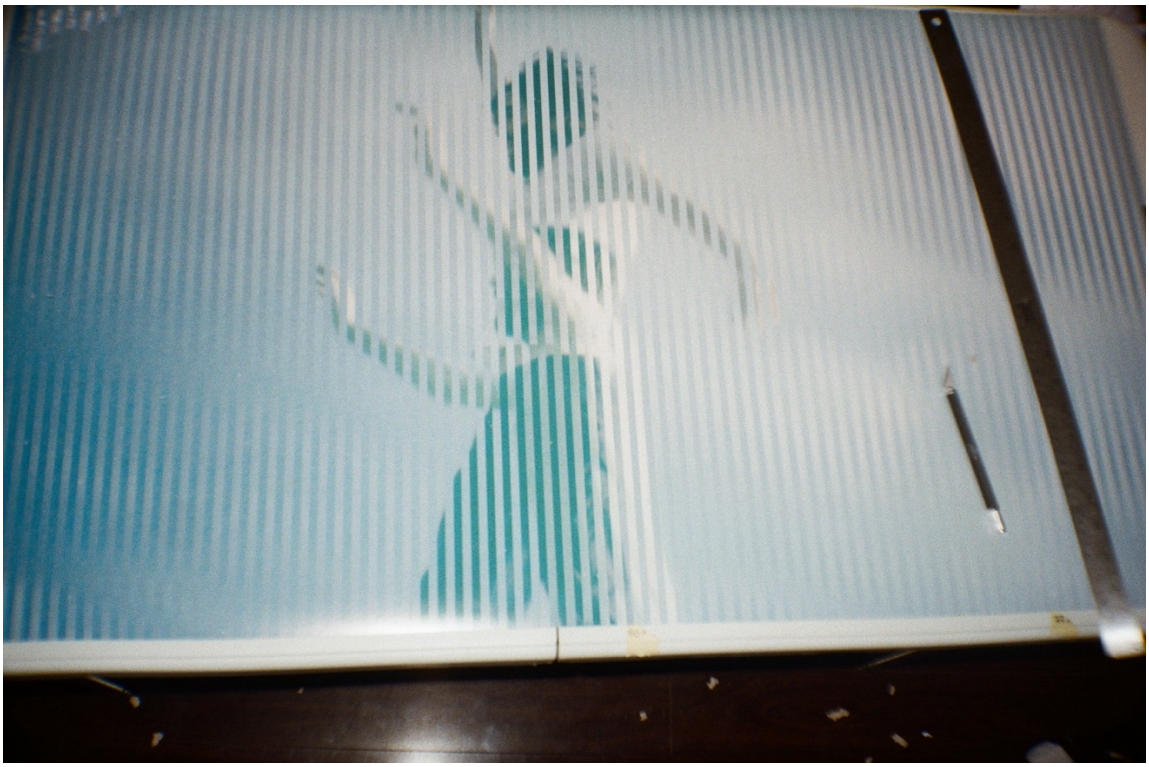


Image 2: flat digital print before folding for lenticular.

