# END OF THE ROPE

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A THESIS SUBMITTED TO
THE FACULTY OF GRADUATE STUDIES
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF
MASTER OF FINE ARTS

GRADUATE PROGRAM IN FILM
YORK UNIVERSITY
TORONTO, ONTARIO

May 2019

# Abstract

*End of the Rope* is a 20-minute sci-fi drama about an injured dancer's journey towards self-empowerment.  After she is crippled in a car accident, a former dancer enters a power struggle with an exploitative scientist who promises her creative freedom in an altered reality with his invention.

Rachel Victoria Drummond, a famous dancer who had to quit dancing after an accident, wants to succeed as a choreographer. One day, she visits Dr. Petr Zimmermann, a genius neuroscientist who has invented a creativity-sharing machine called N.I.C.E. (Neurological Interchange Communication Equipment), a machine that taps into peoples' talents and consciousness. As Rachel continues to use the machine, her relationship with Dr. Zimmermann dissolves into one of seduction and abuse. Lines between ordinary reality and N.I.C.E. reality blur as Rachel is torn between the life she has always wanted and the sacrifice she must make to keep it.

*End of the Rope* unfolds in two realities: one not so far into our future, and that of N.I.C.E, an altered reality with dance elements where the protagonist embarks on a journey of self-discovery.

# Acknowledgements

I'm grateful to my thesis committee: my supervisor, John Greyson, and his constant support, challenging me, pushing me to strengthen my vision, and warning me about possible downfalls, and my reader, Marie Rickard, for her insightful, constructive feedback, editing wisdom, emotional support, and belief in me.

I'm thankful to my cohort for their unconditional support, our Graduate Program Assistant, Kuowei Lee, for administrative help, and Jon Hedley for his endless help with bookings.

I give my deepest love and immense gratitude to my husband, daughter, and parents for their patience, support, and sacrifice during my master's.

Thank you to my key creative team for volunteering their time with dedication, hard work, and belief in my project*:* Lisa and Christine Brkich, the choreographers with whom I was lucky to share my MFA journey at York University; my director of photography, Andrew Hunter; and Vitold Vidic and Oleksiy Buyanov, my editors. Thank you to our amazing cast, Sarah Murphy Dyson and Ryan Hollyman, for their contribution, and our N.I.C.E. Dancers, Armando Biasi, Jenna Gagliardi, Madison Haste, Sara Hinding, and Amanda Martin, for their time in rehearsals and production.

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# Introduction

As a Turkish Canadian filmmaker growing up in a patriarchal society where women are harassed physically or psychologically on a daily basis, I feel the need to explore the issues of power and abuse. I like to portray strong female characters in their search for self, overcoming social, physical, and psychological restrictions.

*End of the Rope* is a 20-minute sci-fi drama in the intellectual tradition of Tarkovsky that contributes to debates on issues of power, control, sexual abuse in virtual reality, and the use of immersive technology in creativity and existentialist psychology. I focus on power, desire, and dependency through my characters: an artist, a scientist, and a machine. *End of the Rope* is a film about how power is obtained and used to control and take advantage.

I use immersive virtual environment technology in my film. My protagonist, Rachel, uses a futuristic machine known as N.I.C.E. (Neurological Interchange Communication Equipment) in order to achieve creative freedom in an altered reality since she cannot succeed in the real world due to her disability. N.I.C.E. allows Rachel to delve into other people's minds to utilize their cognitive ability, talent, knowledge, and consciousness. Dr. Petr Zimmermann provides Rachel not only physical freedom, but also the tools she can use to unblock her creativity. Rachel places her hopes, desires, and needs on a machine, and her growing dependence puts her at risk.

We are transitioning into a hybrid age, an era of human-machine interdependence, where technology will live within us. This will drastically change society, the life of the individual, and possibly even the nature of creativity. Can a fiction film depict potential abuse of power through a protagonist who experiences problems in immersive simulated technology? When abuse is virtual, what are the possible tools to fight it? In order to balance the male gaze and the female

gaze in film, what are the elements to take into consideration in terms of identity, representation, and nudity?

      The central role machines will play in our future raises questions such as "Can there be a platform for shared creativity?" and "How are we going to create in the future?" Rachel tries to reach her full potential without sacrificing her integrity. What are the motives to use this kind of technology? Can we achieve empowerment with or without virtual tools? Can a machine built on nanotechnology and AI help individuals tap into each other's talents?



**Image 1: Frame-grab, *End of the Rope*. Sarah Murphy Dyson as *Rachel.***

## Development of the Story and Characters

When I was living in Prague in 2017, I started writing *End of the Rope* as a feature film. It was about an expat filmmaker, Jane, who lives in Prague with her husband and daughter. Struggling to make her first feature film, she uses a creativity machine made by a fictional writer and inventor that turns her into a character without a future stuck in an incomplete screenplay. Set in magical Prague, a city full of mysteries, myths, and legends, this story would tell the inner journey of a female filmmaker, new to town, who struggles between her fantasy life where she truly wants to create, and her daily routines of being a mum and supportive wife in an expat community. I was inspired to tell this story because I too had been moving around and was unable to establish myself properly in any one place. I was experiencing the difficulties of being an expat and outsider in all of the countries I'd lived in the past seven years, including my home country of Turkey. I was more focused on my recent experiences balancing my career and home life. When we look at films about middle-aged women as struggling mothers, we find stories of single moms, failed marriages, or unfaithful relationships that point to male absence as the source of hardship and sorrow. In *End of the Rope*, I wanted to emphasize female interiority and explore various facets of a female professional - creativity, work, family, love, identity, and the search for self - without reducing my protagonist to maternal stereotypes.

In Prague, I was inspired by Jára Cimrman, a Czech fictional genius created by three writers.[1] He won the vote for The Greatest Czech in 2005, but the fact that Cimrman is fictional prevented him from actually winning the contest. He is presented as one of the greatest Czech playwrights, travelers, philosophers, inventors, mathematicians, and sportsmen, and he owns a

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[1] Cimrman English Theatre, "Jara Cimrman", accessed February 6, 2018,
http://www.cimrmanenglishtheatre.cz/jara-cimrman/

theatre in Prague. Cimrman inspired me in the creation of my antagonist; the central concept for

my film, however, arose from an experience I had one morning when I noticed data running on

my husband's computer screen. He had donated his computer's CPU to a research facility

specializing in cancer research, an activity sponsored by the IT company he was working for.

This inspired my idea of sharing unused intelligence and brain power. My interest in combining

art and science with filmmaking was my initial inspiration to start my feature screenplay. My

story was layered in parallel and vertical realities through the developing relationship of two

characters in M.I.C.E. (Mind Interchange Communication Equipment) which later became

N.I.C.E. (Neurological Interchange Communication Equipment). As Christopher Nolan focused

on creation and perception through the infinite potential of the human subconscious in his film

*Inception*, I'm interested in the infinite potential of the human mind in a virtual reality platform

where you can access your full potential through the use of many brains, as in *End of the Rope*.

It was a long and challenging process to adapt the feature as a short film. For a long time,

I thought I was making a calling card short and would later return to developing the feature.

Having completed my short film, I'm so satisfied that I feel I told the story I wanted to tell,

which proves the strength of a short film in delivering the core of the story.

In adapting the feature film, my first goal was to minimize the characters by focusing on

the essence of the story built around an artist, a scientist, and a machine. My character was no

longer a mum and a wife. My second goal was to find a different career for my protagonist that

could be conveyed in a visually engaging way in a short time. I had always had an interest in

incorporating dance into my work. Initially in the feature film, I had Jane as a filmmaker who is

making a documentary about Katka, an injured dancer/choreographer. But this was still a

feature-length story involving another relationship. As I continued to focus on making my story

smaller, Rachel appeared as my protagonist. Rachel is a dancer who is now trying to become a choreographer because of her accident - she can no longer dance. Cimrman, the fictitious character in my story, became Dr. Zimmermann, a charismatic scientist with a God complex, who has invented the N.I.C.E. (Neurological Interchange Communication Equipment). This is a new scientific technology he claims can help people achieve their artistic dreams through science. Immediately, this became a much more exciting, visually engaging story to put disability on screen and the idea of how liberating technology can be for people in this kind of situation, but at what price? In terms of choosing the profession, vulnerability was important for me. I find dancers vulnerable both in the environment in which they work and in the brevity of their careers.

