

**Counterfactualism –
a new category for fine arts and humanities, dealing
with the retrospective analysis of turning points in life**

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1. Introduction

The pleasure of eating out in unfamiliar places can be fun and challenging at the same time. Using this analogy, the approach of my thesis can be explained *in nuce*, namely the trichotomy of choice, decision and counterfactual thoughts. The American psychologist Barry Schwartz describes in his book, *The Paradox of Choice*, how he strolled through Paris searching for a restaurant. After considering all the tempting possibilities, his appetite vanished and he was unable to choose one restaurant, having being satiated by looking at all the menus.¹

Speaking for myself, he missed out on the most exciting part of this adventure: the challenge of choosing one of the many options on the menu. Usually, I succeed quickly in narrowing it down to three possibilities, but then it becomes rather a random choice between rice or noodles, fish or beef. Last time, I ordered fish and was slightly disappointed with my choice. Then I was given the chance to see my alternative option being served to the table next to mine. Oh, and the red curry with beef looked so much more delicious! If only I had ordered the other dish... .

The same could be true for many of the different choices we have, insignificant or crucial. We might experience this feeling in particular at turning points in our lives. But rarely are we granted the ability to see the possible alternatives. They usually exist only in our imagination.

With this practice-based research, I am trying to explore the retrospective analysis of rejected options, namely counterfactual thoughts, not in everyday life but in the fine

¹ Schwartz, Barry, *The Paradox of Choice: Why More is Less* (New York, NY: Harper Perennial, 2005), p. 135.

arts. For this research, I propose a synthesis of a range of disciplines, including the arts, to describe the term *counterfactualism*.

I will examine whether it is possible to transfer current research on counterfactuals from different disciplines, such as psychology, philosophy, historiography or physics into the fine arts – or even make the theoretical approaches visually, acoustically and emotionally accessible. I raise the question of whether counterfactuals already exist as a tendency in the fine arts and, if so, how they can be approached, explored and presented. It is therefore essential to investigate the conceptual history of counterfactuals in Chapter 4, *Pluriverse and the Best of All Possible Worlds*. In Chapter 3, *Wind Back the Film of Life*, I will give an insight into my inspirations and I will attempt a dissection and classification of the ways in which counterfactual thoughts in fictional narratives can be expressed. Beginning with my artistic research in Chapter 2, *If Only I Had...*, I attempt to analyse the process of counterfactual thinking in different stages in order to explore the perceptions and reactions of an audience. From there, I endeavour to establish the essentials for this new category: *counterfactual art*.

2. If Only I Had... (The Practical Part)

In my artistic research, I propose that the concept of *counterfactualism*², which has appeared in past decades in science and humanities, has become popular as a genre in the fine arts, in particular for fictional time-based media.

At the time of writing, counterfactuals or *the consideration of alternative paths of life or history*, have not yet been formally introduced into the fine arts. The awareness of counterfactuals is and has been a major source of inspiration for my own work and I observed what could be called counterfactual consciousness in the works of other artists, which I will describe in more detail in the section 4.2. Transfer of the Term Counterfactualism into the Fine Arts and I will classify the appearance of counterfactuals into three sections: experiencing, evoking and revealing.

The type of choices we have and the decisions we make are an essential foundation for this research. Therefore, my creative fieldwork is divided into three parts in which each based on the other, provides an insight into my methodology: the first body of work, titled *I Know Where I'm Going!* (cf. Chapter 2.2.2.,) originates from the confrontation with choice. This is a significant basis for retrospective considerations, which would be highly unlikely without the awareness of other options.³ Being confronted with choice and becoming aware of the necessity to choose is explored using two-dimensional media, photography and illustration.

In the second series *Decisions – A User's Manual* (cf. Chapter 2.2.3.,) three-dimensional objects, video, interventions and time-lapse photography describe the

² For a detailed description, see Chapter 4.1. Definition and Terminology.

³ Markman, Keith D. and Miller, Audrey K., "Depression, Control and Counterfactual Thinking: Functional to Whom?" *Journal of Social and Clinical Psychology* 25.2 (2006).

exploration of the difficulty and the various possibilities for decision making in different situations in life.

And finally, this research is synthesised into concepts of counterfactual art in *If only I had...*, of which the panoramic video installation *Decidophobia* (cf. Chapter 2.2.1.) is the first executed example, directly based on my research about choice. *Your Day Will Come* (cf. Chapter 2.2.4.) is an approach towards a counterfactual work that functions using two previously mentioned criteria: evoking and dealing with counterfactuals. Here, immersion, interaction and the limitations of our perception serve as the most appropriate forms for the representation of the idea.

2.1. Personal Background

The confrontation with counterfactuals and their exploration in my artistic practice is an ongoing theme in my life and work.

Though counterfactuals do not exist only in my personal experience, they are a widespread topic in media and various scientific disciplines also investigate this subject. Additionally several artists deal, perhaps unconsciously, with this issue.

I grew up in a small town in Southern Germany, where life seemed to be predestined toward a straight and square existence, with the central aim being to build a house, own a proper shiny car and raise a well-behaved, decent family. My parents each ran their own business enterprises, and they had already decided on a suitable path for the secure future of their only child – but unfortunately they had offered me two different options, one too many. I avoided making the decision to follow either of my parents' professions and escaped on my own rocky path.

Leaving them behind in their sadness, I often wondered how I could have split myself to please everyone. During my apprenticeship as a photographer, I captured a series of self-portraits, titled *Tript-ich-on* (*ich* means “I” in German) in which I experimented with mixing and synthesising coloured light on my face from three different angles.

As part of my studies in Berlin, in 1996 with another series entitled *Multiplicity*, I elaborated on this theme. A self-portrait from five different angles was merged into one image. Three different versions of the analogue photomontage were transferred into screen-prints and three different colours were chosen for each print, making each print of the edition unique in its colour scheme. A kinetic object completed the series.

Although initially not intended as such, *Multiplicity* is an allusion to the few known depictions of the Greek goddess of crossroads, Hecate.⁴



Ill. 1: Elke Reinhuber, *Multiplicity*, 1996

⁴ Hecate is mentioned in Greek mythology as the goddess, who has power over earth, sea and heaven and in particular – of crossroads. The transition from one state to another is attributed to her, like for instance childbirth, death or as well the protection of entrances. Her roman counterpart is Trivia, whose name can be read as ‘tre via’ – translating to three-way. In earlier visualisations on vases, she is shown with two lanterns and animals; in later representations, especially in sculpture, she is visualised with three heads, each pointing in different directions.

The most symbolic statue for this research is the Roman *Hecate Chiaramonti*. Her three bodies merge into one pillar and her heads vary slightly, possibly in reference to her as the goddess of sky, earth and sea; although different interpretations make her a truly versatile figure.

Nowadays, Hecate received a revival as a leading figure in neo-paganism due to her association with magic and witchcraft.

At this point, the roman deity Janus, as a protector of gates and doorways cannot be neglected. Usually, he is represented with two heads, one facing forwards and one backwards; cf. “Hecate.” *Encyclopædia Britannica* (Chicago, IL: Encyclopædia Britannica, 2013).

While these approaches still referred to a possible division of my personality, in 1997, in *Path of Life*, I created my first artistic implementation that dealt with counterfactual thought. Although I was struggling mainly with the programming



Ill. 2: Elke Reinhuber, *Me&Myself*, 2001

From left to right: Laura Glaser, Rebecca Lange, Gabi Tetschke, Eleonore Ludwig, Lydia Leandros, Ursula Weber

language Lingo, the concept seemed to be elaborated. The initial section included name, date and place of birth, gender, parents and education up to the tenth grade of school. At this point the user was able to intervene: to continue school, interrupt my education, start an apprenticeship or run away. From there on, many options were given for continuing my path in life, depending on my profession, status, place of residence, interests and so on. For my final degree, I went one step further with the photographic series *Me & Myself*.⁵ With this work, I explored six possible lives I could have had.

I did this through a series of self-portraits; all images were taken as if I had been kidnapped as a baby, cloned six times and as if thirty years later I happened to meet all my other selves. All of these possible selves had grown up under different conditions, had different biographies, likes and dislikes and became finally alive (with my help) on online partner dating websites. In addition to the lifelines I might have had following my parents' advice, I added imaginary lives with possible partners and professions I might have chosen. Although many different approaches followed, this was my most significant early work exploring a retrospective analysis of my path of life so far.

⁵ Elke Reinhuber, *Ich & Ich & Ich & Ich & Ich*. *Das Schwammtuchbuch* (Berlin: self-published/Artist Book, Edition of 30, 2003)

Some time later, I remembered that my mother had offered her support when I was seventeen, to “optimise” my profile, in particular – to make my nose a little smaller. A friend of hers had undergone a nose-correction at the time and was not satisfied with her new profile, so she tried several times (and probably developed many counterfactual thoughts). I experimented with the way I would look if I followed the ideal-profile suggestions from different plastic surgeons. Luckily I avoided any feelings of regret for not having my nose corrected, because I examined the idea of my perfect nose and chin



Ill. 3: Elke Reinhuber, *Profilneurose*, 2004

in the work *Profile-neurosis* on the computer only, with the help of image-processing software. Consequently I did not experience any “if only I had...” considerations regarding my possible profiles and in the end felt even more content.

Another work dealing peripherally with this topic, is *The Young Photographer*, a collaboration with German artist Marc Schmitz, an interactive video installation observing a lively pedestrian crossing in the heart of Berlin where people can cross the road in any direction. While the audience was pointing with the cursor at individuals on the screen, the horoscopes of the pedestrians was recited in the first person singular at random and in eight different languages – so it seemed that they must know their fate, what would happen to them that day.



At the same time, my alter ego – *The Urban Beautician*⁶ – came to life. She actually had a background as a real beautician – this was the well-paved path my mother suggested – she was dressed in my mother’s original beautician’s smock from the 1960s. Thus, in her attire, I was able to explore an alternative path instead of just considering counterfactually “If only I had...;” however *The Urban Beautician* operates according to my suggestions and beautifies the urban environment instead of individual persons. In her appearance, I try to optimise and point out little details of everyday life, just as a make-up artist seeks to optimise every face.

From this background my interest in various approaches evolved into counterfactual thinking, parallel universes and other possibilities in which a series of planes of existence can be explored in different disciplines.



Ill. 5: The Urban Beautician, L’Air du Pont, Paris, 2011

2.2. If Only I Had... (Counterfactual Art)

The body of work which explores retrospective analysis is summarised under the title *If Only I Had...*, and focuses on the subcategories that evoke and reveal counterfactual thoughts. As will be explained in more detail, the ideal media is immersive or even interactive.

⁶ Elke Reinhuber, ed., *The Urban Beautician: Die Stadtkosmetikerin* (Braunschweig: Hochschule f. Bildende Künste, 2010).

2.2.1. Decidophobia

My panoramic video installation *Decidophobia* consummates my interpretation of Borges's short story "*The Garden of Forking Paths*,"⁷ the description of a fictional narration in which any of all possible futures can be chosen without eliminating any one of the others, and leads for that reason to parallel, simultaneous times and universes in which all possible lives can be explored. This would be the ideal scenario in which to make counterfactual thoughts superfluous. In this context, *Decidophobia* stimulates the awareness of the difficulty of choice. The surrounding voices doubt their choices and, if the viewer fails to attend the right place in the right moment, the words spoken might be missed and invite immediate retrospective thoughts. A reference to the Renaissance paintings of *Hercules at the Crossroads*⁸ can be observed in several alleys at once. At the entrance to adulthood the Greek mythological hero had to choose between two female representations, Vice and Virtue, resembling two possible paths in life. His facial expression and body language show that he is pondering which is the right track to choose. In Annibale



Ill. 6: Annibale Carracci, Hercules at the crossroads, 1596

Carracci's⁹ painting from 1595, a steep and narrow path in the background indicates the way of virtue, the easier and wider path refers to vice. Although, I refrained from making any reference to these personifications and a valuation of the alleys.¹⁰

⁷ Borges, Jorge Luis, "The Garden of Forking Paths (*El Jardín de senderos que se bifurcan*) [1941]." *Ficciones* (London: Bristol Classic Press, 1999).

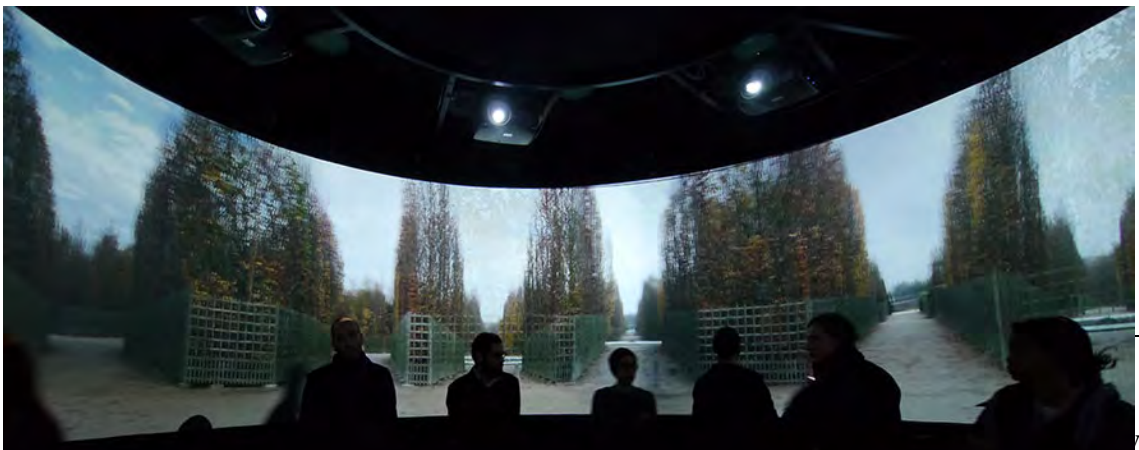
⁸ Panofsky, Erwin, *Hercules am Scheidewege . Und andere antike Bildstoffe in der neueren Kunst* (Berlin: Gebr. Mann, 1930).

⁹ Ibid.

¹⁰ The popular example of the *Choice of Hercules* (Prodicus, loc. cit. in: Xenophon, "The Memorabilia . Book 2." *Xenophon*, ed. Marchant, E. C., vol. 4 (London: William Heinemann, Ltd., 1923).) presents Hercules as personification of strength and courage, at a crossroad, uncertain which way to choose. The personifications of Virtue and Vice tempt him to go on

In *Decidophobia*, a perfect labyrinth surrounds the viewer completely. And it is not possible to orientate oneself: paths appear, disappear and vanish completely, but new possibilities open up. A soundtrack underlines the visual experience and passers-by express their confusion by questioning where they actually are, where they should go to, which path to take and where they came from. The babel-like chatter in eight languages coming from different directions adds to the confusion. It is difficult to focus on one voice, on a familiar language, which leaves the viewer with the impression of a missed conversation, a missed opportunity.

This installation is an approach to an artwork designed to raise counterfactual thoughts immediately within the audience, leading them to reflect on choices and decisions. In my experience, as encountered after a public screening in the Panorama-Lab at ZKM Karlsruhe, the moment when all paths disappear and a closed wall of hedges covers the screen, followed by new paths opening up, leaves by far the most



III. 7: Elke Reinhuber, *Decidophobia*, 2012. Installation view, panorama lab ZKM, July 2012. © Elke Reinhuber

difficulty of choice.

Another myth about the difficulty of choice is the Judgement of Paris. The Trojan shepherd-prince was invited by Eris, the goddess of discord to choose among the fairest of the three goddesses Hera, Aphrodite or Athena. According to Christian humanist interpretation, they embody three different ways of life – leading towards wisdom, power or lust – between which one must choose. I argue that the illustrations of the myth – other than the choice of Hercules – are not self-explanatory and require background knowledge of the scene.

intense impression. We feel the agony of choice, the difficulty of deciding in which direction to look; but it is much worse to have no choice at all, to be trapped in closed surroundings. Not everyone on our planet has the freedom of choice, for many reasons that include cultural background, society and/or status.

The panoramic projection, in this case 360°, covers the peripheral vision and beyond. This means that, although there is no dramatic action, the audience is always aware that something might be occurring behind their backs. In addition, the sound composition enhances this impression with fragments only of recognisable sentences, shifting through the immersive environment.

The work is the result of extensive research on the process and visualisation of choice and decision making, which I will describe in more detail in this chapter, including its basis in the research for *I Know Where I'm Going!*

2.2.1.1. Research

In my research on the visualisation of choice and the task of decision making, I drew my main source of inspiration not only from the visualisations of *Hercules at the Crossroads*,¹¹ but from the reference to the letter, or rather symbol “Y” also called the *Pythagoræan letter*.¹²

¹¹ Ibid.

¹² The Littera Pythagoræ, the Samian letter or more common – the letter Y is in my regard the simplest form to visualise an intersection with two paths to choose from, if it is not just seen as a letter. The German philologist Wolfgang Harms (Harms, Wolfgang, *Homo viator in bivio. Studien zur Bildlichkeit des Weges*. (München: Wilhelm Fink, 1970).) assumed that the letter Y was just associated to Pythagoras by his followers and disciples.

An early document dates back to the time of Servius (Ossa-Richardson, Anthony, “From Servius to Frazer: The Golden Bough and its Transformations.” *International Journal of the Classical Tradition* 15.3 (2008).):

“We know that Pythagoras of Samos divided human life according to the letter Y, that is, because the first age is unformed, not yet given over either to vices or to virtues; and that the

With this background, I considered common pathways as the best possibility for visual reference to different paths in our lives. Therefore, I searched for the perfect structure, as in a maze or labyrinth,¹³ with complex and confusing series of tracks symbolising the different possible paths of life. While labyrinths provide a linear meander from beginning to end, mazes offer the choice of a series of possibilities and – more interestingly – a number of traps or dead-end routes.

Although mazes were mentioned in Greek mythology, I was particularly interested in the ones appearing in Baroque and Rococo gardens. They were built for absolute sovereigns to enjoy the luxury of moving along perfectly trimmed hedges – getting lost on purpose, trying different routes, detours and side tracks. Therefore I was researching the potential for mazes to visualise the network of decisions through which we go in our lives.

fork of the letter Y begins with youth, at which time men follow either vices (the left path) or virtues (the right path.)”

Philologist Franz Dornseiff (Dornseiff, Franz, *Das Alphabet in Mystik und Magie*, Stoicheia, Studien zur Geschichte des antiken Weltbildes und der griechischen Wissenschaft, ed. Boll, F., vol. VII (Leipzig: B. G. Teubner, 1922), p. 24.) observes furthermore the occurrence of the symbol Ψ (psi) in an oil painting (*Attisches Relief aus dem Ölwald*, N°1462, Berliner Museum). He speculates about a forking path with a middle road, though he is aware of the many different interpretations.

Y is not often used or even replaceable in many languages by I or J; therefore it could rather be regarded a symbol than a letter. The letter Y does not exist in the Italian alphabet (Singh, Simon, *Codici e Segreti* (Milano: Biblioteca Universale Rizzoli, 1999).) and is hardly used in the German (0.04%; cf. Beutelspacher, Albrecht, *Kryptologie*, 7th ed. (Wiesbaden: Vieweg Verlagsgesellschaft, 2005).), if so, mainly for foreign words, whereas in Spanish, peculiarly the word “y” means “and.” In summary, the symbol Y shines as one of the simplest and most meaningful metaphors, no matter from where it emerged.

According to the research of counterfactual thoughts, I would like to add the Φ (small phi) for consideration. A possible interpretation could be: if we take a detour in the form of a wrong decision, we might come back to the right path. Another more relevant connotation to this research implies returning to the turning point and choosing the other option.

¹³ Kern, Hermann, *Through the Labyrinth: Designs and Meanings over 5000 Years* (München: Prestel, 2000), p. 23.

It was an engaging task – each forking path represented a kind of decision, which I will explain in more detail in the section 2.2.2. I Know Where I’m Going!. I travelled to specific locations to explore the remnants of well-trimmed hedges and pathways: Zen gardens in Japan; the concrete paths of a botanical garden in Spain; hedge mazes in Great Britain; a rose-garden in the Czech Republic; winding alleyways in Italy and Israel; a Baroque maze in Austria; a corn maze in France and labyrinths in several cathedrals and parks. Most of the mazes that were part of parks were only mentioned in tourist guides or seen in etchings from some centuries ago.

After several unrewarding journeys, I explored the locations beforehand from above, using satellite images. And again – the result was not as expected: beautiful hedge mazes on Google Earth¹⁴ were brown and leafless in reality, labyrinth-like structures were just painted on the ground, promising winding lanes were not accessible due to closure during winter or had even been turned into building sites and hidden behind scaffolds.

At a certain point, I decided not to carry the project any further and continued to research other aspects of life-changing decisions and their application. Then I was granted a residency at *Cité Internationale des Arts* in Paris, France with my new project *Decisions – A User’s Manual*.



Ill. 8: Above: Aerial view on Le Bosquet de Girandole, 2011; Map of Le Bosquet de Girandole, drawing, 2011
Below: Versailles, panorama photograph, 200 by 40 centimetres, 2011, as exhibited at Cité Internationale, September 2011

¹⁴ My initial research for this artwork took place in 2009/10, before Google street-view was widely implemented.

Arriving in Paris, one of my first tasks was to visit the park at Versailles, although I knew that the once famous maze, *Bosquet du Labyrinth*,¹⁵ which the French garden designers André Le Nôtre and Charles Perrault created in the 17th century, no longer existed. However, I was generously rewarded for my quest for forking paths! What I discovered was far more exciting than any maze-like confusion seen from above: it was the perfect structure of forking lanes, although the floor plan indicated a well-organised grid, which seemed easy to navigate. The *Bosquet de la Girandole* in Versailles contains fourteen intersections and is mirrored on the other side of the park by a similar structure, called *Bosquet du Dauphin*. The original plan, which has been reconstructed, was initially created between 1661 and 1663 by André Le Nôtre.¹⁶ The twenty-eight intersections look confusingly similar; however, they are distinguished by small details: some junctions are based on four, some on five crossroads, two on only three; some are symmetrical; one of them contains four white marble sculptures, mirrored identically with three other junctions in the same *bosquet*, although without the sculptures; the same goes for two intersections with one sculpture, while only one is composed of five pathways and three sculptures. What might seem to be distinguishable in a straightforward way, is in reality a confusing matrix. The grey-beige pebble-stone-paths are flanked by four metre tall, dense, deciduous hedges, gleaming green in spring and summer, but brown in autumn and winter. Even when leafless, the hedges do not allow a view through their branches. There is no visible beginning or end: once inside, it is easy to lose orientation, and therefore difficult to find the desired way out – the ideal

¹⁵ Thompson, Ian, *Sun King's Garden: Louis XIV, André Le Notre and the Creation of the Gardens of Versailles* (London: Bloomsbury Publishing, 2006), pp. 133-141.

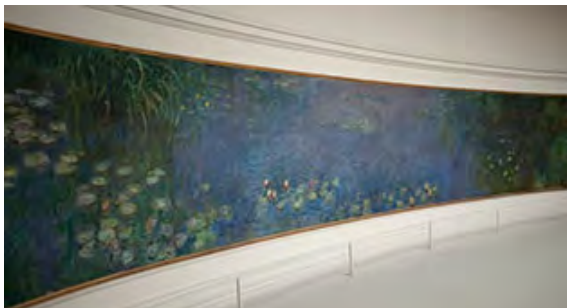
¹⁶ *Ibid.*, pp. 105, 160.

environment for developing counterfactual considerations such as, where would the other paths have lead to, why did I not try those

2.2.1.2. Approach

In order to transfer the extraordinary feeling of being surrounded by many choices and unable to choose an easy way out, I captured the intersection that I regarded as most appealing, in a similar style to the panoramic images in my research *I Know Where I'm Going!*, with an overcast sky, since the light ideally would not provide any orientation or preference, and each path in the final picture possessed its own vanishing point. In difference to the earlier series, I captured a 360° panoramic image, rather than covering a range of only 180°.

The image was printed in the dimensions of 200 by 40 centimetres for a show in



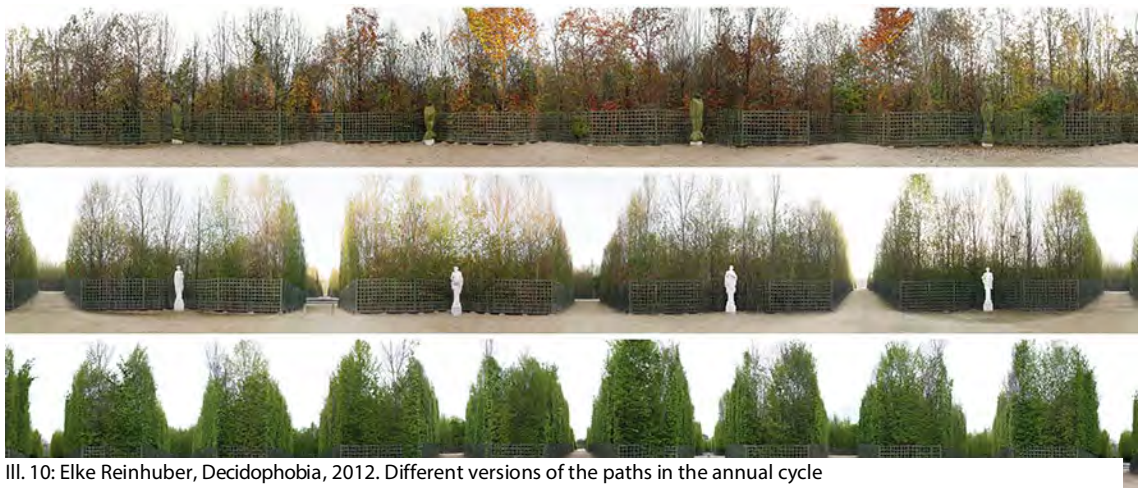
Ill. 9: Claude Monet, *Decorations des Nymphéas*, 1927, Musée de l'Orangerie, Paris

Paris and presented alongside a panoramic image of the same size, displaying a hedge maze from Barcelona. The impression inside the network of forking paths was overwhelming; flat on the wall, I was

slightly disappointed by the outcome. I therefore considered other forms of presentation, a larger size or a slightly curved construction on which to mount the image and to make the work more immersive, in a manner similar to Claude Monet's extraordinary panoramic paintings *Decorations des Nymphéas*, located in purpose-built oval galleries¹⁷ following the artist's instructions and completed in 1927.

¹⁷ Musée de l'Orangerie in the Tuilleries, Paris

My residency in Paris was followed by a scholarship to HfG Karlsruhe¹⁸ where I had the privilege of experimenting in the immersive environment of the panorama lab at ZKM¹⁹ under the encouraging supervision of Bernd Lintermann (head of the Institute for Visual Media at ZKM), Ludger Brümmer (head of the Institute for Music and Acoustics at ZKM) and Isaac Julien (professor for moving image at HfG). Herein, I discovered how perfectly the panoramic still of the *bosquet* from Versailles worked as a panoramic projection, how close it came to the actual feeling of being inside the gardens, and I decided to develop a concept particularly for this immersive



III. 10: Elke Reinhuber, *Decidophobia*, 2012. Different versions of the paths in the annual cycle

environment. Being located in Karlsruhe (a three hours train trip from Paris) was extremely beneficial. The next time I returned to the park, I was equipped with a 3D video camera, Steadicam® gear and some other technical gadgets for a few experiments.

The atmosphere had changed: everything was now covered in autumn leaves of a similar shade of brown, with only a few shrubs with vibrant shades of red and yellow. The captivating white sculptures were covered for the cold season with a brown-

¹⁸ Baden-Württemberg-Stipendium by courtesy of the Baden-Württemberg-Stiftung to study at HfG Karlsruhe University of Arts and Design

¹⁹ Centre for Art and Media, Karlsruhe

greenish fabric, which transformed them into mysterious objects. But the place was still as enchanting as before, even more intriguing, because the shrubs were not as dense as in summer and fascinating with their bare tree structures.

Back in the panorama lab, I abandoned most of the captured material: 3D video and Steadicam shots of a walk through the alleys, which I had considered for an interactive environment. I decided to recreate the perception of the actual space on an emotional level: peaceful, relaxing, quiet, magical, but at the same time confusing and intimidating. For this reason, I continued to work with the panoramic still images I had captured at each of the fourteen intersections and fused them into a two-minute video.

In comparing the images from summer and autumn, it was difficult to choose between them, summer appeared dense and confined, only the paths gave a view through the thicket and the colours were appealing, the green contrasted the beige of the ground perfectly. Although the space seemed more open in autumn, the colour scheme left a rather depressing feeling on the test-audience. Soon I came to the conclusion that it would be best to use both seasons in alternation, which would provide a taste of a reappearing situation, exactly what counterfactual thinking is supposed to prepare us for: to be able to make better decisions in a similar, recurrent situation. I reduced the selection of forking paths and converted them into more suitable geometric junctions, which do not exist in reality. In addition, I used subtler, less obvious transitions in the edit.

Which is the right path?	Quel chemin est le bon?	Let's go left and imagine what would've happened if we'd turned right.
	Wo führt dieser Weg wohl hin?	我們回頭嗎？
	Los caminos son todos iguales.	
Все пути похожи друг на друга.	Every path looks the same.	
We have been here before!	Waar gaan we nu heen?	Wo sind wir hergekommen?
誰決めることです...	Where will this road take us?	On été déjà ici! Where to?
Wohin jetzt?	Elk pad ziet er hetzelfde uit.	هيا، هناك طريق مختصر!
	Die Wege sehen alle gleich aus.	¿Y ahora?
Vogliamo tornare indietro?		Shouldn't we rather go back?

III. 11: An excerpt of questions spoken in different languages in Decidophobia

This done, the work lacked two seasons: winter and spring. I was in Europe while working on the project and more than ever appreciated the changes in the annual cycle (after the perennial green of Sydney, Australia). The variations of atmosphere, moods and rituals had been an essential part of my life: the change of colours and sounds, the smell of the air, the hours of daylight. It was essential that I could capture the images on a cloudy but bright day, without rain and preferably on a Monday, (because the château remains closed and therefore fewer visitors stroll through the park). So I followed the weather forecast up until snow was predicted. Arriving in Paris the next morning, I felt privileged to see masses of white flakes everywhere, in particular as I walked inside the forecourt of Versailles. Unfortunately, the park remains closed during periods of heavy snow; even my urgent enquiries to all levels of administration could not get me in, due to the order of the head of police. One year later, I succeeded finally in capturing the missing winter sequence including a thin layer of snow. But the day after, as a thicker white layer covered the ground, the park once again remained closed.

In the end, the projection is composed of all four seasons. In spring, tender green leaves appear; summer shows a dense green coverage of the hedges; autumn provides a brown structure; and finally in winter, everything looks bleak and covered with a white snowy veil – in the expectation of the new beginning of spring. This could be considered in juxtaposition to the concept of counterfactuals, and a connection to the eternal cycle.

However, being aware that the average attention-span for any artwork²⁰ is usually less than the duration of my work, it can be considered a reward for the visitor who remained for one full cycle.

2.2.1.3. The Audio

The audio layer of *Decidophobia* both reveals and evokes counterfactual thoughts. It is retrieved from actual observations inside the *bosquet*.

Coming to the grove as a frequent visitor, I overheard the reactions of others and their conversations. Simply re-recording some of the actual conversations might appear to be an unambitious sound composition, but the expression of confusion proved to be the best metaphor for what we might go through at turning points in life – and in front of the network of paths in the park.

Consequently, I started to record fellow students at HfG Karlsruhe, as well as technicians and professors. Thanks to their participation it was possible to capture different voices in eight languages: English, German, Chinese, French, Spanish, Russian, Czech and Japanese. The final composition is optimised for eight or sixteen speakers in a circular array. Female and male voices pose questions, often simultaneously, asking whether they are on the right track, whether they have been here before and other phrases expressing their confusion and as well their everyday counterfactual thoughts. The arrangement of many simultaneous voices alternates with pauses and phrases spoken in all languages successively. The so-called *cocktail party effect*²¹ draws attention

²⁰ Rauterberg, Hanno, “Und die Herzen schlagen höher.” *Die Zeit*. April 19th, 2012.

A recent study by German cultural scholar Martin Tröndle proposed the average duration a visitor spends in front of a work of art is eleven seconds or three breaths. However, his research did not comprise video installations.

