Tipping Element

by

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Log line

In an accident the VR-chip (Virtual Reality chip) in the head of young Lina gets damaged. From now on, she is the only one who sees her environment as it really is: a socially unequal, digitally oppressed world, already transformed by climate change.

Genre: (Near-Future-)Sci-Fi, Thriller, (A movie in four shots)

Abstract

In a future not so far away, everyone has got a chip implanted in their head which allows living in a virtually amended reality. Virtual objects can be perceived in a real, non-virtual environment. Thus, one can amend their world by creating, modulating or replacing objects and persons virtually. (Keywords: <u>Augmented reality</u>, <u>Computer-mediated reality</u>)

Though everyone is aware of climate change and its effects, nobody lives in a reality where it exists. One day, after Lina's chip gets damaged in an accident, she has to find her way between two different realities. She learns to enjoy originality over virtual luxury and about the power the producer of the chips, a global acting big tech company, has over its customers. She makes herself powerful enemies, but the ball starts rolling.

Note: The movie imitates the state of our pre-pandemic society of living in superficial realities which excludes global issues. As we all experienced since then, hard reality bursts into Lina's life.

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Characters

Paulina "Lina" Terry

Brave when required, mostly gentle, always honest.

Motivation: To gain back self-determination and freedom.

Doesn't intend to be a rebel against a multi-billion-dollar company, but functions as a 'tipping element', who once triggered, initiates an irreversible development. As her personal rights and freedom is cut by big tech, she is determined to gain them back. Not for ideological reasons, but to saturate her own freedom drive.

Unlike classic movie heroes, Lina does not develop a goal toward which she works in the second act. Rather, the second act shows a development in which Lina increasingly loses her self-determination. Towards the end of the second act, the climax of this loss is reached, and she decides to get it back.

Important steps:

Her VR-chip breaks => loses control over her perception

Neighbor makes her appearance ugly for him (after she rejects him) => loses control over how she is perceived

A friend sleeps with a prostitute who has Lina's looks => loses control over her intimacy That Fake Lina talks in her name in a talk show => loses control over her publicness.

=> sets off the servers of the VR to gain back control

Note: Lina suffers sexual coercion and virtual abuse (as a friend hires a prostitute with her body) in the course of the plot. A possible adaptation of the gender of the role, should therefore be considered in the meaning and function of the role.

Jason "Glitch" Savage

Always egoistic, mostly charming, never serious.

Motivation: Best personal outcome

Glitch is a shapeshifter, joker and free spirit. He uses VR to his own advantage, to cheat and lie, and thus reveals the darker side of VR. Meant as fun, his lack of empathy leads to sexist and abusive behavior.

Bianca Bourdain

Unfailingly reliable, mostly friendly, never negative,

Motivation: To do good

She is the counter momentum to Glitch as she sees good in technology and people. A reliable friend who provides support.

Frederik Zimmermann

Sometimes severe, often moody, always selfless,

Motivation: To redeem himself

As co-inventor of the VR-chips and stockholder, he regrets his creation and tries to bring it down. Sacrifices his life to redeem himself.

Note: His german surname 'Zimmermann' means carpenter and refers to Jesus Christ who dies for all people. A similar fate is meant for Zimmermann. Possibly.

Theo Baker

Mostly fatherly, often generous, always unrelenting.

Motivation: To gain/preserve power and control

Generous as long as he is in control. Relentless when he is not. Visionary. Stops at nothing. Power seeker who strives for nothing less than godlike power.

Note: His first name 'Theo' is the greek word for 'god' which refers to the all-encompassing power of his company. His surname refers to his ordinary origin.

Minor characters

Olimpia Spalanzani

Always loyal, mostly polite, never inattentive

Motivation: To serve the company

An AI in the service of the company. Servant and shapeshifter.

Fake Lina

Never open, sometimes confident, always vulnerable,

Motivation: To make a living

A prostitute who, thanks to VR technology, looks like Lina (or whatever her customer wishes). Does what she is paid for, nothing more, nothing less. Can't afford morality.

Sewer Woman

Always determined, irrepressibly strong, always vengeful

Motivation: Revenge

Once had a competing start-up to Ventura. Lost everything to it as in our society it's still unfair to be born as a woman. A brutal villain with the sympathy of the audience that is sensing for revenge.