Dr. Zimmermann appears to be a caring and helpful mentor. In order to use N.I.C.E., Rachel signs a consent form that she will be available as a "Giver": her consciousness, talent, and experience will be recorded during the session to be included in his database so other "Receivers" can access it. During the development, I had to make a decision whether this would be a Faustian story where my character pays the price for what she wants with a negative ending, or if it would be an empowering story with a positive ending where she doesn't need to choose between her choreography and dignity. Because I'm interested in power issues and gender roles, I went with the latter.

*End of the Rope* portrays the protagonist fighting against sexual abuse in a virtual reality. As the film evolves, the fight between the two characters for control becomes more noticeable. When Rachel finally creates her "Godly Creation" in N.I.C.E., her absolute joy is interrupted. Dr. Zimmermann wants to wrench the control away from her. Rachel finds herself in the middle of a desolate barley field in Dr. Zimmermann's subconscious reality. His jealousy and need to

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dominate is further told through his line "I wanted to share in your pleasure" as he forces himself on her. Rachel understands that he was always guided by self-interest and she needs to protect herself on her own terms. The power roles in the film shift at this point as Rachel tricks him into her subconscious reality where she has her revenge. Her desire for revenge is a natural reaction, however I focused on seeking empowerment rather than revenge in my film. For this to be a journey of self-discovery, Rachel's growth through her choreography had to be the most important element. For that reason, I used stylized choreography and music that signifies Rachel's development, which leads her to take control of this abusive relationship. She suddenly sees not only Dr. Zimmermann's true character, but how self-pitying she has become, how riddled with doubt, and how far she was willing to compromise in order to reclaim her creativity. Rachel has a moment of self-recognition to stop herself from going too far. She makes the connection that in Dr. Zimmermann's hands his N.I.C.E. technology is not very nice and she will not be like him. She lets him go, deciding she doesn't need him or the machine to achieve her dreams. In the beginning of the film, Rachel makes her decisions in an environment controlled by Dr. Zimmermann, but later, when she takes control of the machine, she turns the tables on him. His invention fails him. At the end of the film, his embarrassment is not only because of what happens in the revenge scene, but also his failure to control his own machine.

# Themes of the film

The film critically analyzes power, control, and dominance through the narrative, characters, and technology. We are invited into an altered reality which is constructed from the desires of the characters, a place where they have complete control. "Power is not neutral, diffuse and freely available but fiercely protected by those who hold it and their agents; and the actual use of force and violence remain essential to the exercise of power". [2] Often people abuse power in order to benefit themselves.

*End of the Rope* focuses on the issue of female creativity and its role in the representation of the female body: in this case, a disabled body that doesn't serve the needs of the protagonist. Rachel tries to get used to her new body and through that, used to new ways of thinking and creating. Her digitalized body is not a stylized or commodified body, but one that serves her own desires. This gives power to Dr. Zimmermann, who is able to provide the protagonist the opportunity she seeks to create. He attains power through her needs and dependence. As Dr. Zimmermann abuses the power he attains through the machine, Rachel tries to reach her full potential without sacrificing her integrity, which leads to her empowerment.

We often see voyeurism in film as a result of an obsession. In *Rear Window* (1954) by Alfred Hitchcock, this obsession was approached as a reasonable yearning more than as an immoral addiction. Or in *The Conversation (1974)* by Francis Ford Coppola, the character understands it as unethical at the end. Dr. Zimmermann has a voyeuristic position in the film that gradually increases from watching Rachel from surveillance cameras in his lab to watching her nude in N.I.C.E, which leads to his sadomasochistic behaviour in the barley field when he

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[2] Dean and Juliet MacCannell and Flower MacCanell, *Violence, power and pleasure: A revisionist reading of Foucault from the victim perspective. Up against Foucault, explorations of some tensions between Foucault and feminism,* ed. Caroline Ramazanoglu (New York : Routledge, 1993), 205.

attacks her. His subconscious is revealed on a deeper level in N.I.C.E. reality, where he does not

hide behind his profession.

Rachel, the protagonist, is at first a victim of the male gaze. She is nicely dressed,

attractive, capable, and beautiful. She is an object in his machine and the world he built where he

can satisfy his fantasies. Dr. Zimmermann feels the right over her by giving her what she needs

and what she wants. She is not safe. Later, we realize that her virtual experience is also recorded

on a memory disc, an object of permanence in the real world. The film shifts the power dynamics

when the female protagonist takes control of Dr. Zimmermann and the machine. In the barley

field, she uses her sexuality to become the powerful one, and then when she takes him to her

subconscious world, she beats him through using her choreography and the power of the

machine. As suggested by Foucault, the exercise of power perpetually creates knowledge and,

conversely, knowledge constantly induces the effects of power.[3] We shift from a male gaze to a

female gaze. She is no longer a victim, while he becomes the victim of his own creation. As

mentioned in Laura Mulvey's polemic essay, the patriarchal language, where women are

represented as the 'other', as objects rather than subjects, shifts when the woman protagonist in

my film is empowered.[4] The male gaze is redirected through a technological device used by a

woman. Historically, machines are male-oriented, invented and used by men. When Rachel gains

control, this is a reflection of the change in women's position in society. Women are taught,

educated, and expected to behave nicely, but in my film, Rachel gets her happy ending by doing

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[3] Michel Foucault, *Power/Knowledge, Selected Interviews and Other Writings,* Ed. Colin Gordon (New York : Pantheon Books, 1980), 52.

[4] Laura Mulvey, *Visual Pleasure and Narrative Cinema. Film Theory and Criticism : Introductory Readings,* Eds. Leo Braudy and Marshall Cohen (New York: Oxford UP, 1999), 833-44.

the opposite. Having grown up in a Middle Eastern country, I know that you have to create justice for yourself, which can not always arise from niceness.

Virtual reality offers us the ability to master our emotions by immersing ourselves in altered forms of reality. The arrival of immersive technologies has produced a new layer in the relationship of representation and reality in cinema, which demands a new way of looking at women's agency and subjectivity. My protagonist submits herself to an immersive technology. Her sexual abuse and fight for power in *End of the Rope* is virtual, occurring only in the mind.

As a result of my education in science and art, I'm interested in merging these two worlds in my filmmaking. Computers, sensors, the internet of things (IOT), biometric devices, artificial intelligence, and virtual reality are already part of our lives. Technological evolution affects our world biologically, socially, economically, politically, and environmentally. We live, think, communicate, create, play, study, and work differently than 20 years ago. Right now, we are transitioning into a hybrid age, an era of human-machine interdependence, where technology will live within us by 2050. This will drastically change individual life and society, and possibly the way we will be creating. In 2050, smart, automated, and generative cities, smart transport, self-driving cars, more intelligent machines mimicking human emotions, and a lot more will be possible. So, not only is our environment becoming a hybrid, but human beings are also moving in that direction, with sensor-enabled biomedical pills, bionic implants, biological and artificial bodies, and the manmade extension of our natural lives to 150 years. Machines will be in everything from our clothes to our skin. This is not science fiction. This is what scientists are discussing and working on right now.