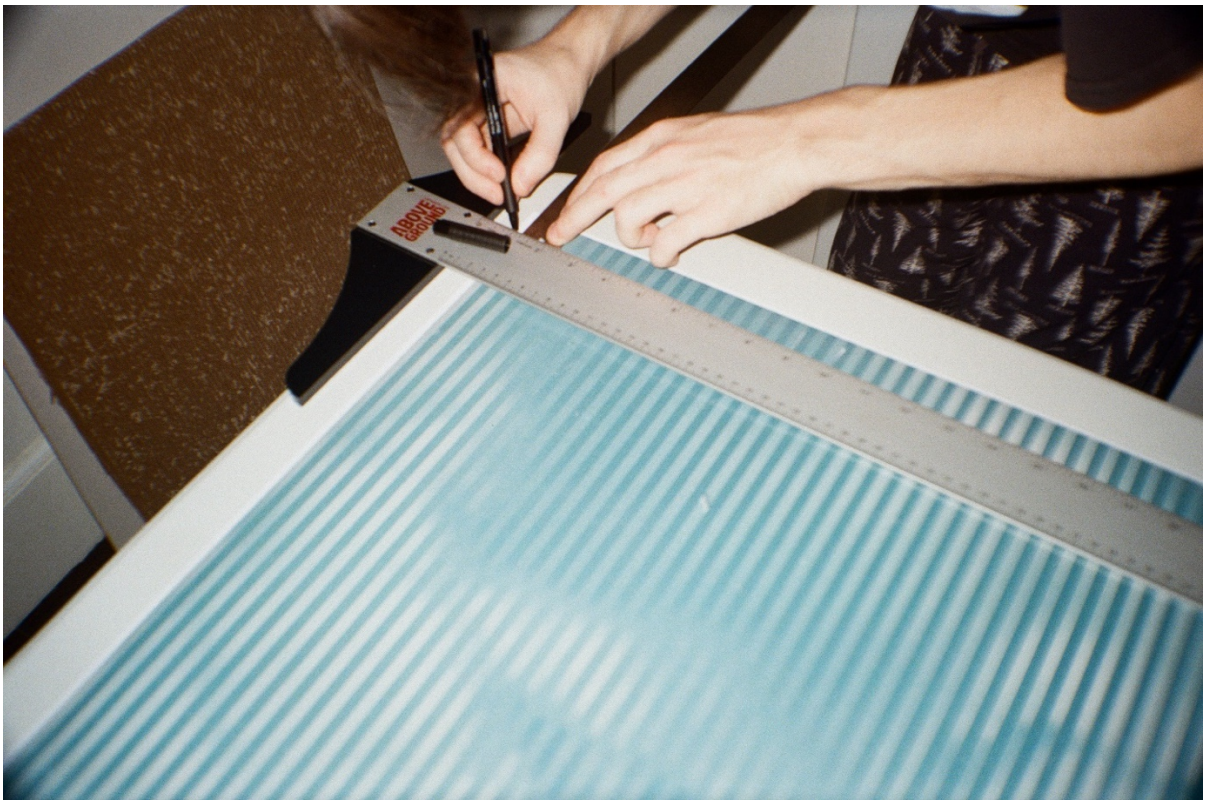


Image 3: measuring and trimming the prints to size. (close-up shot)

Image 4: measuring and trimming the prints to size. (wide angle shot)

Image 5: making materials and tools including mod podge, glue brush, wooden dowels, pliers, tape measure, plastic card, books. (unpictured: various 30" plus rulers and cardboard)

Image 6: print being placed over corrugated substrate.

Image 7: gluing down the print to the substrate and fitting it into the grooves of the substrate with a plastic card.

Image 8: first finished large-scale lenticular.

Image 9: home studio.

Image 10: test sequence in the exhibition space.

Appendix 3: PowerPoint from defense presentation

Pixilated Figments

Thesis defense presentation

By
Roderick Mackinnon
IAMD MFA Candidate
OCAD University
April 16, 2024

Land acknowledgement

OCAD University acknowledges the ancestral and traditional territories of the Mississaugas of the Credit, the Haudenosaunee, the Anishinaabe and the Huron-Wendat, who are the original owners and custodians of the land on which we stand and create.

Presentation overview:

- Artist Bio
- About Pixilated Figments
- Exploring Polaroids:

  emulsion transfers and cinematic capacities
- Exploring Lenticulars:

  handmade vs machine-produced
- Autopixilation:

  Theoretical background

  exploring subjective interpretations of time

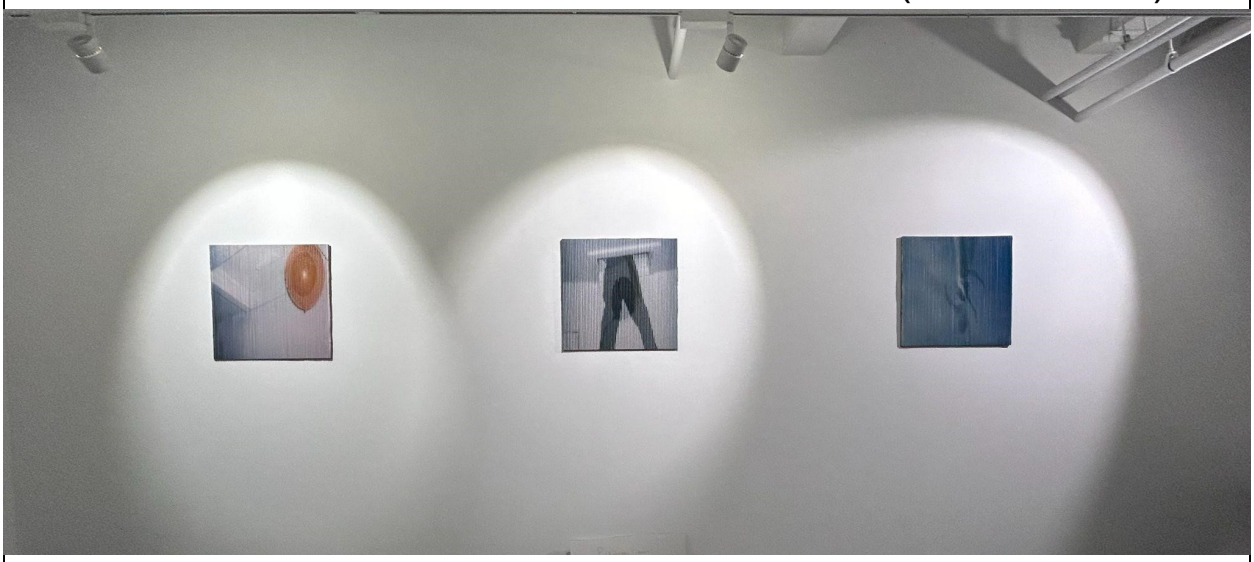
Artist Bio

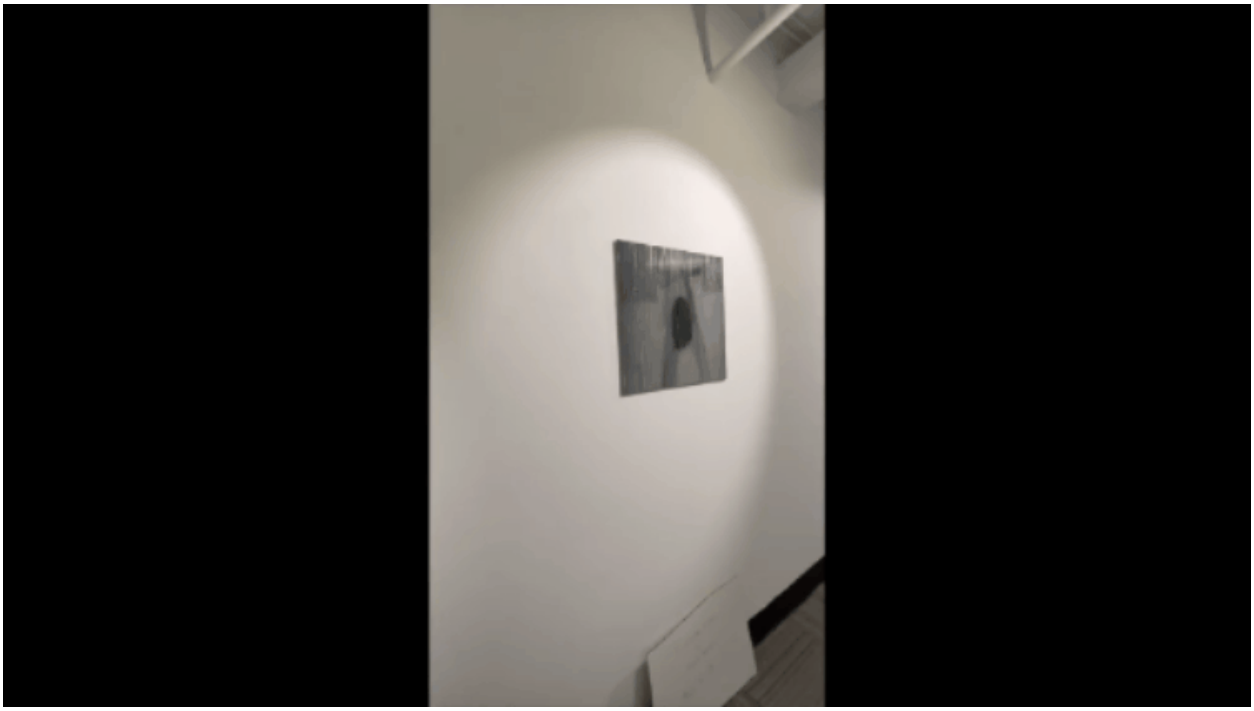
Roderick Mackinnon (b.1997) is a emerging visual artist currently based in Toronto. He received his BFA in Integrated media with a minor in Photography from OCAD U in 2019. Since this time he has continued to explore historical photographic process and analogue printing techniques in search of a more tangible lens-based practice.

About Pixilated Figments

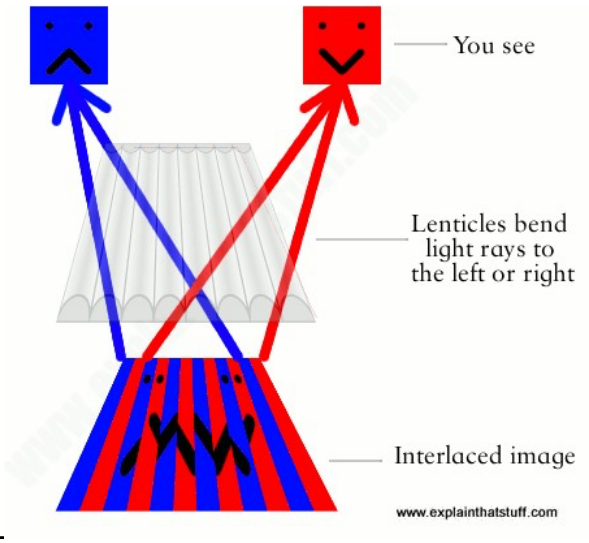
Exploring animation as research creation, this project combines pixilation animation and analogue lenticular printing to explore how Film can have a unique in-person viewing experience without screens. For artists working with the moving image as a medium, single-channel installation and projection have become the preferred modes of display. This project seeks to provide an untethered, re-materialized and immersive analogue viewing and making experience in an era of increasing digital interfaces. The illusion of apparent motion is activated from the lenticular prints by the movement of the audience. Personal experiences of time and memory will also be analyzed against the moving image and its mode of display. Although display formats of moving image work have long histories of change, the mode in which they are displayed and produced has largely remained tethered to screens or projection. Lenticulars are one technique I have used to explore this problem. Instead of screens and projections, they serve more as windows, windows into the wonder of discovery that pixilation has previously established in Film. This project questions expectations for experiences, especially pertaining to viewing moving image work in-person. It questions people's engagement with moving image work and how this engagement might be made more inviting. It compares the modes in which we can transmit visual information and offers a contemplative proposal of a different future for the moving image. By using lenticular animation to bring the moving image into plastic practices, the thesis gives the moving image a unique corrugated container.