²¹ Bronkhorst, Adelbert W., “The Cocktail Party Phenomenon: A Review on Speech

to a familiar language, but soon after its appearance, the sound snippet vanishes and is heard coming from another direction.

The sound arrangements refer directly to my understanding of the confusion that is described in the legend of the Tower of Babel in the Old Testament. Human beings were jointly trying to build a tower reaching into heaven. “The Lord said, ‘If as one people speaking the same language they have begun to do this, then nothing they plan to do will be impossible for them [...]’”²² Therefore, according to the tale, language was confused and a common understanding made impossible.

Borges’s short story *The Babylon Lottery*²³ relates to the described event as well. It seems to be about an infinite game of chance. The rules and methods are explained in detail. In the end the reader is aware that it is the lottery of life with all our faith and destiny, which is played by a higher existence. Our whole life is determined by the draw of the lottery of the “big company.”

All spoken questions in my work are posed in a manner that refers equally to forking pathways or to life-changing decisions. The soundscape is completed by ambient sounds in the background and accentuated by a specially recorded sound, the reversed clink of glasses, –metaphorically a noise introducing a counterfactual element. Although theoretically possible, once broken, glass can not be physically reconstructed. The same is valid for events in our life – once a decision is made and we follow a path in our life, it hardly can be reversed.

Intelligibility in Multiple-Talker Conditions.” *Acta Acustica united with Acustica* 86.1 (2000).

²² Genesis 11:4-9, vid., “Holy Bible, New International Version.” *BibleGateway.com* 2011, 13.03.2013, <www.biblegateway.com/>.

Genesis 11:9 That is, Babylon; Babel sounds like the Hebrew word for “confused”.

²³ Borges, Jorge Luis, *Ficciones* (London: David Campbell Publishers Ltd., 1993), p. 45.

The multi channel audio layer requires the audience to move around, to become a mobile spectator and to explore an individual spatial composition based on each of their physical positions and to where their attention is drawn. Additionally, the application of studio reverb was attempted in order to simulate the different seasonal atmospheres. This could not be achieved to my full satisfaction and was therefore left out in the end.

An important reference to the audio layer of *Decidophobia* is the spatial acousmatic melodrama *Forêt Profonde*²⁴ (Dark Forest) by contemporary French-Canadian composer Francis Dhomont, to which I have had the privilege of listening in the sound dome at ZKM.²⁵ Based on Bruno Bettelheim's essay *The Uses of Enchantment*, it is a spatial journey through childhood memories of fairy-tales. Dhomont's work plays with our reception of different languages and well-worn phrases (Once upon a time..., *Es war einmal...*, *Il était une fois...*) with which he evokes traumatic memories of disturbing fairy-tales.

As the American artist Joseph Nechvatal mentioned during a workshop on immersion (in which I participated)²⁶ and in his book *Immersion Into Noise*,²⁷ art and entertainment have merged. In order to stimulate the audience to think and reflect, it is necessary to avoid an immediately obvious spectacle – “it restores art's responsibility of resistance,”²⁸ an aspect which I consider applicable to *Decidophobia*.

²⁴ Dhomont, Francis, *Forêt profonde*, 1996, France, Canada.

<<http://www.electrocd.com/en/oeuvres/select/?id=14329> <http://www.digital-music-archives.com/webdb2/application/Application.php?ProductCode=CDE0045>>.

²⁵ Consisting of 48 speakers, “Imatronic Extended” at Centre for Art and Media, Karlsruhe, 2012, November 29.

²⁶ 9th Shanghai Biennial 2012: The Academy of Reciprocal Enlightenment, “Art of Noise,” October 2012

²⁷ Nechvatal, Joseph, *Immersion Into Noise* (Ann Arbor, MI: University of Michigan – Open Humanities Press, 2011).

²⁸ *Ibid.*, Preface, pp. 9-12.

2.2.1.4. The Setup

The title *Decidophobia* is a composite expression, containing the verb ‘to decide’ and the noun ‘phobia’, the latter meaning an extreme fear or aversion to something. In 1973, the American philosopher Walter Arnold Kaufman described the concept in detail and referred to Freud’s study of unusual phobias. Kaufman mentions as well the closeness of the words “to decide” and “deciduous” – the expression for plants shedding their leaves annually, literally to fall down or to fall off at maturity.²⁹

The title is apposite, since I captured the annual cycle of the garden as a reference to eternal recurrence, and at the same time the confrontation with too many options of similar-looking paths, causing therefore dis-orientation. Unable to consider in which direction to focus, the title matches the sentiment perfectly.

The immersive³⁰ panorama screen proved the ideal presentation form. The cylindrical 360° environment is a fixed installation at ZKM Karlsruhe and was developed in collaboration with the iCinema Research Centre³¹ in Sydney. It consists of six HD-projectors with a total aspect ratio of approximately 9:1. The size of the projection is 11012 by 1152 pixels in the rotunda with an eight-metre diameter and a height of 2,80 metres. In this way, the whole of peripheral vision is covered.

²⁹ Kaufman, Walter Arnold, *Without Guilt and Justice: From Decidophobia to Autonomy* (New York, NY: P. H. Wyden, 1973), p. 273.

³⁰ Grau, Oliver, *Virtual Art: From Illusion to Immersion* (Cambridge, MA: MIT Press, 2003).

³¹ *Forschung & Entwicklung: PanoramaTechnologie*, n. d., ZKM | Zentrum für Kunst und Medientechnologie, Available: [http://on1.zkm.de/zkm/stories/storyReader\\$5310](http://on1.zkm.de/zkm/stories/storyReader$5310), 13.03.2013. The English version is not as verbose: *Research & Development: Interactive High Resolution Panorama*, n. d., ZKM | Zentrum für Kunst und Medientechnologie, Available: [http://on1.zkm.de/zkm/stories/storyReader\\$5310](http://on1.zkm.de/zkm/stories/storyReader$5310), 13.03.2013.

The video file was prepared in the required dimensions with a video compositing application,³² exported as a movie-file and rendered to match the screen with the dedicated software³³ developed by the ZKM Institute for Visual Media for the panorama screen. As well ‘Zirkonium’, a customised software to distribute the audio file on eight channels, was developed at ZKM at the Institute for Music and Acoustics (IMA.) Hearing the stereo sound, down-mixed as a documentation, can hardly replicate the actual experience of listening to eight channels inside the sound dome. Yet the same is valid for many artworks, and is true for the whole installation of *Decidophobia*.

Because not many set-ups like the ones in Karlsruhe, Sydney or Hong Kong exist and in particular not in an ordinary exhibition context, it is necessary to consider alternatives to the preferred installation.

During a studio show³⁴ I experimented with a 90° angle projection, covering two adjacent walls. The disadvantage is the loss of the feeling of immersion, and what is even more problematic, the simultaneous vanishing points of all paths are less appealing and strangely confusing in the projection on a flat surface, which continues around a corner. The same is true for a black cube set-up with a four-projector screening distributed on four walls, although here the illusion of immersion exists. For the studio show, all of my artistic research leading to *Decidophobia* was presented on smaller TV screens, which enhanced the character of the work-in-progress.

³² Adobe® After Effects® CS4.

³³ Panorama Display Software [PDS].

³⁴ For a visit from Christine Van Assche, Chief curator for video at Centre Pompidou Paris, on December 19th, 2012.



Ill. 12: Decidophobia, alternative set-up for a studio visit at HfG, December 2012

Consequently, I considered a series of printed, large-scale photographs the best alternative to the curved screen of the immersive environment in another

medium. As the origin of the multimedia-installation (which might be called ‘expanded photography’) the printed photograph is still valid. During my presentation in the panorama lab in July 2012, I showed four prints simultaneously along a white wall, mounted on aluminium with dimensions of 300 by 50 centimetres, each with a matte surface. In some respects, the printings are reminiscent of Chinese scrolls³⁵ – not packed with multiple layers of information like the narrative visual scrolls by Dutch artist



Ill. 13: Decidophobia, photographs on alu-dibond, 4 panels, 300 by 50 centimetres each, installation view at HfG, July 2012

Tjebbe van Tijen³⁶ – but modestly stimulating reflections and emotions. Mounted without frames on the wall, the panoramic images accompanied the members of the audience as they passed along a distance of twelve metres through the different seasons. In regarding the images from a distance, the initial intention of the panoramic print came back to life. The multiple vanishing points, which had been amended in the

³⁵ For instance a remarkable example is the famous scroll of “Along the River During the Qingming Festival (清明上河圖)”, painted by Zhang Zeduan in the early 12th century with the dimensions of 25.5 cm × 525 cm (10.0 in × 207 in), Palace Museum, Beijing, http://www.nytimes.com/2007/07/03/arts/design/03pain.html?ei=5090&en=1d3319aaf35b6c1b&ex=1341115200&partner=rssuserland&emc=rss&pagewanted=all&_r=0

³⁶ Tjebbe van Tijen explores different techniques and presentations of scrolls over three decades. An overview can be found on the web. *Imaginary Museum*, n. d., Tjebbe van Tijen, Available: <http://imaginarymuseum.org/>, 13.03.2013.

editing process, achieved a degree of subconscious confusion while walking towards the series of images.

In order to make the work more accessible, I explored one further approach by creating a virtual reality panorama,³⁷ linking all variations of intersections and all seasons together, including the audio. Obviously, the advantage is in the versatility: it can be seen anywhere at anytime on a smartphone, tablet, computer screen or gigantic projection. Although this technique refers to video games, the participant is trapped forever in the labyrinth of forking pathways. After the initial struggle to escape and reach another level, the user is supposed to capitulate through the changing seasons and repetitive pattern of pathways to the *eternal recurrence*.

Nevertheless I consider the presentation on a flat screen,³⁸ not covering peripheral vision, as an immense loss to the project. Although, one definite bonus is the supplementary interactivity and more direct confrontation with the question of choice, finally leading to surrender in the quest for an aim or return to another path in order to appreciate the actual moment, the here and now.

2.2.1.5. Alternative Possibilities or Retrospective Considerations

³⁷ That originates from the classic QTVR-application (Quick Time Virtual Reality) by *Apple* and makes panoramic photographs interactively accessible, with the option to scroll through the captured environment. Hotspots link to other panoramic images or close-ups or even activate audio.

QTVR is hardly supported nowadays, therefore most VR-applications utilise *Adobe® Flash*, *JAVA*, *HTML 5* or are custom built.

³⁸ LG announced in January 2013 the production of a curved screen in order to cover the peripheral vision, the EA9800, cf. "LG's curved EA9800 OLED display eyes-on." *engadget.com*, 13.03.2013 <<http://www.engadget.com/2013/01/08/lgs-curved-ea9800-oled-display-eyes-on/>>.



Ill. 14: Chong Ma, Tree, Shanghai Biennale 2012

The question might be raised, why did I not focus on the illustration of trees with their trunk, boughs, branches and veining of their leaves as a reference to all the possible paths our life could take? The French/Chinese artist Ma Chong³⁹ built a tree out of drainage-system plastic pipes, which expanded over two floors, describing the changes in his artistic life. Although the context he

provides is not in the ramification of the tree, but the traditional Chinese way of studying, the necessity of learning to draw a tree flawlessly and conversely of experiencing abroad the freedom to build a tree in whatever material.

Nevertheless, the resulting structure could easily be compared to the possible alternatives that we encounter in our lives.



Ill. 15: Qiu Zhijie, The Small Knocking down the Big, Venice Biennale 2009

Another work visualising this ramified structure is *The Small Knocking Down the Big* by Qiu Zhijie.⁴⁰ It is a giant domino installation with many branches and a trunk comprised of increasingly large stones. An interesting aspect is the direction of the domino effect. During a performance at the Venice Biennale in 2009 the artist initiated the movement from the small peripheral stones which fell towards the big “root” stones and tried to make them collapse, a task which was not achieved.

³⁹ Personal conversation with the artist at the Shanghai Biennale, 2012, October 18th.

⁴⁰ Seen at Venice Biennale 2009; cf. Zhijie, Qiu, *The Small Knocking Down the Big*, 2009. 53rd Venice Biennale, Giardini. <<http://www.qiuzhijie.com/worksleibie/zhuangzhi/e-duominuo.htm>>.

The concepts mentioned above connect to different aspects of life, particularly to lifelines. Nevertheless there is a simple reason why I did not apply these structures to my praxis, which becomes obvious in my research for *Decision Making Taxonomy* – forking paths as seen from above compared to the paths at eye level. The structure of a tree can provide an overview at a glance, but it does not visualise the actual task of deciding at one particular branching point. The same is valid for the Pythagoræan letter Y: rather than standing at the crossroads itself, we observe from a distance how the line splits into two possible alternatives. It displays a linear path until the bifurcation at the entrance to adulthood, as it was often referred to in literature and visualisations. Other than in the structure of the tree, which could display a whole path of life, there is only one intersection at a time, similar to David Bordwell's⁴¹ observation on forking path narrations in film.

Another approach, which I did not pursue, was a split-screen movie in which all the paths I came across would fork endlessly and continue in parallel until they all would have reached a common destination. Explored as a stop-motion-movie, the screen was firstly bisected and continued to bifurcate further into smaller segments of the screen; namely, a scene with a fork in the road split vertically, then, at the next intersection horizontally and so on, until multitudinous tiny movies were running simultaneously. During the production process, I remembered Dieter Kiesling's interactive application *Continue*. It repeatedly poses the question about the continuation of the process. Astrid Sommer describes it as follows:

⁴¹ Bordwell, David, "Film Futures." *SubStance* 31, 1 (2002), 13.03.2013
<<http://www.jstor.org/stable/3685810>>.

Yes or No? 0 or 1? Quit or Continue? Infinity is, in fact, limited: a pixel is the smallest, indivisible unit of the digital image, and when the threshold has been exceeded in which “Quit” is allocated to every second pixel and “Continue” to the others, then only random operations remain, as opposed to further multiplications.⁴²

Continue consists of a division between black and white that makes it visually appealing and attractive, whereas the forking paths proved to be too detailed and the result was merely confusing. Therefore I abandoned this approach as well, although in theory it would have been a suitable way to present the concept of counterfactualism: experiencing all the paths which we were not able to take simultaneously, while at the same time being unable to appreciate one of the single paths because of the overwhelming multitude.

2.2.2. I Know Where I’m Going!

I initiated my research with crossroads, intersections and forking paths. These served as the foundation for my panoramic installation *Decidophobia*. An overview of related artwork and other sources which influenced and guided my preliminary research are part of this section, as well as an explanation of the origin of the title *I Know Where I’m Going!* I will discuss in detail a collection of forking-path photographs, the resulting database and the background of a tableau, which turned out to be the centrepiece of the series *I Know Where I’m Going*.



Ill. 16: Elke_Reinhuber, I Know Where I’m Going! (Mull), 2010

⁴² Kiesling, Dieter, “Continue.” *artintact 4*. CD-ROM and book, ed. ZKM | Karlsruhe (Stuttgart: Cantz, 1997).

2.2.2.1. The Confrontation with Choice

The initial part of my studio-based work features a series illustrating confrontation with choice. Panoramic landscapes follow the tradition of highly detailed and realistic *veduta* paintings. But in this work they are turned into illustrations of different kinds of options; nature thus becomes the sculptor of an individual path of life.

Some paths are almost identical, in other cases there is a choice between narrow and wide, left and right, easy and steep – a distinction we already know from the myth of Hercules.

On closer observation, more details become visible. Little trails come into view and dead-end roads are only obvious at a second glance. In these landscapes, there is more that reminds us of bypasses and ramifications, such as rivers and trees. They all have their individual shape: the straight trunk diverges sooner or later into several boughs and forks again into various branches. The constructed environment also offers many options. Paths may lead to different doors and gates.

A series of drawings show diverse categories with different forks. Using maps and aerial views, I investigated intersections at places I was visiting, taking photographs on site. The drawings are presented together with satellite images and on-location photographs. A collection from the database of possible forking paths was transformed into a collage assembled in the video *Decision Making Taxonomy* as a mission statement for this study.

On our path through life, we have – at turning points and repeatedly – to decide which route to take. But the difficulty in reaching a decision can hardly be expressed in words, much less visualised. As soon as different possibilities are offered to us, our

dilemma begins. Which way is the best one to take to reach our target – and which above all is the right direction?

I ask myself this question at each intersection: should I change course or continue forward? Is this a



Ill. 17: Sebastian Brant, *The Choice of Hercules*, 1497

crossing with equal streets, a steep, narrow path which could lead to a shortcut? Or is it a trap or dead end? Will the forking paths lead in completely different directions or meet again after a small detour? Maybe the other path would have been better – but usually we cannot go back in life.

Although this series of work might appear to be merely pleasant landscape images, it is influenced by many deliberations, which become more obvious by means of the video *Decision Making Taxonomy* and on a closer examination of the images.

The title of this section, *I Know Where I'm Going!*, is borrowed from a movie by Michael Powell and Emeric Pressburger⁴³, in which a young lady travels to the Hebrides. The female protagonist appears as straightforward and ambitious, having known since childhood what she wants. However, she is engaged to a wealthy man whom she never met before, on the Isle of Kiloran. But her ship breaks down on the Isle of Mull where she falls in a love with a man, who we discover, is the real owner of the island, the Laird of Kiloran. In her case – although she had to take a detour – she achieves the goal for which she has aimed.

The photographs are captured in such a manner as to avoid a preference for which road to follow. There is no obvious sunny or shady path – all pictures were taken in diffuse light. Even more confusing is the fact that the relating panoramic images show

⁴³ Powell, Michael and Pressburger, Emeric, *I Know Where I'm Going!*, United Kingdom, 1945.

multiple vanishing points. They were taken with a wide-angle lens in several sections and carefully stitched together in order to maintain a natural appearance, at the same time avoiding an emphasis on one particular spot or horizon.

These panoramic images deliberately and significantly separate the photographic reproduction from reality. They appear surreal: an obvious semi-circle is flattened on a plain surface. In reality, the viewer's eyes cannot see simultaneously into several paths, which open up around him or her. But these panoramas make the impossible plausible; all the paths appear equally visible. This approach differs from ordinary landscape photography, in which the image usually tries to replicate reality as closely as possible.

2.2.2.2. Related Work

Through fictional worlds and virtual spaces, we are now more than ever able to explore neglected opportunities. But the dilemma and its visualisation is nothing new.

Throughout history, we find references to the difficulty of deciding – and the even bigger challenge lies in depicting the confrontation with choice and the possible outcomes in one image.

It is difficult to define the point when the exploration of this idea began. I propose that the starting point in Western tradition occurred with the emergence of the *Littera Pythagoræ*, the Pythagoræan letter Y. It could be considered as one of the first metaphors and visualisations of a bifurcation in lifelines. Another is the Ancient Greek myth of the *Choice of Hercules* who stood at the crossroads at the threshold to manhood. The frequent occurrence of this iconographic image in Renaissance art proves its lasting significance. As well, the *Fall of Man* in the Garden of Eden, written in the Book of

Genesis, could be seen as another possible origin due to the division of the world into good and evil, into paradise and doom after the eating event of the forbidden fruit.⁴⁴

The definitions of virtue and vice, good and evil, right and wrong vary in different cultures as well as in different eras, as do the possible origin and content of the associated visualisation. Eastern traditions, for instance, refer to Tao, the right path, the perfect equilibrium between Yin and Yang. My research is concentrated mainly on Western⁴⁵ culture and discusses certain correlations in contemporary art.

⁴⁴ In a Coptic fresco from the 11th century, Adam and Eve are represented before and after their fall from grace. On the right side they are depicted as innocent, without genitals and the tied horse symbolises the control of evil. The snake on the left side stands for the fatal seduction and they cover their nakedness with leaves. (*Adam and Eve, Tebtunis (Um el-Beregat, Fayoum)*, Inv. N°3962, 11th century. Coptic Museum, Cairo. <<http://coptic-cairo.com/museum/selection/fresco/fresco.html>>.)

Michelangelo pictured a before-and-after scene on the ceiling of the Sistine Chapel. The temptation and hesitation of Adam and Eve is visible in the first part of this Renaissance fresco and their discomfort in the second part, executed between 1508-12 (Buonarroti, Michelangelo, 1509. Sistine Chapel, Vatican. <http://www.vatican.va/various/cappelle/sistina_vr/index.html>.). Their body language and facial expressions suggest that something unpleasant happened between the left and the right part of the image, although the viewer is not informed about the event in detail. On the right hand side, Adam and Eve arrived clearly in an unpleasant new state of being. Given the knowledge of the biblical text, their expression might be interpreted as regret. Possible counterfactual thoughts are not communicated in this image, although they might be a consequence: What if Eve did not eat the apple and we were not condemned from paradise?

An example with a slightly different approach, purpose and meaning can be found in the polyptych of Hieronymus Bosch: *The Garden of Earthly Delights*. It dates back to 1490-1510 and is located today in the Museo del Prado, Madrid. In the style of grisaille painting, the exterior panels of the closed piece represents the world before human beings were created. Once the polyptych is opened, it is argued that the left wing might display Paradise before the fall of Man in bright colours and the right wing depicts Hell in dark colours. The main panel resembles a counterfactual idea: what if humans had never left paradise? What could a peaceful and joyful coexistence of all men look like? It is a fantasy image of a possible world in which the tender and harmonic existence of all creatures is apparent at first glance. The art historian Hans Belting entitled the centrepiece "Another world" (Belting, Hans, *Hieronymus Bosch – Garden of Earthly Delights* (New York, NY: Prestel Publishers, 2002), pp. 38-57.), which could be regarded as a parallel or counterfactual world.

⁴⁵ The short essay by the British philosopher Martin Cohen, *Y is for Counterfactuals and a Backwards Approach to History*, coincides with my idea in which I view the Chinese Wall as a symbol contradictory to the forking-path-like branching of the letter Y. He examines counterfactuals in history by using the example of the Chinese Wall and what would have happened to the Chinese empire without its significant division. Cohen, Martin, *Wittgenstein's Beetle and other Classic Thought Experiments* (Oxford (UK), Malden, MA: Blackwell Publishing, 2005).

French artist Pierre Huyghe offered an example of a modern interpretation of the crossroad-theme with his photograph of forking paths from 1995/2001. The Y-shaped path leads to the top of a hill and ends below the horizon. The landscape and the path shine in shades of brown under a bright blue sky. The title *Or?* gives a clear indication of the meaning of the image. Huyghe states in the exhibition catalogue: “A second path has been added to the strangeness of a path that leads nowhere.”⁴⁶



Ill. 18: Pierre Huyghe, *Or?*, 1995

More information is given by curator Amelia Barikin in her publication *Parallel Presents*. The paths are the remains of an intervention by Huyghe, in which a second path was “manufactured” adjoining the initial route. Barikin adds:

Huyghe’s photograph of the event refuses to demarcate one path as “fiction” and the other one as “real.” *Or?* reminds us that there is no space, no inhabitable landscape, located “in between” reality and fiction. It also delights in the idea of a journey without destination [...].⁴⁷

Furthermore, Barikin refers to the theory of the *simulacrum* put forward by French philosopher Jean Baudrillard, and mentions how Huyghe avoids that antagonistic discourse by directing the attention to the gap between presentation and re-presentation.

⁴⁶ Christov-Bakargiev, Carolyn, “Pierre Huyghe.” ed. Castello di Rivoli, Museo d’Arte Contemporanea, Rivoli-Torino (Milano, Italy: Skira, 2004).

⁴⁷ Barikin, Amelia, ed., *Parallel Presents: The Art of Pierre Huyghe* (Cambridge, MA: MIT Press, 2012), pp. 14-15.

Jeff Wall's *Crooked Path* from 1991 is an earlier example. This large format photograph offers the viewer no choice. A beaten track winds through a meadow in no-man's-land towards a large industrial building. The disturbing feature, typical in Wall's photography, is a second trail (which creates a cross-shape) leading from nowhere to anywhere. German curator Bernd Reiss describes the process of these images:

Jeff Wall's photos seem to be a product of chance, taken from the viewpoint of an



Ill. 19: Jeff Wall, *The Crooked Path*, 1991

observer stumbling naively on something unforeseen.

Yet the pictures are constructs, carefully staged scenes usually created in an urban environment.⁴⁸

Richard Long uses the opposite *modus operandi* in his

work "Art made by walking in landscapes."⁴⁹ Instead of capturing existing paths, he creates his own trail. *A Line Made by Walking* (1967) or *Dusty Boots Line Sahara* (1988) depict the result of his plod along a straight line. In some of his walking performances (for example *A Hundred Mile Walk* in 1971-2), Long planned his path with a ruler on a circled section of a map and took this outlined route, no matter how the territory looked in reality. The idea to construct his "own" trail on a map, apart from a well-trodden one, appears to be a way to define his "own" future and to live it in such a way that everything must come true,



Ill. 20: Richard Long, *Line made by Walking*, 1967

⁴⁸ Bernd Reiss, "Constructing an Apparent Reality: Setting, Gazes, Paraphrases" in: Lauter, Rolf, *Jeff Wall: Figures and Places. Selected Works from 1978-2000* (New York, NY: Prestel Publishers, 2001), pp. 186-189.

⁴⁹ Visited in 2009 at Tate Britain, cf. *Richard Long: Heaven and Earth*, 2009, Tate Britain, Available: <http://www.tate.org.uk/britain/exhibitions/richardlong/>, 13.03.2013.

disregarding any obstacles on the path.

Some urbanists now take advantage of people creating their own convenient trails. Instead of offering fixed routes, constructed on the drawing board, city planners observe how people develop tracks and short cuts. The sociologist Dirk Helbing,⁵⁰ explained how individuals create their own pathways, while at the same time co-operating and compromising with others in order to arrange well-trodden and well-situated paths. This can be observed clearly in winter when new, temporary routes appear on snow-covered ground. Helbing states that the limit of the acceptance of the use of detours is between 20 and 30%, before pedestrians leave the shared route. Furthermore, he perceives in beaten tracks a good opportunity to research self-organising systems in general.

Another approach of mapping the urban environment was suggested by the avant-garde-movement of French lettrists and situationists and visualised by Guy Debord in 1955. His *Guide psychogéographique de Paris*⁵¹ consists of printed blocks of houses, as seen from above and linked with red arrows. Unlike an ordinary and objective map, the connections refer to emotions and behaviour of individuals and illustrate the “[d]iscourse on the passion of love: psychogeographic descents of drifting and localisation of ambient unities⁵²”, so the translated title of the map.

⁵⁰ Helbing, Dirk and Ankowitsch, Christian, “Draußen eigene Wege gehen (Interview).” *Süddeutsche Zeitung Magazin*. August 13th, 2010.

⁵¹ Debord, Guy, *Guide psychogéographique de Paris . Discours sur les passions de l’amour pentes psychogeographiques de la dérive et localisation d’unites d’ambriance*, 1955. Available: <<http://imaginariymuseum.org/LPG/Mapsitu1.htm>>

⁵² Ibid.

Thus, my approach to visualise the difficulty of choice with forking paths, intersections and dead end roads could proceed into a detailed imaginary map visualising all major turning points in the life of an individual.

However, the aim of my images is to evoke the awareness of the complexity of choice and hence the difficulty in making decisions. Therefore I tried to confront the subconscious of the audience by using the provocative but ironic statement *I Know Where I'm Going!* and an image without an obvious direction, or precise vanishing point. The viewer is left to find an answer on his or her own.

2.2.2.3. Classification of Crossroads

How might the ideal crossroad look when representing the moral dilemma of the choice between two options? What can be said in advance, there exists no ultimate representation, because no two dilemmas are alike. Each decision has its particular importance and therefore needs an individual representation. Instead of arriving at a solution by means of a single image, my quest for the ideal forking path resulted in a database, containing about 3000 photographs.

Unless we know exactly where to go to, we find ourselves at some point confronted with crossroads, wondering which way to choose. I began my research by travelling to different destinations with a purpose, in which getting lost and finding the right way was part of their attraction, for example strolling around Venice or through the Old City of Jerusalem. I started collecting different types of forking paths and developed a taxonomy of crossroads, which included photographic images from Australia, New Zealand, Japan, South Korea, Israel, England, Scotland, Italy, Spain and Austria.



III. 21: Elke Reinhuber, Detail of Decision Making Taxonomy, 2010: Shortcut

After the first series of images yielded no satisfactory result, I examined in advance more locations looking for promising forking paths, usually with the aid of satellite images. The experience proved how difficult it is to plan one's life thoroughly in advance, while eschewing unexpected situations. My imagination often differed from what I found on the spot. Due to bad weather conditions in winter, some bifurcations were hardly visible or blocked sometimes by construction sites. Therefore, new temporary paths appeared as discernible footprints in the snow.

Green and beautiful looking mazes turned out to be brown and rotten, thoroughly arranged pathways in parks were transformed into building sites, or locations which seemed to offer good contrast in green and grey were in reality all just white and dim, due to the winter haze. Others, in reverse, looked splendid from eye level, sometimes just existing temporarily while not visible at all from above.

The most significant of these contradictory experiences are represented in a table sheet and each pair was complemented by an illustration. These depictions explain equally the impression from above,



from the front and an abstraction, which leads towards a classification. In the chart the following major categories are represented: equal paths, short cuts, detours, dead-end roads, branchings, various crossings, star-shapes, roundabouts, mazes, markings and the indeterminate. The classification could have been done with various indexical classifications, however the final tableau proved to be most obvious and coherent.

The aspect ratio of the images varies. Square satellite images sit next to frontal photographs with a ratio of 2:1 and illustrations in the proportion of 4:3 in a row. The whole chart with its seventeen examples has an aspect ratio of 1:4.

In this part of the work I would like to accentuate the aspect of Performance art: I researched these places, travelled to each and took the photographs in order to find the ideal crossroad. The result resembles plain landscape photography without reference to human activities at each location, apart from my subjective point of view whereby I positioned the camera, looked through the lens and released the shutter.

The chart turned out to be the centrepiece of the whole series of work. The ability to compare the different aspects makes it possible to assess the crossings. Looking at the three aligned images, to determine which one is most appropriate and which gives the best information about the depicted crossroad seems difficult – but seen together as one picture, the composition gives much more information than a single image could.

The aerial view allows the viewer to look behind the scenes: how does the road continue after the intersection? Does it continue in the expected direction? Does it reunite with the other road or lead to the next turning point? In this example the search for the right path would mainly be led by rationality. Most probably the shortest route from A to B would be plotted when seen from above. The neutrality and anonymity of

the images without an author is enhanced by the addition of the geographic coordinates, showing the precise latitude and longitude of the intersection.

The first person view at eye level gives a better impression of reality: how does the path, which might appear best from an aerial perspective, look? Here, the rational examination, possible from above, turns into a personal and emotional point of view. Does one path look more appealing, easier or more interesting? The viewer is directly confronted with the turning point from where the decision needs to be made, but it is not possible to see in advance how the selected path will continue.

The third visualisation differs mostly from the previous ones. This illustration focuses on the turning point found in the second image, but with an explanatory, abstracted point of view, more similar to the birds-eye perspective of the first image. The viewing direction is coherent with the eye-level of the image and the visible paths are reduced to the most important ones, which thus determines its classification.

One usually cannot know how an unknown path continues beyond its branching, but it appears that with the confrontation of these three perspectives, the path (and maybe the future as well) suddenly becomes accessible and predictable. One image alone would not be sufficient to provide this amount of information.

Continuing my previous artistic practice, eighty-four of the most significant crossroads of my digital database with multiple sub-criteria such as shape, location or materials were assembled as a tableau and additionally transformed into a new work, the video *Decision Making Taxonomy*. In order to find suitable strategies in which to sort these images, I was inspired by several sources. The extraordinary essays and short stories of the Argentinian writer Jorge Luis Borges are an inexhaustible well for my subject and occurring throughout the whole research, in particular in the Chapter 3.

Wind Back the Film of Life. In Borges's work, illusion and reality often merge and labyrinths, parallel times and infinity are common topics with which he encourages the reader to meander between dream and truth.