Donna Haraway says, "By the late twentieth century, our time, a mythic time, we are all chimeras, theorized and fabricated hybrids of machine and organism; in short, we are cyborgs".[5] Katherine Hayles takes this further, stating, "That the cyborg is no longer the most compelling metaphor through which to understand our contemporary situation should not blind us to the fact that much urgent and pressing work remains to be done. The cognisphere takes up where the cyborg left off...the cognisphere, like the world itself, is not binary but multiple, not a split creature but a co-evolving and densely interconnected complex system".[6] She explains cognisphere as the globally interconnected cognitive systems in which humans are increasingly embedded. N.I.C.E. is built in a cognitive intelligence environment with the idea of sharing a collective intelligence to maximize creativity and potential.

Technology is not bad, and its progress is inevitable. However, are we ready for this as human beings? Advanced technology has become a threat to many countries around the world. There are ongoing wars, conflicts, struggles, and violence as a result of power and existentialist issues. My film raises some of these issues through a story that involves art and technology in the hopes of inspiring a safer future.

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[5] Donna Haraway, "A Cyborg Manifesto: Science, Technology and Socialist-Feminism in the Late Twentieth Century," In *The Cybercultures Reader*, edited by Bell, David and Barbara M. Kennedy, 292: Routledge, 2000.

[6] N. Katherine Hayles, "Unfinished Work: From Cyborg to Cognisphere," *Theory, Culture & Society* 23, no. 7-8 (12, 2006): 165

## Cinematic Influences

Chris Marker's *La Jetée* (1962) is a unique approach to sci-fi and was a huge influence for me. *La Jetée* is about memory as a philosophical investigation into the way our minds perceive and construct our experience of time. However, the machine in the film also takes the user to an unknown time and space chosen by the protagonist. Tarkovsky's *Stalker* takes place in a forbidden zone in Russia where visitors' wishes can come true. There is again a visitation in search of dreams; just as in my film, Rachel is promised the achievement of her dreams through science.

As Charlie Kaufman focuses on the idea of adaptation with an internal struggle in his film *Adaptation*, I also focus on the creative process of an artist, and external and internal obstacles in the present, past, and future. Like in Fellini's *8 1/2* about a filmmaker suffering from director's block, the dancer's block in *End of the Rope* is not only about herself and her alter ego, but also her disability as an external factor that limits her creativity.

Films using layered time and space such as *Inception, Predestination,* and *The Curious Case of Benjamin Button* are all inspirations to me as intelligent ways of using space, time and mind games. For a long time, when I was working on the feature version of *End of the Rope*, I mapped my film in vertical and parallel layers in reality and analyzed how Christopher Nolan did this in *Inception.* There are multiple layers in N.I.C.E. There is an extension to N.I.C.E. reality that reflects the subconscious desires that I call Rachel's reality and Dr. Zimmermann's reality. In N.I.C.E. reality, things were recorded on a memory disc under Dr. Zimmermann's surveillance whereas in their subconscious realities, things were not recorded and there is no proof. One might question if this is a malfunctioning of the machine or if it is intentional,

designed that way by Dr. Zimmermann. Was he malicious from the beginning, or is he also a victim of desires he cannot control?

As my film also creates layered reality without the notion of time and space, it takes on a dream-like quality. However, as opposed to some of my favourite directors' use of dreams in their films such as Tarkovsky, Bergman, Kubrick, and Wong Kar-Wai, I wanted to separate the time, place, and understanding of the machine world versus the real world. In most of my earlier films and feature screenplays, I loved blurring the lines between dream and reality, making them inseparable in the way Tarkovsy uses dreams as antirealism. However, in *End of the Rope*, while there are so many layers in the narrative, I wanted to keep a more linear style of editing, where we have clear beginnings and ends to the machine reality and we can follow a linear narrative in the real world. Thorsten Botz Bornstein says "the rhythm that we feel in cinematic time is an illusion insofar as it's the rhythm that we transfer from our own being into the films that we see".[7] This also reminds me why we watch films and consume films to fulfill our own desire of becoming. The "Zone" in Tarkovsky's *Stalker* does not "symbolize anything, any more than anything else does in my films; the zone is a zone, it's life, and as he makes his way across it man may break down or may come through". [8] As the other filmmakers play with time and space through dreams in their films, I do the same in virtual reality, creating a space that challenges the characters to face their deepest desires and passions.

I also analyzed how virtual environment, virtual bodies, and connection are built in sci-fi films such as *Star Trek*'s Holodeck, with the immersive green screen VR room, *Minority Report*'s three Precogs submerged in a jacuzzi to see the crimes of the future, *eXistenz*, where

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[7] Thorsten Botz-Bornstein, *Films and Dreams* (Lanham : Lexington Books, 2007), 2.

[8] Thorsten Botz-Bornstein, *Films and Dreams* (Lanham : Lexington Books, 2007), 8.

they plug into a Bioport installed in spine like an umbilical cord to download the virtual game, the transfer of Jake's consciousness to an avatar body in *Avatar,* how Intravenus was used to enter a different space and time in *Inception,* and how the protagonists jacked into the virtual world via ports in their necks in *The Matrix.*

## Structure, Tone and Style

The genre of science fiction immensely excites me, as it makes me think and question the era we are living in, its progression, and its possible outcomes. Etienne F. Augé says, "Science Fiction is to prevent and invent the future". [9] Sci-fi movies help us prevent the dangers of the future from arriving by inventing a future in which they do not happen. My film examines the possibilities of immersive technology and the risk it might hold in both the present and future. In the film, we follow humanity's faith in technology through my character's personal journey using technology, but it raises the question "what if something happens while using this machine in an altered reality?"

I was always drawn to creating an ambiguous time and space in my films with a timeless story. The film projects two realms of reality that Rachel experiences. I collaborated with my cinematographer, choreographers, and composer to explore N.I.C.E. reality through dance movements, lights, music, and visuals, where Rachel creates her masterful choreography. This is a character-driven narrative with imagery intended to reflect the inner conflicts of Rachel. Because of the genre, the film could have been plot-driven, but, I preferred to stay close to my protagonist to create an empowering story that made it character-driven. The film demands a truthful understanding of our own being, both our conscious and our subconscious.

While Rachel's real world is limiting, painful, and frustrating, the world N.I.C.E offers is revolutionizing, free, limitless, and, for that reason, addictive. We made cinematography choices to reflect this, which we also supported with editing and music. N.I.C.E. is more colourful, with free camera movements. There is more openness to it and more movement, whereas the real

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[9] Tedx Talks, *Why our world needs science fiction: Etienne Augé at TEDxErasmusUniversity*. YouTube video, 14:48, Posted (March 2014), https://www.youtube.com/watch?v=FJkixvgJqsY

world is duller, stiff, with slow movements, and the world around Rachel is more compressed. We used long lenses and kept our distance from the character in portraying her in reality, whereas we captured Rachel's astonishment and feeling of freedom in N.I.C.E. reality through free camera movements with steadicam. N.I.C.E. reality is all about feelings, excitement, and joy. The pacing is faster and freer. There is fluidity and beauty through dance choreography. Anything is possible in N.I.C.E.

Our first dance sequence is captured in blackness, a subtle and simple setting where we see only Rachel in the space. This scene is about feeling her body again seven years after the accident and rediscovering her joy for dancing. We start on a close up and dolly back to reveal Rachel's body. We see her pointe shoes and hear her steps as she embraces the moment in movement. She goes through a range of shadows and sudden bright lights, conveying the feeling of coming out of her shell and being born again. This is also the moment where she understands how N.I.C.E. works and how she can draw power from the people she connects to. In this lost space, she enjoys the music and her dancing until she finds a mirror, where she sees herself. She starts to give birth to her creation, but is suddenly interrupted, finding herself naked with Dr. Zimmermann watching her. When she goes back to reality, she is faced with betrayal and disappointment, which is the midpoint of the film. As the story evolves, she gets better at using N.I.C.E., so the world around her gets richer in production design, and the pacing in the choreography and editing increases. In the real world, there is also progress in terms of pacing. Each time Rachel is in the room with Dr. Zimmermann, the rhythm builds with more jump cuts.

