

# THE PHYSICISTS

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## Dedication

This work is dedicated to Petra Heiss and Rainer Keller, my parents.

I am immensely grateful for their unconditional love and support, especially throughout these past three years that I spent in America.

And to Elfriede, Franz, Stefan, Daniela, Martina, Jonas and Sophie Lochbihler - my amazing family. They all made it possible for me to take this step in my life.

## Introduction

I first encountered *The Physicists* in school, when I was about 15 years old. As one of the most performed theatre pieces in German speaking countries and one of the most successful plays after World War II, *The Physicists* is a standard theatre piece. It is read in schools, and actually proves to be one of the most liked among students. It is funny, easily accessible but also clever and multi-layered.

When I thought about which piece to choose for my thesis I wanted to do something that was originally written in German, my mother tongue, to have the possibility to compare the original with the translation. I also wanted to do a play that had a classical structure, because that is what I want to challenge myself in. Above all I was looking for a story that had a message that applies to today's society and culture.

*The Physicists* fulfilled all these points and proved to be surprisingly timely.

## Why this play now?

### The discovery of the Higgs Particle 2012

The Higgs Boson particle is an elementary particle in the standard model of particle physics. The Higgs-particle belongs to the Higgs-Mechanism, a theory that was proposed in the 1960ies.

*It would explain why some fundamental particles have mass when the symmetries controlling their interactions should require them to be massless, and why the weak force has a much shorter range than the electromagnetic force. The discovery of a Higgs boson should allow physicists to finally validate the last untested area of the Standard Model's approach to fundamental particles and forces, guide other theories and discoveries in particle physics, and potentially lead to developments in „new physics“<sup>1</sup>*

The search for the Higgs-Particle, also known as the God-Particle, was of such importance that it led to a 40 year long search and, when experimental technology finally became sophisticated enough, to the construction of one of the world's largest and most expensive research facilities. In 2013 the Nobel Prize was awarded to Peter Higgs and Francois Englert.

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<sup>1</sup> "The Higgs boson: Evolution or revolution?". CERN. 13 December 2011. Retrieved 2012-07-18. (Wikipedia)

*„We have encountered a void. Our knowledge has become a frightening burden. Our researches are perilous, our discoveries are lethal. For us physicists there is nothing left but to surrender to reality. It has not kept up with us. (...) We have to take back our knowledge and I have taken it back. There is no other way out.”<sup>2</sup>*

## Whistleblowers

In 2013 Edward Snowden released a huge number of classified material and secret documents to the public. This was considered one of the most significant leaks in U.S. History and led to fueled debates about mass surveillance, government secrecy and the balance between national security and privacy of information. Snowden explained his actions saying:

*"I don't want to live in a society that does these sort of things [surveillance on its citizens]... I do not want to live in a world where everything I do and say is recorded... My sole motive is to inform the public as to that which is done in their name and that which is done against them.”<sup>3</sup>*

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<sup>2</sup> Möbius in The Physicists

<sup>3</sup> "NSA whistleblower Edward Snowden: 'I don't want to live in a society that does these sort of things'" (video). *The Guardian* (London). June 9, 2013. (Wikipedia)

## **The Nuclear program of Iran**

In the late 1950ies Iran started the research for a nuclear program that should support the country's energy policy. During the Islamic Revolution and the Gulf War the work was stopped. In 2011 the Bushehr nuclear power plant was officially opened, despite concerns about safety. Even though it could never be proved, Iran has been believed to develop atomic weapons and it's nuclear program has been the target of multiple sabotages.

In 2012 the Iranian nuclear facilities were again sabotages by a computer virus, which one night played the song "Thunderstruck" by AC/DC.

## **How do these aspects tie into The Physicists?**

*The Physicists* is a play about secrets and discoveries, not all them pleasant. The three Physicists in the play are trying to find out the ultimate solutions to unresolved scientific questions: the cure against gravity and the Theory of Universal Discovery. They think that knowledge will lead them to richness and fame. The fact that they are only pawns in a bigger game is of little importance to them.

In our present society, knowledge and hard work are the keys to success and wealth. Sometimes, possessing this aspiration to higher goals results in tunnel vision, creating unawareness of truths that surrounds us. Just like the Physicists, who literally murder their



non-mission-related life opportunities (i.e. the nurses) society becomes caught up in the quest to higher achievement, which inhibits them to see answers to questions that are right in front of them.

## What specific questions does this play provoke?

*The Physicists* is a play that speaks to the responsibility of science and, furthermore, to the responsibility of each individual in a modern society. The political atmosphere of the early 1960ies influenced the play during the Cold War, when the world was still recovering from the consequences of World War II and people feared the outbreak of a nuclear war. It emphasizes the fact that our society tends to misuse knowledge in order to gain power.

In his last interview 1996 the astronomer Carl Sagan states that

*“We live in an age based on science and technology, with formidable technological logic and powers. (...) And we don’t understand it, and with we I mean the general public, (...) then who is making all the decision about science and technology that are gonna determine what kind of future our children live in? (...) There’s two kinds of dangers. One is that we have arranged a society based on science and technology, yet nobody understands anything about science and technology. And this combustible mixture of ignorance and power sooner or later is gonna blow up in our faces. (...) And the second reason is that science is more than a body of knowledge. It’s a way of thinking. A way of skeptically interrogating the rules of the universe with a fine understanding of human fallibility. If we are not able to ask skeptical questions, to interrogate those who tell us that something is true, to be skeptical of those in authority, then we are up for grabs for the next charlatan, politician or religious who comes ambling along.”*

Half a century after *The Physicists* was first published later the questions about responsibility and the power of knowledge have become more important than ever before. Technology is a daily part of our lives and influences the way we communicate and connect. 1995 Ivan Goldberg proposed the term IAD (Internet Addiction Disorder) as a satirical joke, which in the following years was taken surprisingly serious by his colleagues.

In the 50's the first plans for unmanned aircraft vehicles were sketched in the United States Air force. After 9/11 the CIA commissioned the use of UAVs officially. Since then, thousands of people (including many unarmed civilians) have died because of the attacks by UAVs.

In 2011, Apple introduced an intelligent personal assistant and knowledge navigator called SIRI on their iPhone. In May 2013 Defense Distributed, an online open-source platform, has “made public the 3D printable files (STL files) for the world's first fully 3D printable gun, the Liberator .380 single shot pistol”<sup>4</sup>

Nowadays the inclusion of technology and robots in our everyday lives is a given. Technological changes and improvements are happening faster every day, challenging our brains with new inputs, a high speed environment and multitasking.

For Friedrich Durrenmatt, the prospects of this future were catastrophic:

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<sup>4</sup> Greenberg, Andy (May 5, 2013). "Meet The 'Liberator': Test-Firing The World's First Fully 3D-Printed Gun". Forbes. Retrieved May 7, 2013.

*Only in the madhouse can we be free. Only in the madhouse we can think our own thoughts. Outside they would be dynamite. (...) Are those murders we committed stand for nothing? Either they were sacrificial killings , or just plain murders. Either we stay in this madhouse or the world becomes one. Either we wipe ourselves out of the memory of mankind or mankind wipes out itself.<sup>5</sup>*

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<sup>5</sup> Möbius in *The Physicists*

## Inspirations and Creative Background

During our initial discussions around *The Physicists* we found one interesting central topic that influenced both our dramaturgical and design approach: Different forms of containment. This is also a topic that interested Durrenmatt his whole life. In his famous speech “Switzerland as a prison” he talks about the make belief of freedom in a country that holds itself prison as a political island.



### The containment of thoughts

Mobius's brain functions like a big container or treasure box, where he stows all his discoveries and research results. He wants to keep his knowledge just for himself. His brain equals a pressure cooker or even a reactor, where on a high energy level thoughts are thought and through that different forms of anxieties and even panic attacks (like he has in the famous "Solomon speech" when his family is visiting him) are triggered. Mobius's brain is like a ticking bomb, ready to explode every minute.

## Containment as a form of Imprisonment

Möbius knows of his powers and the danger of his discoveries and decides to imprison himself in a mad house. Fräulein Doktor Zahnd is imprisoning the Three Physicists without their awareness in Les Cerisiers and even the relationship with the nurses, who fall in love with the three men, could be seen as an allegory of imprisonment: The bounds of marriage.

*Nurse Irene (...) would have done anything for me. I warned her. I shouted at her. I treated her like a dog. I implored her to run away before it was too late. In vain. She stayed. She wanted to take me away into the country. To Kohlwang. She wanted to marry me. She even obtained permission for the wedding from Fräulein Doktor Zahnd herself. Then I strangled her.”<sup>6</sup>*

In order to keep their eyes on the prize and stay self-motivated the Physicists kill their lovers.

## Boxing in

In *The Physicists* we are confronted with very expressionist, clearly shaped, eccentric character depictions. Each one of them appears as an almost cartoonish form of normal everyday people. May it be the inspector, who follows his rules and counts his boring office days going by, or Sister Boll, who is a strong minded, but nonetheless “simple” woman, or The Rose family, a distorted example of “the perfect loving family”... All of them are clearly outlined character examples and none of them changes. In fact, through the entire course of

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<sup>6</sup> Einstein in *The Physicists*

the play these characters stay the same. All of them can be “boxed into” character-niches. When those different characters meet in the play, they have a conflict. They only function well in their own little isolated universes. As soon as they get in touch with someone or something outside of their perspective they cannot operate anymore. The idea of containment is mirrored in the set and lighting design and repeated in the modular furniture, the framework of the “arena” on stage, which is surrounded by lit power strips on the floor and strictly shaped window boxes on the ceiling, as well as in the shapes of iPads and TVs that are used throughout the course of the play.