Installed show at 205 Richmond in RM 118 (March 14-19)

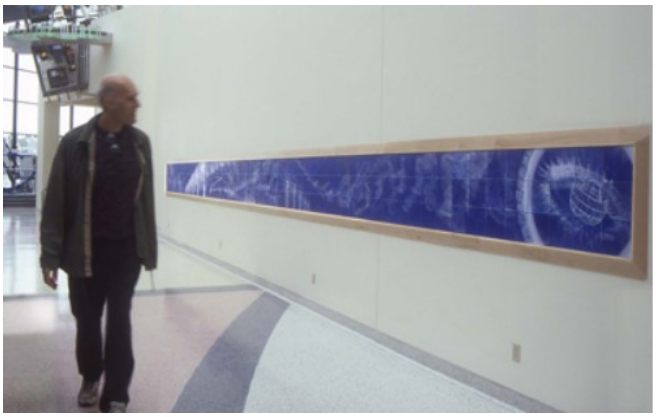




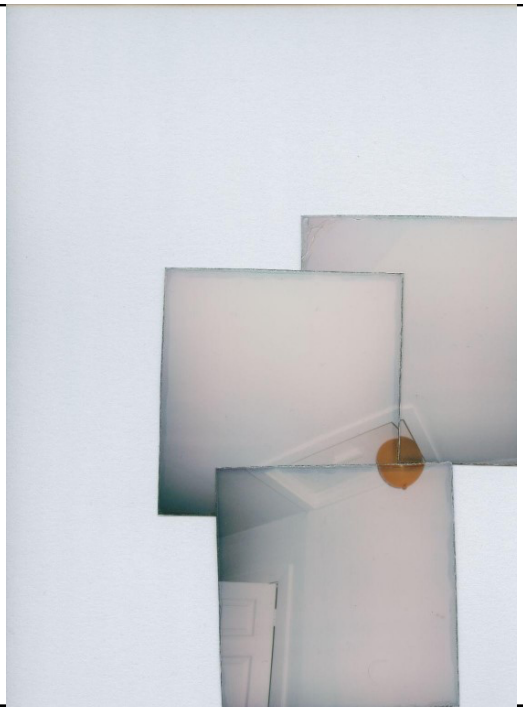
How lenticulars work

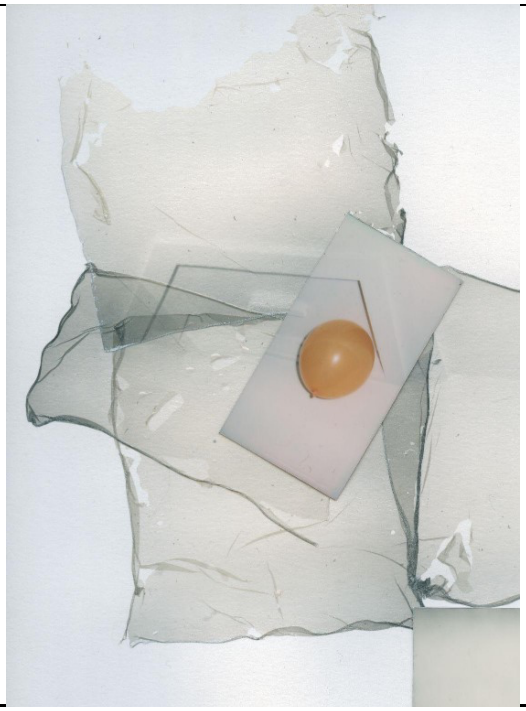


Rufus Seder's *LIFETILES* and *SCANIMATION*