Sewer People

Motivation: Survive

A group of people who are severely affected by poverty. They live in seclusion in the sewers in a parallel society. Through VR, they live in an illusion of luxury.

Dramatic Structure

The script is based on a three-act structure. In the second act, however, there is another turning point (TP) with the arrest of the protagonist (TP_1.9), which is almost on a par with TP_2 (hence 1.9). The film could theoretically end here without a Happy End. The further course quasi offers an equivalent, alternative ending.

First Act:

(Characters, technology and the company are introduced.)

Lina is implanted with a VR chip that allows her, like everyone else, to virtually adjust her reality and create virtual objects. She starts her new job with the manufacturer and operator of the chips and is introduced to her new team.

<u>TP_1</u>: During a day trip to a flooded open-cast mine, an accident occurs in the huge ruins of a coal excavator, damaging her chip.

Second Act:

(The plot unveils. The company controls all. The suffering of people and climate becomes visible.)

Lina's chip has broken down and she is now faced with the challenge of getting by on her own in a virtually adapted world without virtuality. Since she is in danger of losing control over her perception due to the broken chip, she decides to turn it off.

<u>TP_1.1</u>: Lina gets a new chip.

Despite a new, functional chip, Lina quickly realizes that control over her perception and how she is perceived by others lies with her employer.

<u>TP_1.9</u>: Lina is wrongfully arrested after freeing a woman with Lina's appearance (Fake Lina) from the clutches of a kidnapper (Sewer Woman).

After Lina is released from custody, Fake Lina is seen on television under her name. Lina wants to take back control of her appearance and identity and decides to cripple Ventura's servers.

<u>TP_2</u>: Lina gives Sewer Woman (an underground-living villain) access to the Ventura servers to destroy them.

Third Act:

(The end of the movie offers hope for justice for our world.)

At a court hearing, Lina receives a suspended sentence for aggravated damage to property and Ventura is threatened with a fine in a next instance for mass privacy violations and violations of virtual self-determination. Protests herald a social and political change.

<u>Plot</u>

LINA, mid 20s, is strapped to a treatment chair. An automotive operating robot interweves a computer chip with her brain. The machine closes her head without leaving any scar. She awakes and is now able to perceive and to create virtual objects.

Lina comes out of the operating room and finds herself in a bustling mall. She walks past people who stand in line for virtual amended food, virtual sword fights and refugees living in tents in virtual luxury. She receives a virtual call: Her DATE appears next to her and she promises him/her a micro-date in Venice while being in an air taxi on the way to her destination.



While she flies over a metropolitan city, she receives a message from her destination in which a (lifelike) LEPRECHAUN tells her about Ventura Realities and the application possibilities of the VR chips. She stops the message and travels virtually to Venice. There, no one is waiting for her anymore.

She arrives at Ventura HQ complex where OLIMPIA SPALANZANI, assistant to the managing director, awaits her.

Olimpia guides Lina to her new workroom where she is presented to her new team (BIANCA and GLITCH), to which she presents her design of a VR cabin in which one can live entirely virtually. ZIMMERMANN, who supervises the team, makes clear, he won't allow failure of the ambitious rollout of the project.

She and her team are going to a gala dinner as Ventura's CEO, THEO BAKER, appears globally and gives a lecture about Ventura's achievements and plans. Meanwhile, Glitch virtually changes his appearance into Theo Baker's and messes with the shareholders at the gala dinner.

Glitch shows Lina the Central Unit (CU), Ventura's server room, where all the VR data is processed. All of a sudden Frederik comes and approaches the CU with a data stick, but notices Glitch and Lina before he uses it.

Olimpia accompanies Lina to her apartment provided by the company. Lina goes to sleep.

Lina wakes up. She walks out the apartment door, which now leads directly to a beach.

She walks across the beautiful beach when a door opens mid-air...



Bianca pulls her into the door and thus out of the VR cabin into the workroom. They call it a day.

As they leave the Ventura HQ, they arrange to fly to a reservoir/flooded open-cast mine.

Lina enjoys her way home through a flowering park with exotic animals and plants.