## Directorial challenges, skills and abilities

The biggest challenge for me was to lead an international ensemble where not all people were in the same space.

One big goal in this production was to make it possible for Evelien Stichelmeyer, a set designer from Brussels, to come to New York and collaborate with us on this production.

Two more, long-time international collaborators and friends (Manuel Mitterhuber and Florian Hackl) were located in Austria and we had to communicate over Skype and E Mail throughout the whole artistic process. To make international collaboration possible, it requires a very clear and distinct idea of the piece. On the other hand, it is important for me to give my collaborators the most artistic freedom possible. This is a balance act that requires a lot of patient, flexibility and resilience.

It was exciting and sometimes difficult to guide Evelien (who was visiting New York for the very first time and not used to any cultural demeanor) through the working process at Columbia and in the Connelly Theater. We had a couple of misunderstandings and conflicts and I spent additional time navigating through those and resolving issues within the team. It was helpful to facilitate discussions with smaller groups and give people the opportunity to articulate their insecurities. As an international student I know how hard it can be to not understand certain cultural routines and I was prepared to open up discussions about this issue.



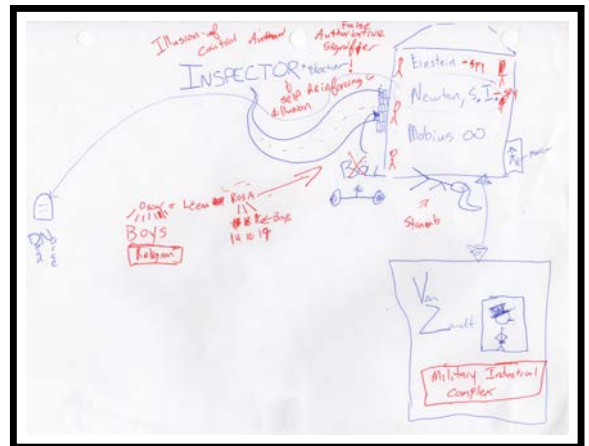
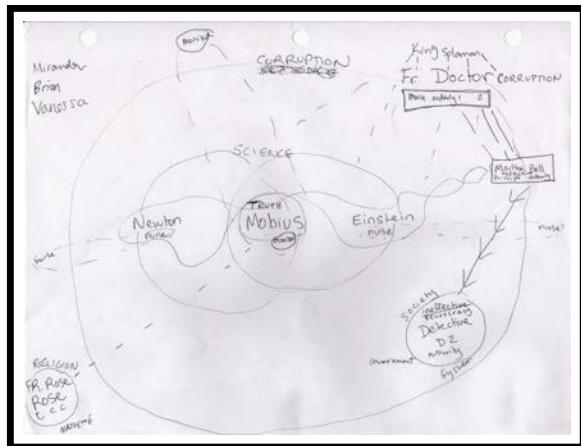
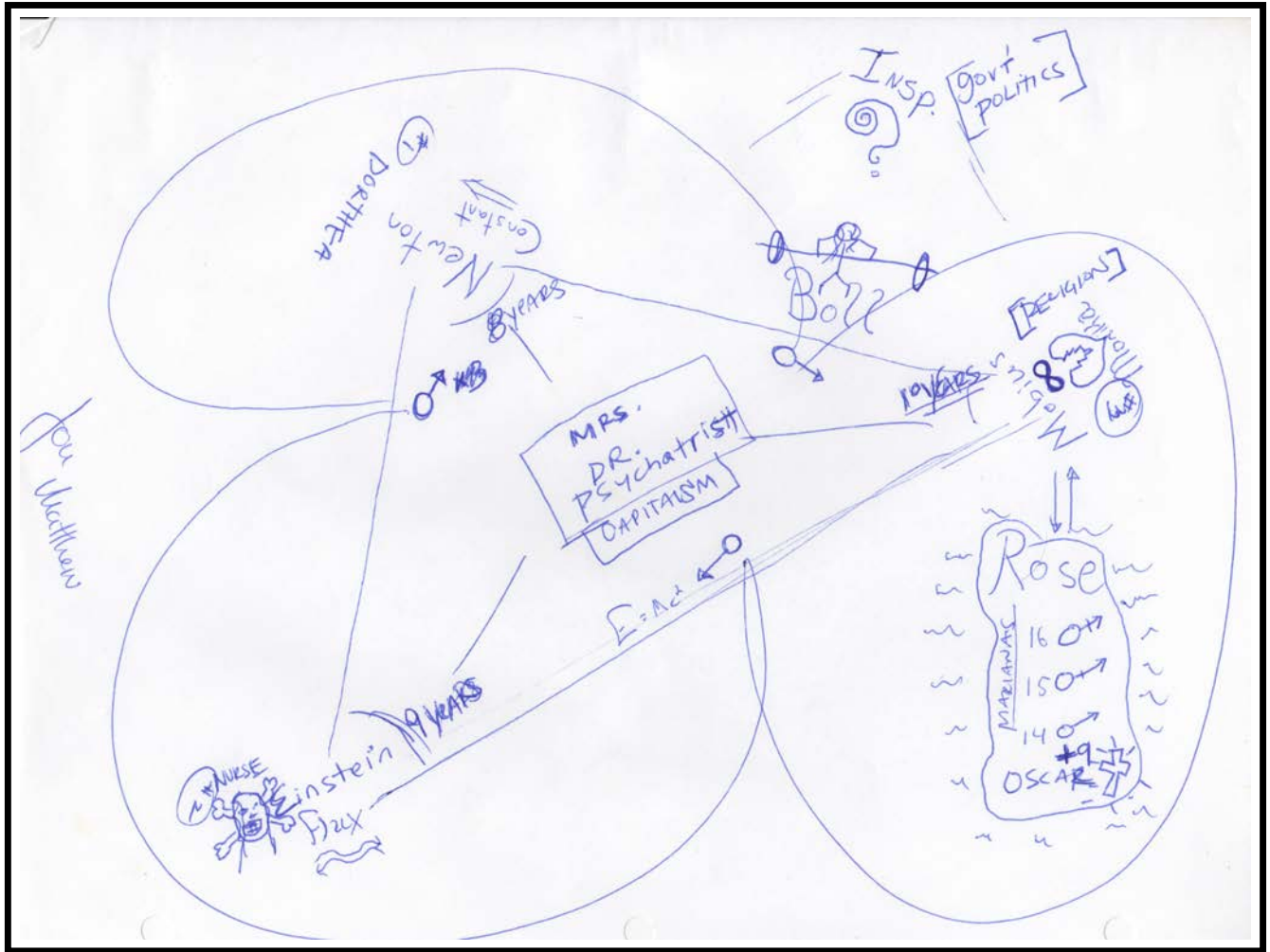
With video and sound it was mostly troubleshooting that was demanded. The formats of files and videos needed to be adapted and people needed to familiarize themselves with new technologies. The fact that both my music and video designer were never in the space with us required me to look for assistance for both of them.

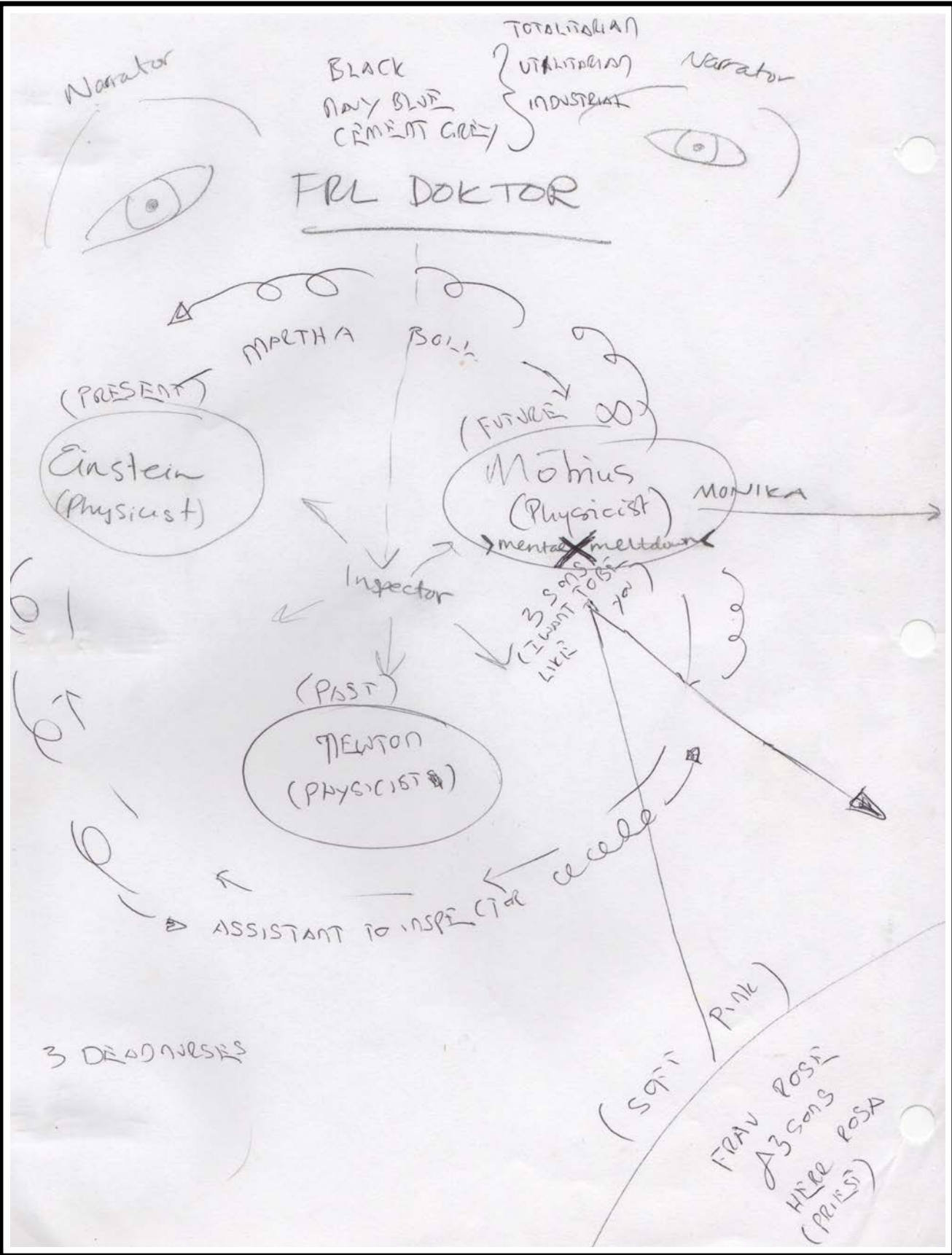
Working with a translation of a piece which was originally written in German, was something that I aimed for my thesis. I wanted to experience the pleasure of having first hand insight in the original script and being able to compare the texts. This would allow me to understand how humor is received in a different culture, what can be literally translated and what needed to be described differently. In some cases I would have loved to propose my own translation of the piece, but we needed to stick to the Kirkupp translation to serve the rights.