As in all my films, *End of the Rope* is a very cinematography- and design-heavy film. We aimed to achieve a natural, cinematic, saturated image quality and tonality that would give the film a look that engaged us psychologically and enhanced the story of a dancer who tries to reach

her full potential. For me, it is not only about creating beautiful shots; it is about creating meaningful shots that convey a sentiment, which is how I looked at each of my scenes. I analyzed each one, designed my shots, and found my locations based on the analysis of the emotional arc of the character. There is a good balance of using interior and exterior locations in *End of the Rope*. I tried to find locations that gave me angular depth, such as the bridge with the metal structure, the courtyard in front of science lab with black forms, the huge tree with the twisted roots, the long corridor leading to the science lab, and the open barley field stretching to the horizon at sunset **(as seen in Appendix 1)**. I used long master shots at these locations, foreshadowing changes in Rachel's life, like a transition from one state to another.

      After her true creation is interrupted, and through the disappointment, fear, and anxiety of what she faces in the barley field, Rachel attempts to use her power. In the revenge scene, I positioned the lead male actor as the subject of embarrassment who was looked down upon, suggesting an alternative and self-conscious spectatorship. I used higher angle shots to show him weak and helpless, while I used lower angle shots to capture the protagonist finding the truth within herself. The similar approach to signify who holds the power can also be seen in the camera angles in the first half of the film, where we see the protagonist as a small figure in this world from a high angle in the courtyard. This is also the first time we're introduced to her disability. This shot not only reveals how she feels about herself, but also makes her powerless in this environment. This is also used in the surveillance camera footage, where Dr. Zimmermann has full control and power. Rachel's disability is on screen; she can no longer communicate through her body, and future technology provides her liberation. The protagonist is in a very vulnerable state at this time.

What happens if she uses the same power he used on her to strip him naked and tie him with ropes and show him violated? How is she different than him, even if it is happening through the people she controls in a virtual environment? How does she use these virtual tools differently than him? Revenge is her first instinct as her antagonist is an abusive and potentially dangerous person. However, I focused on seeking truth rather than revenge. I wanted to emphasize two things: first, that Rachel can use the same power. Second, that she can make the choice whether or not to use it. I wanted my character to have that awareness before she goes too far, and to make the choice that she is done with Zimmermann and his offerings, without acting as he did. She uses her power in choreography. This is one of the reasons why the choreography is stylized and the revenge seems to be staged like a show. She almost tests her limits of using these virtual tools. She uses her newly attained power to turn the tables on him. Throwing away the memory disc at the end of the film concludes her journey towards empowerment.

During the editing stage, I received comments, including from my editor and supervisor, to take out the end where Rachel throws the disc into the garbage. I tried it and ended the film on her face, when she is in the center of the frame, powerful and hopeful. Taking the memory disc out saved us time, and also people commented that she had already achieved what she wanted and this would not affect the story.

My supervisor John Greyson thought it was a red herring and had extra questions about what was on the disc, as he believed that Rachel did not need it and could not do anything with it. According to him, she was already empowered and had concluded her journey, both with herself and with Dr. Zimmermann. And, he thought, the ending was perfect on her face. I was also very happy with the central shot as an ending. However, my reader, Marie Rickard, from the beginning felt so strongly about keeping the memory disc and concluding this element of the

storyline, which I also believed. The memory disc was important metaphorically for the script because it showed the concrete rejection of Dr. Zimmermann and everything he represented. It was also established in the film from the beginning and would require a conclusion. Rachel would also not leave the memory disc with him as it was hers and private. Throwing the memory disc symbolizes that she believes in herself now and is ready for a new journey, which provides a more cinematic and complete ending that makes us think. It was a challenge to find a shot I felt was still a strong ending, but it worked out at the end.

This memory disc was also a challenging decision for me in the screenplay. There were many drafts with different endings involving where and when Rachel would take the disc and if she would ever pick it up or throw it away. If she kept the memory disc, it might have implied she still needed it or her connection to Dr. Zimmermann would continue. But in the end, I chose for her to throw the disc away because I wanted the ending to be empowering.

## Previous Work

My filmmaking process is influenced by my background in the visual arts, as I make collages – like photographic scripts – to visually develop the scenes in my projects. I like researching new ways of telling a story and telling a different story each time. I like fantasy elements in my filmmaking, but use them in a realistic environment. I infuse my stories with myth, ritual, and imagination, which offer the viewers a journey into the unknown and unexpected. I like creating a dream-like mood that takes the viewer into an undefined time and space. I work with symbolic visuals by instinct and intuition. Being a dual citizen and having lived in two different cultures throughout my life, I enjoy exploring human psychology and the ways in which the conscious and subconscious mind are affected by social and environmental conditions. I like transitions from one place to another, from one person to another, from one condition to another, and from one reality to another, as in *End of the Rope*.

My earlier film, *Hungarian Salami,* is a story about myth, ritual, and imagination. The film unfolds in a transitional state between the human and supernatural world, and depicts how myth - which can not be explained by logic, familiar knowledge, or received beliefs - challenges realism.

With its connection to psychoanalysis, my film *In the Penal Colony* has a dream-like quality and takes the viewer on a timeless journey, with the feeling of being simultaneously in a state of reality and dream.  We go between the two worlds created in the film: the perverted power relations in the penal colony, and each individual's struggle to exist in this reality.

The subjects I'm interested in are usually related to justice, science, and human conditions. Having the chance to be hands-on in York's MFA in Film, I wanted to push my style and tune my skills by exploring new techniques of storytelling. Virtual reality is an expansion of

my research to find new ways of storytelling and of characters expressing themselves. I wanted to create an interdisciplinary work and bring the strength of different mediums into filmmaking. York University provided the required innovative and collaborative environment to achieve my goals and explore my creative voice further. I collaborated with other MFAs in dance and music not only on my thesis film, but also on another assignment prior to shooting *End of the Rope* in order to develop a strong collaborative language.

N.I.C.E. is one of the main characters of my film. This approach comes directly from my critically-acclaimed, award-winning short film *In the Penal Colony,* based on Franz Kafka's short story. Here, Apparatus, the execution machine, portrays a control mechanism that the individual characters have no power over. *In the Penal Colony* was about being "broken," and society's way of dealing with this through power systems. There are two different story lines in this film. The first follows the penal colony and the Apparatus, and the second is the inner world of the characters. I was interested in the fact that the story carries a personal and psychological perspective, yet builds a strong social context through representing power roles and relations in society. My other sci-fi film in development, *Broken Eggs,* centres around the idea of being "unbroken": being perfect, which is achieved through science. Both systems portray control outside of the hands of the individual, which can be thought of as an act of dictatorship. In *End of the Rope*, I focus on using technology controlled by an individual's own freewill. I wanted to create a character-driven story with a positive ending where the protagonist reaches her full potential. Power issues are handled more at the psychological and personal level in this film, but it still creates a social context around the ethics and philosophy of science, raising questions about the future and our dependency on technology.

I take gender role into consideration in all of my films, including my adaptation of Franz Kafka's story *In the Penal Colony*, where I told the story through the eyes of a female explorer and designed the Apparatus taking gender equality into consideration.

I made three short films during my MFA at York. These three films are different genres, and in each of them, I wanted to challenge myself in storytelling. *Turkish Mesir Macunu* is a dark comedy about a free-spirited young woman with dreams who fights against traditions on the first night of her arranged marriage. With a humorous tone, *Turkish Mesir Macunu* represents a chaotic culture clinging to obsolete traditions and how this mentality affects relationships. This theme is explored most times in a tragic way, but the absurdity in my film sets a humorous tone with an unexpected twist at the end. I hope that with my films, I can create a voice for women and their ongoing struggles. Although *Turkish Mesir Macunu* is a different genre than *End of the Rope*, the reason for telling the story of a struggling woman was similar. The film was nominated for the Student Academy Awards, and, following this film, I received the W. Lawrence Heisey Graduate Award in Fine Arts, which recognizes outstanding ability and achievement in scholarly and creative work. It premiered at the 2019 Toronto Shorts International Film Festival and won Gold Remi Award in Best Comedy - Dark/Black Short Film Category at the 52nd WorldFest Houston Festival. During the production of *Turkish Mesir Macunu,* I gained the courage to make a no-budget short film, which was a first for me, as my previous films were funded by the Arts Council, Bravo!FACT, and prizes such as the William F. White Proficiency in Film prize. Coming from an artist background and having done my undergrad at OCAD, I was used to people working on their own as individual artists. Making these two shorts before my thesis film, I got to work with the strengths and support of the York community, to which I now belong.