Lina helps an OLD LADY cross the street. Being persistent but lovely, Old Lady manages to extract a promise from Lina to dine with her. She then turns into Glitch.

Down in the sewers, a rat is killed with a knife by SEWER WOMAN (following SW). As she passes through a portal of green light, her shredded suit becomes neat and clean, her knife and the rat disappear. SEWER CHILDREN who were just playing in a wet, cold sewer maintenance room are now playing in a forest clearing.

SW continues through the sewers that the SEWER PEOPLE have made home with the help of VR. She arrives at her own sewer parcel, full of VR equipment and images of her long lost successful past.

Theo Baker enters a door in the workroom and now finds himself on Zimmermann's porch of his beach house. He hints that Ventura's vast amounts of data can be used to predict the future. He cannot remove Zimmermann's doubts about its accuracy.

Lina and Glitch swim to the ruins of a gigantic bucket wheel excavator off the coast of a flooded open-cast mine...



They climb up and inside.

TP_1: Lina is shocked by an old battery that discharges.

DOCTOR at Zimmermann's beach house determines that Lina's chip is damaged, but still functional. He promises her a replacement anyway. Zimmermann voices suspicion about Doctor's intentions.

Lina walks along the beach and creates a virtual dinner at sunset.

The chip fails and she finds herself in the VR Cabin choking on a feeding tube in her mouth. Porridge blots out over her shirt. As the VR goes back on, she uses it to hide the stain. The VR fails repeatedly.

Lina arrives at her apartment and changes clothes.

Lina with Glitch in the restaurant. She confesses that she doesn't like the VR and the use of her own draft of the VR cabin.

Lina comes home. Her plants are gone. While getting ready for bed, she repeatedly tells the VR to add the plants back, to no avail. She goes to sleep...



Lina wakes up to a jungle in her apartment. When she goes to delete the plants, the chip blinds her. Something breaks. She turns off the chip completely and can see again (No virtual objects though).

Lina goes to the hairdresser for a non-virtual haircut.

Lina meets Bianca on a riverbank. The river is almost dried out completely. Lina jumps into the empty bed. As we change perspective to Bianca's POV, the water level has risen significantly so that Lina is now standing in (virtual) water.

They walk through Ventura Plaza together and Lina confesses that sometimes she finds life more pleasant without VR.

Lina flies to the mall.

As her VR chip is still off, she sees, there, people lining up for porridge and poor refugees squatting in makeshift tents.

In the Operating Room, Doctor offers Lina a new chip with extraordinary new abilities. Lina refuses and insists to get just a replacement of her old model. (**TP_1.1**)

Lina comes home. HANDSOME NEIGHBOR is too pushy in offering his help. Lina tries to back out. He turns the perpetrator victim relationship in his favor.

Sewer Woman shoots a virtual Theo Baker in the sewers. SEWER CHILD enters, ignoring the shots, and leads Sewer Woman to the other Sewer People who have set up a room as a renaissance hall. The room changes to different locations and the Sewer residents watch funny clips (the room changes virtually into different locations). In the last clip, Lina struts across Ventura Square dripping wet, claiming not to have lost control. Sewer Woman doesn't agree and marches off in a huff.

Lina sits on the train with Theo Baker and watches the comments on the clip that has gone viral.

Lina arrives in flooded London.

Lina tells at a press conference that she very much thinks VR is an achievement. She gets second thoughts when questioned by JOURNALIST.

In a control room, an algorithm registers Lina's doubts. CONTROLLERS subtly manipulate her appearance with the intention to lower her credibility.

Zimmermann walks through a door in the workroom and unexpectedly finds himself in the CU Room kissing Lina. TB addresses Zimmermann's insecurity about the prediction's accuracy and challenges his doubts. The prediction ends abruptly.

Lina calls with Glitch via VR. While he is sitting virtually in a train back from London with her, she is sitting virtually in his kitchen. She stands him up, he orders a prostitute instead.

MONTAGE: Lina arrives at home as FAKE LINA, a prostitute who looks just like Lina, arrives at Glitch's. As Lina lies alone in her bed, Glitch lies with her Doppelganger in his. Being lonely, Lina decides to visit Glitch after all.

As Glitch sends his company off, Lina arrives. She slaps him and stomps away.