2.2.2.4. Borges and The Analytical Language of John Wilkins

The inspiration for the video *Decision Making Taxonomy* mainly came from Borges's essay *The Analytical Language of John Wilkins*. Wilkins, an English clergyman and originator of the Invisible College tried at the end of the 17th century, to find a universal language. In his *Mathematical and Philosophical Works* from 1708, he proposed the counterfactual idea that the moon might be the earth and the earth might be a planet.⁵³ In the essay about Wilkins, Borges describes the "Celestial Emporium of Benevolent Knowledge's Taxonomy":

In its distant pages it is written that animals are divided into (a) those that belong to the emperor; (b) embalmed ones; (c) those that are trained; (d) suckling pigs; (e) mermaids; (f) fabulous ones; (g) stray dogs; (h) those that are included in this classification; (i) those that tremble as if they were mad; (j) innumerable ones; (k) those drawn with a very fine camel's-hair brush; (l) etcetera; (m) those that have just broken the flower vase; (n) those that at a distance resemble flies.⁵⁴

His list seems absurd, making us wonder and smile. Another reference to my work are selected films by Peter Greenaway, especially *A Zed & Two Naughts*, *26 Bathrooms*, *The Falls* and *H is for House*. In each he presents different lists in a spoken form with underlining or contrasting images. *26 Bathrooms* lists alphabetically twenty-six words,

⁵³ Wilkins, John, *Mathematical and philosophical works* (London: Frank Cass & Co. Ltd., 1970).

⁵⁴ Borges, Jorge Luis, "The Analytical Language of John Wilkins." in: Borges, Jorge Luis, *Other Inquisitions, 1937-1952*, [*Otras inquisiciones*], trans. Simms, Ruth L. C. (London: Souvenir Press, 1973), pp. 102-105.

which can be associated with this location and shows images of different rooms. *The Falls* is a film that reads like a list, in which ninety-two people, whose last names start with “Fall” are introduced. In *H is for House*, he lists many objects beginning with the letter “H” and few with other letters, accompanied by images, sometimes of these objects, sometimes of his wife and daughter. Short narratives interrupt the film. As the literature professor Maria Esther Maciel wrote in the preface to her essay *An Encyclopedic Imagination – Peter Greenaway in the Light of Jorge Luis Borges*, these lists are not coincidental. Greenaway is known to be an admirer of Borges whose lists inspired him for the enumeration in his films.⁵⁵

Furthermore, Michel Foucault starts his preface to *The Order of Things* with a tribute to Borges’s lists. According to him, only language can make lists such as these, which make us laugh and awake our mental activity.⁵⁶

Umberto Eco refers to the importance of lists in an interview about his recent book *The Infinity of Lists*.⁵⁷ He sees in lists, catalogues and encyclopædias ways to grasp infinity, an approach to understand the inexpressible and the incomprehensible. Lists are part of our culture, of our ability to express and describe the invisible and infinite with words. In his book, Eco also refers to Borges and adds that the desire to accumulate and to collect is a passion in Western culture. He draws a distinction between practical,

⁵⁵ Maciel, Maria Esther, “An Encyclopedic Imagination . Peter Greenaway in the light of Jorge Luis Borges.” *Corner 04* (2000), 13.03.2013
<<http://www.cornermag.org/corner04/page02.htm>>.

⁵⁶ Foucault, Michel, *Die Ordnung der Dinge* (Frankfurt am Main: Suhrkamp Taschenbücher Wissenschaft N°96, 2002).

⁵⁷ Eco, Umberto, *The Infinity of Lists* (New York, NY: Rizzoli, 2009).

usually finite lists, like inventories or shopping lists and poetic lists on the other hand, which could be infinite.⁵⁸

My earlier artistic practice often relates to lists of inventories or taxonomies; I therefore developed a classification for choices or decisions in the analogy of forking paths. This taxonomy resulted in the two tableaus described in 2.2.2.3 and as well in the video *Decision Making Taxonomy*.

2.2.2.5. Decision Making Taxonomy

My video work *Decision Making Taxonomy* has its source in my attempt to classify, structure and sort different kinds of decisions, and their abstract but obvious visualisations in forking paths. I wrote the text *Celestial Benevolent Highways and Byways Authority: Decision Making Taxonomy* as the foundation for a series of images and the resulting video.

The silent film with the duration of 5 minutes follows the style of a slideshow. White text is used on a black background. The images dissolve one after another together with the classification of the crossroads. The aspect ratio of the original version is 4:3, with the text underneath the image like a subtitle. Text and image work independently, while at the same time corresponding with each other.

The frame story describes the difficulty in translating an ancient document, which keeps even specialists uncertain as to whether it is a guide for turning points in life or for crossroads. Possible classifications for diverging roads follow. It concludes with the assumption that our paths through life are predetermined anyway.

⁵⁸ Eco, Umberto, Beyer, Susanne and Gorris, Lothar, "We Like Lists Because We Don't Want to Die (Interview)." *Der Spiegel* (2009), 11.11.2009
<<http://www.spiegel.de/international/zeitgeist/0,1518,659577,00.html>>.

Celestial Benevolent Highways and Byways Authority:

Decision Making Taxonomy

Recently an ancient document was discovered which is ascribed to Qin Shi Huang (秦始皇),⁵⁹ the first emperor of China, who planned the Great Wall in 220 BC.

According to the latest translation undertaken by thirty-six specialists, under the supervision of the Argentinian librarian Jorge B., it is claimed to be the ultimate guide on how to make the right decision at turning points in life. However, some translators are currently arguing that the document may simply be referring to architectural structures of crossroads. In their opinion, the translation is as follows:

There are crossroads, which could be divided into necessary and otiose ones. We could call them forking paths, forks in the road, crossroads, crossings, intersections and sometimes we have roundabouts. The next distinction refers to the occurrence of these systems in the universe, on earth or simply on the surface of this planet, whereas others are subterranean.

We can look at them in general or in particular. Some of them are Y-shaped, some X-shaped, others T-shaped and some can be either called O-shaped or star-shaped, which in this case makes no difference at all. Their structure often reminds one of ramifications like the roots of a tree – or its trunk with boughs, branches and leaves, each with its own venation. This can also be found in the wings of butterflies or other insects and in the network-system of venous blood vessels or the nervous system of living creatures. Even looking at liquids can remind us of this. Many rivers, which are developed by numerous creeks and

⁵⁹ Wood, Frances, *China's First Emperor and His Terracotta Warriors* (New York, NY: St. Martin's Press, 2008).

originate from innumerable springs – feed the ocean and the ramified structure of frozen liquids is visible in ice crystals.

Sometimes we can observe a horizontal, sometimes a vertical, or even a diagonal division and most of the previously mentioned lead into several divisions, depending on our point of view. These divisions can be equal, which obviously makes the decision very difficult; or they can be unequal, making sometimes the decision too easy and regrettable. Furthermore, they can be obvious or confusing, especially if a particular destination exists. It is hard to identify paths as detours, shortcuts, traps or dead-end roads that lead to nothingness, before taking them. Furthermore, a practical distinction can be made between traces, footpaths, bridges, stairs, rail tracks, roads or flight paths. We can observe that some of these branchings were made by the forces of nature, some by animals, and others are man-made. Amongst these, some are superfluous and some are necessary. Trees, street signs or traffic lights can indicate a fork in the road. As a final result, the document concludes that which ever road we take, whatever decision we make, our path is our destiny and already predetermined, as are the points on the railroad switched by the points man – or to be precise – in whichever way the wind blows.⁶⁰

⁶⁰ Reinhuber, Elke, *Decision Making Taxonomy*, 2010. galleryeight, Sydney.

2.2.2.6. Signs – Confusing and Simplifying

The common purpose of signs and symbols is usually to simplify indications and to make them widely understood, without knowledge of a specific language or code. In the examples I collected, the signposts and road-markings



Ill. 23: Elke Reinhuber, I Know Where I'm Going! (Kreuzberg), 2010, title image on the booklet

appear to confuse more than to clarify, at least for a foreigner, layman or outsider.

The images of different international signs were captured with geometric clarity. No indication of time or place, no cars, people nor houses are visible in most of the photographs. The clarity adds to the aesthetic quality.

Apart from one photograph, the images were not manipulated. The only exception is the picture of a signpost with seven arrow-shaped markers, pointing in four directions. When passing by the actual road sign, it is not easy to recognise all



Ill. 25: Elke Reinhuber, I Know Where I'm Going! (Svdeny), 2010

directions at first glance – though it would be more obvious in a still image. Therefore all letters were thoroughly removed in postproduction. This image was used for the title of the booklet and exhibition poster, together with the statement *I Know Where I'm Going*. It was kept separate from the others because of the obvious manipulation.⁶¹

This section is closely related to my earlier artistic practice, in which I explored neglected details in everyday life. These details were treated like an artwork in public

⁶¹ Although it could be considered as a newly fabricated sign before the destinations were applied and has the same effect as looking at signposts in China without being able to read Jiāntǐzì.



III. 24: Elke Reinhuber, HDH215, 2009

space, captured and sometimes transferred into a new context. The clearest analogy can be found in *HDH215*, a photographic series of an intersection and an animation referring to the confusing and ever-changing traffic

system in my hometown, Heidenheim. One intersection has twenty-one signs with arrows pointing in different directions. They become inconspicuous for inhabitants, but are confusing for the visitor. The images were colour reduced, except from the blue and white signs, in order to make them even more obvious. A short animation shows the signs becoming independent, rotating and pointing in random directions. It was supposed to be projected on the local town hall and has been put into storage by the municipal art museum, the Kunstmuseum Heidenheim.

This series could be seen as an addition to my forking path images. It confronts the viewer in a different way: the pictures do not trigger the same feeling as does standing in front of a crossroad and having the urge to make a decision – rather, the observer is confronted with a riddle that is sometimes difficult to solve instantly.

Subsequently, I developed the work *Counterplate* with custom-made signs.

2.2.2.7. Counterplate

In order to explore different artistic methods, the intervention in public space called *Counterplate* was an approach in evoking counterfactual thoughts verbally.

Statements regarding decisions were

embossed on aluminium signs and installed in appropriate places. The title of the work plays with the words “counterfactual” and “contemplate”.⁶²



Ill. 27: Counterplate, YOU CAN'T HAVE THE CAKE AND EAT IT TOO, Paris, 2011

The style of the plates is that of standard German advice signs like “Keep Entry Clear.” The plaques were custom-made, 30 by 20 centimetres, in a single edition with four different phrases. Two with popular proverbs, the other two show lines of dialogue, adapted from the movie *Mr. Nobody*.⁶³

To document the intervention, photographic images were taken of all the installations, which then became the final work. All phrases were written in English to make the artwork accessible for an international audience.

Among the locations chosen was a confusing road-sign on the Pont d’Alma in Paris with seven arrows pointing in different directions. EVERY PATH IS THE RIGHT PATH was written



Ill. 28: Counterplate, AS LONG AS WE DON'T CHOOSE, EVERYTHING REMAINS POSSIBLE, Venice, 2011



Ill. 26: Elke Reinhuber, Counterplate, EVERY PATH IS THE RIGHT PATH, Paris, 2011

⁶² The word counterplate is as well used for negative moulds in the metal industry

⁶³ Dormael, Jaco van, *Mr. Nobody*, Canada, Belgium, France, Germany, 2009.

on the sign placed underneath. Unfortunately it was not possible to observe a clear response from the car drivers in their motorised cocoons.

The situation is different in Venice: often signs point in two directions to reach the same locality, such as towards San Marco or Piazza Roma. AS LONG AS WE DON'T CHOOSE, EVERYTHING REMAINS POSSIBLE was the chosen phrase for some of these spots. The signs were installed early in the morning; a few pedestrians in the alleys stopped and studied the signs. Because they were only temporarily attached, I removed my yellow signposts before the crowd of tourists conquered the city. The same phrase was introduced onto the shelves of a French *hypermarché*. Here, it was planned as a secret intervention for the eye of the camera to point to the overwhelming choices. In the small town where I grew up, I could not resist attaching a plate on the wooden lattice fence belonging to my parents' neighbours: THE GRASS IS ALWAYS GREENER ON THE OTHER SIDE. The same proverb seemed suitable for the gardens of Versailles and the Tuileries in Paris. The last deployed phrase was, YOU CANNOT HAVE THE CAKE AND EAT IT TOO. I consider French confectionary in particular irresistible, not only because it is visually splendid but also being extraordinarily delicious. Therefore these plates were attached next to the windows of confectioners with a huge variety of beautiful *gâteaux* inside.

In each case, the observers might be encouraged to look back and wonder how certain things could have evolved differently if they had made another choice.



III. 29: Counterplate, THE GRASS IS ALWAYS GREENER ON THE OTHER SIDE, Heidenheim, 2011



Ill. 31: No lamppost was too tall for the 'I Know Where I'm Going!'-team

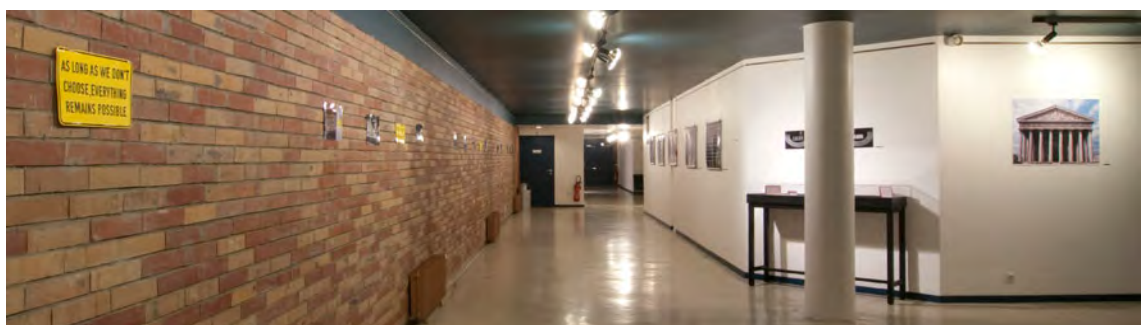
The actual audience for this intervention I aspired to address, was the crowd visiting my show in Paris. The photographs were printed in the same dimensions: 30 by 20 centimetres. The original aluminium plates, now slightly worn, were presented along with the photographs. The message the signs conveyed, hanging on a wall in the gallery was not comparable to the

surprise of such a sign in public space. For this reason, in retrospect, I experienced counterfactual thoughts regarding this work:

- Should I have provided the signs in the local language and used a local standard for the sign?
- Should I have installed the signs properly and actually left them in place?
- Should I have taken videos of the reactions, rather than images of the sign and the location devoid of people?

As explained, I wanted to demonstrate how counterfactuals could appear in the process of art production. To recreate the intervention with the piece *Counterplate* and to explore my reflections retrospectively, would not be difficult. It is more demanding, for instance, in photography, in which the “decisive moment”⁶⁴ is extremely valuable.

This challenge I will explain in more detail in the section 4.2.1. Experiencing Counterfactual Thoughts.



Ill. 30: Counterplate in Decisions – A User's Manual, installation view, Cité International des Arts, Paris, 2011



Ill. 32: I Know Where I'm Going!, installation view, galleryeight Sydney, 2010. Above: Artist talk and invitation
 2.2.2.8. *I Know Where I'm Going!* Exhibited

The research into forking paths was exhibited in solo shows in Berlin⁶⁵ and Sydney.⁶⁶

The latter was accompanied by an artist's talk and was then again displayed during a

symposium in Sydney.⁶⁷ Some images were also exhibited in a show in Paris.⁶⁸ This

experince served as an important practice for me, I was enabled to survey the reaction of the audience and compare it to my intended response: the feeling of being confronted with a decision at a turning point in life.



Ill. 34: I Know Where I'm Going!, installation view, Raum in Mitte, 2010

⁶⁵ Raum in Mitte, Berlin, 2010, August 27-September 24.

⁶⁶ galleryeight, Sydney, 2010, October 15-28.

⁶⁷ Synergies Symposium, Chauvel Cinema, Sydney, 2010, November 5-6.

⁶⁸ La Cité internationale des arts, Paris, 2011, September 13-17.



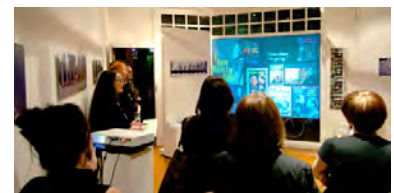
Ill. 33: I Know Where I'm Going! (Schönbrunn), galleryeight, Sydney, 2010

For the exhibition, a selection of images was printed and mounted on aluminium board. The surface was matte in order to absorb the viewer in the work and avoid disturbing reflections. A height

of 28 centimetres gave a consistency to the display of the images in the work. The exposed images had specific widths: the panoramic images were 99 centimetres, two colourful images, which I consider as signature pieces of this collection, were printed with a width of 56 centimetres and the images with indication signs had a dimension of 42 by 28 centimetres. The exceptions were two images that I had planned as conceptual drafts before the show: the previously mentioned collage and the chart with different perspectives on the crossroads. They were treated like unmounted posters with the dimensions of 30 by 140 centimetres.

The review on the Australian art-critic website *Strobed* concluded with the sentence “A warning though, if you were forced to study Robert Frost’s poem *The Road Not Taken* at any stage you may find this exhibition a little traumatic....” The poem ends with the lines:

Two roads diverged in a wood, and I—
I took the one less travelled by,
And that has made all the difference.⁶⁹



Although, as I tried to express my vision in the video *Decision Making Taxonomy*, in my opinion, it does not matter in the end which route we take, which decision we make,

⁶⁹ Frost, Robert, “The Road Not Taken.” *Mountain Interval* (New York, NY: Henry Holt And Company, 1916), p. 3.



because we have to accept whatever path lays ahead of us: "...which makes no difference at all!"

In the shows, suddenly the question of the location where the images were captured, became important. On purpose, the images had no individual titles. They were all considered as part of the series *I Know Where I'm Going!* – therefore, in order to distinguish the individual images, the locations were written only in the small print of the hanging plan.

It proved that for most of the audience, the pictured landscapes were not as enjoyable as expected. As the custodian Henriette Olbrisch from the gallery *Raum in Mitte* remarked: "The landscapes don't excite a desire for being there."⁷⁰ They were even considered by some to be disturbing. On purpose, they lack blue or dramatic skies, sunny fields, mountains and rivers, exciting perspectives and other details, which make landscape photography generally appealing.

After the Artist Talk in *galleryeight*, Sydney, the audience agreed in general that my explanations helped with the understanding of the work, especially when seen in continuation of my earlier work. Although many visitors in Berlin and Sydney assured me that the meaning was obvious, particularly in light of the provocative title of the exhibition.

A common remark was about the size of the images. The images could have been bigger; possibly even three times the actual size. The peripheral vision would then have been covered and the effect of standing in front of crossroads would have been even stronger.

⁷⁰ Personal conversation during the show in Berlin

The public's favourite was the poster, which combined aerial views, first-person perspective at eye level and abstractions of the same forking paths. Originally it was just meant as a sketch to sort and classify different types of forking paths, but it proved its appeal during the exhibitions and became the centrepiece of my research.

As a result of the presentation, I would consider it as a successful approach to visualising the moral dilemma of standing at crossroads in life at which a major decision has to be made.

We make decisions which we sometimes regret, when we ruminate or wonder how things could have turned out differently. The images of crossroads are significant for my research because they show the moment right before a decision needs to be made. While everything is possible as long as we do not choose, in fact it does not matter how we decide: it does not matter which path we choose, unless we aim straight to reach a destination. Every path is worth taking, worth living – as long as we accept the here and now and do not look back all the time. My research for *I Know Where I'm Going!* lead straight to my panoramic video-installation *Decidophobia*, as described in Chapter 2.2.1..

Nevertheless the question remains, how do we actually decide and what different types of decisions do we face in our lives? I continued my artistic research in the exploration of these questions in order to finally conclude with a concept for the interactive work *Your Day Will Come!*, in which the user is confronted with several choices, needs to decide on different levels and subsequently will be able to explore the alternative paths.



III. 36: Booklet *Decisions – A Users's Manual*, Cité International des Arts, Paris, 2011

2.2.3. Decisions – A User's Manual

The following section of my artistic research on counterfactual thinking is focused on decision making. How we decide is an important aspect of the development of retrospective considerations and therefore more than worthy to be explored in theory and practice.

My emphasis is on the importance and difficulty of good decision making, depending on the type of decision, the influences and balance of reason and emotion. Furthermore I would like to point out some fields in which good and sometimes immediate decision making is essential.

Nowadays, the number of choices we have in almost all sections of life is overwhelming. We are born into a certain place and family with a particular gender and

a name chosen by our parents. From there on, we can choose at least theoretically, nearly all factors that affect our lives.

In regarding *Counterfactual Art*, we should be aware of the necessity for being confronted with a choice in the first place, and later on the awareness and freedom to choose. Only then might we generate counterfactual thoughts in consideration of the differences that an alternative decision would have brought.

During my research, I examined and observed different methods for making choices in various situations and locations: I explored divination methods in Asia, observed institutions in which decision making is essential, conducted interviews with neuroscientists specialised in the cognitive processing of choices and decisions⁷¹ and I took part in an experiment in decision making in the fMRI brain-scanner in their lab.



III. 35: Decisions with 3 Tesla, 2013, still, neuroscientist pointing at Elke Reinhuber's amygdala

The following attempts, which I will describe briefly, deal with the difficulty of decision making and led eventually to work with a counterfactual approach. Other than the confrontation with choice, the process of decision making is more difficult to visualise, especially in two-dimensional media. The actual moment can possibly be seized in a photo, but the action or procedure can only be captured on film or video.

- The documentary video *Decisions with 3 Tesla*⁷² describes the method of a study on decision making, in which researchers from medicine and humanities explain the present state in this field of research and the possibilities for visualising brain activity.

⁷¹ D.I.N.E., Berlin (Dahlem Institute of Neuroscience of Emotion).

⁷² Maschinensehen, ZKM Karlsruhe, 2013, March 1st-May 19th.

- *Is it in my Hands?*⁷³ is a rather personal work, for which I drew inspiration in Hong Kong, where in public areas palm reading appears to be an everyday event.
- With the time-lapse photographic composites *Decision Values*,⁷⁴ I explored ways to grasp the aura of several institutions in Paris in which relevant decision making is essential, a regular and highly important task, while following an idiosyncratic concept of numerology in my work.
- *Blank Chance*⁷⁵ offers an insight into my personal notion of divination and chance methods as an aid in decision making. The work consists of a series of objects – divination tools – and video sequences that leave the final decision to the audience, although the videos attempt to mirror their subconscious.
- The vinyl record *Decision disc N°1*⁷⁶ could be considered a conceptual work which I suggest applying to specific choices.

Unequivocally, I regard the act of decision making as obligatory in the research of counterfactual thinking and therefore I have explored these methods theoretically as well as practically.

The first part of this inquiry was installed in a show in Paris⁷⁷ in 2011 entitled *Decisions – a User’s Manual*. On the reverse of the invitation and the accompanying booklet was written *Decisions – There is no User’s Manual*.

The show consisted of a series of works which investigated the difficulty of decision making – by both rational and divination methods. Further explorations

⁷³ Ego Candy, Alte Bonbonfabrik Karlsruhe, 2012, February 24-26.

Selbst-Design/Sommerloch, HfG Karlsruhe, 2012, July 18-22; www.selbstdesign.com

⁷⁴ La Cité internationale, Paris, 2011, September 13-17.

⁷⁵ Ibid.

⁷⁶ Reinhuber, Elke, *Decision Disc N°1*, Elke’s Electrical Recordings [eer], Germany, 2012.

⁷⁷ La Cité Internationale, Paris, 2011, September 13-17.

followed of which my latest research, on decision making in the neuro-scientific context, was exhibited at ZKM in Karlsruhe⁷⁸ and subsequently at the Fotomuseum Winterthur⁷⁹.

2.2.3.1. Research on Decision Making

The ability to reflect on decisions might be called one of the factors, which separate humankind from animals. Aristotle explains in his *Nicomachean Ethics* that animals are able to act voluntarily, but not to choose.⁸⁰ He further explains that choice differs from desire, passion, wish and opinion.

We need at least two possibilities from which to choose. With small decisions, choice often happens spontaneously and intuitively – like picking a vacant seat⁸¹ in the bus. However, major and especially life-changing decisions require more reflection.

In other situations, for example for pilots on a nose-diving airplane, immediate decisions are essential, but even they need to be well thought out and responsible. The process of decision making in particular is being researched today in different neuro-scientific disciplines.

Dealing with counterfactual thoughts implies that a decision was made at a certain moment of choice. As the writer and physicist Stefan Klein states in *Alles Zufall* (All by

⁷⁸ in “Maschinensehen”, March-May 2013.

⁷⁹ in “Cross Over”, September-November 2013.

⁸⁰ Aristotle, “*Nicomachean Ethics*”, trans., Rackham, H., *Aristotle*, ed. Rackham, H., vol. 19 (London: William Heinemann Ltd., 1934).

⁸¹ Like that decision made by Rosa Parks.

On December 1, 1955, she took a bus seat in the section reserved for white men in Montgomery, Alabama, and refused to give it up. Her act inspired the civil rights movement.

Chance),⁸² an individual is less likely to consider retrospective alternatives when a choice was made either intuitively, by chance or by accident.

2.2.3.1.1. Freedom of Choice

Arriving at a crossroad, at a turning point in life, to choose one path and eliminate the other option is usual practice. This can be executed by several methods, but only some choices enhance the possibility of counterfactual thoughts.

Several questions arise while pondering decision making: how can we reach the right decision or a decision at all? Do we have influence on our destiny, is the Free Will superior to the concept of Determination, or is our future already written-in-stone no matter how or what we decide?

Furthermore, the task of choosing depends on the kind of choice with which we are confronted, our future plans, our past experiences, as well as our cultural background and environment.

Different possibilities exist for making decisions – deliberately or unconsciously; spontaneously, accidentally or influenced by rationality and knowledge; experience and especially chance operations.

These issues are prime topics and cannot be answered *en passant*. However I would like to initiate reflections on these questions by way of my current work on decisions. Moreover, this background is essential in order to understand counterfactualism. Looking back to turning points and wondering how life could have evolved differently is only sensible in a world in which we have the “freedom” to

⁸² Klein, Stefan, *Alles Zufall: die Kraft, die unser Leben bestimmt*, 2nd ed. (Reinbek bei Hamburg: rororo . Rowohlt, 2006).

generate our own path. Otherwise, imagining what could have happened differently is restricted to assumptions only and would not cause repercussions outside our fantasy.

The discussions about Free Will versus Predetermination or Fatalism stretch from the early days of philosophy into present studies of neuropsychology. As there is no evidence on this topic, it is not surprising that the speculations cover multiple theories, with backgrounds in different cultures, of which because of the limitations of this thesis I mention only a few:

The popular paradox *Buridan's Ass* illustrates the importance to choose: the animal starves between two equal sized piles of oats,⁸³ because it cannot make a rational decision since there is no reason for him to select one over the other. A similar parable dates back to Aristotle, although he was referring to the forces on our circular planet: “[...] the man who is violently, but equally, hungry and thirsty, and stands at an equal distance from food and drink, and who therefore must remain where he is.”⁸⁴ Leibniz criticises the sophism of *Buridan's Ass* as an impossible equipoise, because both options can never be so equal as to prevent the animal from going to one side or the other.⁸⁵

The political philosopher Isaiah Berlin established a convincing concept. He distinguishes between “negative liberty” and “positive liberty.”⁸⁶ Negative liberty could

⁸³ Also known as the donkey dying of hunger and thirst between a stack of hay and a bucket of water.

⁸⁴ Aristotle, *On the Heavens*, trans. Guthrie, William Keith Chambers, vol. Book 2 Chapter 13 §295b (Cambridge, MA: Harvard University Press (Loeb Classical Library N°338), 1939), p. 237.

⁸⁵ “There will therefore always be many things in the [animal] and outside the [animal], although they be not apparent to us, which will determine him to go on one side rather than the other. And although man is free, and the ass is not, nevertheless for the same reason it must be true that in man likewise the case of a perfect equipoise between two courses is impossible.”; vid. Leibniz, Gottfried Wilhelm, *Theodicy: Essays on the Goodness of God, the Freedom of Man, and the Origin of Evil*, trans., Huggard, E. M., ed. Farrer, Austin M. (New York, NY: Cosimo Classics, 2010), pp. 150, §149.

⁸⁶ cf. Berlin, Isaiah *Two Concepts of Liberty: An Inaugural Lecture Delivered Before the University of Oxford on 31 October 1958* (Oxford: Clarendon Press, 1958)

be described as “freedom from ...” – constraint from being told what to do by others, whereas positive liberty stands for “freedom to ...” – the availability of opportunities to be the author of your own life and to make it meaningful and significant.

Whereas it is not obvious whether Jean-Paul Sartre, French philosopher and novelist, believed in Free Will or in the idea that everything is already determined, he proposed in *Being and Nothingness* the idea that Free Will exists, albeit in a rather determined sense. Sartre spoke of the individual being condemned to be free, although his situation may be completely determined.

Man is condemned to be free; once thrown into the world, he is responsible for everything he does. In one sense choice is possible, but what is not possible is not to choose. I can always choose, but I must know that if I do not choose, that is still a choice.⁸⁷

In the same year he wrote a dialogue in the first act of his play *The Flies* which rather makes him appear as a supporter of predetermination: “Some men are born committed to action: they do not have a choice, they have been thrown on a path, at the end of that path, an act awaits them, their act.”⁸⁸

David Hume, the Scottish 18th-century philosopher, evades the dilemma with his concept of determinism: the problem that our actions are either causally determined or random. In either case, he suggests that we are not responsible for them, which I consider as a superficial explanation to avoid further discourse.⁸⁹

⁸⁷ Sartre, Jean-Paul, *Being and Nothingness* [1943], trans., Barnes, Hazel (New York, NY: Philosophical Library, 1956).

⁸⁸ Sartre, Jean-Paul, “The Flies” [1943], trans., Gibert, Stuart, *No Exit and Three Other Plays* (New York, NY: Vintage).

⁸⁹ Blackburn, Simon, “Hume’s Fork.” *Oxford Dictionary of Philosophy*, ed. Blackburn, Simon, 2nd revised ed. (Oxford: Oxford University Press, 2012).

In this case, I agree with existentialist philosopher Søren Kierkegaard, who explored in his psychological work the feelings and emotions of man when faced with life choices: “It is perfectly true, as philosophers say, that life must be understood backwards. But they forget the other proposition, that it must be lived forwards.”⁹⁰

He was concerned that individuals trying to understand and define life, love, religion, God would never actually come to the point to make a decision.

In this thesis, I do not dare to step further into the field of this immense and ongoing research. Therefore I just sum up my priority of Free Will over the idea of a predetermined life. All events, which lead towards counterfactualism, can only be enjoyed in a world in which everyone has the freedom to decide.

2.2.3.1.2. Training and Guidance

The science of decision making and choice is a recent discipline of the humanities, established in the past 50 years. A large number of books have been written which can be divided in two categories: research which examines the process of decision making, analysed in different steps; and self-help books or guides on how to develop the best



Ill. 1: Bookshelf at UNSW library with books about choice decision making capability. The most current publications even focus on the agony of having the freedom to choose between too many options: religion, society, goods and work, even our appearance. The choice of self-help books on how to make the right

⁹⁰ Kierkegaard, Søren, *Concluding Unscientific Postscript*, trans., Swenson, David F., eds. Lowrie, Walter and American-Scandinavian Foundation, vol. 1, 2 vols. (Princeton, MA: Princeton University Press, 1941), p. 54.

decision has become overwhelming and ironically, it is a rather difficult task to choose a book about choice.

According to the recent flood of self-help books, there are many ways we can improve our choices. I agree with Jonah Lehrer's conclusion in *How We Decide*⁹¹ that there is no common recipe for making decisions because all situations differ. Understanding our brain and knowing when we should listen to our emotions and intuitions – or rather calculate all probabilities – is his advice. He solved his personal problem of the overwhelming choice of cereals by buying his three favourites and mixing them in his bowl. Just like Johann Wolfgang von Goethe's Herkules, who tells Wieland that he would not have bothered to decide between the female representations of Virtue and Vice – he simply would have taken both women with him at the crossroads.⁹² A similar advice the German artist Dieter Roth gave in the famous instruction card set *Oblique Strategies*⁹³: "Faced with a choice, do both."

Several how-to books propose a



Ill. 38: Elke Reinhuber, Counterplate, AS LONG AS WE DON'T CHOOSE, EVERYTHING REMAINS POSSIBLE, Paris, 2011

⁹¹ Lehrer, Jonah, *How We Decide*, [= *The decisive moment: How the Brain Makes Up Its Mind*] (Edinburgh: Canongate Books, 2009).