It was an enriching experience to watch the ensemble figure out the timing of speech and the comedic elements in the storytelling and characters. Comparing the German to the English version of the piece, the recipe of humor is different. Whereas the Swiss version scores with a dry, almost cranky, very rhythmical way of communication, the English version reads differently and becomes a little more stilted and wordy. For the English production I decided to concentrate more on character development and physicality. I did not want to get hung up in trying to make a punch line in German work in English. Ultimately, the juiciness of our production were the encounters of vastly diverse personages in an open arena.

*The Physicists* was so far the biggest production with the largest ensemble that I have ever directed. The fact that it was only in the week of tech that we actually had the full ensemble in

the space together forced me to imagine the piece as a whole in my head. The work with the play was like working with little puzzle stones for a long time. I had to trust my instincts with both design (as half of my design team was abroad) and musical choices. Especially the last song of the piece, Stand!, was a big dramaturgical decision, which my team debated over for a while. Musing over creative choices and imagining a bigger picture requires a lot of faith. However it is one of the most rewarding and exciting parts of my job, as I can use all my knowledge and experience from various artistic fields. In my time at Columbia University I learned that as a leader you are able to transfer excitement and can build trust with your ensemble. This can spark people to work with united powers and creates the most rewarding works of art. Each team-member feels encouraged and safe to bring in their ideas and thoughts without the feeling of judgment or fear of failure. In fact, I think that little "accidents" can lead to great discoveries and that a production with some hurdles will ultimately be hugely rewarding for everybody in it.





## The work with the design and dramaturgy team

### Ashley Minihan – dramaturgy

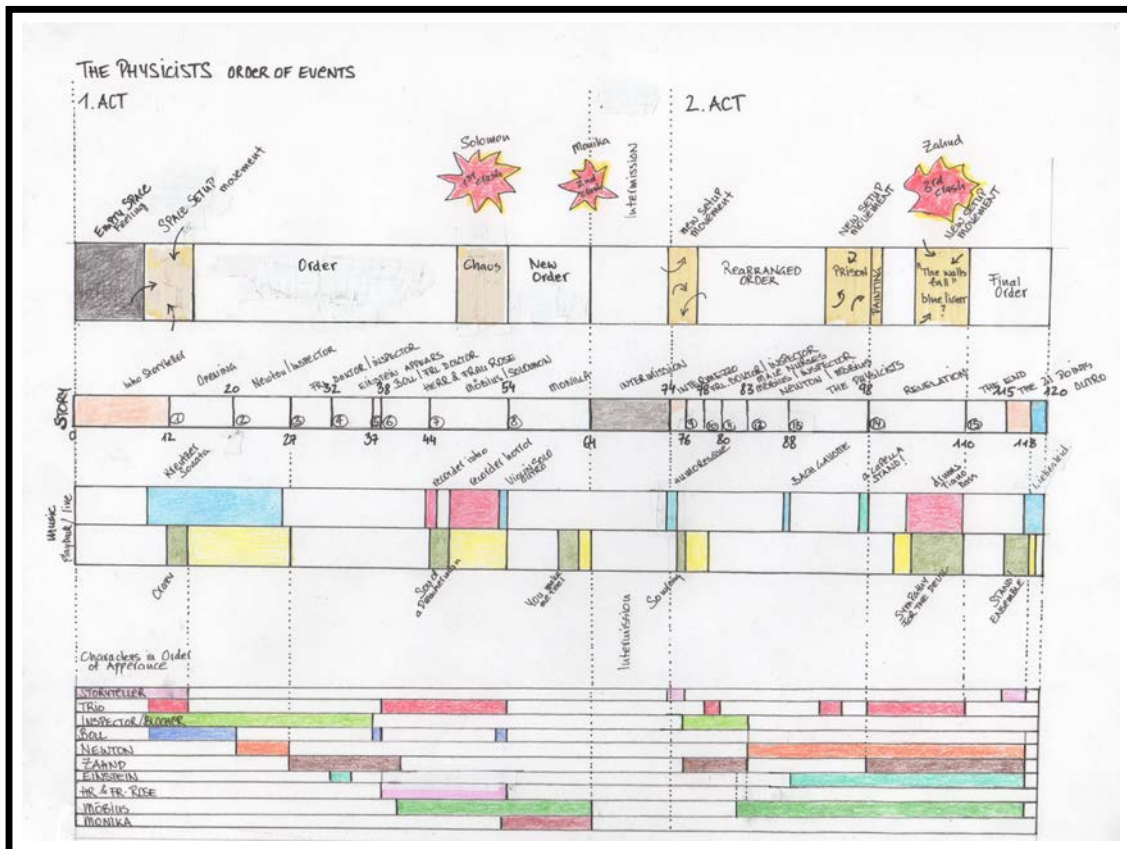
In August 2013 we did a first reading of the Physicists in New York. This reading, a rooftop-performance, included live music and spontaneous improvisation. Some of which we used in the actual show months later. After this, I met with my colleague and collaborator Ashley Minihan who has advised me in dramaturgy for the last couple of plays I have done. Our initial reactions to the atmosphere of the piece were mixed. On the one hand we were really excited about the many the possibilities of receptions that the story awakens; on the other hand we were worried that it holds a danger of becoming too flat, that it might be hard to find the seriousness in the foregrounded comedy.

We organized a dramaturgy session with the cast, where we opened up the space for questions. We wanted to make sure that everybody seized their opportunity to dig into the layers of the piece and not stay solely on the surface with the obvious comedic aspects of it.

Here are some questions that stood out to me:

- When do the shifts occur between funny and serious?
- What is sad about this play?

- Does this comedy have "straight men"?
- Who is playing a role and who is not? How many roles is each actor playing?
- Do characters experience an arc through which they change?
- Or do they just stay the same as they were at the start of the play?
- Do the characters ever want to talk directly to the audience?
- Are there moments when the actors' individual personalities come through, or are they always their characters?
- What is this play about and is there anything lost in translation?
- What is the playwright trying to say about the human condition?
- What is the playwright trying to say about women and can we provide a modern slant/critique of this?



Our production of *The Physicists* was enriched by those initial questions. The role of nurse Monika, for example, represents the "straight man" in the play, the one role closest to the audience, which we then actually realized in the blocking of the scene. The question about how many roles each actor is playing and when they drop the role to be "authentic" made a huge impact on our decision to have all actors on stage throughout the play. Finally, the ensemble discussed and deliberately addressed the fact that the author expressed racist and sexist views throughout the play, which gave them the opportunity to weave in their own political standpoints.

## **Evelien Stichelmeyer – set design**

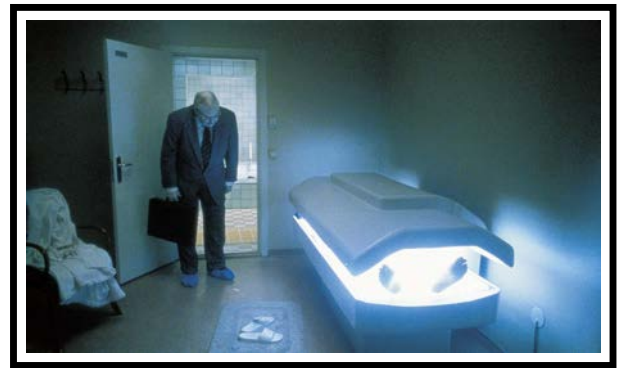
I met Evelien during my internship with Toneelgroep in Amsterdam, while she was working as a set assistant for both Ivo van Hove and Thomas Ostermeyer. We immediately clicked on a personal level and spend hours on discussion social issues, communication and the role of media in our lives. Beside the facts that I got along immediately with Evelien on a personal level, I liked her aesthetics and documentation of her former work and saw a potential for a fruitful collaboration on *The Physicists*, as we both were gripped by the scientific, technological and psychological background of the piece.