Lina waits for her metro train, still crying. As Fake Lina enters the metro, too, she is kidnapped by SW and dragged into the tunnel. Lina calls the Police via VR who appears immediately to guide Lina to safety. But Lina follows the kidnapper into the tunnel instead.



Down in the sewers, Lina follows SW through ravines, renaissance halls, etc. Lina has managed to find Fake Lina strapped to a stretcher under Sewer Woman's control while a robot is operating on Fake Lina's head.

(As Police drones arrive) Lina manages to safe Fake Lina and they escape through tunnels and finally they arrive at the dried out riverbed midst the city. The rainy season starts. From now on at every external scene its raining.

TP_1.9: Police lands in flying cars and detain Lina.

Bianca walks through a door in the workroom and finds herself in a burned forest. There, she

watches TB act out a conversation with POLICE COMMISSIONER (simulated by AI) and failing to persuade him to continue holding Lina.

Two SEWER WORKERS clean the sewers of all virtual objects. Hidden in the shadows, Sewer Children wait for the two to finish their work so they can take out the remaining usable items.

Glitch lies in bed with Fake Lina. He fails to persuade her to show her true appearance. She leaves.

Lina tries to get into her apartment and fails. Olimpia shows up and tells her that she can't use it anymore.

Zimmermann sits on his beach house veranda and enjoys the sunset. Eventually, he goes inside, but sees that inside Lina is just entering the workroom (where the door actually leads to). Lina enters one of the VR cabins.

Lina travels to Zimmermann's house with the help of the VR cabin, but can't find him there. She falls asleep on his sofa.

Lina wakes up on Zimmermann's sofa. She meets him in the kitchen but is consequently ignored by him and his VISITORS. Eventually, she realizes that she is in a recording. The refrigerator transforms into the real Zimmermann, who now guides Lina through memories (recorded via VR) of his life.

Lina learns at a funeral in the same house, at an earlier time, that Zimmermann was the first with a VR chip and is co-founder of Ventura next to TB. Frederik tells her about two data sticks, one in his possession, one in TB's, with which the CU (and thus the VR) can be switched off.

Lina appears in the workroom and is fired by Olimpia for security reasons. In the process, Lina publishes her VR recordings on the Internet to prove that she was victim not perpetrator. She loses her access codes to Ventura HQ.

Bianca and Glitch watch the recordings in the VR cabin. While (real) Lina is at a lawyer's office, Bianca finds out that Glitch cheated and abused Lina with Fake Lina.

Becoming homeless, Lina tries to get a hotel room, but her ID that is stored virtually on her VRchip fails to load, so she doesn't get a room.

While Lina looks for a place to sleep on the subway, Glitch sits in the workroom regretting his actions. Suddenly, he sees a mouse disappearing into a virtual wall. He follows and finds himself in heavy smoke midst a desert. TB is defending his own grave with a gun. The simulated prediction ends abruptly as Glitch lies to TB about Lina...



In a talk show, Fake Lina (as Lina) tells about her experiences in the tunnels. Real Lina sees this in the subway and gets off it. She enters the tunnels.

Zimmermann sees Fake Lina talking in the talk show. He heads to the CU with the data stick in his hand.

As he is about to enter the CU room, the room changes into his beach house. In this future prediction the house looks decrepit and Zimmermann's dead body is laid out, rotten and forgotten. Theo Baker appears and explains his friendship to him and offers his help to prevent this possible outcome of the future.

In the sewers, SW threatens Lina with a butcher knife. But Lina is not afraid. Lina wants her to come to Ventura's entrance. When SW tries to cut off Lina's VR, Lina wakes up in the VR Cabin in the HQ.

Lina opens all the doors from the inside for SW who is now waiting at the entrance with a bomb. Together they go towards the CU Room.

There they are faced with closed doors. But Zimmermann is inside. (From his perspective in his beach house.) Despite TB telling Zimmermann it would be his death, Lina can convince him to open the door (**TP_2**). She kisses him out of gratitude.

In the talk show, Journalist asks Fake Lina critical questions. When she doesn't know the answer anymore, she becomes another woman again and flees from the studio.