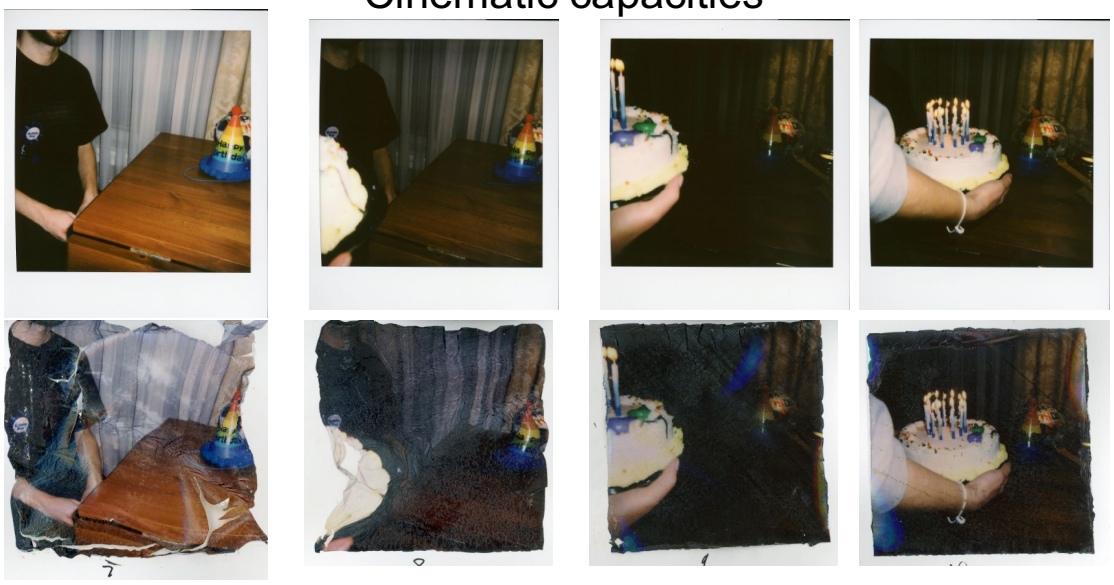


Exploring polaroids (emulsion transfers)





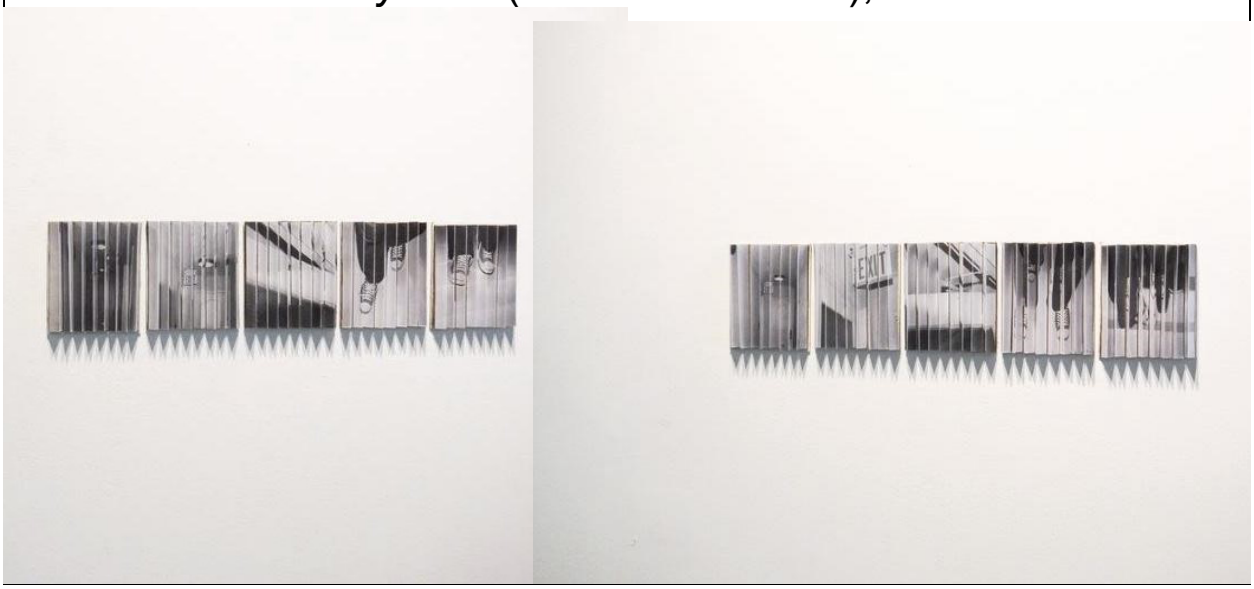
Cinematic capacities



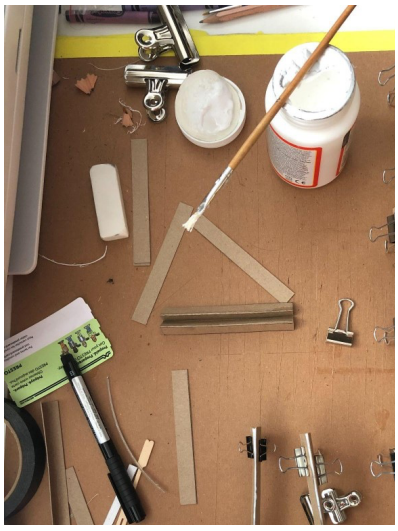
Site of production VS site of presentation

Exploring Lenticulars (handmade)