## **Visual Research: Jaques Tati, Roy Andersson**

Our research started off in the world of Jaques Tati and Roy Andersson. We liked the cool coloring and the artificial feeling of everyday life. Inspiring movies were *You, the Living* or *Playtime*. We were especially drawn to the idea of isolating architecture and prisonlike spaces in *Playtime*. Our original idea of building a complete space with a huge amount of transparent walls could not be realized because of budgetary restrictions, so we decided to create a “take” on restricted spaces in steel and glass and created the outlines, shapes and shadows of it. Ultimately, this decision provided us with an airy, open space, that showed clear, defined limitations.





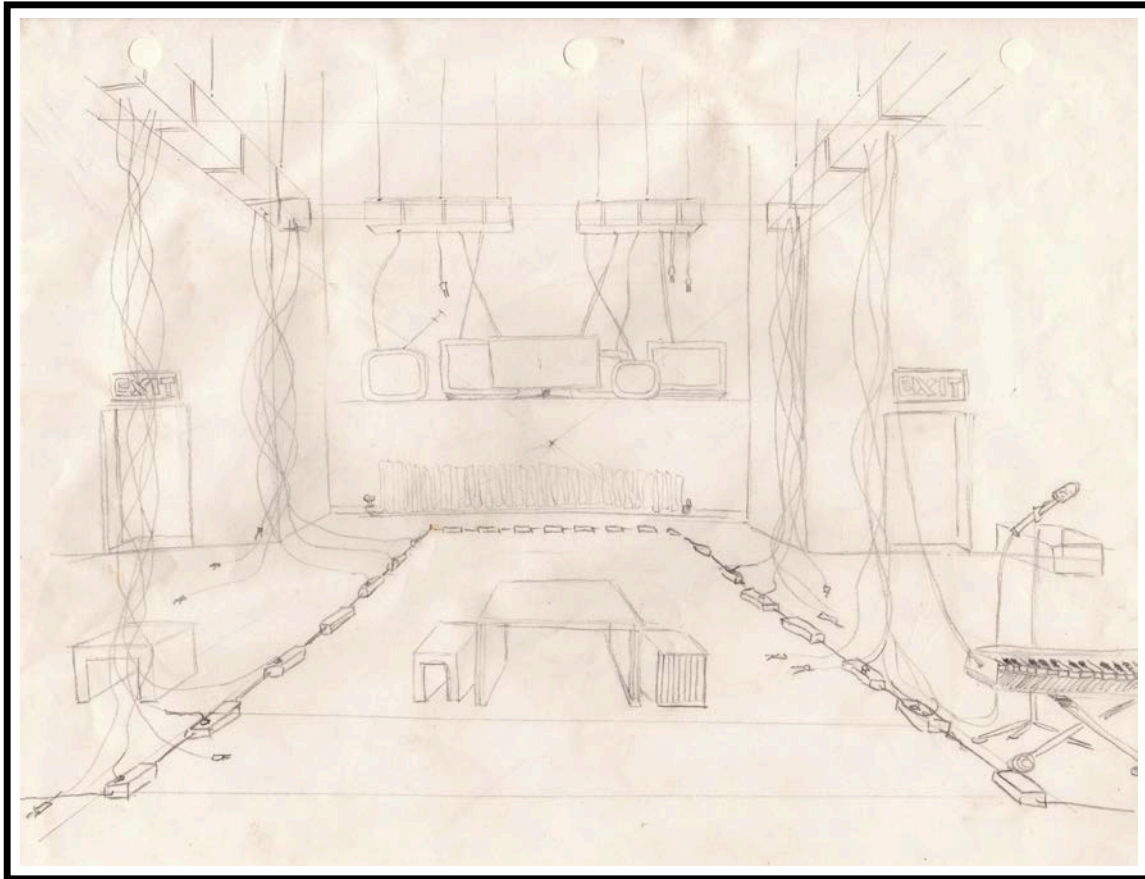


## The Drawing Room

Our first draft of the drawing room of *Les Cerisier* was a very realistic one. We started off with Durrenmatt's exact description and tried out some more modern takes on it. Our biggest problem with the room was the walls. We wanted to have glass walls originally, which then could have been put together to a kind of glass-cage (or "tank") for the physicists in the end of the story. This would have been a metaphor for the "open prison" the three physicists are caught in. We talked about the symbolism of aquariums or shopping windows, which are widely featured in our research material, the movies of Tati and Andersson. The action of imprisoning and exhibiting someone at the same time was attractive to us, but could, in this form not be realized, as plexi glass wall-elements were outside of our budget. We then simplified the concept drastically and sized the "open-prison" or "tank" effect down to just three rectangles of light, in which the actors or physicists are caught (and exposed) at the end of the play. Our initial impulse of providing moveable walls was reduced to "high windows", designed as light-boxes, which were hung from the ceiling and marked the outlines of the room. The frame on the floor was repeated with connected power strips and those again were "plugged" into the window boxes. The idea was to create a playground that is literally a powerhouse, that holds potential to be dangerous, that has to do with physics and everyday life and that supports Durrenmatt's logic of space, time and action. It was essential not to change places, so the drawing room itself needed to be versatile. This was achieved through the connection of set and lights – the color of the window boxes could be controlled and the

red light of the power strips on the floor could be switched on or off to underline the feeling of an arena. The additional set-pieces were a piano, (which added some coziness to the space, but still maintained strict lines), and a fireplace. Here again, we added a feeling of comfortability that lacks authenticity simply by the fact that we just look at a projection that anytime can be switched off or changed. Throughout the course of the play, the atmosphere could easily be morphed, as most of the lights were fully integrated in the set design and allowed us to change the mood of the space with simple color-changes. The set gradually became more uncomfortable, cold and harsh.

Looking back on our first design ideas, we ended up being very happy deciding on a very open, airy arena without walls which underlined the paradox of the story about prisoners who are not aware that they are trapped.



## Modular Furniture

### *Modules/Particles*

The Furniture starts off with what we call the “black box principle”. We don’t know what it is or what is inside it. One of the inspirations the inspirations for the furniture was Stanley Kubrick’s monolith from *Odyssey 2001*. In the beginning of the movie it is suddenly there, confronting human-apes with a riddle. Is standing for the great unknown, the overall power, the big secret. In the *Physicists* the secrets are unraveled.



Another inspiration came from looking at the *Gordic Knot*. A difficult puzzle that looks very logical and simple once you manage to have put it together.

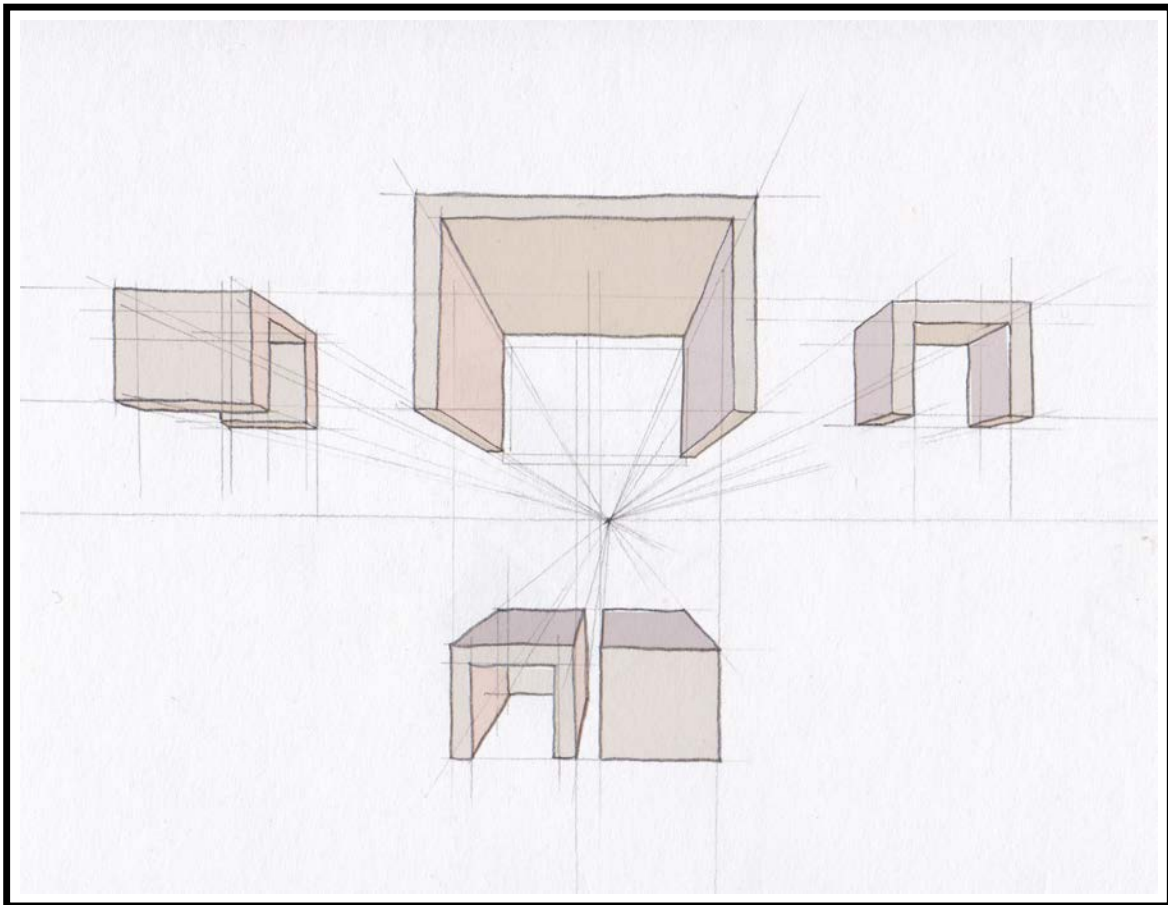
These two inspirations brought us on to modular furniture. A very timely way of building minimalistic pieces that have multiple functions and can change meaning and resemble a puzzle.