I shot my second short film in my Hybrid Fiction class. *One Step Apart* is a five-minute hybrid fiction, dance/drama about a couple struggling with a past secret that puts their relationship on the verge of separation. Their emotions are revealed through dance, where they are trying to get out of this infinite loop of anger and sadness. I was interested in hybridity from the perspective of using dance and drama together to tell a story. *One Step Apart* is experimental compared to the narrative structure of *End of the Rope*; however, my goal had been to work with dance before I shot my thesis film about a dancer. Having worked with the creative medium of dance and film in *End of the Rope,* I received the Miron Deca Memorial Award in 2019 for an ardent intellectual curiosity, a thirst for knowledge, and an interdisciplinary dedicated preoccupation for Fine Arts.

## Using Choreography in Film

Lisa Brkich and I worked on *One Step Apart* just prior to our collaboration on *End of the Rope.* It is important for me to establish strong communication with my key collaborators, and I knew Lisa was the right person to work with. Lisa brought in her sister, Christine Brkich, with whom she has been collaborating for years. I was lucky to have two wonderful choreographers working with me from the script stage who were also second year MFAs at York.

For the choreographers, the focus was to first and foremost maintain the integrity and authenticity of the script, and to make sure the movement vocabulary was in line with the world I was creating. They looked at working with the notion of the dynamic strength of a woman who was living and regaining a memory, instead of finding the ability in her current body, which is ailing and 'broken' in her perspective.

Based on the script, we divided the choreography in four sections:

A) Real-life choreography which Rachel and her dancer, Katka, practice in the studio.

B) In N.I.C.E., Rachel's solo dance, where she feels liberated and starts to learn how she can use the machine.

C) Godly Creation. The ideal choreography of "Broken", the dance piece Rachel is trying to choreograph. Rachel goes beyond her planned choreography through the power of N.I.C.E., creating her dance piece with five dancers **(as seen in Appendix 2)**.

D) Rachel's empowerment through her choreography in the revenge scene with the five dancers, Rachel, and Dr. Zimmermann.

My direction to the choreographers was a Wayne McGregor type of choreography: swift, sharp, unique movements. I wanted the dancers to look powerful, because these are people in an altered reality, idealized and perfect. That is why the choreography goes beyond Rachel's

imagination and becomes a Godly Creation. Our focus was on fast, short movements that develop rapidly and match the length of the film. As I didn't want the film to be more than 20 minutes, I asked my choreographers for fast ins and outs in each scene. The movements had to be impactful right from the start. Stylistically, the choreographers looked for sharp lines and rhythmic patterns, moving seamlessly at a variation of speeds with partnering that both supported and offered tension to the relationships both between the dancers and with the viewer.

The choreography had three different feels in Rachel's three dance sequences, as it matched the mindset of the character and what was happening in the Godly Creation, her ideal choreography. Each dance demanded different emotional and physical portrayals of the storyline. Our vocabulary especially for the Godly Creation, had elements of jazz style and technique crossed with a fusion of contemporary dance genres, but the choreography stands out on its own and also fits well into a score that is atmospheric and otherworldly.

In Godly Creation, the choreography was meant to be dynamic and challenging so as to embody a virtuosic style, reminiscent of what Rachel may have remembered from being able to dance as a principal ballerina. We wanted to infuse ensemble work with some moments of unification, interspersed with partnering as well as segmented grouping, all while keeping true to a technically-driven style that combined both jazz and contemporary dance movement.

The final piece with the ropes was meant to be more aggressive, yet still with dynamic flare as the main character set out on her revenge. Revenge was a theme played with here in order to earn the ending of the scientist tied up and disrobed. Again, this was set in more of a contemporary style, with minimal partner work and a more unified ensemble.

Katka's ballet solo was meant to be very classical at the start of the scene to show her ballet virtuosity, and then juxtaposed with a contemporary solo piece that would have been

choreographed especially for her. This was to present the idea that although she was a very classically-trained dancer, she may have lacked the contemporary skill to bring out what Rachel was looking for.

In order to embrace the diverse modalities of spectatorship and achieve balanced gender framing, casting of both male and female dancers was very important to me. Our rehearsals started a month prior to the production. At times, I visited the rehearsals with my director of photography and composer to discuss the movement, rhythm and coverage.

In the scriptwriting, because Rachel was directing the dancers in her subconscious reality and using them to execute what she wanted, her decisions, especially in the revenge scene, were very important such as the decision of how far she would go and when she would recognize that she was about to go too far. The emotional states of the dancers and what they portray were also important. We also considered what Dr. Zimmermann's reaction within that choreography would be. Was he afraid? Would he try to plead with the dancers, even non-verbally? Dr. Zimmermann was also a part of the choreography, even though he did not dance. In each sequence, we considered and discussed Rachel's position and her reactions as she became the observer.

The biggest challenge for the choreographers was to work without music. They chose not to use music because they knew the music was going to be composed specifically for the work. They thought using other music would have helped them stay together in the timing, but might have influenced the choreography incorrectly once the composer's music was laid on top. They listened to some only to help inspire the technical style but not to be tied down to any one theme.

## Music and Sound Design

Music has a connecting, enriching, and supporting role in the film. The style is minimalist, not overpowering, supportive and integrated with progressing cues. The music concentrates to support the emotional arc of the protagonist and storyline. The mood is very subtle. Following the storyline, the music accentuates the emotions, such as curiosity, excitement, sadness, and hopefulness. I wanted to use classical music with classical instruments to have an acoustic and earthy music score that creates a nice contrast to the technological, sci-fi world, such as in Chris Marker's *La Jatee* and Kubrick's *Clockwork Orange.*

The music in a way represents N.I.C.E going beyond its user's capabilities. The meaning I seek in the music has a cause and effect relationship: power leads to injustice and desire, which leads to disappointment and dependency, and finally, empowerment. The reference rhythm is from the circling motion of the ropes in the revenge scene, which create a pulling and pushing effect. Some of the music references we have are John Luther Adams' *River With No Willows*, Steve Reich's *Drumming Part IV*, *Electric counterpoint, Music for Pieces of Wood* and Philip Glass, *Glassworks*. We are going after a general theme that connects all the sequences. In reference to the sections listed in "Using Choreography in Film",  Section B, Rachel's solo dance is probably the most emotional and personal part, and the most vulnerable at the end, where she is naked and betrayed. I planned piano or cello for this part. For C, percussion and strings. More orchestral and rich, powerful music focusing on choreography. And D, the revenge scene, which is not just about turning the tables on Dr. Zimmermann, but which carries the whole concept of the film and the character's journey. It is about Rachel's empowerment, but also about issues of power and manipulation, and the risks of future science and technology. There are so many layers of emotions for both Rachel and Dr. Zimmermann that need to be represented in the

music. Between C and D, where I have the barley field, the music continues. An initial melody built in B goes big in C, and creates a twist in D. We see D as more of a revelation and resolution, but with a big impact that shows the change in Rachel. Like we had in the choreography, there is not so much time to develop the music; it needs to arise quickly and effectively.