Sequence from *Hook* (1991 Spielberg). PETER is sitting at the table with the CHILDREN OF NEVERLAND and can't see the food. As he begins to use his imagination, a huge buffet appears and a food fight starts.

CHILD is watching Hook on TV when they is called to dinner. The VR goes on again, but the FAMILIY collectively decides to leave it off. Meanwhile, the news is on TV.

In a courtroom, Lina is sentenced to probation and Ventura is fined. Protests herald social and political change.

Science or Fiction? - The operating principles of the VR-chips

In the diegetic world, just about everyone has a chip implanted in their head that allows perceiving virtual or virtually altered objects. People are still situated in the 'normal', 'physical' world and sense it. However, virtual objects can also be seen, felt and heard. This makes it possible to design places with things that do not exist physically but only virtually. For example, if a city does not have the resources to water a park, it can create lawns and other plants virtually. Anyone with a VR chip who walks through the park will perceive it as a well-manicured, flowering, evergreen oasis. All without having to put VR glasses on.

Even though VR chips, in the strict sense, are not Virtual Reality technology but Augmented Reality (AR), I chose the term because for the vast majority VR is a household word. In the film, VR stands for Ventura Realities, the manufacturer and operator of the chips. Augmented Reality involves inserting virtual objects into a real environment instead of creating a whole virtual environment (Virtual Reality). An example of AR is the well-known game Pokemon Go, where you can meet and interact with Pokemon in the real world.

The operating principle

In our example with the virtually amended park the eye would continue to see a barren park with withered plants. This image would be sent by the optic nerve as an electrical signal to the brain. However, before it reaches the cerebral cortex and thus consciousness, it is picked up by the VR chip, manipulated (in this example: withered plants replaced by green ones) and only then forwarded to the cerebral cortex. The person perceives a green park.

Whereto place the chip

Since almost all sensory stimuli (sight, touch, hearing,...) pass through the thalamus before being transmitted to the cerebral cortex, this is the place where the chip is implanted. (The thalamus serves as a kind of junction for sensory stimuli.) It picks up all the sensory information and sends it altered on to the cerebral cortex (where consciousness sits). In this way, virtual objects or virtually altered objects can be seen, heard and even felt in a real, physical environment.

The usage

People in the diegetic world can shape their environment, as well as themselves, according to their wishes. Instantly. Whether you want to wear longer hair for the evening or put on different clothes for a job interview, with VR chips it's no problem to change this in seconds. The environment and appearance can even be changed beyond recognition. It should be noted that the physical conditions of the real environment remain intact, though. If one is disturbed by cars and instructs the chip to remove them from the perception, it can do so. However, if you then walk carelessly onto the street, you could still be run over by them.

Adding virtual objects to a real environment can be just as dangerous as virtually removing real objects. A virtual railing, for example, provides only ostensible support. The virtual adaptation of objects and the environment on the other hand should not create an immediate danger. The design

of real objects can be changed virtually as can the color of walls or the appearance of people. With the help of the VR chip, people and their surroundings could even be changed beyond recognition. Therefore, it is possible to make an environment look basically like a completely different one. If you want to travel to a beach, you could instruct the VR chip to make your current environment look like a beach. But since you would still be bound to the physical conditions of your real environment, as described above, this would not be a suitable method to travel permanently to another place. (Though a similar technique is used in the movie as VR telephony where persons travel virtually to the location of the conversation partner for the duration of the chat. Movements, however, have to be relatively stationary for the aforementioned reasons.)

Permanent, virtual travel requires two things: the real body of the virtually traveling person has to be in a controlled environment, best motionless, and the physical needs must be satisfied during the time of travel. Therefore, in the movie, Lina and her team are working on so-called VR cabins which allow people to travel virtually to any place in the world. Their body is provided with food while it lies motionless in the cabin which even disposes of bodily excreta. Since the people at the destination also have VR chips, the traveler can be virtually projected to their environment and thus become visible at the destination to others who are there physically. The traveler can thus interact with the people on site as if they were actually there. Here, too, virtual perception is not limited to sight, but applies also to hearing, touching and smelling.