### *The rectangle or squared shape*

Inspired by the simplicity and minimalism of Russian Suprematism, we looked for simple tools to design a space that can become complex in our minds and imagination. This principle allowed us to have very clearly shaped, minimal objects on stage, which could be seen as abstract shapes or used as furniture. On top of that, they could, arranged in the right order, even stand for a groundbreaking physical formula like  $E=MC^2$ .

In *The Physicists*, things are never as they seem to be. Even in the end we actually don't really know if Zahnd is "good" or "bad" because we don't know what her business actually is.

Our brains work just like the ones of the three Physicists – we are inventing our own stories and interpretations. But we can never be sure if the things we see are actually what we see on the first glance. They keep changing.



## Lighting Design - Daisy Long

Daisy is a long-term collaborator who has differentiated herself with her sense for colors, dramaturgical efficiency, and her wit. She went to the design program at Yale, is a freelance lighting designer in New York and has become both a good friend and reliable, outstanding colleague over the last years.

Given the fact that *The Physicists* takes place in a world that still suffers from the immediate consequences of the explosion of the first atomic bombs and speaks to people's fears and awareness in that matter, our first choice of source material for lighting design were atomic explosions and nuclear reactors.

### Cherenkov Radiation – The glowing effect inside a reactor

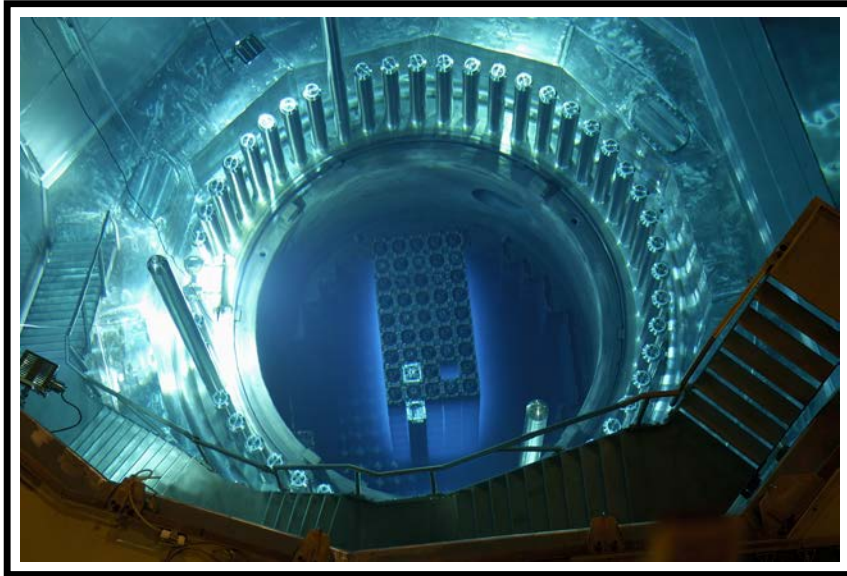
Cherenkov Radiation happens due to an effect, where accelerated particles reach a speed greater than the speed of light. This is possible, when “*a charged particle, most commonly electron, travels through a dielectric (electrically polarizable) medium with a speed greater than that at which light would otherwise propagate in the same medium.*”<sup>7</sup>

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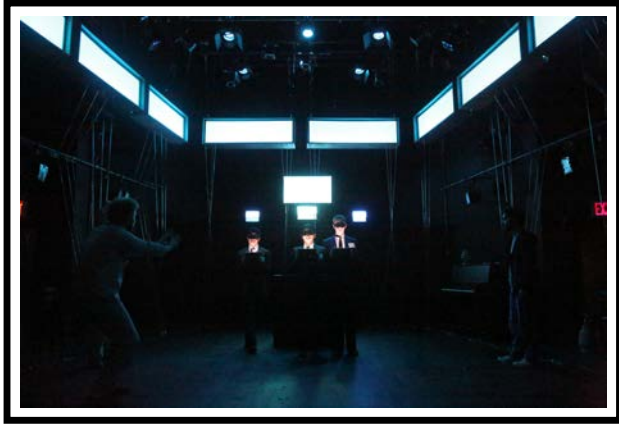
<sup>7</sup> Cherenkov radiation; from Wikipedia, the free encyclopedia



The goal of the lighting design was to achieve an effect, similar to Cherenkov radiation that would fill the whole Connelly Theatre space. The audience would then experience being “inside” a reactor, which was also supported by the round shape of the space.



The gallery allowed us to place lights around the audience to mimic the circular design at the inside of a nuclear reactor. When Fräulein Doktor Zahnd reveals her true identity to the physicists, the lights change and reveal the fact, that the three men and the audience have always been part of a bigger, controlling structure. Everyone, the actors and the audience, have always been right inside this structure.



*“What you see around you are no longer the walls of an asylum. This is the strong room of my trust. It contains three physicists, the only human beings apart from myself to know the truth.”<sup>8</sup>*

Slowly, over the course of the piece, the blue light and the Doktor’s sinister plan are sneaking in on the physicists. First, we only see hints; gradually it is mixed more into the coloring of the “window boxes”. Also, it is repeated when the TV flickers and in the pale, cold shimmer that reflects from the iPads the male attendants are using. The visit of the Rose family only momentarily brings a warm pink shading to Les Cerisier and finally, the depiction of the fireplace, which gave the space a coziness in the opening, is switched off with Sister Monikas death. The color-temperature of the space gradually sinks and cools off completely by the beginning of Act Two.

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<sup>8</sup> Fräulein Doktor von Zahnd in *The Physicists*

## Sound Design, Composition – Manuel Mitterhuber

Manuel is a very close friend and long-term collaborator of mine. We have developed several artistic concepts together, always multidisciplinary, focusing on space, movement and sound. We also worked on a couple of theatre pieces and a short film in 2012 and 2013. Manuel runs Zach records, a sound studio in Linz/ Austria. He is a composer, guitarist, and drummer and has been touring through Europe with various bands.

The musical approach was strongly influenced by the idea of giving the audience a sense of the power of technology through sound. A live violin introduces the first notes we hear in the piece. We listen to Bach's Kreutzer sonata, which is played by piano and violin solely acoustically. The choices for the songs that are woven into the play are partially set by Durrenmatt – the classical music is used as written in the play. The additional pop songs were chosen to further inform the situations and the characters. I looked exclusively for number one hits written in the 60ies, to underline the time period of the piece and for lyrics that bring additional inspiration.

The play opens with a couple of bars of the song *Crazy* by Patsy Cline and introduces us to the world of a mental home. Lina Rose sings *Son of a Preacherman* when she introduces her new husband, Oskar to Möbius. I kept the original suggestion by Durrenmatt to have the Rose boys play the recorders – but the song played on the recorders is not determined in the script and I let them play to the Dusty Springfield hit.

*You Make Me Feel Like a Natural Woman* seemed a perfect fit for the love scene between Monika and Möbius. This effectively peaks in the moment where the lyrics “...you make me feel so alive” clash with Monikas violent strangling that ends Act One.

*So wrong* is another Patsy Cline song that brings us back into the world of the piece at the beginning of Act Two.

Only in the second act the sound becomes more digitally produced. What was played before with live instruments like violin, piano, recorders and ukulele transforms gradually into an electronic soundscape that is entirely synthesized.

*Stand!* by Sly and the Family Stone (a song about human empowerment and freedom of mind) is used twice in the play. The three physicists deliver the first part of the song as a pathetic acapella version. It marks the “fake happy ending” that Durrenmatt crafted in the end of the second act and came from a vulnerable and personal place, exposing both the three physicists and the three actors on stage. It was followed by “a long silence” and explores the naked feeling of being exposed, another form of being trapped. In our version of *The Physicists*, the first loud sound after the final chord of *Stand!* is the bash of a black trash bag that is shook open by one of the male attendants. It underlines the fact that the Physicists have become linked together in an ineffective trio and are now only fools to the audience. This moment of awkwardness is followed by what we call “The Revelation Scene”.

The soundscape in which Zahnd is revealing her true self is all adapted from the Rolling Stone’s hit *Sympathy for the Devil*. The beats are built up with Geiger Counter sounds and

electronic noises. Zahnd walks up on the gallery behind the audience and her voice is heard over the God mic that was being used by Jenny Ainsworth, our Stage Manager, throughout the piece. When Zahnd mixes Mick Jagger's words: "Pleased to meet you, I hope you guess my name. But what's puzzling you is the nature of my game" into Durrenmatt's text "Now I shall be mightier than my forefathers. My cartel will dictate in each country, each continent" she finally exerts total control over the audience and the rules of the play

The second part of *Stand!* is sung by the whole ensemble with the storyteller on lead vocals. The lyrics speak to the audience and suggest thinking twice about everything:

"Stand! They will try to make you crawl and they know what you're saying makes sense and all. Stand! Don't you know that you are free? Well at least in your mind if you want to be!"