Most of the film is recreated with ADR, Foley, and added sound effects. I was not expecting this, but my sound designer and mixer, Dwayne Newman, who has been working in the industry for thirty years, did not find the location sound fixable for broadcasting quality. I had never had this issue before, but the mechanical engineering lab at the Lassonde School of Engineering was noisy. We could hear a constant rumble in most of the vocal tracks in the lab scenes. I worried about not having authentic acting when we had the ADR sessions, but my actors even improved their performance and we kept some of the synced location sounds to avoid it feeling artificial.

## Character Breakdown, Back Story, Casting and Rehearsals

"Rachel: female, 25-30. A strong former dancer who experiences a terrible accident and works to recover herself through unexpected methods. Ballet and contemporary dance skills are required. Must be comfortable with partial open top nudity. Open Ethnicity." This was my casting breakdown for the auditions. Rachel is a dancer who is now trying to become a choreographer because of her accident - she can no longer dance. Having a storyline like this, I knew I had to work with dancers who could act, rather than actors who could dance. That was the first decision in casting.

Next, I was focused on an actress in her late twenties. I was in touch with Sarah Murphy-Dyson three months prior to auditions through an actor friend of mine. I was interested in meeting her, but wasn't considering her as priority because of her age. Her approach to the script and her questions about the character were so mature that I could not picture her as someone naive who would be able to put herself in a machine like this. She was already very wise and strong. However, after the auditions, I was so impressed with what she was able to bring to the character. I discussed this very closely with my supervisors as well. This was one of the most crucial moments of support I received from them. It took me about a week to settle on the idea that I needed to adapt the script to Sarah's age rather than go with a younger alternative. This adaptation was not only for physical look, but the maturity and understanding that also comes with age. Sarah's age makes Rachel's desperation even more poignant. Rachel as portrayed by Sarah would be trying to hold on to her dream to the very last moment; not ready to give it up. The injury could then become a dramatic metaphor for her pending loss of her dancing career due to age. Ageism is something so many women deal with in their careers. Rachel is trying to

stave off the end of hers as long as she can. This also increases the stakes and conflict between her and Katka, the dancer she's working with for her choreography "Broken".

Gemini Award winner Sarah Murphy-Dyson was a First Soloist with The Royal Winnipeg Ballet, principal dancer with the Alberta Ballet, was an original cast member in the North American premiere of Dirty Dancing Onstage (Mirvish) "where she performed as Penny" close to 100 times. She danced with Pro Arte Danza, stunt doubled Milla Jovovich and Kate Beckinsale, coached Jennifer Lopez, and recently choreographed "Cabaret" for the Lower Ossington Theatre. She wrote a solo show, *The Naked Ballerina*, which premiered at the Toronto Fringe Festival in 2010. She was the perfect person to collaborate with as a dancer, actor and choreographer. At times, she also helped the choreographers and had suggestions for her parts, especially in her solo dance. It was a true collaboration.

The scene between Rachel and Katka in the dance studio introduces us to Rachel's conflicts, frustration, needs, and the urgency of her situation. Rachel is trying to prepare a new choreography, her piece "Broken," to be programmed this season. Gordon is the artistic director standing in her way, who has the last say as to whether Rachel's piece is performed. We understand that Rachel has failed before, and this is her last chance to have a show.

Rachel has taught Katka in the past. Now, she dances in the ballet company where Rachel used to dance. Rachel is someone she respects and saw as a role model, but Katka knows that Rachel is going through hard times after her accident and the interruption in her dance career, and she's not a good choreographer. Katka knows Rachel doesn't really know what she wants, and although she is trying to support Rachel, this worries Katka, as it is her body on display. She is a good dancer, but thinks she is not as good as Rachel used to be, though she does love her craft. Rachel, on the other hand, thinks Katka is someone who she could have been, but will

never be because of her injury and also now her age. Subconsciously, she envies her. We see this when she is watching Katka dance from the door of the studio.

My focus in casting Katka was to choose the best dancer. Sarah Murphy-Dyson and Taylor Gill knew each other from Alberta. Taylor was in the Royal Winnipeg Ballet and performed as Sarah's daughter when they first met. Sarah also taught her at Ballet Jörgen, when Taylor was a soloist there. The dynamic between them already naturally matched the script. This was Taylor's first performance with dialogue. We prepared her together with Sarah. I also allowed actors to improvise, since dancers would know better than me what to say in a dance practice.

I did casting through Casting Workbook. All our dancers initially came to audition for Rachel. We did the auditions in two parts: a dance section as a group guided by the choreographers to look for ballet and contemporary dance skills, and a drama section with two excerpts: a scene with Dr. Zimmermann and one from dance practice with Katka. Scheduling this audition was a big challenge because of time management. I had to get each person out in an hour as they were auditioning for a student project with no money. When I offered these actor/dancers the dancer part, because they loved the project a lot and enjoyed working with the choreographers during the auditions, they accepted right away. We used York University's dance studios for all the auditions and one or two rehearsals a week until the production. It was difficult to get the approval of Dance Faculty because they initially saw "nudity" in the casting call for "Rachel", however after I provided more information that the dancers were from outside, not York students and there was no nudity in any of the dancers, we were able to convince them.

Sarah joined the rehearsals just once. She followed the choreography from our recordings. The choreographers were a bit worried at the beginning, but once she joined them, it

was such a pleasure to see how fast she learned and performed.  She was such a professional, and framing her through the camera lens during her solo dance was so pleasurable. This scene is also one of my favourites for the cinematography. We discussed with Andrew Hunter what filters to use and what colours would match these three different choreographies, but we ran out of time in prep and production to apply these and were limited with our resources, although we rented additional gear from William F. White , and Andrew brought some of his equipment. In the end, the natural blackness and bright spotlights worked best for the solo dance.

Sarah Murphy-Dyson works in casting with a commercial company and has many actor friends. She helped me in casting Dr. Petr Zimmermann. "(Lead) Male 45 - 55 Caucasian. A charismatic scientist with a God complex, who has invented N.I.C.E. (Neurological Interchange Communication Equipment). This is a new scientific technology that he claims can help people achieve their artistic dreams. He's attracted to beautiful things and sensual experiences. He has ulterior motives for the beautiful women he attracts with his new technology. Must be comfortable with nudity." This was the breakdown in the casting call. I had many submissions from Casting Workbook, and we auditioned everybody at York University including Sarah's friends. Ryan Hollyman submitted a self-tape, and even just when his name came up and I watched his reel, I had already decided to cast him. He was very experienced in film and TV, and also well-known on stage. But I did auditions in case he became unavailable. This was a suggestion from Justin Camacho from Casting Workbook. I'd worked with Justin on two shorts in one year, and he was always incredibly helpful.

I was very lucky my lead actors were enthusiastic about the story and especially the sci-fi world. Sarah Murphy-Dyson and Ryan Hollyman were not available for rehearsal. We discussed the story, world, and characters in phone calls and group emails. Once they were ready, we had a

script read. During preproduction, they had great questions and inputs for the script. I tried to support Sarah as much as I could and include her in my development process. I felt both actors were a great support and fully committed to make the best of this story. I enjoyed observing their preparation process and our relationship was a collaboration. Ryan also gave me feedback in post-production when I was trying to make the rough cut shorter.

For the barley field scene, I went with whatever level of intimacy the actors felt comfortable with. They even performed more than I asked. Kissing was not part of my script, but at that point, it was Day 4, and Sarah was deep into the character of Rachel, so I followed her instincts. There was great chemistry between the actors. They are good friends, which made it easy for all of us. Sarah needed Ryan's existence during the close ups even when he didn't have any lines, and Ryan was always there for her. This was a very challenging project due to the limited budget, but I was blessed to have these two wonderful people as the faces of my project.