How close such a technology really is

How far away we really are from the technologies described above and whether we will ever reach them remains speculation. The fact is, however, that worldwide research is being done to insert computer chips into the human brain and thus create an interface between humans and computers. In 2017, a man send a text message just with the power of his thought (jump to article). Elon Musk's Neuralink is a prominent representative whose technology is not at all dissimilar to that in the film. Like in the movie, Neuralink's goal is to develop chips with several thousand electrodes interwoven into the brain. The company already successfully implanted a chip in a pig's brain and plans to launch human trials within 2020 (jump to article). All the other technologies shown in the film are already being researched worldwide or are even about to go into production soon. (Ex. air taxi). In conclusion, the film is more of a near-future project than far-future.

How big tech controls people's lives... in the movie <u>A visualization of today</u>

At first glance, the company makes it possible for even the poorer sections of the population to live in luxury and prosperity. Through VR, any decrepit apartment can be spruced up into a luxury home, any structurally weak neighborhood can be made clean and livable, and anyone is able to make their clothes look like designer clothing. At first glance, every user of Ventura Realities gains

control over their perception. After all, everyone is able to shape their environment and appearance to their liking. At first glance...

On closer inspection, however, one must realize that the gain of freedom to create is not necessarily accompanied by a gain to control. Lina experiences a number of situations in the film where this control over her perception and how she is perceived slips away.

The most iconic example is when Lina cancels her appointment with Glitch, who then orders a prostitute with Lina's appearance. While this situation shows Glitch's gain of control (he is able to live out otherwise unfulfillable desires with the help of VR), for Lina it means a total loss of control over her self-determination of bodily integrity. Even if her biological body remains unaffected, it is a physical and mental rape, revealing her helplessness over the use of her virtual content (in a broader sense). Analogously, today we have no control over how images are used or abused by others once they land on the net.

In another sequence, Ventura employees subtly change Lina's appearance to lower her credibility for the public. Discreet changes in skin- and hair color and voice tone are intended to subconsciously influence how Lina is perceived. Even today, one has little influence on how one's own content is abused by the algorithms of large Internet companies. For example, Amazon manipulated the deliverability of competitors on their Marketplace in order to sell their own products. Similar example with Google and advertising. In another case big ad companies like <u>Google used keyword</u> blocking to prevent their ads being running next to coronavirus-related content.

In the aforementioned example, Ventura similarly uses its technology monopoly to gain unfair advantage or influence.

Apart from controlling and being controlled, quasi monopolistic technologies also play a role in the question over our self-determination in another way. When Lina's chip breaks and in consequence loses control over her perception, she decides to turn off her VR chip. She henceforth lives in a different reality than her fellow humans. This is an analogy of how dependent we are on monopolistic technologies nowadays. Deciding to live without a cell phone or just a life without Whatsapp is a bigger step than we might want to admit. It is not easy to make the decision to withdraw from certain apps with de facto monopoly, as this is always accompanied by a withdrawal from social life. Of course, we still can decide against Whatsapp, but the magnitude of the resulting consequences and the lack of alternatives limit our freedom in this regard.

Another phenomenon that we are familiar with, too, happens to Lina in the film: a clip about her goes involuntarily viral. This time it shows a loss of control over one's own external image.

Then, shortly before the second turning point, the prostitute gives an interview on a talk show as Lina. The climax of the loss of control is reached. Lina is robbed of her identity. Even today, checking the authenticity of facts, statements and even videos is becoming increasingly difficult. With the help of freely available AI, even voice and appearance can be deceptively faked. Lina finally sees no other way to regain her self-determination than to destroy the CU and thus disable the VR. Are we doomed to choose between losing our self-determination and shutting the internet down?

Further Reading: That there are ways for us to regain our freedom and self-determination in times of big tech, is described in my article <u>Reclaiming our freedoms from big tech and government amid Covid-19</u>.

Our future climate in the movie

The future depicted in the film is pretty much what we are facing with current policies: droughts, rising sea levels, forest fires, etc. But not only ecological but also political and social effects of climate change are depicted. For example, tents are set up in a shopping center where refugees live in virtual illusion of luxury. Today, most migration movements are triggered by violent conflicts. In the (near) future, conflicts could become more and more frequent as resources and habitable land decreases.

How many so-called climate refugees will be forced to leave their homes as a direct result of climatic changes in the future is disputed. The numbers range from tens of millions to hundreds of millions. Undisputed, however, is that climate change will increase social and political pressure in poor and/or politically unstable regions. In that regard, scientists even describe the Syrian war as a consequence of climate change.