## Projection Design – Paul Lieber, Florian Hackl

Looking at the importance of new technologies that are discussed and warned about in *The Physicists*, I found it important to integrate an every day entertainment medium, that surrounds us almost everywhere nowadays: the TV.

The initial idea was to clutter the back wall of the stage with a pile of cables and TVs of all sizes and ages, but we had to cut down this idea drastically due to budget and prop restrictions. We ended up with a very simple solution that mirrors the trio theme that runs through the piece simply. We put three TVs in the center of the back wall: Abstractly technical representations of the three protagonists. The center TV is a big flat screen, which would additionally represent a certain progress in technology: the move from analog to digital.

In the first half of the piece we are playing with the TV as a “window”. The fireplace that is displayed on the screen becomes part of the reality of the stage, part of the set-up. We forget that it is only a moving image of a fireplace. We accept the reality that we are given. Later, with the death of Monika, the image of the fireplace vanishes. With the entrance of the three male attendants the TVs start to flicker, which reflects an immediate technical response to the presence of those characters. Something is changing, something is manipulated, but we don't know yet, what it is. Only Fräulein Doktor von Zahnd has the power to change the colors and pictures of all screens and technical elements. Every technical element synchronizes with her by the end of the play.

## Costume Design – Brooke Cohen

The goal for the costume design was to exaggerate the characters and make them more comic-like. Doing research, we started with the period clothing from the 60's as a basic costume that would then transfer into a more contemporary, even futuristic, absurd look by the end of the play. Bright, energetic and clean colors dominated the first half of the play, whereas the second act became darker and more business-like.

The biggest transformation in the costume design involved Fräulein Doktor von Zahnd starting the play as an old grandmother-figure that completely transformed into an alien-like tough, erect woman. She could move frantically on stage – reminding a little of a dominatrix.

For the Rose family we drew from home sweet home family pictures, which we wanted to distort and make feel very overwhelming. Too happy, too loving, too comfortable. A family-model so good and proper that the audience might get scared.

With the introduction of a clown-like nurse trio, represented by the same actors who played the Rose boys and the Male Attendants, we underlined the theatricality of the play from beginning on. The entrance of the clown like characters in nurse outfits and wigs set the tone of the piece. The costumes were overall presenting a big headline calling: This is all a set-up! We just pretend that we are those characters!

Highlight of costume was the character of Newton; who's wig was entirely made of phone chords.





## The role of the audience

Theatre for me is a very immediate, energetic experience of showing and watching. In its best version it makes the audience wonder. Their eyes widen, their mouths open and they are inspired by new thoughts and stories created for them on stage. This can trigger change, thinking and discussion. Ideally the audience feels provoked, in a good way, to carry the feelings experienced outside into their world.

The most important aspect for me is how the actor treats the audience and that they are aware of their presence throughout the whole play. The play will not work without an audience, it only comes to life when it is experienced and seen. So, I would like to call the audience of my productions active players. They are directly influencing the actors on stage and they have the power to maneuver the play energetically. In Dürrenmatt's *The Physicists* the audience mostly has a role of a detectives and judges. They are the ones to witness crime and they are ones directly addressed to when the physicists make their cases and directly address them.

### Detectives

In the first half of the play the audience is confronted with a crime story. The audience strongly identifies with the inspector, who is very confused by the rules of the mental home Les Ceriers. The case seems too simple, too perfect; and the characters that Inspector Voss encounters in the first act are somewhat disturbing. For the audience this almost feels like

playing Clue. What is really happening? How does this game end? My experience of sitting in the audience in the first half showed me that people could foresee some events, for example the murder of Monika, and that they tried to prevent her from going back to Möbius, when there was clearly something wrong with him. People would talk to the actress “Don’t go back!”, which was exactly what I intended for the first half of the play.

## Judges

In the second half, the role of the audience shifts to a more observational, detached role. The role of a judge. The gap between the stage and the audience space becomes bigger again and the actors speak to the audience as they were in a trial. What the storyteller in the first act initiated becomes a way of speaking to the audience for all the characters, especially the three physicists. Every one of them tries to convince the audience of their case and make a point of why it was necessary to kill and to lie. Orders are orders. There was nothing else they could do. By listening to the helpless tries of the physicists to make a point, which peaks in a hilarious and silly acapella trio that is laughed at by the audience, the action of the audience is turned from judgment to condemnation. Our intention here was to make the audience feel superior and smarter than the physicists, laughing at a fake, lukewarm ending of the play, only to be then victims of a bigger set-up.

## Prisoners

In the end of the second act the audience becomes surrounded by a bigger setup, a circular theatrical experience, conducted by Zahnd. The technical set-up of the performances changes completely into surround music, microphoned voices, once again the integration of the stage management and - in the very end - the introduction of the rules that the playwright used to construct the story: the 21 points. In the end, the true prisoners of the spectacle are the audience. Together with the three physicists, they were captured by the story and its characters, stirred around in a theatrical set-up and fooled by the playwright. The paradox of the play is that the same world that we created in the beginning is only an illusion. Given the fact that we treated it as a very theatrical, clearly artificial space from the beginning on makes the set-up even stronger. The audience members are victims of the set-up.

Leaving the theatre and stepping back into their private lives, I hope that the audience looks closer at the scenes around them. The world can be a set-up at times and it requires critical thinking and sometimes a double take to really see behind the images. Sometimes the set-up is so obvious that we think we have fully understood it, but it yet proves to be another hoax. Because we are bombarded with medial input every day and our political system is very complex and complicated it requires us to be detectives and judges sometimes. But we should not forget that a lot of times we can't help but be victimized by our very own systems.



## **The actors and their skillset**

### **Breaking the fourth wall**

I encourage the actors of my productions to let go of the idea of the fourth wall. I think this concept of theatricality is not timely anymore. The active engagement with the audience in order to bring forth the idea of theatre as a live, real time process happening with the spectator in the same place requires a direct contact. Most conversations nowadays are extremely limited in duration, they are based on a minimum of words and often they don't happen in

the same room. Theatre can be an active process to engage people in communication again. It needs to be an invitation to sharing information and people connecting.

## **Pushing boundaries**

Especially in *The Physicists*, where the use of knowledge and science is criticized (including our current relationship with communication) I was asking the actors to fight against the “theatrical frame” that the piece provides and to push conventional boundaries. I encouraged them to dig deep into the character’s targets and show their own persona through the characters. To treat the audience as an active witness of the production was key.

In order to achieve this connection I was supporting very strong, bold choices, especially the ones that were most physical. I pushed the actors to extremes in character depiction, encouraged them to distort their actions, to exaggerate, to really look out for their personal pleasure in playing their part.

## **Agency**

From the beginning of the process on I made sure that the rehearsal experience was an open and safe one, so that everybody felt invited to ask many questions about the piece and their roles. I was stimulating discussion and made it possible for the actors to openly talk about

insecurities or fears. In fact, I encouraged them to bring in these uncertainties into the piece. With this I want to achieve a vulnerability and transparency that is one of the most important goals for my ensemble work. This allows the audience to connect within an authenticity, even though the character choices themselves are bold and often weird.

We started our rehearsal process with a full, off-book run in the first week. Of course, I allowed the actors to improvise their texts, but I demanded them know the arch of the story and their relationships with the others on stage. I was looking out for clear, strong choices and decisions in the moment rather than a perfect version of the play. In fact, we found some really nice moments in this first, fun-through as we called it, which we kept for the final version. For example, the choice of actual fast food, to underline our society's dependency on consumerism, which then again leads to dependency and a form of entrapment, highlighted by the moment when Newton and Einstein start their fight over a burger. Or the fact that Sister Boll is actually cleaning and polishing the house while she is talking with the inspector, which exaggerates her traditional role as a woman and accentuates the status game between them.

## **Comprehension**

Additionally to a playful, fearless approach I was asking everyone to tell me their impression of the story of the piece, their idea of the metaphors and allegories. We divided into smaller groups, where each actor got a chance to explore the full piece throughout, not only his or her

part. My goal is to give each ensemble member a full, rich experience of the whole play, farther than just the view of things from their character's perspective. I am asking each one to be fully active when we rehearse the play, not only when they are on stage, but also when they are watching. In fact, I am asking the actors to turn into an engaged and generous audience, to invite their colleagues on stage to give their best, to make them feel important and appreciated as artists and to further invite the audience out there to lean in and watch closer.

## **The world of the piece**

The Physicists opens with the words that we will operate in a rigid structure, a classical framework of place, time and action. This, and the fact that we are confronted with a very socio-critical and timely story were the most important parameters in my choice for the world of the piece.

My production of The Physicists is embedded in a very obvious, "into the face" theatricality, that invites the audience to observe a story and simultaneously be able to witness the theatricality behind it. This should provoke the active viewer in the audience to see the "bigger system" behind the scenes, not only in the story watched, but also, later, outside in their own lives.

I wanted to underline the fact that we are all part of a system (a political and societal order, determined by laws, economy, money etc.) and to highlight Dürrenmatt's satirical take on the power play of our society.

## **The problem of space**

In *The Physicists* the roles of observers and the ones that are observed are very important. Just like in traditional theatre, we have the separation of spaces between the ones who are watched and the ones who are leaning back and enjoying the view out from the darkness.