# Building N.I.C.E. and the Science Lab
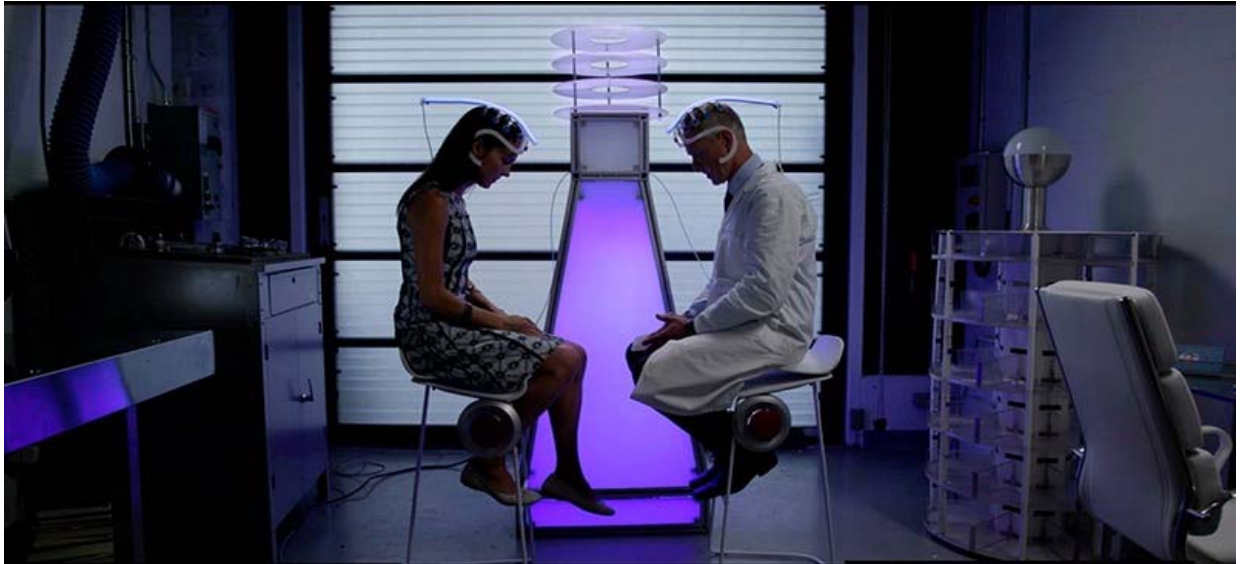


**Image 2: Frame-grab, *End of the Rope*. Science Lab.**

I tried to make the best of limited money and resources to create a futuristic look in the film, but in order to do this, I relied more on the story. N.I.C.E. allows Rachel to delve into other people's minds to utilise their cognitive ability, talent, knowledge, and collective unconscious. Portraying a powerful machine, *End of the Rope* raises questions for the future, such as "Can there be a platform for shared creativity?" and "How are we going to create in the future?" What are the risks with immersive technologies?

I created a machine by researching current science and technology such as virtual reality, artificial intelligence, the Human Brain Project, and cognitive intelligence. Connected to the machine, my main character enters a new world. I collaborated with a scientist, choreographer, cinematographer, VFX artist, and composer to explore this new world through movement, lights, sound, design, and visuals. The machine allows us to experience my protagonist's Godly Creation.

Creating a sci-fi world in a short film is challenging. *Black Mirror* has a similar approach, placing a very cool scientific idea in today's world, controlled by a corporation which dramatically affects the characters. But *Black Mirror* episodes are around an hour long. I had 19 minutes to build this world, so the rules had to be introduced fast and clear. My supervisor, John Greyson, helped me eliminate anything that might create conflict in the rules of the world, particularly during post production. The "red buttons" conflict was one such issue. In the script, I had clear ins and outs from the N.I.C.E. world with a safety button, which people could press to get out when they felt uncomfortable during their session. That was their escape route. I received many questions about why, in the barley field or the warehouse, Rachel didn't press the button to stop the machine. At the script stage, I was able to explain that this was because she was not able to overpower Dr. Zimmermann. The feedback I received was conflicting. Some said I really needed this button, otherwise the main character would not trust the machine in the beginning. Maybe this was true at the script stage, but when you build a believable world and you start to follow the actors, you believe in whatever they do. John Greyson told me that I would not lose anything by taking out the red buttons, but I would lose something if I didn't, so I took them out. That helped the pacing and clarity of the narrative.

As Dr. Zimmermann states in the film, N.I.C.E. works with preloaded cognitive competences. He has hundreds of people in his database so he can choose whose recorded consciousness, talent, and experience is a good fit for his patients. Rachel uses the machine to create, whereas Dr. Zimmermann uses it to control and possess. Another decision in editing was to take out the information about the people Rachel gets connected to. We made cards on the computer screen which showed the data of the Givers in the database, but based on the feedback I received, this created conflict and lots of questions. By taking them out, I didn't lose anything.

It was a difficult decision because I was attached to the way I had built the machine and the logic

of this world. But I know I made the right choice.
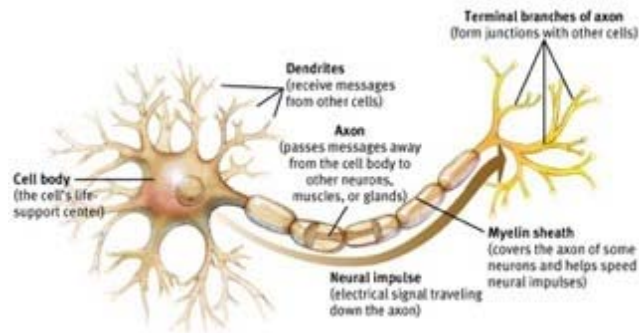


**Image 3: Human Nervous system. Visual Reference to Production Designer and VFX Artist.**

I tried to visualize a machine built on nanotechnology and AI that helps individuals tap into each

other's talents. My first instinct was to build a big sphere with smaller spheres within, inspired by

the way the brain sends messages through axons to dentrites, the basic structure of the human

nervous system. When the machine functions and Rachel experiences her VR body, these

spheres would connect with lights. Like these spheres of lights, many people, many brains, many

intelligences, are connected to form one person's vision at the end.

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INT. SCIENCE LAB - DAY 3

A big transparent sphere dominates the middle of the room. Inside the
sphere, neuronal patterns of electrical activity flash like fire balls
in different colors. It resembles the way our brain sends messages
through axons and dentrites. Behind the sphere is a main console with
lights that collects the data and controls the whole process. Rachel
sits inside this sphere. Her head is enclosed in an identical, but
smaller sphere, connected to the larger one by sensors. She is surrounded
by sparks of electricity. In another small sphere next to her is Dr.
PETR ZIMMERMANN, 45, a charismatic scientist in a white lab coat. A Clock
BEEPS and the machine shuts down. The light in the big sphere goes off
and the sphere around Rachel's head disappears.
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During my location scout, I loved the courtyard and the rooms that opened into it at the Bergeron Centre for Engineering at York University. The Bergeron Centre for Engineering was very generous to allow us to set up a science lab in one of the rooms in the Mechanical Engineering Lab. We got permission to stop the use of the lab for a day and a half, and we would work outside for half a day. We also received props from the chemistry lab. This was a great location, as it already had interesting features. The downside was the room was so small it limited our angles to shoot, and also it was impossible to build a big sphere structure inside. For a no-budget film, I utilized the locations I could find at York. This was still a great option. We treated the room as the container, and in it, we would have our machine. My production designer, Andrea Ovesny, had worked with me on *Turkish Mesir Macunu* and *The Almond Sorters*, and was working on *The Expanse*, the sci-fi series. She invited us to their warehouse to borrow props and take what they were getting rid of, which is where we got the body of our N.I.C.E. machine. We picked up lots of parts to build the boards in the room. My jeweler friend, Aysegul Birol, connected the rings at the top of the machine, and her engineering friend, Erdem Bilaloglu, finished our helmets and bracelets in one night since my production designer's order did not arrive on time. We started our shoot with the science lab and were delayed about four hours to set up.