⁹² Goethe, Johann Wolfgang von, "Götter, Helden und Wieland . Eine Farce." *Berliner Ausgabe . Poetische Werke*, eds. Seidel, Siegfried and Aufbau Verlag, vol. 5 (Berlin: Aufbau Verlag, 1960), p. 179.

⁹³ Eno, Brian and Schmidt, Peter, *Oblique Strategies . Over one hundred worthwhile dilemmas*, London: Brian Eno, 1975.

series of steps, depending on the type of decision and situation, but it would be difficult to choose which of them to trust. Stefan Klein⁹⁴ suggests the method of small steps in complex situations. In conditions where every second counts, a series of “Yes” or “No” questions guides to the right action, for example in hospitals or on an airplane. Pilots are trained to take the first feasible option in case of an emergency, because they need to act as quickly as possible and there is rarely an ideal preference. In cognitive psychology, this strategy or method is known as *heuristic*; it implies estimation as well necessity.

It is a common opinion nowadays that airplane crashes have been reduced due to the training of pilots with flight simulators where they learn from mistakes and react in a real emergency according to their experiences in the immersive virtual environment.⁹⁵ In addition, the American Federal Aviation Administration defined in their advisory circular a guide on aeronautical decision making (ADM).⁹⁶ This can be best described as an enhanced decision making process used in aviation by pilots to help them consistently make the best choices when confronted with alternatives leading to uncertain outcomes.⁹⁷

⁹⁴ Klein, *Alles Zufall: die Kraft, die unser Leben bestimmt* p. 297.

⁹⁵ Lehrer, *How We Decide*.

⁹⁶ Adams, Richard J. and Advanced Aviation Concepts, Inc., *How Expert Pilots Think: Cognitive process in expert decision making*. (Washington, D.C.: Federal Aviation Administration, Research and Development Service, 1993).

⁹⁷ The ADM supports the process of good decision making by ensuring the pilot in charge is aware of all circumstances, which might lead to a bad choice (for example stress, personal situations, and so on.) These so called non-technical skills like decision making, communication and leadership are trained in crew or cockpit resource management (CRM) since NASA discovered in 1979, that human failure is the most frequent cause of accidents.

The US FAA (US Federal Aviation Administration) developed a particular method for structured decision finding in non-normal situations (situations, which are not covered in an existing checklist for abnormal situations) with the pleasant acronym DECIDE: D – Detect (the change which occurred), E – Estimate (how much corrective action applies), C – Choose (the best outcome), I – Identify (controlling actions), D – Do (them as necessary but be adaptive), E – Evaluate (the effects.)

Although, aviation has many international standards, the strategy in evaluating non-normal

As previously mentioned, Stefan Klein encourages trust in chance. According to him, it is better not to rely on insecure information and false estimations, but to decide by random choice and use various divination methods: taking the final choice out of one's own hand protects us from regret. He mentions as well the *Monte Carlo model*⁹⁸ for not relying on only one solution, but using small steps and diversification. Klein gives a clear example: instead of investing in one ship, it is better to invest in several ships as well as the dock – in case all the ships sink.

According to Israeli-American psychologist and Nobel-prize winner Daniel Kahneman, good decisions are made when the following three utilities line up: experienced utility, expected utility and remembered utility. But in reality, this is rarely the case, although we might follow the internal dialogue – “what do I want?” and anticipate how one choice or the other makes us feel.⁹⁹

In the 1950s, the psychologist Herbert Simon introduced the idea of *satisficing*.¹⁰⁰ The idea behind is to settle sometimes for the “good enough” instead of always aiming for the best. So one is less likely to regret a choice which is not “perfect,” as often happens to so-called *maximisers*. Even perfectionists are supposed to be happier than maximisers, because they know how difficult it is to match their high standards. Maximisers always aim for the best and are usually aware of the trouble in making

situation differs slightly, so BA, British Aerospace, uses a model called DODAR (diagnose, options, decide, act or assign, review), the German Aerospace Centre (DLR) relies on FORDEC (facts, options, risks, decide, execute, check). Even more models for aeronautical decision making with slight variations are in use: SAFE, GRADE, FATE, CLEAR.

Hopefully the crew can decide which model they will be using and it will not end up in a Tower of Babel-like situation.

⁹⁸ Klein, *Alles Zufall: die Kraft, die unser Leben bestimmt* p. 311.

⁹⁹ Kahneman, Daniel, “Objective Happiness.” *Well-Being: The Foundations of Hedonic Psychology*, eds. Kahneman, Daniel, Diener, Ed and Schwarz, Norbert (New York, NY: Russell Sage Foundation, 1999).

¹⁰⁰ Simon, Herbert, “Rational Choice and the Structure of the Environment.” *Psychological Review* 63.2 (1956).

decisions. According to American psychology professor Barry Schwartz, this is a source of great dissatisfaction and they are more likely to regret their choice. *Satisficers* appear, to maximisers, as if they are willing to settle for mediocrity, but satisficers settle for something that is good enough and do not worry about imagined better possibilities.¹⁰¹

In his book, *The Paradox of Choice*, Schwartz suggests: “There is no denying that choice improves the quality of our lives. It enables us to control our destinies and to come close to getting exactly what we want out of any situation.”¹⁰² However, he concludes later on that the need to choose in ever more aspects of life causes us more distress than we realise.¹⁰³

An often-quoted study¹⁰⁴ suggests that the greater the number of choices, the more difficult it is to choose – even if it is just for a jar of jam. People were offered in one study either six flavours of jam to sample; the control group was confronted with twenty-four different jams. Both received a discount coupon; the ones who had to choose between only six different types were much more likely in deciding to buy their favourite. The other group was mostly not satisfied with sampling just six out of the twenty-four and expected much more pleasure from the ones they did not try. In the end, they could not make up their minds.

¹⁰¹ Schwartz, *The Paradox of Choice: Why More is Less* pp. 78-79, 87.

¹⁰² *Ibid.*, p. 3.

¹⁰³ *Ibid.*, p. 116.

¹⁰⁴ Wilson, T. D. and Schooler, J. S., “Thinking Too Much: Introspection Can Reduce the Quality of Preferences and Decisions.” *Journal of Personality and Social Psychology* 60 (1991).

The same chair also made experiments about justified and therefore reflected decisions (verbally or written), which resulted in less happier participants. College students were given one poster to decorate their rooms. Their choice differed if they had to justify in a written note just for themselves, why they chose this poster. And furthermore, it resulted in them being less happy with their choice in the long run than the students in the control group, who did not have to justify their selection. cf. Wilson, T. D., Lisle, D. J., Schooler, J. S., Hodges, S. D., Klaren, K. J. and LaFleur, S. J., “Introspecting About Reasons Can Reduce Post-Choice Satisfaction.” *Personality and Social Psychology Bulletin* 19 (1993).

Schwartz recapitulated in his book the reason that the agony of choice is an important foundation to develop counterfactual thoughts: “The more options there are, the more *if only*’s you will be able to generate. And with each *if only* you generate will come a little more regret and a little less satisfaction with the choice you actually made.”¹⁰⁵

Although, looking at self-help-books on how to make the best decisions, none of them advises reliance only upon one’s gut feeling. Barry Schwartz summarises the steps in decision making, which differ slightly in each “how-to-guide” on choice:

1. Figure out your goal.
2. Evaluate the importance of each goal.
3. Array the options.
4. Evaluate how likely each of the options is to meet your goals.
5. Pick the winning option.
6. Later use the consequences of your choice to modify your goals, the importance you assign them, and the way you evaluate future possibilities.¹⁰⁶

Trade-offs are another phenomenon, observed by the pioneer of cognitive science Amos Tversky. They might lead to counterfactual thoughts and can conjure up psychological consequences by affecting the level of satisfaction with the final decision. It might happen, for instance, that a more attractive car is less secure – so the buyer has to choose between attractiveness and security. Tversky concluded that being forced to confront trade-offs in making decisions makes people unhappy and indecisive.¹⁰⁷

¹⁰⁵ Schwartz, *The Paradox of Choice: Why More is Less*, p. 163.

¹⁰⁶ *Ibid.*, p. 47.

¹⁰⁷ Tversky, Amos, “Elimination by Aspects: A Theory of Choice.” *Psychological Review* 79 (1972).

The American legal scholar Cass Robert Sunstein and the philosopher Edna Ullmann-Margalit argue in their research that second order decisions make life easier. This means that the freedom to decide when to make a decision, whether to follow a rule or not, eases the burden which freedom of choice imposes, exemplified by the convenience of a pre-set font on a computer plus having the freedom to change it.¹⁰⁸

In her book *Choice*, a philosopher from Eastern Europe with the experience of Marxism, Renata Salecl, wonders about the huge number of self-help-books on this topic, mostly written by self-described experts. She assumes that we hope to have the burden of choice taken away from us, since in post-industrial capitalist ideology individuals are supposed to experience enjoyment without limit, which means having available all possible choices in life. The aim of her book is to explore how the ideas of choosing who we want to be and the imperative to “become yourself” have begun to work against us, making us more anxious and more acquisitive rather than giving us more freedom:

The feeling of regret for decisions that one took, the fear of making another mistake, can become overwhelming. In order to avoid feelings of loss and regret, and a pervasive anxiety, one tries to minimise risk or at least make it predictable. The society that prizes choice relies on the idea that we have to prevent all risk, or at least predict it.¹⁰⁹

¹⁰⁸ Sunstein, Cass R. and Ullmann-Margalit, E., “Second Order Decisions.” *Behavioral Law and Economics*, ed., Sunstein, Cass R., Cambridge Series on Judgment and Decision Making (Cambridge (UK): Cambridge University Press, 2000).

¹⁰⁹ Salecl, Renata, *The Tyranny of Choice (Big Ideas) – Kindle Edition* (London: Profile Books, 2011).

Salecl refers to the French philosopher Louis Althusser, citing “post-industrial capitalism’s espousal of the ideology of choice is not a coincidence but rather enables it to perpetuate its dominance.”¹¹⁰

According to Jonathan Baron, several steps exist in the process of decision making. He is a professor at the University in Pennsylvania in the science of decision making and the founding editor of the journal *Judgment and Decision Making*. With his students, he developed a website to aid with consumer purchases and fair division in negotiation.¹¹¹ This website guide the user step-by-step through several criteria, which could be relevant for making the correct decisions. He lists price, ease of use, ease of obtainment, reliability, pride of ownership, availability of options/features, expandability, stylishness/aesthetics, durability, safety, morality, functionality/performance and enrichment, in order to help people choose from this overwhelming variety of goods.

Surely, a step-by-step guide can help in coming to a rational decision, but studies suggest¹¹² that spontaneous choices can be the ones we are most happy with in our everyday lives.

2.2.3.1.3. Influences on Decisions

Several factors influence our decisions. In the following, the ones I personally consider to be most important are listed, depending on the type of decision:

¹¹⁰ Ibid., pp. 9, position 148.

¹¹¹ Baron, Jonathan, *Decision aids*, 2000, Available: <http://www.psych.upenn.edu/~baron/daids.html>, 13.03.2013.

¹¹² Wilson, Lisle, Schooler, Hodges, Klaren and LaFleur, “Introspecting About Reasons Can Reduce Post-Choice Satisfaction.”

- Past experiences: past, present and future merge in the act of deciding. We transfer the experiences from the past in the present moment of decision making into the future. We cannot foresee what really will happen, but we usually try to imagine what might happen as we compare it to our past experiences.
- Intrinsic and extrinsic motivation: different types of motivations influence our decisions. They can originate either from our inner, personal desires (whatever pleases us as an intrinsic motivation) or they can be triggered from external factors, such as rewards, needs, preferences and values.
- Cultural background:¹¹³ we learn about values in life during childhood and through education. This can differ greatly, depending on the cultural and religious influences surrounding us.
- Aims: if we are reaching for a certain goal in our life or in a project, then all decisions will lead towards the achievement of this particular goal.
- Language: the way in which questions are posed influences our decisions. People are more likely to prefer to hear that three people out of ten survive, rather than that seven people out of ten die.¹¹⁴
- Reason, intuition and emotions: Plato describes the mind as a charioteer with two horses. The charioteer is the rational brain, controlling and directing the horses. One of them is well behaved and stands for reason; the other is wild, difficult to control,

¹¹³ The understanding of life is certainly related to the culture background and in particular to the religion, with which we grow up. I experienced during my sojourn in Egypt from 2006 to 2007, how the ability to decide is often left to higher powers. If it is not an older member of the family, it is Allah who directs the path of life. No cars are shipped with airbags and if there are seat belts, they are often used for other purposes, like holding the door with failed latches. With my European urge for security, I often asked about it and was always told, even from the most careful drivers, that it is not up to us to influence matters of life and death.

¹¹⁴ cf. the "study," cited throughout Chapter 'Deciding and Choosing', Schwartz, *The Paradox of Choice: Why More is Less* pp. 47-76.

representing emotion, and should, according to him, be tamed. Jonah Lehrer suggests, in his book *How We Decide*,¹¹⁵ that both forces should ideally be in equilibrium, reason and emotion both driving our decisions.

- Biological aspects such hormones: several researchers are exploring how hormones influence our decision making processes. For instance, a research team from Utrecht University in Holland explored the influence of testosterone: “In humans, however, the hormone seems to motivate for rational decision making, social scrutiny and cleverness, the apparent tools for success in a modern society.”¹¹⁶
- Decision making usually ends with a final choice.

All the examples mentioned demonstrate that the best method for approaching a good choice can differ based on situation and background, the profession and many other circumstances and influences. A general rule on how to decide therefore cannot exist, as I seek to indicate with this body of work *Decisions – A User’s Manual*.

2.2.3.2. Decision Values



Ill. 41: Elke Reinhuber, Decision Values, 2011

¹¹⁵ Lehrer, *How We Decide*.

¹¹⁶ Fiorillo, Christopher D., Tobler, Philippe N. and Schultz, Wolfram, “Discrete Coding of Reward Probability and Uncertainty by Dopamine Neurons.” *Science* 299 (2003).

While having a closer look at different approaches and methods to make choices, we see that some professions have regulations on how to decide. In football and chess for instance, a well-known method is to analyse important games afterwards and explore solutions for improving the strategy. For some professions it might even be true that single decisions can change the lives of individuals or even whole nations.

In researching methods of choice, I became aware that for certain professions, decision making is an essential part of their duty. With my photographic series *Decision Values*, I tried to explore the importance of good and rational decisions and to see if the atmosphere of buildings in which decision making is relevant and essential could be captured.

I observed several institutions in which decision making is a regular and highly important task. These institutions are responsible for individuals or the financial market, judgements over right or wrong, or for the wellbeing of a whole nation. It could be awkward if a judge relied on dice, a stock broker made decisions according to the *I Ching*, a surgeon read the palm of his patient or a pilot trusted the tarot card spread.



III. 39: Deck of tarot cards, for sale at the Senat in Paris, 2011

The French people overthrew their aristocracy and decided to take responsibility for ruling the nation as a free and independent democracy after the French revolution. Like a pilgrim, I observed several emblematic buildings in Paris, the capital of the modern era of European democracy, during a specific period of time and evaluated the best method for approaching my task with several test-shots from various angles, on different film stocks and various modes of still and moving images.

Instead of capturing one single photograph in large format, I preferred to take multiple images from one point of view. The number of pictures always refers to a number of decisions in context with this particular building. It was not my aim to capture one specific moment, nor the building as an architectural monument. Rather the time-lapse series was supposed to observe the atmosphere of a venue in which important conclusions are settled.



Ill. 40: Armin Linke, *Il Corpo dello Stato*, 2002-2009 (courtesy fondazione Maxxi)

The approach of Armin Linke was quite different from mine. The Italian photographer succeeded in capturing the aura of federal institutions magnificently in his series *Il corpo dello stato*.¹¹⁷ The camera is positioned neutrally to observe the institutions objectively and capture the interior atmosphere of the monumental buildings rather than particular objects, persons or rooms on which the viewer could focus – subsequently they demonstrate the absurdity of national hierarchies.

The following buildings were part of my research: the stock exchange (La Bourse, Palais Brongniart); the parliament (Assemblée Nationale, Palais Bourbon); the high court (Palais de Justice); an air traffic control tower at an international airport (Orly);¹¹⁸ and a world-famous hospital (Hôpital de la Salpêtrière). I took the same number of images of these buildings as the number of decisions being made, their duration or frequency or the number of decision makers present or the options offered. A systematic investigation of suitable figures was possible due to the publication of annual

¹¹⁷ Linke, Armin and Agamben, Giorgio, *Il Corpo dello Stato* (Zürich: JRP|Ringier, 2010).

¹¹⁸ The images were taken from the observation platform of Orly, which happens to be as well a central location in Chris Marker's movie *La Jetée*.

reports on the Internet. The numbers that I used were from the most recent officially published files at that time, from 2008 to 2011.

Instead of an explanation, the title of each separate part of the work stands for a number resulting from my research.

673 stocks to choose from

At the stock exchange, La Bourse, there were several figures to apply, as the number of buyers, the volume of sales, and so on, but no single quantity seemed to fit. Therefore, I took the number of companies with listed shares, which were 673 by the end of 2008.¹¹⁹



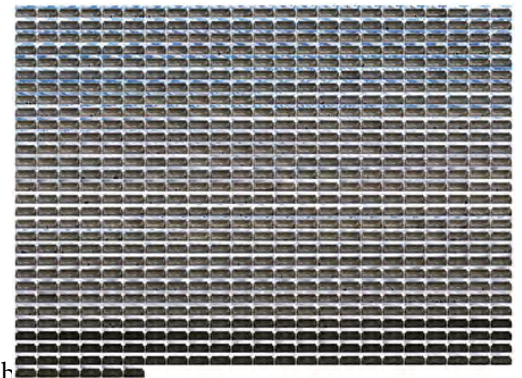
III. 43: Decision Values: 577 decision makers

577 decision makers

The delegates in parliament act according to the stated position of their party and also represent their constituents. The actual poll is preceded by research and discussions, sometimes by hiring experts. It is a time consuming procedure, of which the final election is only a small part. It is important to mention that the delegates had already been elected by the



III. 44: Decision Values: 480 days to decide



III. 42: Decision Values: 673 stocks to choose from

¹¹⁹ *Euronext Fact Book 2008, 2009*, NYSE Euronext, Available at https://europeanequities.nyx.com/sites/europeanequities/euronext_2008_pdf.pdf.

nation. In France, the parliament comprised of 577 seats in 2011.¹²⁰

480 days to decide

The average duration of a court case, from the appeal to reaching the verdict at the court of cassation (Supreme Court) at the Palais de Justice, took in the past decade on average 480 days.¹²¹

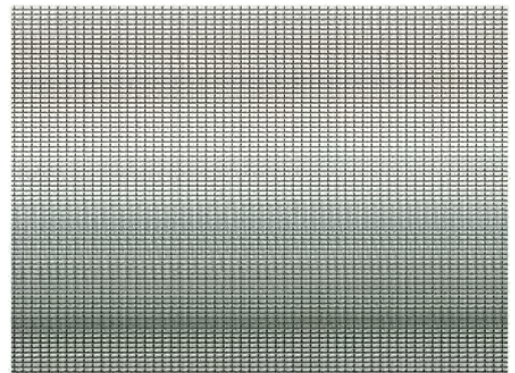
4316 passengers to decide about

The control tower at Orly airport stands for fast and responsible decision making by pilots. They face situations that might never have happened before and every fraction of a second counts in their process of finding the best possible way to cope. They have responsibility for all passengers in the airplanes, as well as the people on the ground.



Ill. 46: Decision Values: An emergency decision every 30 seconds

While approaching or departing an airport, pilots share their responsibility with the air traffic controllers in the control tower. At Orly airport there were 25,203,969 boardings in 2010,¹²² which means on average, 4316 passengers per hour were taking off and landing between 6am and 10pm. In order to



¹²⁰ *The French National Assembly explained to young people* Ill. 45: Decision Values: 4316 passengers to decide about
<http://www.assemblee-nationale.fr/english/8al.asp>, 13.03.2013.

¹²¹ *Stock, flux et délai du contentieux pénal soumis à la Cour de cassation*, n. d., Cour de cassation, Available: <http://www.courdecassation.fr/IMG/File/maquette9-070110.pdf>, 13.03.2013.

¹²² *Trafic du mois de décembre 2010, 2011*, Aéroports de Paris, Available: http://www.aeroportsdeparis.fr/ADP/Resources/f8500f61-bb89-41d0-8487-1e4898670d9a-ADP_Traficdumoisdedecembre2010.pdf?wysistatpr=ads_moteur-synomia_fr, 13.03.2013.

visualise this number, I captured 4316 images of the air traffic control tower in one hour.

An emergency decision every 30 seconds

According to the number of emergency patients seen in 2009,¹²³ a responsible decision needed to be made every 30 seconds at the hospital La Salpêtrière. The duration of the photo session was one hour as well, with a picture taken every 30 seconds.

One Decider

In addition, there is one image of La Madeleine referring to one Decider. This can be interpreted as a multifaceted example for the power in the hand of one.



Ill. 47: Decision Values: One Decider

Built under Napoleon, it refers to the emperor and sovereign ruler. The building, resembling a Roman temple, was firstly designed as a victory monument to the glory of the *Grande Armée*. Then it was considered to house the parliament as the National Assembly, or alternatively the stock exchange or the National Library. It finally became a church. In this function, La Madeleine today refers as well to God as one Decider over life and death.¹²⁴

These diverse locations and their protagonists can be subsumed under one prerogative: All these decision makers must not fail! Their choices are not made on a personal level, they are made for our whole society or over the life and death of

¹²³ *Faits & Chiffres 2009, 2010*, Assistance Publique-Hôpitaux de Paris . Centre hospitalier universitaire d'Ile-de-France, Available: http://www.reseau-chu.org/fileadmin/reseau-chu/chiffres_cles/paris-chiffres-2010.pdf, 13.03.2013.

¹²⁴ "La Madeleine, Paris." *Wikipedia, the free encyclopedia* 2013, Wikimedia Foundation, 13.03.2013, <http://en.wikipedia.org/wiki/La_Madeleine,_Paris>.

individual human beings. Therefore counterfactual thoughts should not be relevant in their cases.

The individual stills were composed into one photographic print for each building. All are 80 by 60 centimetres, meaning the size of each of the single images of which they are composed varies according to the number of decisions. The presentation was complemented by a six-channel screening of stop-motion movies from the very footage, each with the duration of two minutes. A printed postcard, which was placed in different postcard-stands in Paris presented all six locations with composites of all the images merged to one – the period of observation condensed to one instant. However, I prefer the photographic tableaux. Here, the density and importance of decisions becomes most obvious.

2.2.3.3. Divination Methods in Everyday Life

The question of how we reach decisions is difficult to answer. Decisions can be reached by applying various methods – by intuition or reason; sometimes by using divination methods or specific tools to find out what might be best can support the process. Whether shaking fortune sticks, reading the tarot, practising palmistry or rolling dice, everything can help. Often, we know what we want right at the moment the coin is flipped into the air.



III. 48: Chinese coins with trigrams

I Ching and Tarot

Chance operations can be completely random, or they can be an aid for us, like the *I Ching* or the tarot, which also fall into the category of divination. The *I Ching* is one of the oldest classic texts in Chinese. In the Western world it is also known as the *Book of*

Changes.¹²⁵ In the classical method, a set of yarrow stalks is divided and counted to form trigrams, which allow interpretation. The ancient procedure eventually became more popular by flipping three coins. Each trigram symbolises one of the four universal elements: heaven, earth, fire and water and are combined following the principles of Yin and Yang to form one of the sixty-four hexagrams.

The fastest manual method until recently was shaking numbered fortune sticks: computer applications overtook even this technique in speed. In the use of fortune sticks, also known as *Chi-Chi* sticks or *Kau Cim* (求籤),¹²⁶ a bamboo container holds the numbered sticks. After lighting a joss stick and kneeling in front of the altar, the worshipper concentrates on a specific question and shakes the container until one of the sticks falls out. The number on the stick holds the answer, which is then interpreted by the soothsayer. This method is widely practised, in particular in temples in Hong Kong, and became popular in the 1920s in America.

Tarot and *I Ching* do not provide us with a Yes/No answer like the flip of a coin. With their sometimes vague or even confusing descriptions, they make us reflect and look into our subconscious to therefore support the process of making decisions. It is rather like being confronted with a mirror to reflect upon ourselves.

As mentioned earlier, Stefan Klein¹²⁷ recommends the use of chance operations for decisions. He



III. 49: Blank fortune sticks, Elke Reinhuber, Blank Chance, 2011

¹²⁵ Wilhelm, Richard, *The I Ching, or Book of Changes*, trans. Baynes, Cary F. (Princeton, MA: Bollingen, 1950).

¹²⁶ Xiaomin, Zhao and Palmer, Martin, *Chinese Fortune Sticks . Consult the Ancient Oracle for Everyday Guidance* (Pymble NSW: Simon & Schuster Australia, 2006).

¹²⁷ Klein, *Alles Zufall: die Kraft, die unser Leben bestimmt*.

additionally advises observing the flight of birds, drawing lots, or tea-leaf reading – *tasseography*. According to him, it calms the consciousness and reduces the probability of regret after a possible wrong decision – also meaning counterfactual thoughts in general. Furthermore Klein observes the positive connotation of the word “chance” in English. Whereas *Zufall* in German stands only for accident or coincidence, the English meaning implies as well possibility, opportunity, luck or even fortune.

Rock–Paper–Scissors

Rock–Paper–Scissors is a hand-game for two people, which can involve a strategy and is not purely left to chance. Different techniques exist, but it is most common to raise the right hand three times while counting to three and then to open it simultaneously with the hand of the opponent, while reshaping the hand into a gesture, symbolising a rock, a sheet of paper or a pair of scissors. Rock beats scissors and is defeated by paper; paper loses against scissors and wins over rock. So the chances are equal. There are even international competitions and it might be seen as a game rather than a tool to aid decision making. Although a famous contest took place in 2005, when the art collection of a Japanese electronic company, valued at twenty-million US-Dollars, was tendered for sale and its president could not decide whether Christie’s or Sotheby’s were the best auction house for the transaction. In the end, Christie’s scissors beat Sotheby’s paper.¹²⁸

¹²⁸ Vogel, Carol, “Rock, Paper, Payoff: Child’s Play Wins Auction House an Art Sale.” *The New York Times* April 29th 2005.

Animal Oracles

It might appear surprising to see civilised Westerners asking a mollusc about the results of the FIFA World Cup in 2010. *Paul II*, an octopus,¹²⁹ was right in all eight of his predictions, although he had failed two years earlier in two of six prophecies for the UEFA Euro Cup. In his tank at Sea Life Centre in Oberhausen, Germany, Paul could choose between two boxes containing food. These boxes were marked with the national flags of the teams for the forthcoming match. The team of the box chosen by the octopus was therefore expected to win the game.

At the same time, *Mani*, a parakeet from Singapore, appeared in the news. His predictions for the quarterfinals all came true, but he failed in the finals. Mani used a simplified method of cartomancy, he chose between two equal cards, flipped the card over and on the back of the card was the flag of the nation that was supposed to win.

A crocodile named *Dirty Harry* picked the winning candidate in the Australian elections in 2010. At different times other animals such as sheep and horses have also been popular as psychic animals. Historically, the shells of tortoises were used in traditional Chinese religion and the Western classical world employed augurs to interpret the will of the gods by observing the flight of birds.

Flipping a Coin

¹²⁹ "Paul the Octopus." *Wikipedia, the free encyclopedia*, Wikimedia Foundation, 13.03.2013, <http://en.wikipedia.org/wiki/Paul_the_Octopus#Paul_II>.

The flip of a coin is seen in many current movies, in particular in the manipulation of a neutral tool to expedite decisions. For example, the character Two-Face uses his Peace Dollar in the movie adaptations¹³⁰ of the comic series Batman.¹³¹



Ill. 50: Donald Duck as flipper practices Flipism

As well, the protagonist Geoff Carter in *Only Angels have Wings*¹³² ensures the right result to his questions by using a two-headed coin. Another example is in *Mr. Nobody*, in which the main character *Nemo* relies on the Yes or No of his prepared coin after he has achieved all of his aims in one of his possible lives.¹³³

Famous Disney-comic strip artist Carl Barks proposed the term *Flipism* in the comic *Flip Decision*¹³⁴ after Donald Duck is advised by Professor Batty to flip a coin at every crossroad of life and become a Flipist.

Foreseeing the Future

It is often believed that in the moment of decision making, past, present and future merge: in the actual moment of choice, we remember past decisions and project them into the future, wondering how everything could evolve from the actual moment.

Dan Graham's variations in his closed circuit installations *Time Delay Room* (1974) play with this perception, although he did not obviously relate the work to decision making. It rather points to the short-term memory of the observer, who at the same time becomes the observed and plays with the perception of past, future and

¹³⁰ Nolan, Christopher, *The Dark Knight*, USA, 2008.

¹³¹ Kane, Bob, *Batman: The Crimes Of Two-Face*, Detective Comics, vol. 66 (New York, NY: Detective Comics, Inc., 1942).

¹³² Hawks, Howard, *Only Angels have Wings*, USA, 1939.

¹³³ Dormael, *Mr. Nobody*.

¹³⁴ Barks, Carl, "Donald Duck: Flip Decision." *Walt Disney's Comics & Stories* N°149. 1953.

present and as well, representation and reality. A mirror the size of the wall in the installation reflects the present moment, while a video camera records what has happened immediately before. It plays this back on a monitor with eight-seconds delay. Art historian Gregor Stemmrich explains:

The time lag of eight seconds is the outer limit of the neurophysiological short-term memory that forms an immediate part of our present perception and affects this “from within.” If you see your behaviour eight seconds ago presented on a video monitor “from outside” you will probably therefore not recognise the distance in time but tend to identify your current perception and current behaviour with the state eight seconds earlier.¹³⁵

If we could see into the future in the same way, we memorise and be able to capture the past, it might be easier to decide or it might possibly increase the difficulty, if our goals are not perfectly fixed. Many important leaders in history employed an augur or a seer to guide them in their responses to major questions. And even today, clairvoyants are still in business. With tarot, for example, the range of interpretations can be wide, but the cards help to reflect problems and mirror our subconscious as guidance in order to define our preferences.

Another ancient form of prediction is the well-known Delphic Oracle, embodied by Pythia,¹³⁶ priestess of Apollo, who delivered riddling responses to a wide range of questions.

¹³⁵ Stemmrich, Gregor, *Dan Graham*, Friedrich Christian Flick Collection (Köln: DuMont Buchverlag GmbH, 2008).

¹³⁶ Seyffert, Oskar, *Dictionary of Classical Antiquities*, eds. Nettleship, Henry and Sandys, J. E. (London: S. Sonnenschein and Co, 1894), p. 175.



Ill. 52: "Divination Corner" close to the Tin Hau Temple in Hong Kong, 2011

The Bible and Divination

It might be surprising that divination methods, mentioned in some parts of the Bible as possible methods for making decisions, are condemned in others. In the Old Testament, the consultation of augurs and prophets was common. Therefore the response of Christians is split into different factions ranging from the highly conservative (those who see in divination an abominable practice) to liberal Christians, who tolerate and even agree with these methods.¹³⁷ Reading the Bible as a historical text, this ancient source describes divination methods as nothing unusual.

2.2.3.4. Personal Research into Divination

¹³⁷ The Urim and Thummim, are mentioned in the English Bible (NIV) as a helper to decide in Numbers 27:21 and 1 Samuel 28:6. Urim and Thummim appear at seven different passages in the Old Testament. Whereas the German translation by Martin Luther does not mention these Hebrew words at all; Luther usually referred to light, justice or power. The precise meaning and usage of Urim and Thummin is not provided. They were possibly some kind of stones used for divination, which have been carried in the breastplate of the high priest; although this could be as well just a symbolical meaning.

In Ezekiel 21:19-23, The King of Babylon is supposed to come to a fork in the road and shall use a variety of divination methods, to decide which road to take: "He will cast lots with arrows, he will consult his idols, he will examine the liver." The lot suggested him to go towards Jerusalem.