In the play the moments of contact between the observed and the observers are crucial. These moments are moments of awareness. In *The Physicists* the main characters are becoming aware that they had been watched and controlled by Fräulein Doktor Zahnd and realize that their idea of the world was completely wrong. In the theatre the most interesting moments to me are the ones when the actor becomes aware of his or her audience and uses the resulting energy to inform their character. Vice versa, the audience can become aware of the fact that the actor knows that he or she is being watched, which might result in a state of hyper-perception, unease, imbalance. These are the critical, emotional reactions that I want to provoke in my audience, because I think that the changes in thinking happen in moments of instability and crisis.



I intentionally chose the Connelly Theatre because it provided an interesting layout that, in the case of *The Physicists*, supported my directorial goals and also informed the piece's inner spacial logic with an architectural reflection of it:

We have the classical proscenium stage, which provides the classical framework that Durrenmatt is asking for in the opening. The masks of comedy and tragedy, built into the top of the proscenium, are watching over the action, which adds even more to it.

The proscenium allows the audience to watch a story that is "framed" like a picture. The audience is viewer. Simultaneously, the audience space is surrounded by a gallery, where the technical team and the stage management team is sitting. So, there are additional viewers behind the audience, watching the audience and the play. And, to add yet another layer, I put all actors on stage (the Connelly offers a good amount of wing space) to present the performers watching the action that takes place. This setup results in an infinite circle of observers and the ones who are observed: Actors, Audience and technical/managing team are all watching and all being watched at all times.

## **The matter of time**

Durrenmatt wrote *The Physicists* in 1961 and it premiered in 1962.

A good fifty years later a new generation of audience is confronted with topics that are still relevant and timely. The fact, that society has changed and has in some aspects not changed, is

of interest to me. That is why I decided to integrate both the present and the past into this production.

Our version of *The Physicists* is a “time travel” that starts in the past and takes the viewer into a possible future that is open to the audience’s imagination.

The play starts off with a scene that is loosely anchored in “the sixties” and is through the course of the play introduced to more and more changes that add items and social behavior to the story, which will be familiar to a present day audience.

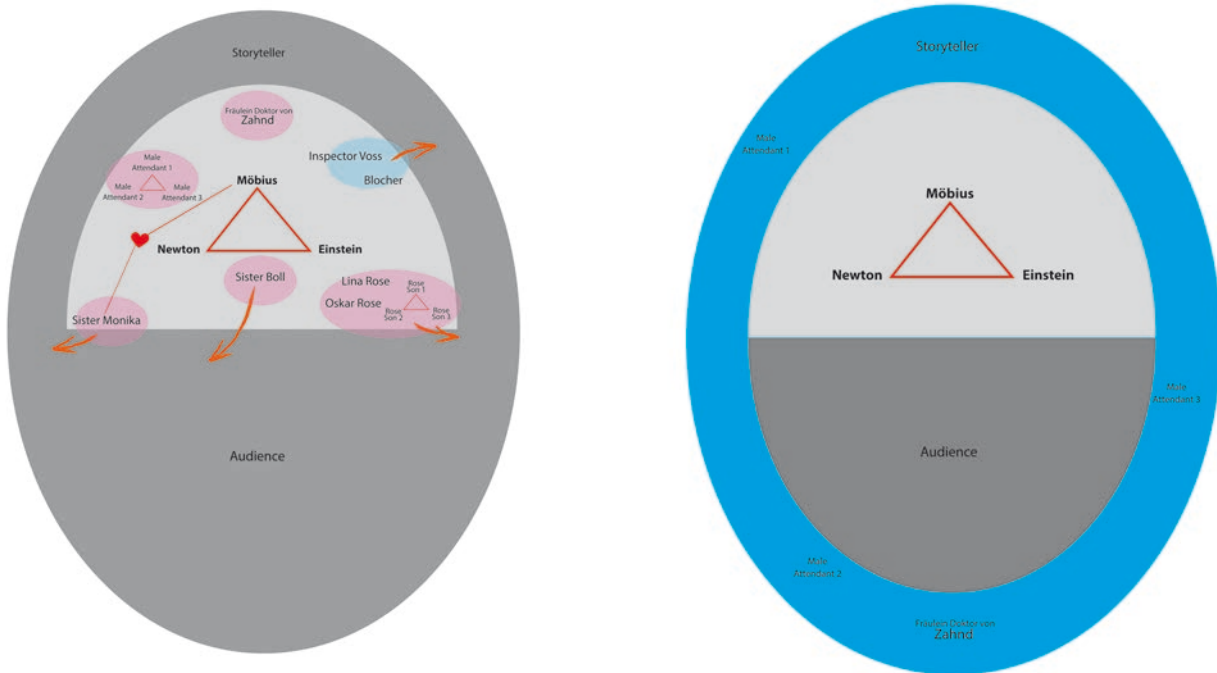
### **The illusion of theatricality**

Looking at the structure and relationships in the first half of the play, we see the triangular connections of characters. Important is, that the audience feels close to the storyteller, they are observing the piece. They are “in control”. One after the other, characters are leaving the story. They stay on stage watching the scenes and become additional audience. The audience “grows”.

In the second half of the play the relationship between audience and characters changes. The illusion of watching trades places with the impression of being watched, being controlled, being part of a set-up. The storyteller rises above the audience and stands now on the upper step with Fräulein Doktor von Zahnd, who is controlling “the world”. The only characters

who are left in the piece and on stage, imprisoned in the world of the mental home are the Physicists. With them, “imprisoned” in the world of the theatre, is the audience.

*Schematic drawing of the "world of the piece" in Act One (left) and Act Two (right):*



## **The social and political relationships between the characters**

### **The storyteller and the composition of the piece**

Durrenmatt, our storyteller, invites us into a gripping and entertaining world literally as well as allegorically. What sticks out in the beginning of the play is that Durrenmatt takes a long time with setting up the space and uses a very informal, almost friendly voice for stage directions. This personal way into the piece made me want to have a storyteller on stage to represent the author's voice, and ultimately closes the play and the evening with the presentation of the 21 theoretical points underlying the dramaturgical structure.

Durrenmatt's storytelling and character's relationships are complex and leave a lot of room for interpretation, which was underlined in our production through the storyteller's active relationship and interference with what happened on stage. Our production was "written in the moment".

What sticks out dramaturgically when looking at the characters is that the connections build up in trios. 3 Physicists, 3 Sons, 3 Male Attendants, 3 Nurses... These trios are standing in relation to each other and other characters again mostly in a triangular system.



## **Boll and Voss**

The first scene of the piece is a confrontation between Sister Boll and the police, foremost Inspector Richard Voss. The scene can be perceived as a very comedic example for a status game between two representatives of diverse social-standpoints.

Inspector Voss embodies a male dominated, structured society. He keeps emphasizes that the murder never would have happened if there were male attendants and that women are generally weak. On the other hand, we meet Martha Boll, who I envisioned as an old-style, emancipated woman who is basically running the mental-home Les Cerisiers. Even though they are very different, both Voss and Boll make their rules and structures very clear. What they have in common is their need for order.

In the first scene the outside-world order meets the world-of-order of the mental home. The spectator learn that here the rules are very different.

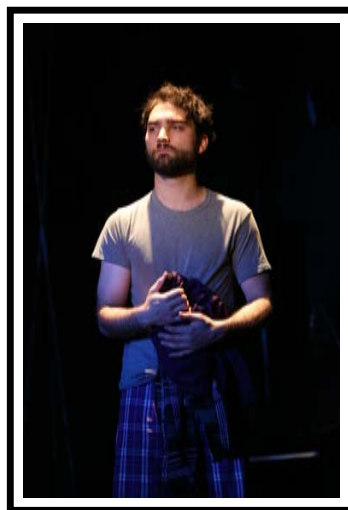
The names Voss and Boll don't really have specific meanings in German, but it is said that the last name Voss in northern Germany can be interpreted as Fox, which is a funny coincidence, as Inspector Voss thinks to be, but not necessarily is, the brightest person in Les Cerisiers.

Boll can be translated as ball, but also has a massive and almost weapon like sound to it. This makes sense as Sister Boll is literally attacking the Inspector in the first scene and forms an invisible wall that he has a hard time getting by.