**Image 4: N.I.C.E. Bracelet and Helmet.**

Alyssa Gismondi, my production designer, was great in graphical design; she designed the logo for Dr. Zimmermann Labs, the postcards, pamphlets, and the charts that would show on the computer screen.
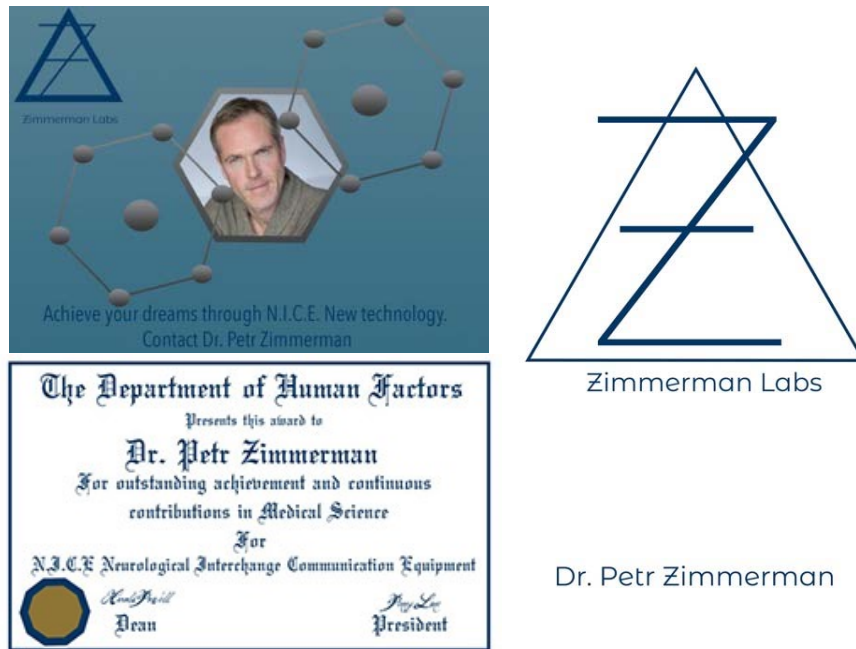


**Image 5: Zimmermann Labs Graphics**

My reference for production and costume design was *Predestination*. Like in this film, I wanted the costumes to work as part of the production design, with graphical forms and matching colours. The spheres over the top of the machine, the helmet with blue dots, Rachel's first dress with the circles, the next dress again with circles, and the last spherical necklace, had a reoccurring design. When Rachel is frustrated and quarrels with Dr. Zimmermann after the nudity scene, she leaves the lab, and in that gloomy light of the long shot, the patterns on her dress match the floor of the corridor as she walks out. Through costume design and choice of colours, we match her emotional arc, such as dressing her in a coral-coloured dress for the last time she visits the lab to seem enlightened, vibrant, and powerful. I also borrowed jewelry from

Aysegul. The necklace in the last scene with a sphere inside a ring represents balance for me. We made the dancers look like a figment of Rachel's imagination, not individual people, with sharp and clean-cut costumes. They all looked the same, whereas Rachel changed many times based on her emotional arc.

As a last touch, we created electricity effects in the central body of the machine in post.

## Ethical Issues

I was particularly very careful with the representation of nudity in my film. I used male and female dancers for equal representation. I also exposed my female and male actors to the same amounts of nudity. I carried the same sensitivity during our production, providing a safe environment for my actors. In preproduction, we drafted the nudity rider and appearance release forms in complete transparency; they communicated the level of nudity our actors were comfortable with, and I adapted the screenplay as a result. We worked on a closed set with an ACTRA representative present. My protagonist also asked our choreographer to be with her for extra support. We rehearsed with clothes on and did minimal takes in shots of nudity. The male actor was also treated with the same sensitivity. He was vulnerable being attacked with ropes by dancers, and it was an emotionally intense scene when he was humiliated. We made sure he was comfortable and safe. Our biggest issue was the dirty floors in the abandoned complex, because his top was naked. We swept the floors and put clean cardboard boxes down where he would be lying, but he used his clothes instead of the cardboard boxes.



**Image 6: Production Still - Revenge Scene with Dr. Zimmermann and the Dancers**

# Conclusion

Can a fiction film depict potential abuse of power through a protagonist who experiences problems in immersive simulated technology? In my experience making this film and testing with an audience, *End of the Rope* is a good example of how cinema can engage us with issues of facing the risks in today's technologies. I'm confident *End of the Rope* provides a platform for female viewers in particular to experience topics of control, agency, violation, and abuse. I started working on this film before the #MeToo movement; this film accidentally happened in the middle of a huge social movement, and I believe my film, being so timely, will significantly contribute to this ongoing debate. In marketing and distribution stages, I believe I will see the effects of #MeToo and #TimesUp social movements.

What are the motives to use this kind of technology? N.I.C.E. and Dr. Zimmermann offer Rachel a breakthrough, a way to overcome her accident, but at the expense of her dignity and self-worth. This is the protagonist's dilemma throughout the film. *End of the Rope* takes us on the journey of a disabled dancer, her reliance on technology, and her search for alternative ways to overcome her artist block. She achieves empowerment with virtual tools by fighting abuse through the power she attains with this technology.

*End of the Rope* shows the psychological effects of sexual assault, as sexual predators prey on victims psychologically to get to them physically. The film depicts the balance of power in situations of trust. Mainly, the trust between a healer and a patient, which is important because doctors, psychiatrists, and dentists have all been accused of misconduct in the #MeToo movement. I think that it also shows how men with resources and power can stand in the way of women's careers, even if they are not superior or in the same field. This is demonstrated through the fact that Rachel uses the virtual world to practice dancing and send it to her artistic director,

Gordon, another man in power who acts as a gatekeeper. Dr. Zimmermann stands in the way of her life, livelihood, and career aspirations. Also, the fact that the doctor explains her nudity in the machine as a result of her subconscious desires is a form of victim-blaming.

In the 1980s, following an era of Hollywood films with gender roles divided by the active male-oriented spectatorship and the passive, female, eroticized spectacle, we see the effect of feminist theory and psychoanalysis when we are introduced to active female characters. Now, we have a social and political movement and new era of #MeToo and TimesUp, which grew immensely through the use of social media to question power dynamics and representation. I didn't make *End of the Rope* with #MeToo in mind, but I believe my film will appeal to these groups who demand systematic changes in accountability, equality, respect, and truthful representation of women in control. *End of the Rope* as a film also demands this change and portrays power dynamics and their ensuing shifts.

After #MeToo, companies and organizations focused on providing a safe and harassment-free workplace. In the dance world, there was #DancersToo, because the power dynamics and working environments in dance can leave women vulnerable, and often dancers are relatively young. Creating chains of accountability and clear policies to encourage reporting inappropriate interaction, and educating women to express their discomfort and not tolerate harassment out of fear is vital.

Can we achieve empowerment with or without virtual tools? Can a machine built on nanotechnology and AI help individuals tap into each other's talents? N.I.C.E. is a connecting virtual environment, a Holodeck, a cognisphere, extending mental capabilities. This is a virtual tool that empowers my protagonist physically and mentally. Its positioning in the story connects

art, science and technology. Technology is an extension of ourselves that allows us to co-create. We are technology, and the future is what we make of it.

As human beings, we still have lots to learn to curb abuses of power, respect human beings all around the world, and treat others justly. We need new legal systems protecting human rights. We are as responsible as our governments to make the right choices and be ethical. *End of the Rope* explores this idea; we have the ability to create a good life for the masses through science and technology, if only we learn to wield power with respect and justice.

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# Appendices

## Appendix A: Locations in the film

Appendix B: Choreographers and Dancers



**Choreographers:**
**Lisa Brkich and Christine Brkich**

N.I.C.E. Dancers: Armando Biasi, Jenna Gagliardi, Madison Haste, Sara Hinding, Amanda Martin
Rehearsals started on July 15, 2018

Appendix C: Behind the Scenes - working with the actors and
director of photography



Behind the Scenes