On the other hand, in Deuteronomy 18:10-12 occult practices are highly condemned: "Let no one be found among you who sacrifices their son or daughter in the fire, who practises divination or sorcery, interprets omens, engages in witchcraft, or casts spells, or who is a medium or spiritist or who consults the dead. Anyone who does these things is detestable to the LORD; because of these same detestable practices the LORD your God will drive out those nations before you".

While travelling to or from Australia and laying over in Hong Kong on the way to Sydney, my curiosity was stimulated to examine various divination methods as an aid for decision making. This eventually led to two works, *Blank Chance* and *Is it in my Hands?* I visited an area close to the Tin Hau Temple¹³⁸ near Temple Street in Kowloon, which I later designated as *Divination Corner*, in order to understand how fortune tellers work. While Buddhism is concerned with the afterlife, Taoism is a folk faith whose devotees believe in luck and in soliciting its favour. The fortune tellers are therefore usually found at Taoist temples. Tao, essentially, is the way of the universe, the spirit of all things, which cannot be perceived.

The Divination Corner was empty before five in the afternoon, but around sunset many little plastic tents in bright colours were erected and decorated with symbols of palmistry, numerology and tarot.

Initially I was afraid to consult a stranger about my life, so I asked a lady about the style of tarot deck she used, but she did not understand and guided me to the palmist Michael Chen. He looked very serious and wise, a friendly, elderly man. I asked him the price and learned that one question costs 50 H\$ and the whole palm 150 H\$. He agreed on his voice being recorded, but I felt strangely reluctant to find out about my life from an outsider. So I returned to him later that night and decided to ask one particular question: whether I should remain an artist or would it be better to change my profession to something



Ill. 53: Palmist Michael Chen and Elke Reinhuber's right hand, Hong Kong, 2011

¹³⁸ Tin Hau (天后), goddess of the sea and protectress of fishermen.

else.

He took my right hand, looked at the endless network of forking paths in my palm, firmly squeezed, squashed and stretched it, investigated my facial features as well: my eyebrows and in particular my nose. Finally he guaranteed that everything should be good after few years.

My initial idea was to have my palms read by different palmists, in regard to this single question. Hoping for various interpretations, I had to accept that only a few of them spoke English understandably and also agreed to be recorded. For that reason I decided to pose my question to practitioners of *I Ching*, numerology and tarot.

Around 10 pm, the place was crowded, the street was filled with blinking booths, which had not been there before. Linda offered me the sticks for 30 H\$ and I became curious. I had to write my question down, she asked for my birthdate, looked it up in a peculiar book with lots of numbers and provided me with a bamboo receptacle containing sixty-four numbered sticks from which I was supposed to pick one.

Number 38 was written on the one I randomly selected and Linda again consulted one of her books. I wondered if the sticks referred to the oracles of the *I Ching*, and learned that there are some similarities and yet it is different. Linda's advice was to work with the right people, those born in the year of the horse, although the year of the tiger seemed to be promising as well. If all failed, the year of the pig would do. She agreed with Michael that all would be



Ill. 54: Tarot-card reader Brian Wong and tarot cards, Hong Kong, 2011 prediction, Hong Kong, 2011

good in the near future, that is from 2014 onwards. So did Brian Wong, who advised me by reading the tarot cards. He shuffled the cards on a table covered with purple velvet and piled them together. I was supposed to cut the pile, then he dealt the cards in a semi-circle in front of him, just like in movies as in the beginning of Agnes Varda's *Cleo from 5 to 7*.¹³⁹ I was supposed to pick five of the cards and flip them over. Their faces showed the Three of Coins, upside down, the Seven of Cups, The Hanging Man, the Strength and, again upside down, the Emperor. Regrettably, Brian did not explain the meaning of the single cards since they needed to be seen in unity to answer my question. Brian suggested I take a break: I should not worry and should think of something else, because everything would be fine in the coming years.

Although the responses to my particular questions were all similar in some ways, I related most of all to the reading of the palmist, who advised me to make rational choices; not only because he appeared to be an elderly wise man, but mainly because of my impression in that moment that it was truly written in my hands: these were my lines and not any random cards or sticks from which I was drawing.

After this experience I wondered, if my future is written in my hands and since I have the freedom to make my own choices, should not the lines of my hands change according to my decisions? This is what I tried to explore with my work *Is it in my hands?*

2.2.3.5. Fortune telling in the Arts

Looking at cultural differences, it is not surprising to see how Asian countries deal with divination. Fritjof Capra gave a brief insight for Westerners into Zen and Buddhism in

¹³⁹ Varda, Agnes, *Cleo from 5 to 7*, France, 1961.

his book *The Tao of Physics*.¹⁴⁰ As well, Swiss psychologist and originator of synchronicity Carl Gustav Jung tried to explain the *I Ching* in his foreword to Richard Williams's translation of the *Book of Changes*.¹⁴¹ Coming from a Western background, it is intriguing to observe the popularity of divination methods in Asian countries.

Initially, I was expecting to encounter hugely different interpretations of my question, like the many points of view in the movie *Rashômon*¹⁴² or responses similar to the different angles of the photographic images in the series *Exposures* that were shot by Barbara Probst.¹⁴³ Yet I was keen to gain some more perspectives about myself, to get some further hand-readings, which is what I then explored in *Is it in my Hands?*

At the same time, in 2011, German artist Clemens Wilhelm investigated this experience in his work *Read Me*.¹⁴⁴ He asked four Chinese fortune tellers to read his left hand. He noted, regarding his work, that the Chinese description and idea of a good, happy and rich life might differ from his ideals. In Wilhelm's exploration, he questioned whether he should believe in it and how much of the interpretation was his own projection.

In his work *Telemistika*,¹⁴⁵ Christian Jankowski asked five fortune tellers from Italian cable TV about his success or failure at the Venice Biennale in 1999. In my opinion, this was a rather superfluous investigation, as an invitation to the Biennale could be observed as a success in any case, no matter how critics perceived his work.

¹⁴⁰ Capra, Fritjof, *The Tao of Physics* [1975], 4th ed., (Boston, MA: Shambala, 2000).

¹⁴¹ Jung, Carl Gustav, "Foreword to the *I Ching* [1949]." *I Ching* (London: Routledge, 1969).

¹⁴² Kurosawa, Akira, *Rashômon*, Japan, 1950.

¹⁴³ Further explanations follow in the section 4.2. Pluriverse and the Best of All Possible Worlds: Experiencing Counterfactual Thoughts.

¹⁴⁴ Wilhelm, Clemens, *Read Me*, 2011, Chongqing.
<<http://www.clemenswilhelm.com/readme.html>>.

¹⁴⁵ *Ibid.*

French conceptual artist Sophie Calle also explored fortune telling in her art practice. She consulted fortune tellers early in her work, in *Douleur exquisite*. (Exquisite Pain)¹⁴⁶ Calle sought advice with a palm reader in Japan about her ex-partner on her “46th Day to Unhappiness” (the single episodes in her work are stamped with the day referring to her separation, a countdown from 92 days to unhappiness.) Unfortunately, instead of a satisfying guidance, she experienced language difficulties.¹⁴⁷

In her more recent work *Prenez soin de vous* (Take Care of Yourself)¹⁴⁸ a clairvoyant appears among the 107 women she consulted after the end of another relationship. In 2009, Calle asked the fortune teller Maud Kristen for her project *Où et quand? Berck/Lourdes* (Where and when?)¹⁴⁹ to prepare a travel itinerary according to the advice of the tarot cards. Her first destination was Berck in France. From there, Sophie Calle checked the advice of the cards by telephone, which led her to Lourdes. She gave her life and her decisions during the travels into the hands of Mme Kristin’s reading of the tarot cards.

Although they are not related to guides for decision making, I would like to mention in brief two aesthetically extraordinary artworks which refer to the fragility, vulnerability but also preciousness of our palms.

In her work *Homeland*, hologram artist Paula Dawson emphasises the lifelines of a number of palms with red colour and converts the casts into a 3D map of an unknown terrain in shades of green, using a technique similar to the holographic maps applied in

¹⁴⁶ Calle, Sophie, *Douleur exquisite*, [Exquisite Pain] (Arles: Actes Sud, 2003).

¹⁴⁷ King, Homa, “The Lost Girls.” *Lost in Translation: Orientalism, Cinema, and the Enigmatic Signifier* (Durham, NC: Duke University Press, 2010).

¹⁴⁸ Calle, Sophie, *Prenez soin de vous*, 2007. 52nd Venice Biennale, French pavillion.

¹⁴⁹ Calle, Sophie, *Où et quand? Berck/Lourdes*, 2008. Galerie Perrotin, Paris.
<http://www.arndtberlin.com/website/page_11829>.

military operations. Dawson described in an interview the tiny fragments of our surroundings in our palm lines, which capture the treasured experiences and secrets that shape each of us and reveal where we are from.¹⁵⁰

Before Arte-Povera artist Guiseppe Penone¹⁵¹ had his big success by erecting disturbing bronze trees in various public spaces,¹⁵² he explored the nature and fragility of skin in some of his work. With *Guanto* (Glove, 1972)¹⁵³ Penone turned a thin latex coating of his left hand over and put it on his right hand like a glove. The resulting photograph presents us with two hands: the left hand and the right with the same fine papillary lines, but as a positive relief, matching the negative impression of the lines of the real left hand.



Ill. 56: Guiseppe Penone, *Guanto*, 1972

Evolving from this context of artworks that deal with palms and palmistry, I went one step further and explored fortune telling in our digital age with a counterfactual approach – by consulting not just one source of guidance in my work *Is it in my hands?*

2.2.3.6. Is it in my Hands?

¹⁵⁰ Gough, Myles, “Arts: Lifelines.” *Uniken* 66 (2012), 13.03.2013
<<http://uniken.unsw.edu.au/regulars/arts-lifelines>>.

¹⁵¹ Leonhard, Karin, “InsideOut.” *Maßlose Bilder . Visuelle Ästhetik der Transgression*, eds., Reichle, Ingeborg and Siegel, Steffen (München: Wilhelm Fink Verlag, 2009).

¹⁵² For example, as seen at Documenta 13, Auepark Kassel: Giuseppe Penone, *Idee di Pietra* (= Ideas of Stone), 2010.

¹⁵³ Penone, Guiseppe, *Guanto*, 1972. Edizioni Multipli, Turin.

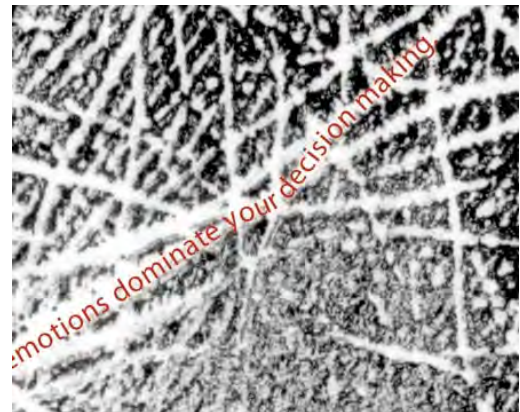


Ill. 58: Elke Reinhuber, *Is it in my Hands?*, installation at HfG Karlsruhe, 2012

Nowadays, classic fortune telling is an endangered tradition. As some Asian newspapers stated in 2012, the next generation to become professional soothsayers will experience tough competition.¹⁵⁴ The reason lies in the ease of access to digital media. At the Wong Tai Sin Temple, it is already possible, for example, to have the future predicted

by an iPod app offered by the temple itself. Although it is regarded sceptically and will presumably not reach an elderly clientele, soothsayers in particular are convinced that to predict an individual's future more is needed than just a number written on a fortune stick.¹⁵⁵

Palm readers have also migrated from their tents to smartphone applications. By basing their prophecies on a photograph of the palm, the competing programs can, courtesy of occult algorithms, automatically make assessments about the future life as well as the personality of the client.



Ill. 59: Elke Reinhuber, *Is it in my Hands?*, detail, 2012

¹⁵⁴ Rejeesh, K. R., "Art of parrot predictions on verge of extinction." *Deccan Chronicle* (2012), 13.03.2013 <<http://www.deccanchronicle.com/120926/lifestyle-astrology/article/art-parrot-predictions-verge-extinction>>.

¹⁵⁵ "Two people can get the same stick, but it would mean different things to them," the Hong Kong daily quoted a soothsayer as saying. She explains that many other factors such as year of birth, day and the weather on that day have to be taken into account: "We have studied for many years in order to qualify for this role. That cannot be replaced by a machine."; vid. "HK temple fortune-tellers cynical of divination app." *asiaone Science & Tech* (2012), 13.03.2013 <<http://www.asiaone.com/News/Latest%2BNews/Science%2BAnd%2BTech/Story/A1Story20120122-323402.html>>.

My work *Is it in my hands?* asks if our life is predetermined, or whether we have it in our own hands to determine what might happen to us. Should that be the case, making significant decisions would also mean leaving visible marks on our palms. For this evaluation, I began in 2011 to make handprints of both of my palms. Initially it was a daily routine; later on I continued with a monthly print, because the differences were not very significant, depending mostly on my mood at the time and some external influences such as cold, warm or dry hands.

Starting from these prints, I downloaded twelve different iPod applications¹⁵⁶ for palm reading in German and English. Most of them required capturing an initial image of the hand and were deciphered from the photograph, based on relevant features like the shape of the hand and fingers as well as lines and mounts. Others suggested a variety of systemic features, such as the shape and length of the life line; I had to choose the type that best resembled mine. To my personal surprise, many of the apps were similar in their interpretations and I often felt identified, sometimes even as if looked through.

Presumably the readings are based on the *Barnum effect*¹⁵⁷ – which implies that there is something with which everyone can identify, even if it is vague and imprecise. Nevertheless, I felt like revealing an intimate portrait of myself, being stripped and



Ill. 60: Elke Reinhuber, *Is it in my Hands?*, artist book, 2012

¹⁵⁶ *Magic Palm Reader*, Pocket Apps Canada Inc.; *Palm Reader: Amazing character reading*, Mango Technologies; *Palm Reader Guide* by Movisol; *Palm Reading Booth*, Best Free Apps and Games; *Palm Reading for Lover*, Martview.com; *Palm Reading*, Horoscope.fr; *Palm Reading Scan*, Squirrel Apps; *Palm Reading Secret*, ipmart.com; *Palmistry*; *FSXcodePalmReader Lite*, iCOOLgeeks; *Handleser X*, CreaTion; *Chiromancia*, Remy Cutard.

¹⁵⁷ The Barnum effect, also known in psychology as Forer effect, is named after the circus director Phineas Taylor Barnum, who claimed “we’ve got something for everyone”.

exposed when showing my hands or the prints to someone else during the period of time I was working on this project.

Along the appropriate lines of my printed hand, I disposed the evaluations suggested by the different apps on large format images. This series comprises twelve pictures with various readings of the same hand, hugely enlarged to the size of 84 by 126 centimetres. The interpretations of the automatic palmistry applications are written in red letters along the lines of my hand or around significant shapes, for instance the form of my thumb. These lines are hardly recognisable from a distance but easily readable close up, which underpins the intimate aspect of the work. The name of the application I used for each print was also written in the corner of the right bottom. The images were printed on *Tyvek*, a synthetic and extremely durable material that resembles traditional Chinese paper, and the applied ink had the appearance of analogue relief printing.¹⁵⁸

The work is accompanied by an artist-book similar in style to my all-time favourite book by Raymond Queneau *Cent mille milliards de poèmes* (A Hundred Thousand Billion Poems),¹⁵⁹ which I will discuss in Chapter 3. *Wind Back the Film of Life*. My book contains one page for each of the applications used and is divided into five sections: life -line, heart-line, head-line, fate-line and hand shape. The single sections are individually cut and bound and can therefore be combined in different ways, similar to the *flip-flap* books for children, in which the elephant might have the body of a crocodile and the feet of a chicken. In this manner, the results of all the applications can be combined into 5^{12} [244.140.625] slightly different variations of my personality. In this exploration, the book has a counterfactual element, at least for

¹⁵⁸ Océ® *CrystalPoint*™ technology.

¹⁵⁹ Queneau, Raymond, "Cent mille milliards (100.000.000.000.000) de poèmes." *Œuvres complètes*, [A Hundred Thousand Billion Poems], vol. 1 (Paris: Éditions Gallimard (Bibliothèque de la Pléiade N°358), 1989).



Ill. 57: Elke Reinhuber, *Is it in my Hands?*, series of daily handprints, 2012

myself on a personal level, which presumably is not recognisable for the general public who are not familiar with my persona. For them, it is just a series of possible combinations for any individual. For my acquaintances and myself, it is an exploration and combination of possible

me's of which some are true and some might be wrong.

Is it in my hands? was shown in two different venues by the time of writing, organised by German photographer Frederik Busch. The first show, *EgoCandy*, was installed in the former villa of a sweets magnate from the 1920s in Karlsruhe. Four of the images were mounted on the wall of the small maid's room, with red carpet on the floor, matching the colour of the printed text. This location provided a beautifully intimate atmosphere that allowed the visitors to be close to the images, to focus and compare the written texts.

The second set-up was completely different, although the approach of the visitors towards the images was similar. The next show took place in the huge hall of the former ammunition factory in Karlsruhe which today accommodates a number of institutions: the ZKM,¹⁶⁰ the MNK¹⁶¹, and the HfG.¹⁶² Here, the prints were lowered from a suspended ceiling, freely moving in the breeze of opening doors and passers-by. Despite the open location, visitors went close to the images, reading the lines in my enlarged

¹⁶⁰ Centre for Art and Media, Karlsruhe.

¹⁶¹ Museum of Contemporary Art, Karlsruhe.

¹⁶² State University of Design, Media and Arts, Karlsruhe.

hands and investigating their own palms simultaneously, as if my personality and future might fit as easily into their hands.

Palmistry is also a part of my main work in the section in which I focused on decisions and in articular divination methods: the multi-screen video installation *Blank Chance*.

2.2.3.7. Blank Chance



Ill. 63: Elke Reinhuber, *Blank Chance*, tableau with film-stills, 2011

There is no ultimate guide for a perfect decision. Even if we have all the knowledge and experience in the world, we do not know which situations we will be confronted with in the future.

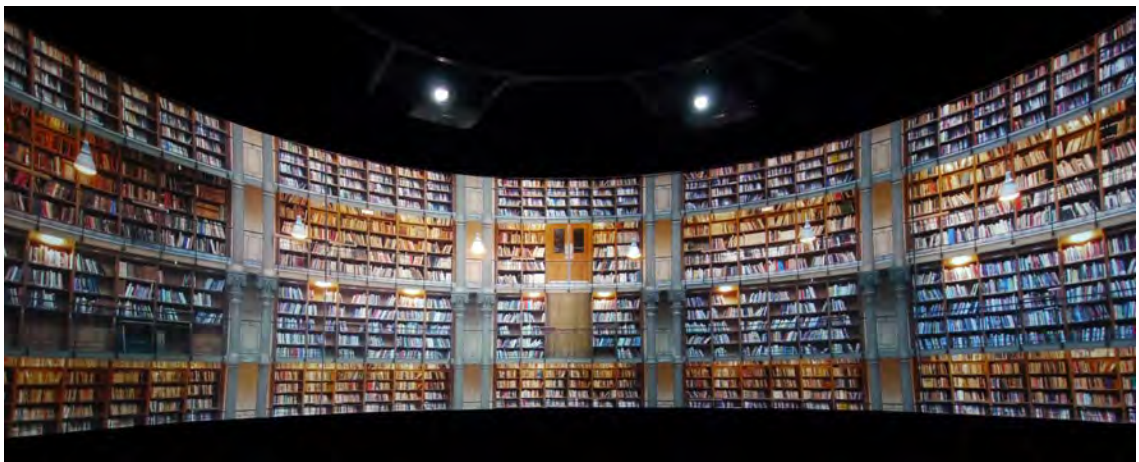
From my personal perspective, I appreciate the choice, the state of having different options, the timespan before we finalise a decision. All possibilities are still available just before we have to eliminate the others. At the same time, I try to make rational choices, but the emotional part is usually stronger. And although a long list

with all positive and negative aspects might be there, all of a sudden my gut feeling tells me what to do.

Even though I argued earlier on how useful it can be to use divination methods in order to reflect our subconscious wishes, at the same time I would like to criticise them. They are not a solution for most kinds of decisions, therefore I agree with Sigmund Freud's suggestion, as quoted by blogger Dante Velasco:

I did not say you should follow blindly what the coin tells you. What I want you to do is to note what the coin indicates. Then look into your own reactions. Ask yourself: Am I pleased? Am I disappointed? That will help you to recognise how you really feel about the matter, deep down inside. With that as a basis, you'll then be ready to make up your mind and come to the right decision.¹⁶³

My initial intention for the project was to film at the old Richelieu building of the Bibliothèque nationale de France in Paris. This building was empty during my application for a residency in Paris, undergoing major refurbishments. As a reference to the portrait of the library in Alain Resnais' famous documentary *Toute la mémoire du*



Ill. 62: Elke Reinhuber. Homage to Jorae Luis Borae. panorama lab. ZKM Karlsruhe. 2012

¹⁶³ Velasco, Dante, "Narrowing your choices, and making up your mind." *Executive Read* (Manila: 2001.)

monde, it symbolises all the knowledge of the world – which would not usually help us to make life-changing decisions.

With its bare shelves during renovations in 2010, the library bore an apocalyptic atmosphere, which at the same time, is ludicrous.

In this work, I intended to emphasise the absurdity and difficulty of making decisions, in particular making decisions by chance. Different ways of staging bizarre random actions could have been used in various parts of the library; like for example gambling dice or tossing coins, whatever might be of help to make up one's mind.

Since the library was empty for refurbishment, all the archived “knowledge” was removed, as it can be seen in the photographs and two-channel projection *Toute la mémoire du monde* (The world's knowledge)¹⁶⁴ of German artist duo Nina Fischer and Maroan el Sani. It would have been the ideal location for a virtual reality photography production including video material. In this panoramic 360° moving image, several chance operations would have occurred simultaneously in different places, farcical and absurd in their own way. So, for example, two people could have been throwing blank dice, others flipping a coin with two similar sides, tarot cards – all of them blank – would have been read in a similar way to the frightening dream in Hitchcock's *Spellbound*.¹⁶⁵ Assembling the cast might have been another task for my project. I intended to look for people who appeared educated but desperate, and simultaneously as if they had been living for a long time behind bookshelves, covered with dust. This would have added an ominous feeling to the whole project.

¹⁶⁴ Fischer, Nina and Sani, Maroan el, *Toute la mémoire du monde*, 2006. Galerie Eigen und Art, Berlin.

¹⁶⁵ Hitchcock, Alfred, *Spellbound*, USA, 1945.

In summer 2011¹⁶⁶ when I arrived in Paris, the library was filled with books again, back to normal operation. Therefore, I was not permitted to film in the library but granted at least one hour for capturing stills before the operating hours in the famous *Salle Ovale*. As a result, I adjusted the panoramic photograph of *Salle Ovale*, which I managed to capture in the hour before the library opened, for a projection in the 360° environment of ZKM and iCinema in 2013. The slowly upwards-moving image generates an illusion for the audience of descending into an endless tube of book shelves. In this endless, all encompassing view of a huge library the eyes can find no halt in the abundance of stored knowledge. The disorientation in time and space is enhanced



Ill. 64: Elke Reinhuber, showcase with objects used in *Blank Chance*, installation view at *Decisions – A User's Manual*, 2011

through a spatial audio composition, a soundscape of diverse ticking clocks, accumulating in the crescendo of a chiming clock. With its physical impact, the work emphasises the void of the here and now. Entitled *An experiment with time [Homage to J.L.B]*, it refers to the great influence, which Jorge Louis Borges had on my artistic research.

Nevertheless, the initially proposed work remains a concept, and I can reflect with counterfactual thoughts, wondering how it would have evolved if I had gone there earlier and would have been able to capture what I intended.

¹⁶⁶ The European summer, that is the July-September trimester.

As a result, I separated the divination methods from the location. My film installation *Blank Chance* became a series of meditative moving images without having an obvious narration – and for *Decision Values*, I pictured decision-relevant locations, mounting them in elaborate grids.

Various divination methods are visible in slow motion, separated from any contextual reference. My own hands, in front of black background explore different auxiliaries for making decisions. But in the end, they do not lead to a result nor support the process of choosing, but emphasise the importance of well-reflected decision making – it cannot be sufficient just to flip a coin.

For the five scenarios, I chose palmistry, dice, the flip of a coin, tarot and fortune sticks. The duration of each clip is between twenty seconds and one minute. An endless on-going *I Ching* was additionally intended, but did not become part of the series due to the final arrangement of the single clips.

In each sequence, the divination method did not result in a conclusive choice: the flipped Euro coin was blank on both sides, the fortune sticks did not have any numbers or signs written on them, all of the tarot cards



Ill. 65: Blank 2-Euro coin as used in *Blank Chance*

flipped over were white, the dice had no pips and even the hand did not show any lines.

The moving images were recorded in high resolution¹⁶⁷ and desaturated. Due to recording in slow motion (120 frames per second) it was necessary to add audio retrospectively. Initially, I experimented with different compositions and sounds, for

¹⁶⁷ Ergo, I would like to thank in particular Prof. Uli Plank at the Institute of Media Research (IMF) at the University of Fine Arts Braunschweig, for supporting me with the possibility to record with the institute's *RED One* digital cinema camera. I also thank Sebastian Pelz and Andreas Melcher for their assistance.

example an enhanced sound of tectonic plate movement, but in the end I came back to recordings of the actual audio. This was possible in the sound studio of HfG Karlsruhe with two excellent small-diaphragm microphones.¹⁶⁸ These recordings were enhanced and delay-processed, in order to make even the touch of the finger on the palm audible.

An appropriate form for presentation was the next challenge. I was not confident about showing one clip after the other. Due to the lack of sufficient projectors or screens, at my show in Paris I exhibited only stills and – what became most important in the whole process of development – the ritual objects. All of them were arranged in a glass showcase on red velvet or in special cases just as valuable jewellery would be displayed.

During my exchange semester in Karlsruhe, I explored a presentation at the panorama lab, which I had initially considered to be unconvincing. The hugely enlarged hands appeared extremely frightening with their pathetic gestures, all reaching for the audience simultaneously and generating a claustrophobic atmosphere. Therefore, I refrained from a simultaneous showing of all five sequences, but still considered it as important to immerse the viewer in the images.

For the structure of the piece just two, or sometimes three sequences are visible at a time, the other sections remain dark. In this manner the situation in the immersive environment is less frightening, but still profoundly intriguing. Although this work focuses on chance operations as the decision making process, the form of presentation adds a counterfactual element. The sequences are, even though in slow motion, rather short and the result is usually introduced with a sound that complements it, such as a

¹⁶⁸ With a set of *Neumann KM 184 MT*, thanks to Frank Halbig, head of media-arts/sound at HfG.

falling coin or the turning of a card. As a result of this elaborate arrangement, there is a fifty-fifty chance that the sound will appear behind the back of the audience and shows that a significant moment could have been missed. In this manner, the audience might develop counterfactual thoughts in regard to their viewing direction, such as “I should have been looking in the other direction...”

In this work, I investigated divination methods as a guide for decisions. At the same time, I became curious about gathering evidence in regard to what is going on in our brain during the making of a decision., I documented my research in the video *Decisions with 3 Tesla*.

2.2.3.8. Decisions with 3 Tesla

As a consequence of my research into the motivations and methods of making decisions, I was still not satisfied and wanted to know what happens in the brain, and whether it can be visualised using contemporary technologies.

When I was exploring the background of decision making, the research in the field of neuroscience became popular, as it appeared to be the magic key to our inner self, to be able to finally decipher how our body and brain work and interact. The headlines in science-magazines and books grab our attention with teasers like “Our brain knows what we opt for already seconds before we decide consciously”¹⁶⁹ and other intriguing assumptions.¹⁷⁰

¹⁶⁹ Soon, Chun Siong, Brass, Marcel, Heinze, Hans-Jochen and Haynes, John-Dylan, “Unconscious determinants of free decisions in the human brain ” *Nature Neuroscience* 11 (2008).

¹⁷⁰ Libet, Benjamin, Freeman, Anthony and Sutherland, J. K. B., eds., *The volitional brain: Towards a neuroscience of free will* (Exeter: Imprint Academic, 1999).



Ill. 66: Elke Reinhuber, storyboard of Decisions with 3 Tesla, 2013

Sam Harris, an American philosopher with a Ph.D. in neuroscience, claims repetitively in his book *Free Will* that our voluntary actions are an illusion with neuroscientific proof.¹⁷¹ In the 1980s Benjamin Libet,¹⁷² one of the pioneers in neuroscience, experimented with *EEG*¹⁷³ measurements and declared that conscious decisions are based on subconscious activity of the brain.

In my personal hope for the existence of Free Will and the freedom to make our own choices in life, I felt the desire to consult specialists who research in the field of neuroscience and decision making. Additionally, I wanted to discover for myself how their experiments are executed and what is actually visible in my brain. Therefore I participated in a study about decision making for portfolio investments.



Ill. 67: Elke Reinhuber, installation view, Decisions with 3 Tesla, in Machine Vision, ZKM Karlsruhe, 2013

At D.I.N.E. – the Dahlem Institute of Neuroimaging of Emotion – the fMRI¹⁷⁴-scanner works with a magnetic force of three Tesla, twenty thousand times of the earth's

¹⁷¹ Harris, Sam, *Free Will* (New York, NY: Free Press, 2012), pp. 1, 5, 15, 18, 53, 61, 62, 64.

¹⁷² Libet, Freeman and Sutherland, eds., *The volitional brain: Towards a neuroscience of free will*.

¹⁷³ Electroencephalography.

¹⁷⁴ Functional magnetic resonance imaging.

magnetic field. Situated in the social sciences department of Berlin's Free University, it is employed to record hemodynamic brain activity in response to language and emotion-relevant situations, which are evaluated as the accounting unit for all cerebral processes. I interviewed researchers from different disciplines including psychology, psychiatry, sociology and neuro-economics on the subject of what is visible in the brain while it is in the process of choosing. Prof. Dr. Hauke Heekeren, Chair of Affective Neuroscience in the Psychology of Emotion and Head of the Max-Planck-Research-Group "Neurocognition of Decision Making" (until 2010) distinguishes between social-, cognitive- and reward-based-decisions. The latter are the easiest type of decisions to research. The well-thought-out decision, which resembles decision making in the common sense, such as life-changing choices about a profession, a partner and other major components of life, are most difficult to study in the artificial environment of the laboratory.

In my twenty-minute-video *Decisions with 3 Tesla*,¹⁷⁵ the visuals provide a point of view on the research other than the aural component: my experience as a participant in the experiment contrasts the achievements and goals of the researchers.¹⁷⁶ It starts with my preparations to enter the fMRI cylinder while the scientists describe in the audio layer how the process operates, which signals are to capture and what they are aiming to explore. Once the huge metal door of the scanning room is shut, only a copper-shielded screen allows the view to the scanner. One screen in the laboratory displays the images

¹⁷⁵ *Decisions with 3 Tesla* was part of the project and exhibition *Maschinensehen* (machine vision) and was exhibited at ZKM Karlsruhe, 2013, March 01-May 19, initiated by Armin Linke and curated by Anselm Franke.

The show and publication focused on technological image production, images which are produced by machines, without the subjective view of the photographer – and in particular for the evaluation by machines.

¹⁷⁶ Reinhuber, Elke, "Entscheiden mit drei Tesla." *Maschinensehen*, ed. Felix Mittelberger, Sebastian Pelz, Margit Rosen, Anselm Franke (Leipzig: Spector Books, 2013).

shown to the test person, me, in the tube; another one shows the actual scans of my brain.

During the study, diagrams of possible financial investments were presented to me on video glasses. I had to choose within the span of seven seconds whether I would prefer to invest my money at a solid interest rate of 5% or opt for the variable rate of the displayed diagram. The study consisted of 256 choices in forty minutes and, although protecting headphones and earplugs were provided, the continuous blaring noise from the scanner overshadowed the experiment.