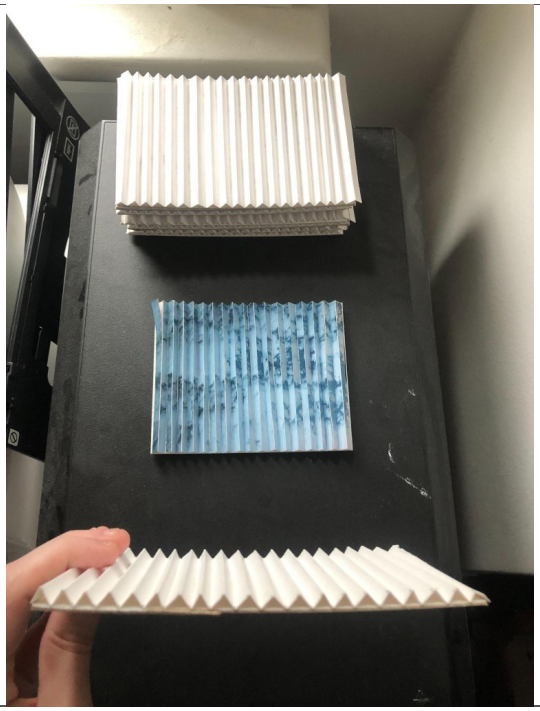
Bunny ears (lenticular version), 2023



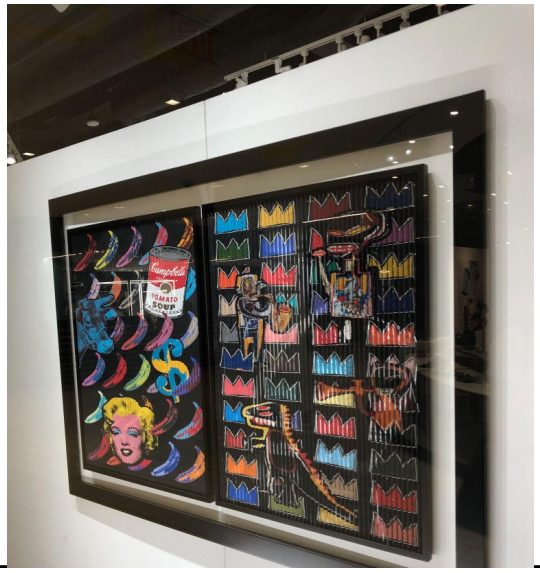
Making corrugated substrates

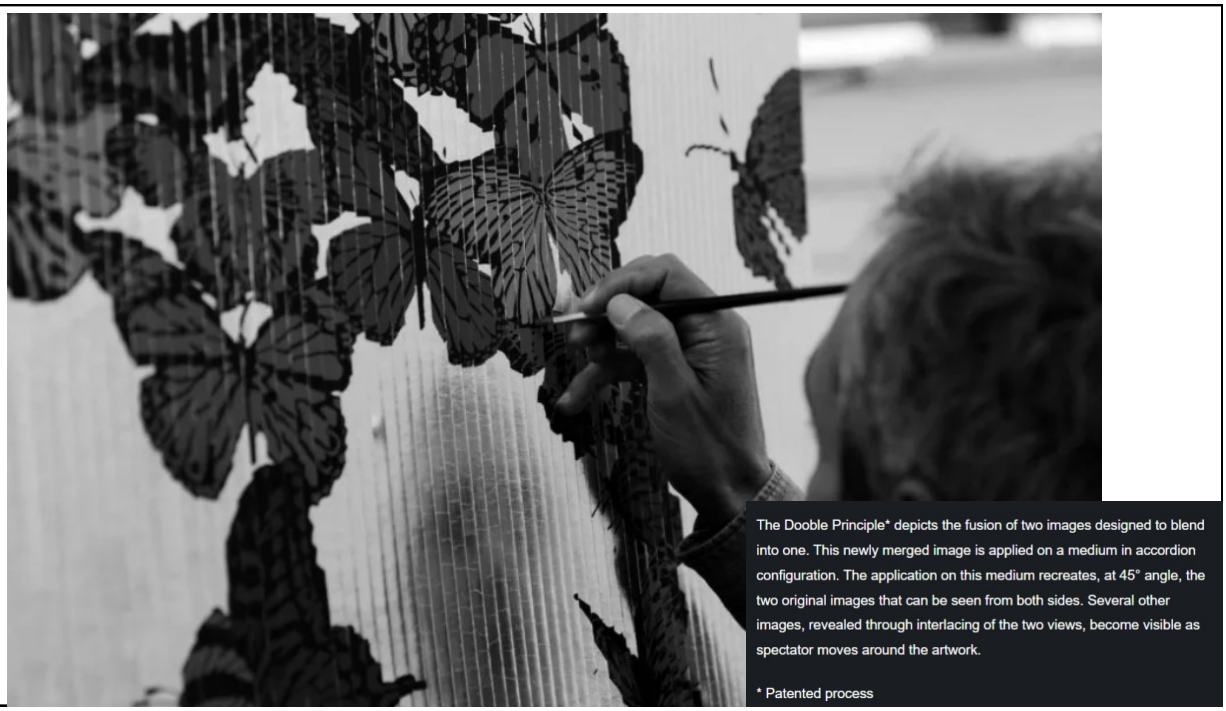



X-ACTO



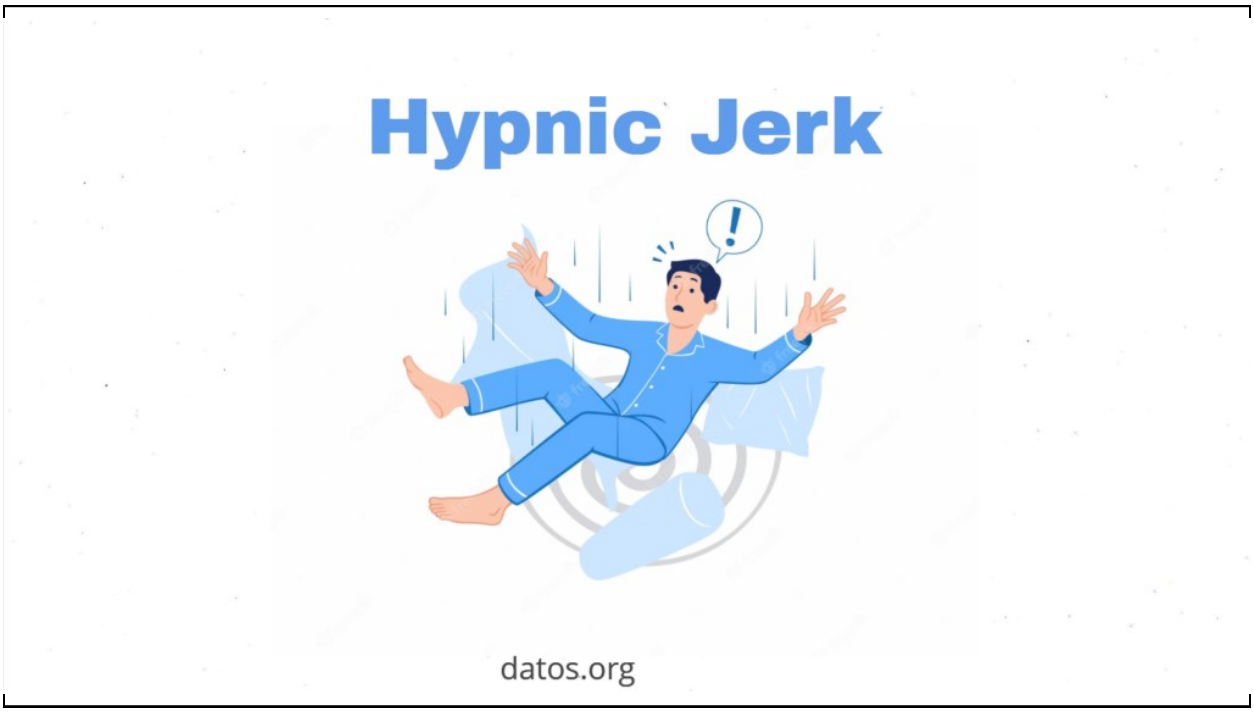
Patrick Rubinstein's lenticulars, 2019





The Dooble Principle* depicts the fusion of two images designed to blend into one. This newly merged image is applied on a