## The Physicists

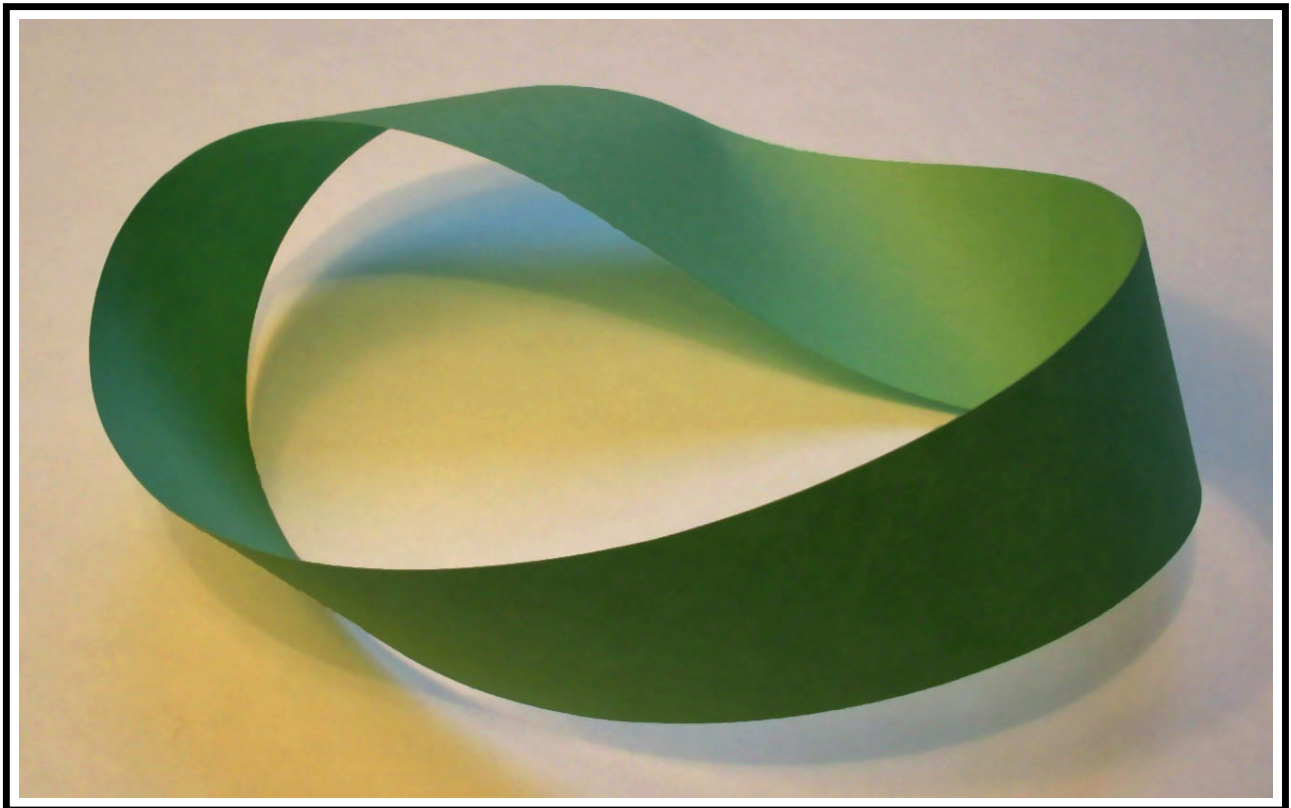
The three physicists, the only patients left in the old wing of the hospital, are three isolated men. Their isolation is underlined by their way of presenting and masking themselves. Only later the trio unites and the men feel empowered for a short time.



The characters of Newton, Einstein and Möbius introduce us to different times in the world of science: The character of Newton, the discoverer of gravity and basic physical knowledge can be seen as an allegory for the past or the initial impulse. In the story, Newton is also the first one to commit a murder, he is the first physicist who is introduced to the audience as well as to the inspector and he is the first one to try to convince Möbius of handing him the secret formulas.

Einstein was the celebrity of physics when Durrenmatt wrote *The Physicists*. He had died only a couple of years before the play premiered and could for this reason be seen as the allegorical character for groundbreaking knowledge of science in Durrenmatt's days.

Möbius, the astronomer and mathematician, lived before Einstein, but in *The Physicists* is an allegorical symbol for "future and infinity". The infinity of knowledge above all. The real world Möbius was the discoverer of the Möbius strip, which is a non-oriented surface with only one side. The Möbius strip is a paradox (which Durrenmatt also calls his play in the 21 points afterwards). The paradox of the shape of the strip has many similarities with the character's destiny in the play. Möbius's thoughts seem to circle around themselves. Even though he has found the theory of Universal Discovery and is able to explain everything he is not able to





escape his own mind, and that makes him his own mental prisoner. Additionally, he ends up being physically imprisoned in Les Cerisiers. The place where he tried to escape to be free in the mind ends up being his prison. Until the last moments of the story, Möbius is thought to know everything but ultimately he is the one who was fooled and deceived all the time. His greatest treasure, all of his knowledge, ends up with Fräulein Doktor Zahnd.

Möbius also calls himself King Solomon, the king of wisdom. In his last monologue he says:

*Once I was immeasurably rich, wise and God fearing. The mighty trembled at my word. I was a Prince of peace, a Prince of Justice. But my wisdom destroyed the fear of God, and when I no longer feared God my wisdom destroyed my wealth. Now the cities over which I ruled are dead, the Kingdom that was given unto my keeping is deserted.*

He realizes that he invented a character that ultimately became himself.

His knowledge was so powerful and made him wanting to possess it all alone, so that he isolated himself, sent away his family, killed his lover and by that shut down the only way of escape into the world, while his knowledge has been abused by someone who was right in front of his eyes and who he had underestimated all these years. Additional characteristics of Möbius could therefore also be egotism, selfishness and greed.

The fact that he wants the world well and that he wants to sacrifice himself for a greater good is at first glance heroic, but then why doesn't he simply kill himself? This would prevent his knowledge from passing to anyone. His choice however seems, on a closer look, incredibly

selfish. He locks himself up in a well-funded, comfortable villa only to finish his studies, hidden in his room and finally keeping the knowledge and overall scientific power for himself. A deadly sin, as we learn later.



## Fräulein Doktor

Fräulein Doktor Zahnd is a master of disguise and the only actual crazy character in the play. She is highly intelligent and calculating but at the same time she is mad.

Zahnd starts off as the nice, quirky, hunchbacked woman who has many stories of old times to tell. She almost seems like the perfect grandmother, who is wise and sweet and funny.

In German the word “Zahn” means tooth and her name could stand for a toothy old lady, but also for a shark, a snake or a witch. A name that symbolizes danger, malice and sinister plans.

There are two incidents in that are destabilizing Mobius ‘stay at Les Cerisiers: The first one is the encounter with his ex-wife Lina, her new husband Oskar and his three sons. Möbius has not seen his family in a long time, so the scene turns into a traumatizing experience for him.

## The Rose Family

Oskar Rose is introduced as a priest and is about to take the family on a permanent mission to the Marianas. What sounds idyllic and peaceful at first turns out to be the opposite when we take a closer look: The Mariana Islands were an important strategic point for attacks between US and Japan. In the 40ies, the Marianas were the place from which the Japanese military leaped off to undertake the attack on Pearl Harbor and later the US used to launch the nuclear bomb attacks on Hiroshima and Nagasaki.

The Rose Family unites the themes of Love (The rose as a symbol for love) with underlying aggression and militant behavior. The fact that Oskar Rose has six boys



from a previous marriage employs the freshly married couple with a little army of 9 “boy-

soldiers”. In Durrenmatt’s play the Rose boys bring their recorders and play Möbius a good-bye song. In my version of the Physicists I decided to keep the Recorders and add *Son of Preacherman*, where Lina Rose expresses both love and sexual desire for Oskar, while the boys are playing along as an orchestra.

The Rose Family is almost invading Les Cerisiers and marches through Möbius calm existence. This shakes him up and leads to his “Solomon speech”, an over the top, hysterical fit that he puts on in order to cast them away.

Ultimately, The Rose Family served my production as allegories of Religion, Love and War.

## Monika

The second traumatizing experience in Möbius’ story is the crucial scene with Nurse Monika Stettler. It happens right in the middle of the play and has major weight to it, through length and truthfulness.



Monika is the character in the piece that is the most authentic. She is pure love. When the physicists talk about their nurses and name them their “lambs”, that is what Monika is closest

to: A gentle, loving sweet creature, willing to sacrifice herself for the man she loves. Tragically, this becomes true when Möbius decides to strangle her.

Monika can also be seen as a metaphor for freedom, a new beginning, the way out.

In fact, all three nurses who are killed in the play would be the only possible exit for each of The Physicists. But the men decide to pursue their search of the world formula over their personal freedom, love and happiness.

## **The male attendants**

The male attendants are almost like a clown-like mirror trio of the physicists. They are what the Physicists don't want to be. They call them "Monsters" who just blindly follow the rules. But when Einstein and Newton reveal their true identity they say about themselves that "orders are orders" and that they "couldn't have done anything else".

In Durrenmatt's version of the play the male attendants are big, strong, muscular ex-boxing champions. In our version of *The Physicists* we wanted to shake up the sexist lense through which Durrenmatt saw those characters and empowered them through electronics and technological control rather than physical strength. They used iPads that gave them the image of absolute power and control over any situation, because they just needed to press a button to make things happen. Additionally, it detached them emotionally from everything that was going in the space, by keeping their attention at the screen rather than their surroundings.

The Physicists are using their brainpower whereas the male attendants are using the power of technology, which trumps over the three men.

If the Physicists would correlate with the analog world, the male attendants are standing for digital empowerment.

## Conclusion

Working on a Dürrenmatt piece has taught me to work explicitly on humor and complex connections between characters. It was a great experience to work with such a smart, rich structure and being able to bend it and add some of my personal taste and flavor to it. I think that the rehearsal process, the work with the design team and the actors was rewarding, as I tried out new ways of working.

I especially enjoyed my open and free flowing rehearsal process, where small groups of actors worked autonomously on their scenes and things were happening simultaneously in space. Working with a team that was open and curious about a process like this allowed me to explore agency of my acting team, playfulness and work in progress and to newly shape a well known classical theatre piece.

Once again, I was able to bring together an international team of designers, who helped me mount a 2,5 hour production without being in the same space with us. To me, this is a huge contribution to the process of a piece about the power of knowledge and technology and allowed us to experiment with the fact that our work and relationships will become more and more global in the future and demands us to think in a wider radius.

Overall this was a huge process of discoveries for all of us, with ups and downs and standing ovations in the end. I hope that some of the audience members saw their world with different

eyes after seeing our production of *The Physicists*. It would make me happy to know, that some of the people who saw the piece or were in it start wondering about the things they know.