A scan was taken every two seconds, with thirty-six slices of my brain in each dimension. Each resulting voxel of the scan has the size of 4 by 4 by 4 millimetres and shows the activity in my brain's blood vessels, compared to a stationary phase, in which no decisions were made. For the final result, all scans were put in order and compared, to note the areas of higher activity, a process which even now takes several days to compute. I learned that it is not possible to achieve, for instance, a visualisation of counterfactual thinking, but areas or rather networks in which rumination occurs, or areas which are more active while a decision is made. For example, the *striatum* is a section that is highly active in the context of rewards. My personal experience, which I tried to express from a neutral point of view in the video, differed from the description of the experiment by the scientists. During the study, I realised that it was not possible for me to focus on my virtual investment (although I was tempted to earn five Euros) in case my speculations were successful, which they were not. Too many other thoughts were bothering my brain. Did I understand the task correctly? Could the tube explode? What is the real aim of this research? And many other thoughts entered my mind,

enough to provide sufficient material for a whole run of episodes for a science-fiction show on television.

To me, neuroscience appears to be a powerful science for understanding non-invasively what is happening in our brains, but I dare say that it is still at its beginning and would not trust the affirmations in popular media. I would suggest, in particular, that the research scenarios need to be worked on, they should be more immersive and not just partially cover the visual but all of our senses, in particular our olfactory and acoustic senses.

2.2.4. Concept for a Counterfactual Artwork: Your Day Will Come!

As a result of my practical research to this point, I ascertained the essentials for a counterfactual artwork and will describe the concept of a work in progress.

In order to stimulate and evoke counterfactual thoughts, at least one of the subsequent requirements needs to be fulfilled:

- The audience should be comfortably immersed in the work.
- The complete work must not be grasped at once.
- The audience should make choices and be aware that the neglected alternative would have led to another outcome.

With the concept for *Your Day Will Come*, the above-mentioned criteria will be examined thanks to the possibilities of stereoscopic 3D video (S3D) with 3D gesture recognition and interaction in a movie narrative.

The plot is a daily routine. As no one knows what will happen over the course of a day, chances are taken or opportunities missed because the twelve hours of the day (compressed in few minutes movie run-time) offer a lot of choices.

A day like every other day – the alarm clock rings, one gets dressed, sips a cup of coffee before leaving the house – but then? The advancement of the story depends on the participation of the viewer. Will the spectator become part of a love story, of a detective story – or will the day just pass by with the viewer staying in bed? Whatever happens over the course of one day, the movie ends with the protagonist falling asleep.

The sequence of events is initiated by a member of the audience, with the aid of simple gestures, while watching the movie. Little movements, like turning the head or lifting an arm designate the user to be the protagonist in the movie, the good guy or the villain, the one who moves the story along. The plot is not supposed to be connected to

III. 68: Structure for Your Day Will Come!, 2012

a particular period or place, rather it should be emphasised that the possibility of parallel times, detached from space, exists.

The first scenes of the movie were shot as S3D stop-motion film in black and white. The movement of the viewer will be captured by a Kinect™ sensor and analysed in real time. It allows the recording and recognition of 3D gestures using depth images of the sensors with customised software.¹⁷⁷ The unique analytic routines allow not only detection of simple gestures such as pushing, clicking, forming a circle or waving, but also the recognition of complex gestures such as those used in dance performances or sign language. This allows the control of the movie by active as well as passive gestures, which is in stark contrast to all previous user-controlled movies, where only active behaviour (like pushing a “select”-button) could be utilised. In particular the inclusion of “passive user behaviour” allows for a new form of storytelling.

The set-up is a single-channel 3D-projection, preferably with an active or passive 3D projector and glasses. The ideal size would be 3 by 2.25 metres in order to present objects for interaction slightly larger than life and covering the peripheral vision. A Microsoft Kinect sensor would be installed above the screen with the movie running from a CPU.

The aesthetics are reminiscent of a black and white silent movie, so moderate amounts of sound would appear only for feedback. The project would be suitable for any audience. One member of the audience could interact and be fully immersed in the work; the others would become witnesses of the protagonist’s day and the decisions made, raising awareness that little choices can change our life. No two viewers are the same and no one leaving the presentation will have watched the same movie.

¹⁷⁷ *Kinetic Space*, a tool developed by Matthias Wölfel.

2.2.5. Summary

In my artistic research, I examined the essential stages for achieving counterfactual thoughts and explored the requirements for supporting works of art.

In contrast to my work in the past, which was mainly based on my own personal retrospective considerations, I attempted to address an unknown audience. Therefore it was an important step to get reactions in public presentations of my sequenced exhibitions. They followed the order of the human process in developing counterfactual thoughts, beginning with the confrontation of choice, represented by the body of work of *I Know Where I'm Going!*; then decision making in the series *Decisions – A User's Manual* and finally reflecting retrospectively on turning points in life, wondering how another choice could have influenced the present in *Decidophobia*. Despite the significance of this work for my practice-based research, I consider it as a starting point for further explorations deserving the classification counterfactualism. The concept for my work in progress *Your Day Will Come!* unifies my experiences: it is an immersive work, in which the viewer unconsciously or consciously makes continuous choices and is aware of the possible alternatives.

3. Wind Back the Film of Life (Inspiration)

In this section I will give an insight into my sources of inspiration, why and how I began to research on counterfactual thinking in different disciplines, and introduce a new category for fine arts and popular media.

Most of my initial influences emerged from movies and literature dealing with the question of destiny and exploring alternatives for the lives of the protagonists. This thesis will explore different approaches to the methods in which concurrent possibilities can be introduced and explained. I will suggest several categories to describe counterfactual movie narratives, they can also be applied to the fine arts.

At the same time, this research follows a general observation of real life and cultural practice: the notion of substitutes to actual life in virtual worlds and virtual reality gaming, which can be seen as a reason for the rising popularity of forking-path narratives in other media.

3.1. Literature

Many relevant examples of counterfactual ideas appear in fictional literature. As it is a very wide field and my research is focused on visual media, I will only mention a few that I consider to be relevant for my work in the following section. The category of alternate or counterfactual history is mentioned in the section 4.1.1. Historiography, as it describes a whole genre which only focuses on the “what if...” question.

My specific interest in prose is founded in the use of hypertext as an essential background for structures offering retrospective alternatives. Within my research, I claim that the traditional book (which is made from trees) is a highly-interactive form of media, with the possibility of experiencing the flow of reading following an individual

path. This means, for example, reading the conclusion of a detective story right after the crime has happened, or looking at the list of contents and choosing relevant sections.

Apart from everyday usage, there are many possibilities for the ways in which books can be treated: they can be opened; flipped through from the first page to the last; a page can be opened at random (this can be used as well as a method of divination, in particular by consulting the Bible, called bibliomancy); a certain page might be of importance according to the table of contents or index; or the reader might follow a pattern – self-selected or following a suggestion by the author; or the book can remain unopened on the shelf, under the wobbling table or maybe even serve as a coaster. Flipping through a book is still faster and simpler than the equivalent digital experience.

Unless every reader starts at the beginning and reads the book through all pages to the end, the experience of reading differs. This might not be as relevant for novels, since the story usually does not allow many experiments. In the example of a detective story, though, non-linearity might evoke counterfactual thoughts: why did I already look up the outcome?

In the following section, after introducing my personal idol and “godfather” of counterfactual narratives, I will give some examples of books in which the active participation of the reader is expected.



Ill. 1: Elke Reinhuber, I Know Where I'm Going! (Schönbrunn), 2011

3.1.1. Jorge Luis Borges – the Godfather of Counterfactualism

Borges's literary practice is emblematic of the ideas I have developed throughout my doctoral study, in particular my practical work. In his *œuvre*, Borges plays in many of his short stories with complex ideas of the universe – different fantastic and realistic but unbelievable ideas of time, recognition, understanding of life and – of an ultimate counterfactual fiction. In the following, I will give a brief overview of his short stories, which had a particular impact on this body of work.

According to my research, Jorge Luis Borges described the idea of an interwoven text with multiple layers first in 1941, in the short story *The Garden of Forking Paths*:

In all fictional works, each time a man is confronted with several alternatives, he chooses one and eliminates the others; in the fiction of Ts'ui Pên, he chooses – simultaneously – all of them. He creates, in this way, diverse futures, diverse times which themselves also proliferate and fork.¹⁷⁸

Borges explains further in his linear story the event of different simultaneous outcomes of the story of Ts'ui Pên and that “he believed in an infinite series of times, in a growing, dizzying net of divergent, convergent and parallel times.”¹⁷⁹

The poem *Things that Might Have Been*¹⁸⁰ could be considered as a short summary of counterfactual history. Borges describes from his personal point of view several events which could have happened, but leaves the outcome to the imagination of the reader. Other though in *Tlön, Uqbar, Orbis, Tertius*¹⁸¹, where the reader is close to

¹⁷⁸ Borges, “The Garden of forking paths (El Jardín de senderos que se bifurcan) [1941].”

¹⁷⁹ Ibid.

¹⁸⁰ Borges, Jorge Luis, *Der Gedichte dritter Teil, Gesammelte Werke*, vol. 9, 12 vols. (München: Hanser).

¹⁸¹ Borges, *Ficciones*.

believe the serious dictionary-like description of the fictional places. At the same time, he refers to Russell's *Analysis of the Mind*,¹⁸² which conjectures that our planet was created a few moments ago, and has been provided with a humanity which "remembers" an illusionary past. The Italian semiotician Umberto Eco refers to the multiple layers of this short story with the notion that "[w]e are in the presence of a typical Borges invention: the invention of an invention."¹⁸³

In *Circular Ruins*,¹⁸⁴ Borges interweaves fiction and imagination of the protagonist by telling the story of a person who dreams his life and his "real" life apparently happens in his dreams. The descriptions are fantastic and illusionary and the story ends with the sentence: "with relief, with humiliation, with terror, he understood that he was an illusion, that someone else was dreaming him."

This could be seen as a reference to *Through the Looking-Glass*¹⁸⁵ by Lewis Carroll, where Alice exists presumably only in the dream of another character.

Borges plays extensively with reality and fiction. He refers to unbelievable stories of real people like in the vision of time, as devised by J. W. Dunne, an Irish [aeronautical engineer](#) and author, or *The Analytical Language of John Wilkins*.¹⁸⁶ At the same time,

¹⁸² "It is not logically necessary to the existence of a memory-belief that the event remembered should have occurred, or even that the past should have existed at all. There is no logical impossibility in the hypothesis that the world sprang into being five minutes ago, exactly as it then was, with a population that 'remembered' a wholly unreal past."; vid: Russell, Bertrand, *The Analysis of the Mind* (London: George Allen & Unwin Ltd, 1921), p. 203.

¹⁸³ Eco, Umberto, *Serendipities, Language and Lunacy*, trans., Weaver, William (New York, NY: Columbia University Press, 1998), p. 12.

¹⁸⁴ Borges, *Ficciones*.

¹⁸⁵ Carroll, Lewis, "Through the Looking-Glass and What Alice Found There." *Alice in Wonderland. Authoritative texts of 'Alice's Adventures in Wonderland', 'Through the Looking-Glass', 'The Hunting of the Snark'. Backgrounds, essays in criticism*, ed. Gray, Donald J. (New York, NY: W. W. Norton & Comp. (Norton Critical Editions), 1971).

¹⁸⁶ According to my inquiries, the Analytical Language is an invention by Jorge L. Borges based

he invents believable fictional characters. J. W. Dunne, who Borges's readers know from *Time and J. W. Dunne*, affirms in *An Experiment with Time*¹⁸⁷ that all time past, present and future is happening simultaneously and only human consciousness experiences this simultaneity in linear form. Borges's short story *An Examination of the Work of Herbert Quain* evokes the desire to read the books written by this author – but Herbert Quain did not write them; in fact, he did not exist. Following Borges, structurally, Quain's detective story *The God of the Labyrinth* was nothing special, however the retrospective paragraph in the end “[e]veryone thought that the encounter of the two chess players was accidental”¹⁸⁸ made curious readers re-read the book and discover the true solution for themselves.

Most astonishing and therefore revealing is the description of *April-March*, which was supposed to be written by Quain in 1936: it is a novel with nine different beginnings, which are “trifurcating backwards in time” and merge into one ending. This structure of a book is similar to my concept of multiple lifelines in *Your Day will Come!*,¹⁸⁹ although in reverse: Quain's novel starts with nine different beginnings, three middle parts, but ends with one conclusion. A diagram accompanies the book. Borges comments which of the narrative lines results in the best story – according to him it is X9. By doing so, the existence of Herbert Quain becomes even more convincing. The obituary about this deceased writer is also purely fictional. Borges praises his work and describes the idea of the reverse of time – we might remember the future and know nothing about the past.

on the “Mathematical and philosophical works of the Right Reverend John Wilkins,” published 1708 in Amsterdam and Philadelphia, utilised in the story “El idioma analítico de John Wilkins”

¹⁸⁷ Dunne, J. W., *An Experiment with Time* (London: A. and C. Black, 1927).

¹⁸⁸ Borges, *Ficciones*.

¹⁸⁹ See Chapter 2.2.4. Concept for a Counterfactual Artwork: Your Day Will Come!

Dream and reality are interwoven yet again in Borges's short story *The Secret Miracle*.¹⁹⁰ The protagonist, the novelist Jaromir Hladik, is to be executed, but in order to finish his book, time stands still for him for exactly one year.

Christoph Rodiek, the author of a book about counterfactual history, *Erfundene Vergangenheit*,¹⁹¹ understands Borges as an author who paved the path for counterfactual writing. I see Jorge Luis Borges as *the* master for the amalgamation of reality and fiction in the style of a labyrinth, in which the reader can wander between dream and truth on multiple paths and may often awake in the end with an "Ah, that's what it is about!". Since Borges is highly significant for the practical part of this thesis, his influence is described also in the section on my practice-based research.

3.1.2. Hypertext as a Counterfactual Experience

In Hypertext, the concept behind HTML and similar systems allowing cross-referencing, can be seen as an approach to the concept of simultaneous accessible narratives, such as the labyrinthine fiction mentioned in *The Garden of Forking Paths*.

I suggest drawing a line before and after the time when web users began to use "tab browsing" in order to define a change in user behaviour regarding possible counterfactual thoughts. Before tab browsing was common, most readers on the internet experienced how it felt to lose the direct path from the beginning to the end – from the question to the answer – in the labyrinth of hypertext: while perusing text on a website, an interesting link might appear: an exciting sentence and with one click, the attention was completely drawn to the new page before finishing reading the old one.

¹⁹⁰ Borges, *Ficciones*.

¹⁹¹ Rodiek, Christoph, *Erfundene Vergangenheit: Kontrafaktische Geschichtsdarstellung (Uchronie) in der Literatur* (Frankfurt am Main: Vittorio Klostermann (Analecta Romanica, 57), 1997), p. 13.

And then it could happen again – another distracting link, and in the end it was difficult to follow the flow of pages. It took a certain while for the pages to appear on the connected device; therefore quickly jumping back to the previous page was time-consuming.

Nowadays, just another tab opens. This means that it is possible to stay focused on the actual page and still obtain the additional information which the link provides. In his book *Hypermedia and literary studies*, George P. Landow, a pioneer in the theory of hypertext, describes it as a text attacked with scissors, which is possible to rearrange according to different needs, whereas the text in a printed book is flat.¹⁹² In the 1920s the Dadaist movement, in particular Tristan Tzara, used cut-up¹⁹³ as an aleatoric technique in literature. Later, in the 1960s, Bryon Gysin and William S. Burroughs rediscovered and popularised this technique, even creating novels in this way – although in this case the stories lost their continuity. The final results were static and did not allow any counterfactual experience such as: what if it had been arranged differently?

Landow transfers the term *hypertext* from its technical origin to literature. He points out the idea of presenting the user with an overview, for example a sitemap, and an easy way to access relevant information, like a text search, a structure and a well-elaborated menu that indicates which documents and information are connected. More than twenty years after his book was published, the contribution is still relevant: the vision expressed has become the “state of the art,” although user behaviour changed.

¹⁹² Landow, George P., *Hypermedia and literary studies* (Cambridge, MA: MIT Press, 1991).

¹⁹³ William S. Burroughs. ‘The Cut-Up Method of Brian Gysin’ [1963] in Wardrip-Fruin, Noah and Montfort, Nick, eds., *The New Media Reader* (Cambridge, MA: MIT Press, 2002), pp. 89-92.

Nowadays, most pages offer a direct search, which leads straight forward like a shortcut, to the relevant information. Other pages, in particular those with mainly visual content like the video-platform youtube.com, still offer great potential to get lost by clicking on a related link. This is what makes hypermedia counterfactual: if one had clicked on another link, another clip would have been suggested and probably been watched! In addition, we find the essential structure of hypertext in several movies dealing with the concept of counterfactual thinking, which will be explained more detailed in Chapter 3.3. Movies.

3.1.2.1. One Text – Multiple Ways to Read

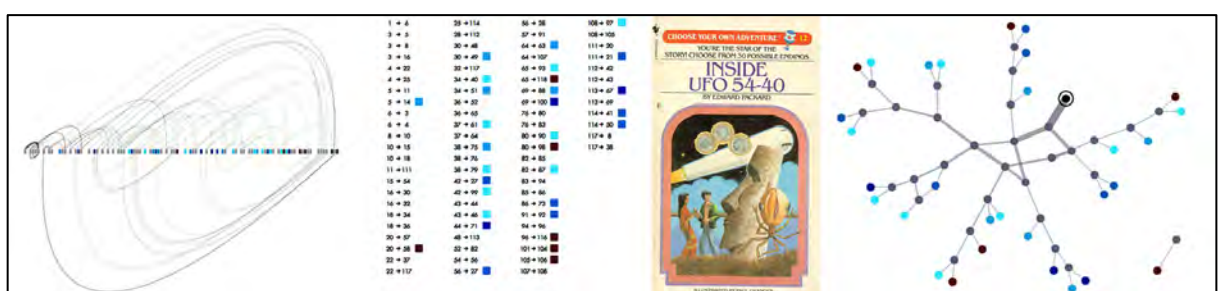
Several novels are based on a non-linear structure, similar to the idea of hypertext. They can therefore be explored in different ways. By not following the unwritten rule of reading a book from the beginning to the end, manifold new interpretations of a single book become possible. *Rayuela*¹⁹⁴ by Julio Cortázar is a novel with a meticulously planned structure. It is possible to read it like an ordinary book, from chapter 1 through chapter 56, but it can also be read in the order suggested by the author: page 73 - 1 - 2 - 116 - 3 - 84 - 4 - 71 and so on. The book can be explored by reading only odd or even pages, or by choosing pages at random. In each reading, the story changes. Chapters 1 to 36 take place in Paris, chapters 37 to 56 in Buenos Aires and, according to Cortázar himself, chapters 57 to 155 could be neglected. It is a mixture of novel, monologues, quotations, word plays and articles inspired by surrealism and the *nouveau roman*.¹⁹⁵

¹⁹⁴ Cortazar, Julio, *Rayuela – Himmel und Hölle, [Hopscotch]* (Frankfurt am Main: Suhrkamp Verlag, 1963).

¹⁹⁵ The *nouveau roman* describes a category of avant-garde French novel, originating in the 1950s. The main focus was on experiment and structure rather than on plot, characters and narrators in the traditional style.

The story itself is not important for my thesis, despite the appearance of a corresponding motive: the protagonist Horacio regards Traveller, another person, as his Doppelgänger. Nevertheless, I focused mainly on the structure of the book, its different endings and the fact that it is for the reader to decide how to make the most out of the book. Therefore *Rayuela* is an excellent example, especially because of the structure defined by the author.

With less linguistic proficiency than *Rayuela*, but more closely related to ongoing choices in life is the *Choose your own adventures*¹⁹⁶ series. These adventure books for children offer the possibility of choosing how the story continues. The stories are written in the second person singular, so readers are directly addressed and asked whether they would like to do one thing or the other, and are then directed to the appropriate page. Each story is therefore different and could have, according to the official website, up to eighteen different endings. As an advantage, the stories are participative, can be read over and over again, and rarely have the same outcome. These



Ill. 3: A structural analysis by Christian Swinehart of Choose your own adventure №12, Inside UFO 54-40, 2009

books were published between 1979 and 1999 and enjoyed a successful revival in 2005.

They are now also available in digital editions. The American art director Christian Swinehart dissected, visualised and even animated a selection of books, providing a readily accessible insight into the structure. By doing so, he revealed the number of

¹⁹⁶ *Choose Your Own Adventure*, n. d., Available: <http://cyoa.com/>, 13.03.2013.

points of decision throughout the book and the range of different endings, spanning from catastrophic to absolutely marvelous.¹⁹⁷ My favourite concept is the book *Inside UFO 54-40*, unique in that a “happily ever after” ending can only be discovered once the rules are disregarded, and by randomly browsing through the pages.¹⁹⁸

One more recent attempt is *Life's Lottery*¹⁹⁹ by Kim Newman (1999), an adaptation of CYOA game-books. It is written in the second person singular, so readers find themselves in the role of the protagonist and choose their own fate at certain turning points. If the reader does not obey the instructions for an interactive adventure, the book can be read linearly, following the character Keith Marion (who is in a coma) through a series of events, which turn out to be in the mind of the protagonist who eventually becomes Marion Keith. The consideration of a sex change and the consequent adaptation of the name, attributes which define an individual from birth, are the most interesting aspects of *Life's Lottery*. A confusing element of the book is the often-recurring advice “you must go to 0.” It is frustrating to start reading right from the beginning again and again, in particular in a time in which we are spoiled by video games which just return to the last saved level. “Go on” at the end of many chapters proposes only to continue reading the next chapter. The chapters usually end with a sentence, a suggestion in certain cases or an agreement to continue with a particular number or with an alternative agreement to continue with another number. Although I consider *Life's Lottery* to be the least convincing example, some interesting thoughts are implemented. It points out that initially it is not possible to choose fundamental

¹⁹⁷ Swinehart, Christian, *One Book, Many Readings*, n. d., Available: <http://samizdat.cc/cyoa/>, 14.03.2013.

¹⁹⁸ Ibid.

¹⁹⁹ Romney, Jonathan, “Three strikes and you’re out . Chaos Theory (Film Unlimited).” *The Guardian* November 3rd 1999.

attributes like gender, family and name, but nevertheless nowadays all can be changed during the path of life.

A similar structure offers the interactive short story by Raymond Queneau *Yours For the Telling*²⁰⁰ from 1967. The story consists of twenty-one short questions to the reader and a referral to the next line, depending on the chosen answer. It is build like a hypertext,²⁰¹ which contains what-if clauses, as in a programming language:

1. Do you wish to hear the story of the three alert peas?
 - a. if yes, got to 4
 - b. if no, got to 2
4. Once upon a time there were three peas dressed in green who were fast asleep in their pod. Their round faces breathed through the holes in their nostrils, and one could hear their soft and harmonious snoring.
 - a. if you prefer another description go to 9
 - b. if this description suits you, continue with 5.

This structure brings an analogy to programming languages²⁰² to mind:

```

on (release) {
    if (x=9) {
        play();
    } else if (x<9) {
        gotoAndPlay(1);
    } else {
        stop();
    }
}

```

²⁰⁰ Queneau, Raymond, in Wardrip-Fruin and Montfort, eds., *The New Media Reader* pp. 171-178.

²⁰¹ Queneau, Raymond, *Un conte à votre façon*, 1967, Available: http://www.thing.de/projekte/7:9%23/queneau_1.html, 13.03.2013. This is an interactive adaptation of his story under the title *Story as You Like It*.

²⁰² Example from *Flash*® Action Script® 2.0

Six years earlier, Queneau had created an impressive book with the aim to individualise a text with his *Cent mille milliards de poèmes*.²⁰³ Ten sonnets are printed on stiff paper that has been slit line by line, so that it can be read in multiple combinations. This leaves seemingly endless possibilities for each sonnet. As mentioned in reference to my artist book *Is it in my hands?*, the principle is taken from so called “flip-flap books,” children’s books in which animals or persons are cut into head, body and legs in multiple segments, and can be combined in endless variations. Sara Ball created paradigms in this genre, including *Por-gua-can*²⁰⁴ or *Croc-gu-phant*.²⁰⁵ Queneau refers to this kind of children’s books as his source of inspiration.²⁰⁶

This style of book echoes my research topic: the multiple ways one’s life can be cut into slices and examined. As a homage to Raymond Queneau’s *pièce de résistance*, I used the technique in my practical research to combine various readings from different points of view, or rather interpretations of my life, by a series of palmistry applications on my iPod in the work *Is it in my hands?* as described in Chapter 2.2.3.6.

According to my research, the books mentioned above could all be classified as counterfactual works because of to their structure: it is possible to read them in one way, but there is at least still one other possibility, for the way in which the story could unfold.

²⁰³ Queneau, *Cent mille milliards (100.000.000.000.000) de poèmes*.

²⁰⁴ Ball, Sara, *Por-gua-can . A Flip-Flap-Book* (Bridgeport, CT: W. J. Fantasy 1983).

²⁰⁵ Ball, Sara, *Croc-gu-phant . A Flip-Flap-Book* (London: Abelard-Schuman, 1982).

²⁰⁶ “C’est plus inspiré par le livre pour enfants *Têtes folles* que par les jeux surréalistes du genre ‘cadavre exquis’ que j’ai conçu – et réalisé – ce petit ouvrage qui permet à tout un chacun de composer à volonté cent milliards de sonnets, tous réguliers bien entendu.”; vid. Queneau, *Cent mille milliards (100.000.000.000.000) de poèmes*.

3.1.2.2. One Thousand and One Nights as the First Hypertext

Many books could be considered as a printed form of hypertext, which allows the reader to explore new narratives through different structures. The earliest example, still thriving, is the collection *The Arabian Nights*.²⁰⁷ Although the book (and in particular the frame story) follows a linear narration, it is based on a non-linear scheme from which the reader can choose a unique structure. A series of folk tales from different background, different epochs and places are collected in one frame narrative:

Scheherazade saves her life by telling the king a new, exciting story each evening according to the tradition of Arabic storytellers – she interrupts at the climax and continues the next night in order to keep the king entranced with how the story will evolve. Thus she stays alive and continues the following evening, night after night.

In her story, other narrators appear to tell other stories – and within this framework, there might be yet someone else telling a story. Additionally, in the tale *The Adventures of Bulukiya*,²⁰⁸ the protagonist describes learning of fantastic alternative worlds²⁰⁹ or even universes in his quest for an immortality-promising herb. A recurring topic in each story is fate or destiny, made clear by a chain of abnormal events, returning to normality in the end.

²⁰⁷ *One Thousand and One Nights* There are many versions, for example by: Antoine Galland, Edward William Lane, Sir Richard Francis Burton, J. C. Madrus.

²⁰⁸ Irwin, Robert, *The Arabian Nights: A Companion* (London: Tauris Parke Paperbacks, 2003), p. 209.

²⁰⁹ Tegmark, Max, ed., *Parallel Universes* (Cambridge (UK): Cambridge University Press, 2003).

This concept was also found in ancient Hindu mythology, in texts such as the Puranas, which expressed an infinite number of universes, each with its own gods; cf. Sagan, Carl and D'Souza, Placido P., "Hindu cosmology's time-scale for the universe is in consonance with modern science (Interview)." *The Rediff Special* (1996), 13.03.2013 <<http://www.rediff.com/news/jan/29sagan.htm>>.

Throughout the centuries, many different versions and in particular various translations appeared. *The Arabian Nights* is an ancient text that exists in a large number of translations. Diverging interpretations, and therefore the question of truth in the translation, can also be seen as a counterfactual aspect. The plot of the frame narration is similar in most versions, whereas the narrated stories and their number vary from version to version, especially in their adherence to the original. Scheherazade's technique and structure could be compared to hypertext. Tales inside a tale: interwoven, linked, but all of them independent. However, *One Thousand and One Nights* is still presented as a linear book.

3.1.3. Counterfactuals in the Content

In addition to the above-mentioned examples, counterfactual thoughts appear in the content of several novels or narrations, of which I would like to mention Milan Kundera's *The Unbearable Lightness of Being* and Isaac Asimov's short story *What if...?* because of their immediate relevance.

In the novel *The Unbearable Lightness of Being*,²¹⁰ the Czech author Milan Kundera raises many questions about life. This book fascinated me more than twenty years ago and still did when I re-read it recently. It raised the awareness for retrospective considerations, in particular whether our path in life is meant to be or could be changed easily; it was one of my initial inspirations for choosing to work on counterfactualism.

The protagonist Tomáš wonders in certain situations, whether something could have been different in the past, although the book argues that we have only one life to

²¹⁰ Kundera, Milan, *The Unbearable Lightness of Being* [*Nesnesitelná lehkost bytí*], trans. Heim, Michael Henry (London: Faber & Faber, 1987).

live: there is no way to repeat the past without facing the mistakes we made. In this manner, his alternative possibilities remain clearly fictional:

Human life occurs only once, and the reason we cannot determine which of our decisions are good and which bad is that in a given situation we can make only one decision; we are not granted a second, third or fourth life in which to compare various decisions.²¹¹

Kundera employs Nietzsche's philosophy of the eternal return in a model of parallel universes and reflects²¹² on the figures which he created for the parallel world of his novel:

Several days later, he was struck by another thought, which I [the author] record as an addendum to the preceding chapter: Somewhere out in space there was a planet where all people would be born again. They would be fully aware of the life they had spent on earth and all the experience they had amassed here. And perhaps there was still another planet, where we would all be born a third time with the experience of our first two lives. And perhaps there were yet more and more planets, where mankind would be born one degree (one life) more mature. That was Tomáš' version of eternal return.²¹³

Considerations, which remain a mere thought experiment in Kundera's novel, are applied with the aid of a tool in Isaac Asimov's fictional short story *What if...?* Asimov introduced an astonishing gadget to see our possible alternative lives. Nowadays, at least the appearance of the tool seems perfectly reasonable, however its application still is not.

²¹¹ Ibid., p. 219.

²¹² Ibid., p. 218.

²¹³ Ibid., p. 221.

He wrote his novels and science fiction stories about visions for a possible future in the middle of the last century. The short story *What if...?*²¹⁴ describes his vision of a kind of laptop or tablet computer (nearly sixty years ago) to show possibilities of one's life in a realistic way. A woman constantly asks herself and her spouse the question: what would have happened if they had not met the way they did? They are sitting in a train compartment and the silent man opposite responds by quietly putting his visionary device on the table and they are able to observe what would have happened. At the end of the story everything turns out to be the same at this very moment in the life of the two protagonists, no matter what happened in between their meeting and this point in time.²¹⁵ Asimov's story is directly related to counterfactual thoughts and suggests that our life is pre-determined to a certain degree. No matter what we choose to do we end up at the same key moments of our life.

As a combination of hypertext and counterfactual content, I consider the *nouveau roman* movement *Oulipo*²¹⁶ (Potential Literature) to be of importance. It was founded in the early sixties by a group of French writers. Among the founding members were the earlier-mentioned Raymond Queneau and as well Georges Perec. Their manifesto contained several restrictions regarding their approach for writing – or rather the construction of text.

²¹⁴ Asimov, Isaac, "What If... [1952]." *Nightfall, and other stories*, vol. 1 (Garden City, NY: Doubleday, 1969).

²¹⁵ The idea is similar to Cinceras' *Kinoautomat*, where the movie is split several times in two possibilities, but no matter which one is chosen, the narrative threads come back together in the end, to open up two new choices for the following scene.

²¹⁶ Jean Lescure. "Brief History of the Oulipoli." in Wardrip-Fruin and Montfort, eds., *The New Media Reader* pp. 172-176.

Another example in the movement of *Oulipo* is executed by Georges Perec in his *Life – A User’s Manual*.²¹⁷ Here, the story is constructed around a block of flats: the ninety-nine chapters of this 600-page *œuvre* move like a knight’s tour of a chessboard around the floor plan of a Paris apartment building, describing the rooms and staircases, telling the stories of the inhabitants. The construction sketches, which were published posthumously, explain his task and achievement. To get an idea of the complexity of the configuration, it might be of interest to know that Perec had in the past created crossword puzzles for the French journal *Le Point*.

The structure, the most interesting aspect and the connection for rather unconnected persons and coincidences, gives the idea of parallel universes, all existing simultaneously in one apartment block. Furthermore, it is possible to read this book in a non-linear way. Apart from an inspiring approach to construct and combine different, separated lives and the idea of multiple coexisting universes in one house, the book has only a peripheral relevance to my work. However the title of my body of work *Decisions – A User’s Manual* bears an obvious reference to Perec’s novel.