medium in accordion configuration. The application on this medium recreates, at 45° angle, the two original images that can be seen from both sides. Several other images, revealed through interlacing of the two views, become visible as spectator moves around the artwork.

* Patented process



Autopixilation

Theoretical background

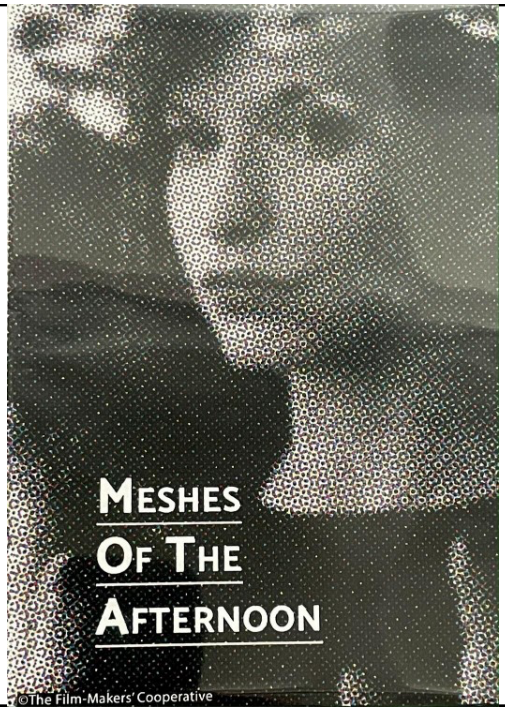
Henri Bergson (1851-1941) French Philosopher