In the wake of the drought, agricultural collapse pushed rural people into cities in large numbers. Competition over resources and jobs, already scarce following decades of poor governance, took on an ethnic dimension. (Source)

This "ethnic dimension" resulted in a disastrous war and triggered a global refugee crisis. Jonathan Watts even predicts in his <u>article for The Guardian</u> that within the next 50 years up to 1.2 billion people could lose their livelihoods due to the climate crisis (due to rising sea levels, but also impaired food production). Thus, migration pressure will certainly also increase on the rich industrialized countries, even if the extent is not yet foreseeable. As an important aspect of climate change, the refugee issue is also presented in the film, and what place could be more appropriate than a shopping mall, which stands as a symbol for an unbridled consumer society.

Climate change is not something that happens only in distant, poor countries and is at most indirectly noticeable. It happens everywhere and also affects rich industrialized countries. Lina experiences huge burned forests that seem commonplace in the film. We all remember the images from California or Australia in recent years, but forest fires are also becoming more frequent and intense in other parts of North America and in Europe due to climate change. When Lina finally emerges from the tube station in London, she walks over improvised footbridges through the flooded streets of London. It's an image we'll probably have to get used to, too. Western mega cities such as London, Hamburg and New York are also affected by rising sea levels. Not everywhere can this be contained with water protection measures. An <u>interactive map by Climate Central</u> shows the effects sea level rise can have on all parts of the world. You can see that already in the foreseeable future (2050) some urban areas of Hamburg and London are below sea level and several others are threatened by annual floods.

Not only too much water, but also too little water plays a role in the movie. Only without VR Lina and the viewer become aware of the full extent of climate change for everyday city life. Parks have dried up, riverbeds are at rock bottom and so on. In 2019, shipping traffic on the Rhine in Germany had to be suspended due to the persistent drought. The main shipping lane was impassable for

several months because it had not rained for months. The result: oil shortages, production facilities and power plants had to be shut down. According to forecasts, more precipitation is expected to fall in Germany and Central Europe as a result of climate change, but droughts/dry spells are also expected to occur more frequently. Global jet streams normally cause high and low pressure areas to move. However, when the jet streams weaken (like they do), the weather conditions remain for a longer time in place, sometimes for months. It would therefore make sense for countries like Germany to use former opencast coal mining areas as huge water reservoirs in the future like presented in the movie.

The developments depicted in the film are all already visible today and will intensify. It is therefore not without reason that the film uses a term from climate research for its title. Tipping Elements are large-scale components of the Earth system, which are characterized by a threshold behavior. When relevant aspects of the climate approach a threshold, these components can be tipped into a qualitatively different state by small external perturbations. (<u>https://www.pik-potsdam.de/en/output/infodesk/tipping-elements</u>)

The characters in the film behave like dominoes that, once triggered, set in motion an unstoppable development.

Further Reading: <u>We created the anthropocene and the anthropocene is biting back</u>

The idea behind four shots

The idea of the movie is to create a near-future reality that resembles ours. The differences shall reveal the similarities. We live in a world where everyone knows about climate change, social injustice, and digital surveillance, but (almost) no one has to be confronted by it. Not yet, maybe. It's easy to ignore forest fires if you don't live in California or Australia. It's easy to ignore poverty if you're not affected. It's easy to ignore your digital unfreedom when your social life depends on monopolistic tech corps. Even today, we create our own realities that fit our expectations and our limits. In the movie, it just becomes more visible.

The film should therefore have a visual concept that offers orientation and familiarity to the viewer. As the created world shall resemble our society. Fast cuts create tension, but also disorientation. That's why I wrote the script as a proposal for a film consisting of just four shots. The three cuts follow the act structure. The viewer should be able to orient himself and find their way around in a world that is similar to theirs and yet so different.

For the same reason, the script includes sequences of everyday actions such as brushing teeth and

showering. Inspired by Italian neorealism, these sequences offer space for atmospheric, non-verbal acting, showing the contrasts of virtual luxury and real ordinariness, but above all a chance for the viewers to see themselves in the story. Lina remains not only a film character, but an ordinary human being, who also needs to shower and brush her teeth before falling wearily into bed.