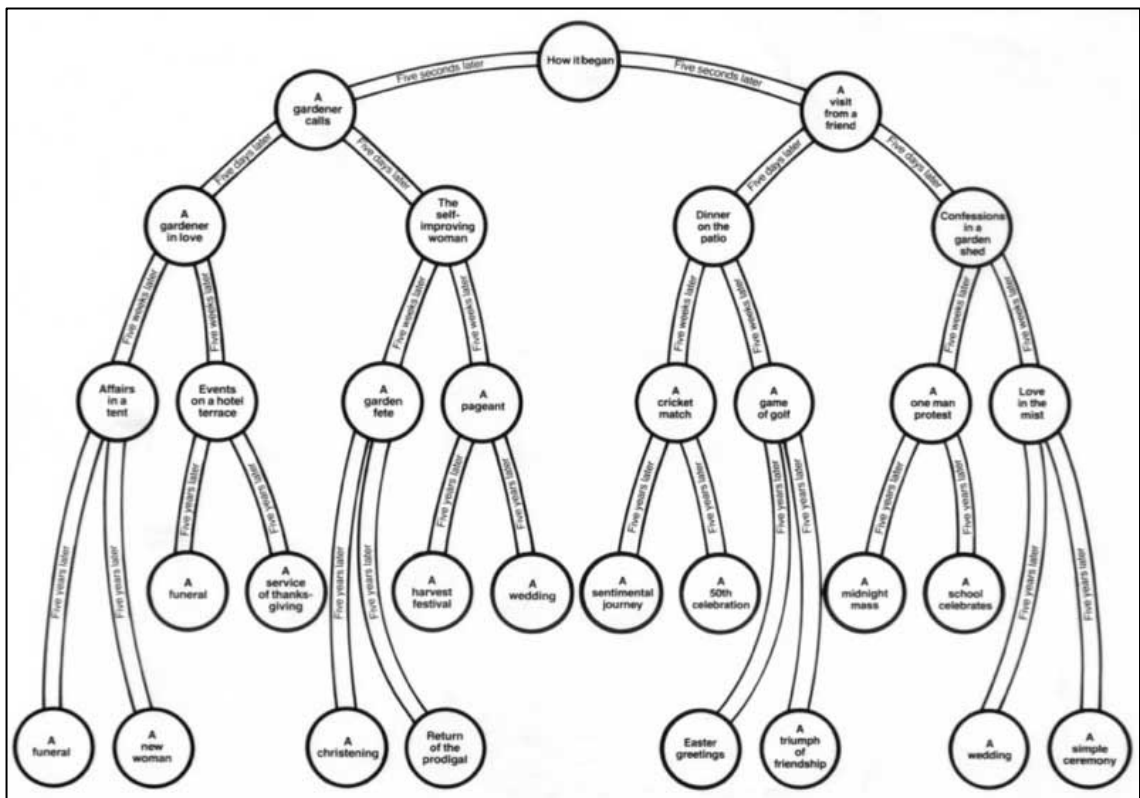
In summary, most of the above-mentioned literature is a basic source of inspiration and an important foundation for my praxis-based approach. Counterfactuals can appear in literature in different ways, either to be explored by the reader with the structure of the book or described by the author in the content.

²¹⁷ Perec, Georges, *Life – A User’s Manual*, [*La Vie – mode d’emploi*], trans., Bellos, David (London: Collins Harvill, 1978).

3.2. Performing Arts

As a link between literature and movies, I mention here a few plays which explore the possibilities of parallel or alternative lives. The first two were later made into movies, using different techniques.

*Possible Worlds*²¹⁸ is a play written by John Mighton in 1988. It consists of eighteen scenes and the idea of possible simultaneous worlds appears in the story itself. The plot line does not follow a linear narration: scenes of possible parallel lives interchange. The protagonist George Barber possesses an unusual level of awareness – he not only understands that people exist in parallel worlds simultaneously, but they are also able to experience several alternative lives at once, even remembering what happened on one plane of existence while being active in another. His wife Joyce is murdered in one life, and he finds himself thrown from one life to another, in which he encounters Joyce's other lives while searching for her killer. In the opening scene, George has been murdered and his brain removed from his body; police detectives investigating the



Ill. 5: Structure of Alan Ayckbourn's play *Intimate Exchanges*, 1982

murder are led to a laboratory run by an eccentric scientist who performs experiments

²¹⁸ Lepage, Robert, *Possible Worlds*, USA, 2000.

on animal brains and studies the effects of sensory deprivation. Joyce is told by the scientist that George's brain is alive, although separated from his body and producing rudimentary consciousness in a discontinuous "fluctuating dream state." Meanwhile, George is still alive in another parallel world, where he meets Joyce again (and again.)

A movie with the same title was directed by Robert Lepage in 2000, with the script also written by John Mighton. Therefore, it relates closely to the play.

Alan Ayckbourn's play *Intimate Exchanges*²¹⁹ from 1982 revealed a different concept and structure, while becoming ten years later the script for the movie by Alain Resnais: *Smoking/No Smoking*²²⁰ too. Both Resnais and Ayckbourn seem to be fascinated by turning points, decisions, questions and repetitions.

Only two actors are involved in this construction with sixteen possible endings. The play and the movie both start with a binary action – to smoke or not to smoke – and from there on at the end of each scene evolve many little choices, which fork into two pathways. It opens with one prologue, continues with two alternative first scenes, four second scenes, eight third scenes and sixteen permutations in the fourth scene. In the stage play, there are eight variations with two alternative endings.

In the movie, nearly all possibilities are simulated by repetition with an introductory title. The play was performed over several nights and the theatres presented a structural map in the foyer²²¹ showing which path would be taken the following evening.

²¹⁹ Ayckbourn, Alan, *Intimate Exchanges (Acting Edition)*, vol. 1, 2 vols. (London: Samuel French Ltd., 1985).

²²⁰ Resnais, Alain, *Smoking/No Smoking*, France, 1993.

²²¹ Murgatroyd, Simon, *An Introduction To Intimate Exchanges*, Available: <http://intimateexchanges.alanayckbourn.net/>, 13.03.2013.

Alan Ayckbourn himself was surprised that many spectators remained attentive until the end and came back to other performances with different orders of events, as pointed out by Simon Murgatroyd in *An Introduction To Intimate Exchanges*.²²²

The playwright obviously ponders decisions:

Have you ever reflected how those tiny decisions we make every day of our lives – (Shall I take a raincoat today?) can often require us to make further small decisions (Should I shelter in this doorway?), that lead to larger decisions (Shall I accept this stranger’s offer of a drink?) which then demand a really big decision (Should we see each other again?), forcing you into those vast decisions (Shall we share our lives together?), that finally lead to the truly monumental decisions (Is it time we called it a day?)²²³

Choice appears as a repetitive topic in the plays by Ayckbourn; for instance he used an ingenious structure²²⁴ to leave decisions to the audience in *Mr A’s Amazing Maze Plays*.²²⁵ However, I consider *Intimate Exchanges* by far the strongest in representing counterfactual ideas. I attended the play in a staging in Berlin in December 2009, watching how director Sven Mundt managed to condense this expansive piece into 90 minutes. It is performed like a rehearsal, the actors deciding which role to perform ad hoc. According to the article *Lebensweisende Entscheidungen*²²⁶ (= Life-changing

²²² Ibid.

²²³ Ayckbourn, Alan, *Intimate Exchanges: Articles by Alan Ayckbourn*, 1982, Available: <http://intimateexchanges.alanayckbourn.net/styled-5/styled-6/index.html>, 13.03.2013.

²²⁴ Ayckbourn, Alan, *Mr A’s Amazing Maze Plays: Structure*, n.d., Available: <http://mrasamazing.alanayckbourn.net/styled-4/styled-2/index.html>, 13.03.2013.

²²⁵ Ayckbourn, Alan, *Alan Ayckbourn’s Mr A’s Amazing Maze Plays (1988)*, n. d., Available: <http://mrasamazing.alanayckbourn.net/>, 13.03.2013.

²²⁶ Zivanovic, Aleksandar, “Lebensweisende Entscheidungen.” *Berliner Zeitung* December 10th 2009.

Decisions) by Aleksandar Zivanovic in the newspaper *Berliner Zeitung*, they had the freedom to pick different scenes each time, of which the audience was not aware during the play, which I consider as deficiency. All the performances differed – therefore, according to my theory, this play could evoke counterfactual thoughts in an audience informed of neglected possibilities.

When talking about alternative lives, the early play from 1921 written by Lord Dunsany entitled *If*²²⁷ should be mentioned for completeness. Unfortunately I could not catch a performance on stage, but according to the script, several aspects which frequently appeared later in movies are already executed: the future is determined by catching or missing a train²²⁸ and a magic gemstone enables the protagonist to travel back in time and experience the road not taken.

As another work with a reference to movies (and to the cut-up techniques in literature) is Tom Stoppard's play *Travesties*²²⁹. He uses repetitions to illustrate the confused memory of Henry Carr while mixing up his encounters with James Joyce, Lenin and Tristan Tzara in Zürich, during the First World War. This could be also seen as a reference to counterfactual history. In particular, I was interested in the way in which the repetitions were introduced: each time with the call of a cuckoo clock and the appearance of Carr's butler. All the recurrences differ in their content, which makes it necessary to have at least a repetitive start or, as the American film theorist David Bordwell calls it, a signpost.²³⁰

²²⁷ Dunsany, Lord, *If*, (1921), <<http://www.gutenberg.org/etext/1311>>.

²²⁸ Howitt, Peter, *Sliding Doors*, United Kingdom, USA, 1998.

²²⁹ Stoppard, Tom, *Travesties* (London: Faber and Faber, 1974).

²³⁰ Bordwell, "Film Futures."

Life-changing decisions and retrospective considerations are a frequent theme on stage, which would provide sufficient material for a whole thesis. In my opinion, theatre requires an even more elaborate and obvious method to guide the viewer through a labyrinthine narrative than film because the subjective perspective of a camera directs the attention of the viewer to where it is supposed to go.

3.3. Movies

In popular movies, counterfactual thoughts seem to be often used. As they are one of my main sources of inspiration and closer related to media arts, I will explain and categorise the approaches of some relevant examples with appropriate graphs; and will also research the ways in which movies follow certain patterns that make the construction, visualisation and understanding of counterfactual stories possible.

All movies mentioned approach the return to a life-changing turning point differently. According to my research, these are either the first of their kind or well-crafted examples.

It seems that in recent years a certain trend for “what if...?” movies has emerged, but there are also some examples that date back to the middle of the last century. David Bordwell²³¹ suggests the roots for the growing popularity are to be found in video gaming, in which alternative story lines and returning to the last saved level are the norm.

According to my definition having an alternative ending alone does not turn a movie into a counterfactual story. Alternative endings often occur because of changes made after viewing by a trial audience or because an altered version suits the director or

²³¹ Ibid.

the distributor better. In cinema screenings, the audience is usually not aware of possible alternatives. On DVDs different versions are sometimes included, for example in the double-sided edition of *The Butterfly Effect*,²³² which needed to be turned in the player; the movie can then either be watched twice or skipped through to reveal the alternative ending. In my opinion, it would be more interesting to offer in the one version both endings by random or direct choice. In TV series, three different endings are sometimes shot to keep the actual finale absolutely secret.

As for the murder mystery movie *Clue*,²³³ we could speak of a counterfactual approach, since the movie was shipped to the cinema in three different versions. The picture was based on the board game *Cluedo* by Parker Brothers, so each outcome was equally possible. The audience happened to see one or the other resolution of the story revealed, depending on the cinema they were attending. On DVDs, all three endings play either randomly or by choice and are introduced with an intermediate title: “That’s how it could have happened....”

Terry Gilliam’s movie-classic *Brazil*²³⁴ deals in another manner with various endings, revealing after the first ending that it happened to be only a dream: the second and “real” ending then appears. In this way, the director implies the immediate notion of counterfactual thoughts.

Many video games offer alternative endings, depending on the decisions of the player (for instance in *Star Wars* games), or the performance and outcome of the levels (*Resident Evil*). The game *Blade Runner* offers several different endings, depending on how the game is played: these are random events, the player’s choices and different

²³² Bress, Eric and Gruber, J. Mackye, *The Butterfly Effect*, USA, 2004.

²³³ Lynn, Jonathan, *Clue*, USA, 1985.

²³⁴ Gilliam, Terry, *Brazil*, United Kingdom, 1985.

sequences of triggers. The above-mentioned games have either a predecessor or a successor in movies. For this reason they are mentioned in particular in this section.

Unlike movies in general, in which the audience is accustomed to accepting the given conclusion, alternative endings in games can evoke counterfactual thoughts.

Experiences and results are exchanged in communities, so players are aware of different endings and are used to considering retrospectively alternative ways in which the game could have been played.

3.3.1. Theoretical Background

Thomas Elsaesser, Professor Emeritus of Film and Television Studies at the University of Amsterdam, summarises movies under the term *mind-game-films*, when they focus on the human consciousness, the mind and the brain, multiple realities or possible worlds as a philosophical question.²³⁵

[...] the most intriguing and innovative feature is this insistence on temporality as a separate dimension of consciousness and identity, the play on non-linear sequence or inverted causality, on chance and contingency, on synchronicity and simultaneity and their effects on characters, agency, and human relations: we are in worlds that often look just like ours, but where multiple timelines coexist, where the narrative engenders its own loops or Möbius strips, where there may well be a beginning, a middle, and an end, but they certainly are not presented in that order, and thus the spectator's own meaning-making activity involves constant retroactive revision, new reality-checks, displacements, and

²³⁵ Elsaesser, Thomas, "The Mind-Game Film." *Puzzle Films . Complex Storytelling in Contemporary Cinema*, ed., Buckland, Warren (Oxford: Wiley-Blackwell, 2009), p. 15.

reorganisation not only of temporal sequence, but of mental space, and the presumption of a possible switch in cause and effect.²³⁶

Elsaesser reckons that the popularity²³⁷ of this kind of film, is not only because they remind the audience of their own experiences, but also because the films are perceived as being relevant and profound. These movies, in his opinion, combine the advantages of books and video games, which work in favour of the “institution cinema,” either as *gesamtkunstwerk* or as a commercial enterprise.

Another reason for their acceptance could be what famous film-critic Roger Ebert pointed out in one of his reviews:

Life’s missed opportunities, at the end, may seem more poignant to us than those we embraced – because in our imagination they have a perfection that reality can never rival.²³⁸

Thus in counterfactual movies, the spectator finally can see all the possibilities of life at once.

The type of film which Elsaesser²³⁹ himself termed mind-game-films is called by his colleague David Bordwell the *forking-path narrative*²⁴⁰ or *multiple-draft narrative*; Elliot Panek refers to them as (*psychological*) *puzzle films*;²⁴¹ George Wilson as *twist films*²⁴² and Allan Cameron as *modular narratives*.²⁴³ In the Chapter 3.3.2. Categories in

²³⁶ Ibid., p. 21.

²³⁷ Ibid., p. 35.

²³⁸ Ebert, Roger, “The Sleepy Time Gal”, *Chicago Sun Times* November 22nd 2002, Available: <http://www.rogerebert.com/reviews/the-sleepy-time-gal-2002/>, 28.03.2013.

²³⁹ Ibid., p. 19.

²⁴⁰ Bordwell, “Film Futures.”

²⁴¹ Panek, Elliot, “The poet and the detective: Defining the psychological puzzle film.” *Film Criticism* 31.1/2 (2006).

²⁴² Wilson, George, “Transparency and Twist in Narrative Fiction Film.” *Journal of*

Movies, I will suggest a typology for these films with a counterfactual approach and an attempt to describe this genre of film even more precisely in the regard to their structure.

I would suggest the forking-path²⁴⁴ or multiple-draft narratives for this kind of genre, as David Bordwell calls them, should be designated as counterfactual movies. In regard to the limitations of this category, Bordwell states in his essay “Film Futures” that the human mind would not be able to follow at once too many possible alternatives in narration or film, that “we can easily imagine two or three alternative chains of events [...] but not twenty or sixty, let alone an infinite number.”²⁴⁵

Usually there are only two or three possibilities in these forking-path tales, leading to different futures; surprisingly no further bifurcations appear in the ensuing stories. Bordwell observed two different methods: returning to the switch point (which I call the repetition model, as for instance in *Blind Chance*) or running two stories in alternation (as in *Sliding Doors*, which I call the parallel universe model). The different, optional stories need to be identified as other possible futures. Therefore basic characters and situations are necessary to make this task easier. Bordwell summarises the most important rules and conventions:

- Forking paths are linear.

Aesthetics and Art Criticism 61.1 (2006).

²⁴³ Cameron, Allan, *Modular Narratives in Contemporary Cinema* (Houndmills, Basingstoke, Hampshire: Palgrave Macmillan, 2008).

²⁴⁴ Bordwell, “Film Futures.” p. 102.

²⁴⁵ *Ibid.*, p. 91.

This means that, other than in the ideas of Borges's and DeWitt's²⁴⁶ parallel universes with a boundless array of parallel worlds, they are not infinite. After each fork they follow a linear narration: "As film viewers, we like the number of parallel universes to be really little."²⁴⁷

Bordwell does not consider Alain Resnais' *Smoking/No Smoking*, in which the forks continue splitting several times, although he remarks that this film's many choices and forks need to be limited to two characters per scene in order to be comprehensible.

Resnais' movie is an exception, not only due to its adaptation from a play, but mainly because every branch is introduced by a title, which simplifies the comprehension of the narrative.

- The fork is signposted.

There is always a hint. For example, in *Run Lola Run* inter-titles ending with "and then" appear and repetitive scenes, in which a red telephone receiver falls, indicate multiple possibilities. In *Blind Chance* we see nearly identical footage and hear the same music. In *Sliding Doors*, a reverse action and pause start the scene again, leading to two alternating plot lines of the movie.

²⁴⁶ "... every quantum transition taking place on every star, in every galaxy, in every remote corner of the universe is splitting our local world on earth into myriads of copies of itself."; vid. DeWitt, Bryce, Ballentine, Leslie E., Pearle, Philip, Walker, Evan Harris, Sachs, Mendel, Koga, Toyoki and Gerver, Joseph, "Quantum-Mechanics Debate . Not Everyone Agrees with Bryce DeWitt that Acceptance of Quantum Theory Implies Belief in a Continually Splitting Universe." *Physics Today* 24.4 (1971). "The many-worlds interpretation envisages the idea of 10^{100+} slightly imperfect copies of oneself all constantly splitting into further copies, which ultimately become unrecognizable, is not easy to reconcile with common sense."; vid. DeWitt, Bryce, "Quantum Mechanics and Reality . Could the Solution to the Dilemma of Indeterminism Be a Universe in Which All Possible Outcomes of an Experiment actually Occur?" *Physics Today* 23.9 (1970).

²⁴⁷ Bordwell, "Film Futures." p. 92.

Bordwell's other points are of less relevance for this research, therefore I mention them in passing as follows:

- Forking paths intersect sooner or later. The film is usually about the same set of people: no matter what happens, the protagonist is in the same group. Coherence exists thanks to recurring characters and background conditions.
- Forking-path tales are unified by traditional cohesion devices, such as appointments and deadlines.
- Forking paths will often run in parallel.
- All paths are not equal; the last one taken presupposes the others. And the protagonist grows wiser with each version.
- All paths are not equal; the last one taken, or completed, is the least hypothetical one.

Bordwell encourages artists and filmmakers to stretch the boundaries of story narration within the frame of norm and invention to their limit and he sees what is almost a new genre in the tradition of narration.

Doug Aitken proposes, in his book *Broken Screen*, his *Diagram of Nonlinear Film*.²⁴⁸ He describes it as a sketch and foundation for future conversations. Aitken is referring to several movies which are relevant to my research, including:

- Manipulation of structure and story line
The interweaving of plots and timelines; subverting linear story lines through technical experimentation.

²⁴⁸ Aitken, Doug, *Broken Screen*, (New York, NY: D.A.P. Distributed Art Publishers, 2006), pp. 291-295.

(In this section he mentions *Run Lola Run* and *Eternal Sunshine of the Spotless Mind*.)

- Story line manipulation (interweaving plots and timelines)
(*Rashômon*, *Last Year in Marienbad*, *Slacker* and *Memento*)
- Immersion (overtaking the environment with image and sound)
(*Labyrinth*)
- Structural manipulation (subverting linear story lines through technical experimentation)
(*La Jetée*, *Timecode* and *The Thomas Crown Affair*)
- Broken image (challenging the content through image fragmentation)
(*Kinoautomat*)

Due to my interest in the counterfactual content rather than in the structure itself, I will proceed with my own observations.

3.3.2. Categories in Movies

I developed the following terms to distinguish various approaches and structures for a genre, which I would categorise as counterfactual film, and therefore a division of counterfactualism. Their borders are often fluid, and yet they give an initial insight into possible categories. I will reinforce the structure with diagrams showing how and where the counterfactual story is introduced and developed.

- The **repetition model**, which was used in *Przypadek* (Blind Chance) by Krzysztof Kieślowski (1981)

- The **parallel universe model** unites the following two methods:
 - Parallel Lives as in *Sliding Doors* by Peter Howitt (1998)
 - Alternative Worlds: *It's a Wonderful Life* by Frank Capra (1946)
- The **thought-experiment model** appeared in *Unfaithfully Yours* by Preston Sturges (1948)
- The **time-travel model**, for example in *La Jetée* by Chris Marker (1962)
- The **structured model**, as in *Smoking/No Smoking* by Alain Resnais (1992)
- The **cloud model**, used in *Mr. Nobody* by Jaco Van Dormael (2009)
- **Multiple perspectives** as seen in *Rashômon* by Akira Kurosawa (1950)

And lastly, **other approaches**, for example user interaction, used by Radúz Činčera in his *Kinoautomat* (1967) or a random sequence of film reels such as those utilised for *Blue Moon* (1997).

3.3.2.1. The Repetition Model

In the repetition structure, the narration recurs with slight or major variations, one after the other. In my research, this happens at a minimum of three times, as in Krzysztof Kieślowski's *Blind Chance*²⁴⁹, up to a nearly uncountable number in Harold Ramis' *Groundhog Day*.²⁵⁰

The beginning of the rerun is often clearly marked or signposted, as labelled by Bordwell. In *Groundhog Day* the alarm clock starts at the same time with the same wake-up song every morning. In *Blind Chance*, we find a familiar scene: the protagonist runs into the train station to catch his train. The spectator might not be fully aware of

²⁴⁹ Kieślowski, Krzysztof, *Przypadek*, Poland, 1981.

²⁵⁰ Ramis, Harold, *Groundhog Day*, USA, 1993.

the recurring moment before the third repetition, in which the same scene with a similar event appears again.

Groundhog Day and *Run Lola Run*²⁵¹ follow a slightly different pattern in the overall structure and I hesitate to call them counterfactual per se. Here, the protagonists are obviously supposed to learn from their past experiences in the earlier episodes in order to arrive at a happy ending, and they do, even if they are unconsciously aware of the past. Whereas in *Blind Chance*, in which a small occurrence changes the life of the protagonist completely, even his attitude (as observed by Slavoj Žižek)²⁵² could be interpreted as close-to-death flashbacks, referring to a life-changing “what if...?” situation.

Blind Chance is, in my opinion, the definitive counterfactual movie. It was one of the main influences on my research into life-changing moments and possible alternatives. Watching it for the first time, about twenty years ago, I was deeply touched by the way in which a little detail can change a whole life, and not only that of one individual.

The plot tells the possible fate of a young man. In the blink of an eye his destiny changes in three different directions. After an introductory sequence, the film is split into three parts, all with the same beginning but with three different endings. They are revealed one after another. The protagonist catches or misses the train and depending

²⁵¹ Tykwer, Tom, *Lola rennt*, Germany, 1998.

²⁵² “Is, then, the entire film not the flashback of a person who, aware that he is close to death, quickly runs not only through his life (as people are supposed to do when they know they will die shortly), but through his *three* possible lives?”; vid. Žižek, Slavoj, *The Fright of Real Tears* (London: British Film Institute, 2001), p. 80.

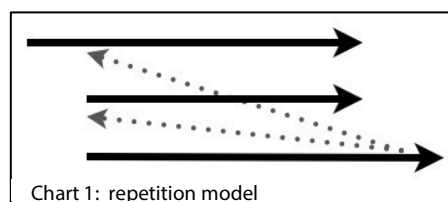
My observation: Although in the opening scene, a frontal shot of Witek on a blue airplane seat, whereas in the final scene, the colour of the similar seat is orange and apparently the position of the camera differs as well as his seating position (more to the right side of the plane).

on this moment, either he works for the government or an underground organisation, or he dies as a non-political family man in a plane crash. All three scenarios have similarities: for example the people he meets, or who can be observed in the background.

The film opens with a man screaming loudly. After an introductory scene, the story is repeated three times, following seemingly unimportant but life-changing turning points. These turning points are just small incidents, but change the development of Witek's personality completely.

In the book *Kieślowski on Kieślowski*, the director states that it is “a description of the powers which meddle with our fate, which push us one way or another.”²⁵³

In the case of *Blind Chance*, Chart 1 displays a linear narration from the starting point to the end of the arrow. It starts again at an advanced point of time with a parallel story and again for a third time, in which it advances to the end of the movie. Right before the end, two arrows indicate that the other two parallel lines might have been only imagined from the marked point on the third line.



The popular movie *Run Lola Run* is a pop-culture remake, as Slavoj Žižek hypothesises in *The Fright of Real Tears*. It follows a similar pattern, but does not involve the ways in which the development of personality is influenced by small incidents. David Bordwell approves the independent ideas, and especially acknowledges

²⁵³ Kieślowski, Krzysztof, *Kieślowski on Kieślowski*, ed. Stok, Danusia (London: Faber and Faber Ltd., 1993), p. 113.

that the protagonists keep learning in each episode. British film critic Jonathan Romney points out the reference to PlayStation games, in which it is possible to restart the game or go back to a saved mark, with the experience from the latest session.²⁵⁴

In *Groundhog Day*, the same day starts over and over again, and the character of the protagonist needs to grow in order to finally advance to the next day. The main character, a grumpy TV weatherman, is trapped in a time loop, waking up each morning in the same way, meeting the same people; everything is the same every day. In the happy ending, after he improves his personality, he can escape the time trap and wake up the following day – a new day.

The concept appears to be related to the vision of Friedrich Nietzsche's *eternal recurrence* (which will be explained later), although all above-mentioned examples contrast Nietzsche's fear of an endless repetition at the same time: each relived life-sequence in the movies differs, even though only slightly, from earlier ones in the past.

Australian research fellow Joanne Faulkner suggested in her paper *Eternal Sunshine and the Eternal Recurrence*, the close relationship of Nietzsche's concept to the movie *Eternal Sunshine of the Spotless Mind*.²⁵⁵ After the failed liaison of the protagonists, they not only consider a counterfactual life story but also go one step further and have the memories of their common past erased in a dubious procedure.²⁵⁶ Not knowing what is happening to the other anymore, the same story may occur to them in repetition: they will meet, fall in love, separate and forget each other again.

²⁵⁴ Romney, "Three strikes and you're out . Chaos Theory (Film Unlimited)."

²⁵⁵ Gondry, Michel, *Eternal Sunshine of the Spotless Mind*, USA, 2004.

²⁵⁶ Faulkner, Joanne, "The Eternal Sunshine and Eternal Recurrence: The Interval Between Memory and Forgetting." *La Trobe Philosophy Postgraduates' Colloquium*, 12 October 12, 2005 2005.

3.3.2.1.1. Digression: In the Hands of the Editor

In the above-mentioned example, the concept of endless repetition in eternal recurrence contrasts with that of counterfactual thinking. Even though there is a chance to experience a turning point in life repetitively, the loss of memory makes it impossible to improve the situation.

Looking at the three different scenes, when Witek from *Blind Chance* tries to catch the train, it suggests the work with the Moviola, where several takes of one shot are watched and examined in order to find out which might be the most suitable.

The actor's life onstage is totally in the hands of the director and his editor. I made this observation while watching Stanley Kubrick's *Barry Lyndon*.²⁵⁷ In that movie several sequences are gathered, where Ryan O'Neal as the main



Ill. 6: Elke Reinhuber, still from *Destiny*, 2009

character has the same expression on his face, but carrying a different emotional meaning in each context. Even in his life-changing moments, the viewer sees the same close-up of the protagonist's eyes: only the circumstances vary.

I explored this myself in 2009 in the short movie *Destiny*, when I captured different scenes with a close-up of Lyndon's eyes. My short video montage dealt with the perception of a character. He becomes victim to the editor's choices. *Destiny* is an excerpt of his recurring facial expression in which only a single word informs the viewer about the context.

²⁵⁷ Kubrick, Stanley, *Barry Lyndon*, United Kingdom, 1975.

Alfred Hitchcock described this phenomenon earlier in his famous interview with François Truffaut, with reference to *Rear Window*, as the French director asked:

This neutrality you expect from your actors is an interesting concept. The point IS clearly made in some of your more recent pictures, like *Rear Window* or *Vertigo*. In both films James Stewart isn't required to emote; he simply looks – three or four hundred times – and then you show the viewer what he's looking at. That's all.²⁵⁸

Alfred Hitchcock confirms:

You have an immobilized man looking out. That's one part of the film, the second part shows what he sees and the third part shows how he reacts. [...] let's take a close-up of Stewart looking out of the window at a little dog that's being lowered in a basket. Back to Stewart, who has a kindly smile. But if in the place of the little dog you show a half-naked girl exercising in front of her open window, and you go back to a smiling Stewart again, this time he's seen as a dirty old man!²⁵⁹

Transferring this idea to the fine arts, Hong Kong artist Linda Lai explored the described observation extensively in *Near Drama*, a recombinant work to which I will return in Chapter 4.2.2.2. about evoking counterfactual thoughts.

²⁵⁸ Truffaut, François, *Hitchcock: A Definitive Study of Alfred Hitchcock*, Revised ed. (New York, NY: Simon & Schuster, 1985), p. 108.

²⁵⁹ *Ibid.*, pp. 211-213.

3.3.2.2. The Parallel Universe Model

With the idea of parallel universes, human beings can live different lives simultaneously and maybe even experience all their different choices, according to the theory of David Lewis²⁶⁰ in which he states that all counterfactuals are true.

The concept is visualised in a number of movies, of which I mention two. Both examples approach the idea in such different ways that I consider two subcategories essential: parallel lives (as in *Sliding Doors* by Peter Howitt, 1998) and alternative worlds (*It's a Wonderful Life* by Frank Capra, 1946)

Parallel Lives

In *Sliding Doors*,²⁶¹ the life of the leading character changes due to a familiar situation in counterfactual movies: she boards the train on time or is left behind as the doors slide to close.

In my research, this feature is of particular importance due to its rather unique concept and possibility to persuade to explore both potential lives simultaneously. The two possible episodes are narrated in parallel streams and interwoven, just as it would usually be if it were set on stage with two different actors.

The protagonist Helen loses her job and leaves the office earlier than usual. In the story line in which she catches the train, she returns home and discovers her partner frolicking with another woman; whereas in the scene where she misses her train enables him to keep his secret for much longer. From these different starting points, Helen's life develops differently. In reference to Bordwell's observations, the film is easily

²⁶⁰ Lewis, David Kellog, *Counterfactuals*, revised printing Blackwell 1986 ed. (Indianapolis: Harvard University Press, 1973).

²⁶¹ Howitt, *Sliding Doors*.

comprehensible because it only has two plot lines. In one, Helen dies. In this way, one narration comes to an end, whereas she remains alive in the second one, hoping for a better future. Further points of interest are the recurring moments, in which we find her close to her other possible existence. For instance, a spectator observes Helen celebrating in a rowing club; moments later, her other self passes by in the parallel life, looking through the window from outside.

In her report about motivated and analytical counterfactual thinkers, psychologist Laura Kray²⁶² refers to *Sliding Doors* as a typical “what might have been” scenario.

Chart 2: parallel universe model – parallel lives

Alternative Worlds

In Frank Capra’s Christmas classic, *It’s a Wonderful Life*,²⁶³ the central character, George Bailey, is privileged to observe the ways in which the present and future of his hometown, (in particular his family) would behave without his presence in the world. Supernatural powers, embodied in the angel Clarence, were needed to achieve this mental experiment. The angel travels into the parallel past and reveals to Bailey how the

²⁶² University of California, Berkeley/Haas School of Business, “Counterfactual thinkers are more motivated and analytical, study suggests.” *ScienceDaily* (2010).