-*Time and Free Will* (1889)

durée réelle or real duration

- Time eludes mathematics
- The experience of time as a continuum

  Even when we dream we think we are awake



Jan Purkyně, *Plate II, Physiology of Vision, 1823*

Thank you for listening!
Feel free to ask any questions

Work cited

Rufus Seder, LIFETILES, 1990s-present

http://www.rufuslifetiles.com/about.html

Rufus Seder, SCANIMATION, 2011

https://www.magicabra.com/product/the-wizard-of-oz-rufus-butler-seder/

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https://truebluemeandyou.com/post/131841134660/diy-lenticular-art

Patrick Rubinstein, Banana crown fusion, 2019

https://debellefeuille.com/artist/rubinstein-patrick/#gallery-11585-5

Patrick Rubinstein, About the artist

https://www.patrickrubinstein.com/en/elementor-16272/

Christopher Nolan, Inception, 2010

Maya Deren and Alexandr Hackenschmied, Meshes of the afternoon, 1943

Jan Purkyně, Plate II from Physiology of Vision, 1823

https://www.wikigallery.org/wiki/painting_233436/Jan-Purkinje/Plate-II-from-Contributions-of-the-physiology-of-vision-No.-I,-published-in-the-Journal-of-the-Royal-Institution,-1830

Appendix 4: List of images

Figure 1. Pixilated Figments installed at OCAD University

Figure 2. Original Polaroid 3

Figure 2a. Original Polaroid 4

Figure 3. Original Polaroid 5

Figure 3a. Original Polaroid 6

Figure 4. Early stages of preparing the substrate

Figure 5. Mid stage of preparing the substrate

Figure 6. Finished substrate.

Figure 7. Scoring the interlaced print

Figure 8. Folding the scored and interlaced print

Figure 9. Gluing the folded, scored and interlaced print onto the substrate

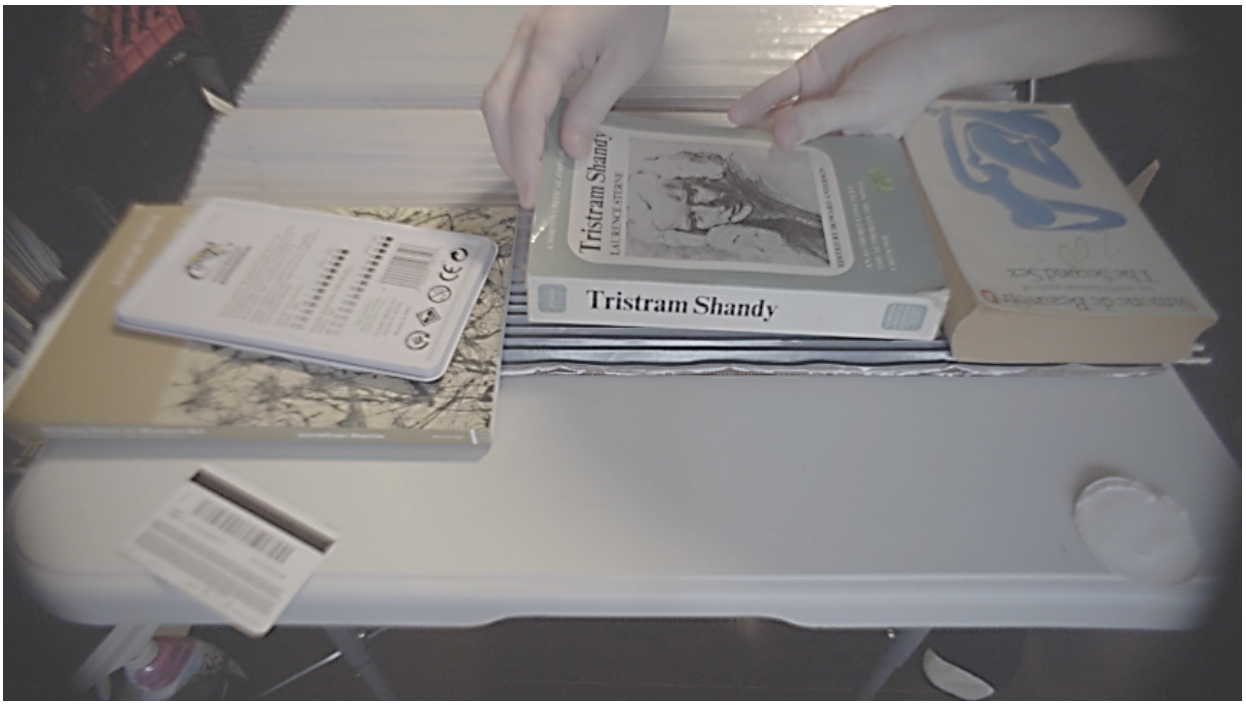

Figure 10. Pressing the completed lenticular

Figure 11. Polaroid emulsion transfer on water colour paper

Figure 12. Polaroid emulsion transfer on Bristol paper