Note: The individual shots are not excessively long. The transition between the scenes, as described in the script, works via visual links. This means that the hidden cuts are not always invisible, but a continuity is created between the scenes (and the individual shots). This also spatially connects the action locations and creates a spatially coherent world.

Financing options

Since all of the technologies shown in the film are already in development or even close to production, it makes sense to contact manufacturers regarding advertising-based participation. Here is a selection of companies that could be considered for product placement:

Lilium

is one of the most promising all-electric, vertical take-off and landing aircraft developer (eVTOL). Futuristic design and prototypes that are already flying would be good prerequisites for use in a movie. In addition, they are already planning <u>so-called vertiports</u> (flight decks) from which the flying taxis will take off in the cities. This could serve as a backdrop for the film.

investment volume: > 375 Mio US- Dollar expected market launch: 2025

https://lilium.com

Velocopter

are similarly advanced and already in test worldwide. It is one of the most promising concepts. Like Lilium, they also have concepts for flight decks.

investment volume: 322 Mio Euro

expected market launch: 2024

https://www.volocopter.com/de/

Airbus

CityAirbus is a demonstrator for electrical and autonomous flying. Airbus is showing its determination to join the race to develop air mobility concepts. A demonstrator already successfully took off for a test flight in 2019. Airbus denied rumors that the project had been discontinued in September.

investment volume: unknown expected market launch: unknown (manned test flights: 2025)

https://www.airbus.com/innovation/zero-emission/urban-air-mobility/cityairbus.html

Bell Helicopters

Nexus

investment volume: unknown expected market launch: mid-2020s

https://www.bellflight.com/products/bell-nexus

Boeing

Boeing is also developing its own concept together with Aurora.

investment volume: unknown expected market launch: unknown

https://www.boeing.com/features/frontiers/2019/autonomous-flying-vehicles/index.page https://www.aurora.aero/pav-evtol-passenger-air-vehicle/

Joby

One of the most promising American concepts with a gigantic investment volume.

investment volume: > 720 US- Dollar expected market launch: 2024

https://www.jobyaviation.com

Neuralink

is working on researching and developing computer chips that will serve as an interface between humans and computers. Similar to the movie, they want to place computer chips in the human brain and "interweave" them with the brain using thousands of electrodes. Also, such an operation is to be completely automated in the future. A really very similar concept to the one in the film, although the benefit behind it is supposed to be different.

investment volume: 158 US- Dollar expected market launch: unknown

https://neuralink.com

Automotive concepts

Furthermore, the sequences on the city streets offer the opportunity for car manufacturers to present their concept studies and mobility concepts. Sample list:

Mercedes Benz <u>AVTR</u> BMW <u>Vision Next 100</u> DLR <u>SLRV</u>

Financing outside tech

Lina walks through a mall twice. Here, too, partners who would like to use these scenes for advertising purposes could be found. Eligible are either companies from the field of VR, which can show their products or visions, or even companies and stores from the retail sector.

The Setting

The setting is not irreplaceable, but it is also not chosen at random. Like no other commodity, coal symbolizes the rise of industrialization and thus our progress and prosperity, but at the same time it also stands for the overexploitation of nature and the consequences for the climate. It is therefore only logical to set a film about climate change in a place that has to do with coal. Germany's role in climate change is just as ambivalent as that of coal. None of the major industrialized countries is more committed to renewable energies and environmental protection than Germany. At the same time, Germany is the largest producer of lignite (brown coal), the dirtiest of all energy sources. No other country has the gigantic bucket-wheel excavators which are both a symbol of human creative strength and enormous destructiveness. And just in few regions of the world, the hunger for energy and the loss of homeland (which is what climate change ultimately entails) is as visible as it is here in the open-cast mines. However, the loss of natural landscapes also offers an opportunity for renewal. For example, former open-cast mines are already being converted into lake landscapes and developed for tourism. A lot of these are located in the Ruhr region in the middle of one of the largest agglomerations in Europe in the middle of the mega region "Blue Banana", a region of great symbolic ambivalence.

Thanks for reading!

Sincerely, Leo Rück

Contact me here.