²⁶³ Capra, Frank, *It’s a Wonderful Life*, USA, 1946.

town would look (in a film-noir aesthetic)²⁶⁴ and what an evil place it would have become, if he were not alive. This stops George Bailey from committing suicide.

Furthermore, he accepts and values his past life which he, as Žižek remarks, “had been living in the expectation of another life, of leaving the town and going elsewhere – he had lived his actual life in a permanent state of suspension, as if ‘this were not yet it.’”²⁶⁵

Here, a linear story line runs through the narration. The encounter with the angel could be described as slipping through a window into this particular alternative world in which Bailey does not exist and returning to his real life afterwards with the positive effects downward counterfactuals²⁶⁶ might elicit.

Chart 3: parallel universe model – alternative worlds

Hilary P. Dannenberg, who researched counterfactuals in literature, identifies *It's a Wonderful Life* as a starting point in the development of counterfactuals in cinematic

²⁶⁴ “It is here that the allegorical dimension of the film – the reference of its content to cinema history, to the difference between cinema genres – becomes operative: the night-mare image of what the town would have turned into in the case of the hero’s absence is clearly modelled on *film noir*, so that the mental experiment with alternative history is a cinematic one, i.e. one passes into another genre – the hero is the ultimate guarantee and bulwark against the noir universe.

This reference to noir has to be mobilised in order to secure the ideological operation of the film, i.e. to make the hero (and the spectator) renounce his striving for Otherness and fully accept the obtuseness of (the ideological perception of) small-town everyday American life.”; vid. Žižek, *The Fright of Real Tears*, p. 63.

²⁶⁵ Ibid.

²⁶⁶ Downward counterfactuals describe a situation which could be worse today if something was different in the past. See Chapter 4.1.3. Psychology – Counterfactual Thinking.

narrative. She describes it as “a form of counterfactual biographical fantasy.”²⁶⁷

According to my research, it is definitely the first notable movie to set a milestone for this new genre.

Movies like Cecil B. DeMille’s *The Road to Yesterday* from 1925 or Edgar Selwyn’s *Turn Back the Clock*²⁶⁸ from 1933 had already approached the notion of possible alternatives. In the latter, the protagonist is unsatisfied with his life, his wife and job, and finds himself one morning twenty years in the past. From this starting point and his knowledge of the future, he tries to correct his mistakes. In this film there is a reference to the next suggested category, in which counterfactuals can be explored through time travel.

3.3.2.3. The Time Travel Model

The *time travel model* is closely related – the protagonists are purposely sent back, or travel by accident or their own will, to a certain turning point in their lives.

In Chris Marker’s picture-story *La Jetée* (The Jetty)²⁶⁹, the survivors of a destroyed Paris in the aftermath of World War III live under ground. They research the

²⁶⁷ “Neither has it been able to devote attention to the history of counterfactuals in film narrative. However, it should be noted that, in comparison to the long history of innovations in twentieth-century print narrative, the film genre has been slow to adopt the counterfactual world motif. In terms of the overall historical development of counterfactuals in cinematic narrative, a key starting point, in the form of counterfactual biographical fantasy, is Frank Capra’s perennially popular movie, *It’s a Wonderful Life* (1946). Here an angel temporarily transports the protagonist, George Bailey, to a downward counterfactual world in which he was never born so that he can understand the profoundly positive effect his existence has had on his community and fellow citizens.”; vid. Dannenberg, Hilary P., *Coincidence and Counterfactuality: Plotting Time and Space in Narrative Fiction*, *Frontiers of Narrative*, ed. Herman, David (Lincoln, NE: University of Nebraska Press, 2008), p. 222.

²⁶⁸ DeMille, Cecil B., *The Road to Yesterday*, USA, 1925.

²⁶⁹ Marker, Chris, *La Jetée*, France, 1962.

possibilities of time travel, hoping to send someone back in the era before the devastating war “to summon the past and future to the aid of the present.”²⁷⁰ The chosen traveller is a male prisoner; he is selected because of his obsession with an image from his childhood. After several efforts, he successfully meets a woman from his memory on the observation deck at Orly Airport, but only briefly.

After the first attempt failed, we learn from the narrator that he is again thrown into the past, in which:

The experimenters tighten their control. They send him back out on the trail.

Time rolls back again, the moment returns. This time he is close to her, he speaks to her. She welcomes him without surprise. They are without memories, without plans. Time builds itself painlessly around them.²⁷¹

After several successful passages to the past, the experimenters attempt to send him into the future. He accomplishes his mission as people of the future hand a power unit over to him. On his return, he is supposed to be executed, but the technologically and in matters of time travel more advanced people of the future offer him an escape to their era; however he asks to be returned to the past. On his return, he experiences the violent incident he partially witnessed as a child – his own death as an adult:

He ran toward her. And when he recognised the man who had trailed him since the underground camp, he understood there was no way to escape time, and that this moment he had been granted to watch as a child, which had never ceased to obsess him, was the moment of his own death.²⁷²

²⁷⁰ Marker, Chris, *La Jetée: cine-roman* (New York, NY: Zone Books, 1992), p. 41.

²⁷¹ *Ibid.*, pp. 106-110.

²⁷² *Ibid.*, pp. 225-230.

In time-travel counterfactuals, the story line runs linearly towards a certain moment at which the protagonist is sent back to a turning point of life. In *La Jetée* at least fifty trips into the past are mentioned, although they are not shown in the movie. It can be seen as a thought experiment in which the notion of the past becomes clearer and more precise with each journey.

Chart 4: time travel model

In other examples, such as that in *The Butterfly Effect*²⁷³ by Eric Bress and J. Mackye Gruber, the turning point in the past is clearly marked with an event which is supposed to be changed.

Evan Treborn,²⁷⁴ the protagonist, is able to travel back in time, although every time he tries to improve the present by changing events in the past, he makes the present worse.

It is an apposite example, arguing that we live in the best of all possible worlds²⁷⁵ and therefore do not need to feel the urge to change our past for a better present or future. In this film, the way in which the travel in time occurs is not obvious. Evan is introduced as a person who does not remember any evil or cruel moments in his life. Close to the end, we learn that neither he nor his father had a lifeline in their palms,

²⁷³ Bress and Gruber, *The Butterfly Effect*.

²⁷⁴ His name could be read as “event reborn”.

²⁷⁵ According to Leibniz

which already makes him an unusual character. As an adult, Evan reviews his old diaries and tries to change negative events that happened in the past. His first effort works well: he saves the life of his girlfriend Kayleigh. But all his other attempts make the present worse. Finally he strangles himself in his mother's womb, so that he is not born at all. The movie offers an alternative theatrical ending, in which Evan just refrains from becoming friends with Kayleigh – which is the reason he travelled back in time in the first place.

Some examples of time-travelling, such as in *La Jetée*, could be regarded as thought experiments, although there is not necessarily a distinction of past–present–future, and they could happen simultaneously in the here and now.

According to Endel Tulving,²⁷⁶ the ability for “mental time travel”, to effect counterfactual changes to historical records, seems feasible due to the episodic memory of human beings.

3.3.2.4. The Thought Experiment Model

In the *thought experiment* model, alternative possibilities are hypothetical and merely occur in the imagination of the main character.

*Unfaithfully Yours*²⁷⁷ by Preston Sturges is a striking and obvious example, although some of the previously-mentioned movies also could fall into this category because the counterfactual scenario appears only to exist in the protagonist's mind.

²⁷⁶ Tulving, Endel, “Episodic and semantic memory.” *Organization of Memory*, eds. Tulving, Endel and Donaldson, W. (New York: Academic Press, 1972).

²⁷⁷ Sturges, Preston, *Unfaithfully Yours*, USA, 1948.

The main character, conductor Sir Alfred De Carter, suspects his wife of infidelity. While conducting, he imagines three different methods of dealing with the situation, matching to the tagline of the according operas.

With a zoom into his eye as the signpost, the spectator witnesses what is happening in his mind: while conducting the Overture to Rossini's *Semiramide* he commits the perfect murder, with his wife as the victim. To the Prelude of Wagner's *Tannhäuser*, he lets her generously go and finally, he invites his opponent to Russian roulette while conducting Tchaikovsky's *Romeo and Juliet*, referring each time to the plot of the according opera. But back in his "real" life, everything is different from his imagination. His wife never betrayed him: all the misery and the solutions which followed only happened in his imagination – although the viewer is initially not aware of the alternative reality as a second layer.

Chart 5: thought experiment model

3.3.2.5. The Structured Model

Smoking/No Smoking,²⁷⁸ by French director Alain Resnais, consists of two movies with an elaborate structure based on Alan Ayckbourn's play *Intimate Exchanges* (see Chapter 3.2.). To smoke a cigarette or not – this is the dilemma which sets the stage for eight

²⁷⁸ Resnais, *Smoking/No Smoking*.

major variations of the drama, each with different endings, adding up to sixteen possibilities.

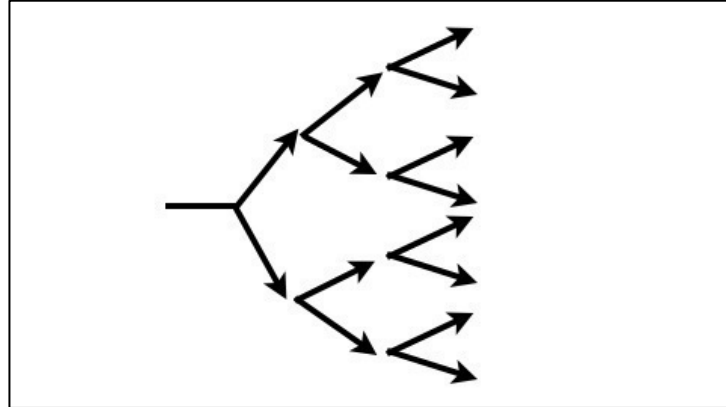


Chart 6: structured model

I agree with David Bordwell, in his essay *Film Futures*, in which he states that the human mind can only follow two or three narrative chains, although the ideal labyrinth story would have an infinite number of possibilities, as described in Borges's *The Garden of Forking Paths*. Already in the bifurcations, which follow after the first decision, it becomes difficult to keep track. Therefore most forking-path narratives have one obvious signposted fork and after that run linearly. In the example of Resnais' *Smoking/No Smoking*, in which we have continuously forking plots, it is kept simple by having only two actors in each of the scenes. The forks are well signposted by an introductory screen and title, and the different persons are clearly introduced in the beginning, which makes it easier to follow.

In my opinion, Alain Resnais is a master in weaving time, past, present and future, into a labyrinth and searching as well for alternative possibilities. Although usually, the structure is somewhat hidden and the fragments of story-telling interwoven.

The best-known example of his films is *Last Year in Marienbad*²⁷⁹, a movie which does not obviously follow a structure and appears rather like a labyrinth: full of moments of déjà vu, searching for a possible ending, even suggesting an alternative conclusion. In Resnais' science fiction drama *I Love You, I Love You*,²⁸⁰ a man has invented a time machine that has proven effective, but only transports the subject back in time for one minute. Applying the device of the time-machine for the film enables a dreamlike series of flashbacks, making it unclear if the action is presently unfolding or if it is merely a vague memory from the past. In his latest movie, *Wild Grass*,²⁸¹ Resnais emphasises crucial turning points and shows them in detail over and over again: the theft of a handbag and the finding of a red wallet. He suggests two different endings in the linear narration of *Wild Grass*: a happy finale but after the end title, the film carries on to an inconclusive ending.

3.3.2.6. The Cloud Model

This type of narration, for which I suggest the name *cloud model*, finds its precedent in Jaco Van Dormael's movie *Mr. Nobody*.²⁸² Different episodes of possible lives are patched together in an apparently non-linear-narrative by following the timeline as a movie.

The structure of this recent film could rather be described as “what-if...?”- clouds. The story is based on the imagination of a nine-year-old boy who has to decide between staying with his father or leaving by train with his mother. Depending on this major

²⁷⁹ With a script by Alain Robbe-Grillet; Resnais, Alain, *L'Année dernière à Marienbad*, France, Italy, 1961.

²⁸⁰ With a script by Jacques Sternberg; Resnais, Alain, *Je t'aime, Je t'aime*, France, 1968.

²⁸¹ With a script by Christian Gailly, based on L'Incident; Resnais, Alain, *Les Herbes Folles*, France, 2009.

²⁸² Dormael, *Mr. Nobody*.

choice, he imagines in this moment many different possibilities for his future. His story is told to the audience from the perspective of an old man, who tries to remember the past. As long as Nemo as a little boy does not choose, anything appears to be possible.

The movie contains many well-elaborated details. For example the name of the station at which Nemo (Latin for “nobody”) has to make a decision is called “Chance.” Small actions cause big events, such as a snowflake falling on a bamboo leaf can initiate a whole pile of snow falling, or through several intermediate steps, a little piece of eggshell leads to an accident – referred to as the “the butterfly effect.”

Colour schemes or colour coding and music cues distinguish various possible lives with three different partners. In one lifeline, Nemo is target-orientated: he outlines as a young boy what he would like to have and achieve at a certain age. After he succeeded with everything and reached all his goals, he surrenders his life to the complete opposite: sheer chance. From then on he makes all his decisions by flipping a coin, which is marked with “yes” on one side and “no” on the other.

The movie contains several notable quotes about choices and life-changing decisions to which I refer partially in my work *Counterplate*. Nemo advises at the age of nine that, “you have to make the right choice. As long as you don’t choose, everything remains possible.”²⁸³ The experienced Nemo at the age of 118 reflects that:

“Each of these lives is the right one! Every path is the right path. Everything could have been everything else and it will have just as much meaning.” [...] “Before he

²⁸³ “Mr. Nobody.” *Internet Movie Database* n. d., 13.03.2013, <http://www.imdb.com/title/tt0485947/quotes?ref_=tt_trv_qu,>.

was unable to make a choice because he didn't know what would happen. Now that he knows what will happen, he is unable to make a choice."²⁸⁴

In an interview about *Mr. Nobody*, Jaco Van Dormael states: "It's about the infinite possibilities facing any person. There are good or bad choices in life. It's simply that each choice will create another life for you. What's interesting is to be alive."²⁸⁵

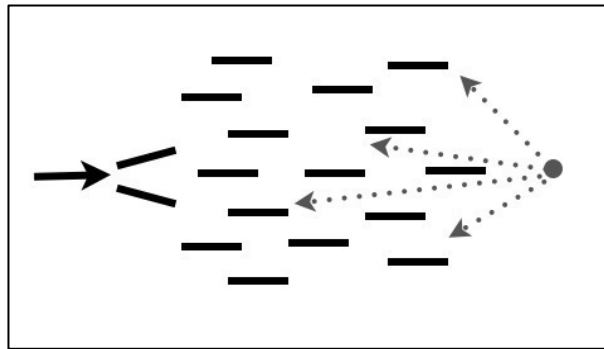


Chart 7: cloud model

Dormael's debut-film, *Toto le Héros*,²⁸⁶ already showed a similar approach, with flashbacks and dream-sequences. Two men are born at a similar time. One of them, Alfred Kant, becomes wealthier and more successful. So the protagonist and narrator Toto imagines they were swapped as babies during a fire and he is actually living Alfred's life. The timeline structure of *Toto le Héros* is exceptional: time is not just flashing back and forward, switching from reality to dream, but sometimes even incorporating events from different timelines simultaneously. For example, a blaze shown on a television set during another fire turns out to be an event, which will happen several years later. In addition to the interesting structure, Toto is a character with

²⁸⁴ Ibid.

²⁸⁵ Kelly, B., "Nobody shooting in town." *The Gazette (Montreal)* (2007), 13.03.2013 <<http://www.canada.com/montrealgazette/news/arts/story.html?id=eb8163f3-99ad-4dec-a298-96505e1223f1>>.

²⁸⁶ Dormael, Jaco van, *Toto le Héros*, Belgium, France, Germany, 1991.

obvious counterfactual thoughts, spending his life cursing the moment in which he might have been swapped as a baby.

A similar, though less obvious, approach is inherent to Alain Resnais' masterpiece *Last Year in Marienbad*.²⁸⁷ The viewer does not know what really happened: the actors are in a kind of parallel, isolated world. Detached from time and space, several characters meet in the superficial world of a spa resort. One man stands out. He remembers a woman from earlier visits, but she keeps denying that they have ever met before. The apparently repetitive sequences tell the audience that they had indeed been in the same place previously. Nothing seems to change: there are repetitive walks through endless corridors and recurring encounters, in which only different clothes give us the hint that it is not just a *déjà vu*. The structure is interwoven, hidden, and works on a sensual level rather than being visually accessible.

The *roman nouveau* author Alain Robbe-Grillet wrote the script to this labyrinth of time and memories. According to the documentary *Dans le labyrinthe de Marienbad*²⁸⁸ by Luc Lagier, the protagonists seem to be trying to escape from the writer, the narrator and the viewer, by taking a short cut. His hypothesis expresses that the bored viewer might confuse the play with his or her personal life. Lagier refers to *North by Northwest*, directed by Alfred Hitchcock, as the closest reference to Marienbad:

It is a film composed of arrows drawn on the ground, directions, crossroads, straight lines, perspectives. It is a veritable labyrinth of geometric forms where Gary Grant can take the place of a ghostly spy.

²⁸⁷ Resnais, *L'Année dernière à Marienbad*.

²⁸⁸ Lagier, Luc, *Dans le labyrinthe de Marienbad*, France, 2005.

Grant plays in *North by Northwest* a faceless character without an interior life, whose destiny is determined by others. Damian Sutton refers to the French contemporary philosopher Gilles Deleuze and his notion of the labyrinthine style of *Marienbad*:

The charm of the labyrinth, its joy and its terror, is being in it. The labyrinth is a metaphor that illustrates Deleuze's approach to truth [...] For Deleuze, of course, the truth is not at the centre of the labyrinth: the truth is the labyrinth.²⁸⁹

Alain Robbe-Grillet suggested two scripts to Resnais for the movie, which became *Marienbad* and two years later decided to direct the other one himself: *L'Immortelle*.²⁹⁰ This movie does not follow a chronological order either: the similarities to *Marienbad* are obvious: Istanbul becomes an absurd, unreal place, rebuilt just for tourists and spies seem to be everywhere. Protagonists' clothes change between one shot and the next; objects and persons change, appearing or disappearing between single pans. Truth becomes irrelevant. A scene of an accident is replayed over and over with different endings in the mind of the protagonist. In 1966 Robbe-Grillet directed *Trans-Europe-Express*,²⁹¹ which also has an unusual way of telling the story without chronological order and with shifts and overlays in time and space.

3.3.2.7. Multiple Perspectives

The point of view, perception and reception can change a whole story; furthermore it points out the question of what is true and what is not.

²⁸⁹ Sutton, Damian, "Photography, cinema, memory: the crystal image of time." (Minneapolis, MN: University of Minnesota Press, 2009), p. 65.

²⁹⁰ Robbe-Grillet, Alain, *L'Immortelle*, France, Turkey, 1962.

²⁹¹ Robbe-Grillet, Alain, *Trans-Europe-Express*, France, 1966.

A classic example from 1950 is to be found in Akira Kurosawa's movie *Rashômon*²⁹². Based on the short story *In a Grove*,²⁹³ in which seven witnesses have seen horrific events (an ambush, a woman is raped and her husband killed) with different subjective perspectives of the incident. Kurosawa slimmed these angles down to four, one for each defendant: the wife, the bandit, the dead husband and the woodcutter. The protagonists are questioned and they narrate their view of what they believe they have seen. *Rashômon* started a trend for films, plays and books about "the relativity of truth."

Chart 8: multiple perspectives

The recent movie *Vantage Point*²⁹⁴ has a similar structure. An attack on the president of the United States is retold several times from different points of view, emphasising different characters' actions. Though *Vantage Point* lacks the completeness of the story after the first few repetitions; only in the last act as the story advances in time and space, becomes what exactly happened finally evident. In this way it is different from *Rashômon*, where each narrator sees a subjective truth.

²⁹² Kurosawa, *Rashômon*.

²⁹³ Akutagawa, Ryūnosuke, "In a Grove [1921]." *The Oxford Book of Japanese Short Stories (Oxford Books of Prose & Verse)*, [藪の中 = Yabu no Naka], ed. Goossen, Theodore W. (Oxford: Oxford University Press, 2010).

²⁹⁴ Travis, Pete, *Vantage Point*, USA, 2008.

The Canadian artist Stan Douglas adapted the concept of *Rashômon* in his multi-screen installation *Klatsassin*²⁹⁵ and transferred it into a story about the Indian Chief Klatsassin. The installation is one of his recombinant works; to view all 840 variations would take 67 hours.

Split-screen is another method suggested for visualising simultaneously various points of view in a single screen movie. In *Timecode*,²⁹⁶ four related stories are shown concurrently. The screen is divided into four split-screen sections. In the cinema version, the audio is edited. Therefore, the audience is only able to follow the designated dialogues and misses the other audio segments. In the DVD version, the viewer can select one of the four dialogue tracks and jump between them, or watch the movie four times, each with a different audio track, because the other conversations would have been missed. Sadly, the option to select one of the audio tracks is only provided on the DVD by the access to the movie through “extras” and is not accessible with the main feature.

Although it is in another medium, some books should be mentioned too, such as the *Alexandria Quartet* by Lawrence Durrell, which consists of four independent volumes. The books *Justine*²⁹⁷, *Balthazar*²⁹⁸ and *Clea*²⁹⁹ are told in first person narrative, whereas *Mountolive*³⁰⁰ is written in the third person. The first three parts recount more

²⁹⁵ Klatsassin means “we don’t know his name”; cf. Christ, Hans D. and Dressler, Iris, eds., *Stan Douglas – Past Imperfect, Werke 1986-2007*. Staatsgalerie Stuttgart, Württembergischer Kunstverein Stuttgart (Ostfildern: Hatje Cantz, 2007).

²⁹⁶ Figgis, Mike, *Timecode*, USA, 2000.

²⁹⁷ Durrell, Lawrence, *Justine*, The Alexandria Quartet (London: Faber & Faber, 1957).

²⁹⁸ Durrell, Lawrence, *Balthazar*, The Alexandria Quartet (London: Faber & Faber, 1958a).

²⁹⁹ Durrell, Lawrence, *Clea*, The Alexandria Quartet (London: Faber & Faber, 1960).

³⁰⁰ Durrell, Lawrence, *Mountolive*, The Alexandria Quartet (London: Faber and Faber, 1958b).

or less the same story, only from different perspectives. In the last book *Clea*, the story arc develops in time and reveals long hidden secrets. Durrell described the technique in his introductory note to *Balthazar* as “relativistic.” *Medea*,³⁰¹ by the German writer Christa Wolf, is a novel that re-tells the story of the Medea myth from the viewpoint of six different people, shedding other lights on the figure from Greek tragedy.

A further example for multiple perspectives is to be found, in my opinion, in language and cultural backgrounds – the previously mentioned confusion of Babel. In *Serendipities, Language and Lunacy*,³⁰² Umberto Eco gives examples of the ways in which (culturally based) misunderstandings lead to new discoveries. Imagining and talking about the same thing, the same idea, could lead to completely different results. As well, researchers of counterfactual thoughts agree on the potential that interdisciplinary viewpoints have: worlds can change with different perspectives.³⁰³

Multiple points of view are relevant for my artistic research, in particular in my subsequent definition of counterfactualism in the fine arts. Here, we will find examples of different artists dealing with the approach to make either various perspectives accessible simultaneously, as does the German photographer Barbara Probst (compare with examples in Chapter: 4.2.1.1.) or purposely with the awareness of the audience, to present one section of the



Ill. 7: Radúz Činčera, *Kinoautomat One Man and his House*, screening with audience participation at the Czech pavilion, Montreal 1967

³⁰¹ Wolf, Christa, *Medea (a Novel) [1993]*, [*Medea: Stimmen*] (New York, NY: Nan A. Talese/Doubleday, 1998).

³⁰² For instance, Leibniz misinterpreted the I Ching, because he used another reading direction and therefore formed the binary code; cf. Eco, *Serendipities, Language and Lunacy* p. 53.

³⁰³ Dunning, David and Madey, Scott F., “Comparison Processes in Counterfactual Thought.” *What Might Have Been: The Social Psychology of Counterfactual Thinking*, eds. Roese, Neal J. and Olson, James N. (London: Psychology Press, 1995).

whole, for example Stan Douglas with his recombinant work.

3.3.2.8. Other Approaches

Further to the relevance to my research of multiple perspectives, I suggest three more subcategories, which will reappear in the transfer to fine arts, as well as in my own artistic research.

Audience Interaction

In Radúz Činčera's *Kinoautomat*³⁰⁴ *One Man and his House*, the audience was supposed to decide the way in which the story progressed, even though the endings of each sequence remained the same. It was shown for the first time in the Czech pavilion at the World Expo Montreal in 1967. The movie stopped at dramatic moments several times, and spectators chose between two options for the continuance of the movie. These situations were introduced on stage by a host. At the same time, the actors appeared, each pleading for the solution that would suit their character best. The audience had to press a green or red button on the armrest of the specially prepared seats: a decision was required every time. Two synchronised projectors, of which one was covered, ran in parallel. The two plot lines converged at each decision point, therefore both variations always ended in the same situation, and actually offered fewer possibilities than expected by the audience. In 1972, the film was banned by the communist regime in the Czech Republic.

Forty years after the première two versions of the film were broadcast simultaneously on two channels of Czech television, then liberated, – similar to Oliver

³⁰⁴ Willoughby, Ian, "Groundbreaking Czechoslovak interactive film system revived 40 years later." (2007), 6.3.2013
<<http://www.radio.cz/en/section/panorama/groundbreaking-czechoslovak-interactive-film-system-revived-40-years-later>>.

Hirschbiegel's murder mystery on German Television, *Mörderische Entscheidung*.³⁰⁵ The audience was invited to switch channels and to choose between the two different versions, which implemented concurrent yet different points of view.

Random

Taiwanese director I-Chen Ko experimented in his 1997 movie *Lan Yue (Blue Moon)*³⁰⁶ with combinatory methods. His feature film consists of five film reels. The order can be chosen by the projectionist and makes up to 120 possibilities by which to watch the film, while still all making sense.

Non-linear narration

Another approach to non-linear narration offers Linklater's *Slacker* from 1991. He gives an introduction to the question "what if...?" as an actor sitting in a taxicab. There is no continuous story, however small incidents occur. Before each little episode reaches its climax, the camera follows another person, a passer-by. The viewer has no choice of which story to follow, but is aware that there are things happening at the same time in different places, referring to parallel universes and different points of view. In this way, many separate stories chosen by the scriptwriter are mentioned, but they are all interrupted and left to the fantasy of the viewer, – possibly evoking some counterfactual thoughts. Linklater published the story one year later as a book.

The question of turning points appears to be a topic as well in Linklater's later works, *Before Sunrise*³⁰⁷ (1995) followed by *Before Sunset*³⁰⁸ (2004) and *Before Midnight*

³⁰⁵ Hirschbiegel, Oliver, *Mörderische Entscheidung*, Germany, 1991.

³⁰⁶ Ko, I-Chen, *Lan yue*, Taiwan, 1998.

³⁰⁷ Linklater, Richard, *Before Sunrise*, USA, Austria, Switzerland, 1995.

Before Sunrise and *Sunset* are nine years apart, in real time and in the fictional story alike.

(2013), in which a man and a woman explore what would have happened if they had both kept an appointment in 1995. Although his later films do not have much relevance to my thesis, I see *Slacker* as a very strong work through which to explore the topic of decisions and parallel events. His movies are not obviously counterfactual but they leave the “what would have happened...?” question to the imagination of the viewer.

The above-mentioned subordinate categories are of particular importance for my concept in *Your Day Will Come!*, in which all of these categories of immersive audience participation and a non-linear narration by choice and random evoke and reveal counterfactual thoughts.

My exhaustive examination of counterfactual movies supported the process of analysing the possible structures of a counterfactual narrative. Furthermore, in distinguishing the turning points, their background and different layers has been instrumental for me in designing the conditions in which to introduce the term as a new category for fine arts.

3.3.3. Advertising

Advertising is the discipline, which plays most obviously with counterfactual thoughts in everyday life. A happy family in a cosy home lets us know that our guests will be most happy with a certain brand of coffee; we will definitely feel more attractive with a certain antiperspirant; we will destroy our environment most pleasurably in a specific car. In front of the extraordinary selection on the shelves in the supermarket, we might think that we cannot go wrong with a familiar brand; we do not need to worry about having

³⁰⁸ Linklater, Richard, *Before Sunset*, USA, 2004.

counterfactual thoughts on our choices afterwards, such as “my guests would have liked the coffee better, if I only had brewed the other brand.”

There is one extraordinary example which I describe in further detail, starring the American actor William Dafoe as the protagonist. The one and a half minute clip in black and white, *Parallels*³⁰⁹, is an Ad for the whiskey brand *Jim Beam*, it was developed by the agency *StrawberryFrog* in 2011.

Dafoe³¹⁰ plays multiple characters and speaks of “[t]he choices you make and the ones you don’t, become you – but which you? Worse? Better? Someone you can’t even recognise? It can make you question everything. Whether you’re strong enough? Good enough?” He concludes: “All choices lead you somewhere. Bold choices take you where you’re supposed to be.”³¹¹ Then the audience learns that *Jim Beam* is the right choice when it comes to picking a particular whiskey.



Ill. 8: Willem Dafoe starring the possible characters he could have become for an advertising campaign, 2011

The spot opens at a bus station in Appleton, the town where the actor Willem

Dafoe grew up. He sits behind a window, in front of two buses, one headed towards New York, the other to Milwaukee.³¹² Then the different personalities Dafoe could have become in his life are convincingly introduced: two disparate versions of him are sitting in a café, then we see him as a trapeze artist, a circus groundskeeper, a chess champion, a boxer, a warehouseman, a fashion designer, an executive or his chauffeur, and even as an overweight sumo wrestler. It is an obvious but at the same time a highly seductive

³⁰⁹ Ariola, Dante, *Bold Choices – Parallels*, USA, 2011.

³¹⁰ *Sparkling a Movement for Bold Choice . Behind the Scenes with Jim Beam*, USA, 2011.

³¹¹ Ariola, *Bold Choices – Parallels*.

³¹² Ironically the city, where most of the beer in the U.S. is produced.

approach to persuade the audience to influence their destinies by making the right choices, even though they might not be the easiest or – in reference to advertising – the cheapest.



Ill. 9: Willem Dafoe ponders whether to take the bus to Milwaukee or New York...

This advertisement is closely related to my line of thoughts, visualised in my early work *Me&Myself*. Furthermore, it is an excellent illustration of what I will call later on *revealing counterfactual thoughts*, a category in which artists consider possible alternatives lives.

3.4. Music

In music, I suggest the counterfactual moment occurs in the varying experiences of the audience. It could be seen also as a description for variations on a repeated motif, for example in Mahler's Variations on the melody of Frère Jacques in his *Symphony No. 1 in D major*, third movement. The motif is performed on different instruments with small variations, as if Mahler initially could not make up his mind about which one to choose and therefore constructed a whole movement from this starting point.

While I would suggest, according to my definition of counterfactualism, it does not stand for written notations of a musical piece at all. Counterfactual thoughts appear only in different perceptions of a musical piece, depending on the performance, including the interpretation, the place and the acoustics and as well the audience. So the reception of the same musical piece can differ completely from one performance to another and therefore evoke counterfactual thoughts. The real execution of the idea is to be found in aleatoric music. I am not referring to music composed using chance methods and then inscribed on paper, as is John Cage's famous *Chance Music* which

was retrieved by consulting the *I Ching*,³¹³ or *Musikalisches Würfelspiel*,³¹⁴ attributed to Mozart. Once composed, only slight variations are possible in the interpretations.

The early compositions by Marcel Duchamp are counterfactual in a different way. For instance *La Mariée mise à nu par ses célibataires, même*³¹⁵ uses an “apparatus automatically recording fragmented musical periods”³¹⁶, therefore making each performance unique. Cage’s *Variation* performances, in which he leaves the whole interpretation to the performer and the conductor, also fall into this category. They are intended for “any number of players and any sound producing means.”³¹⁷ The score leaves a lot of freedom to the performer, so it is difficult to imagine that exactly the same piece could be listened to twice in any live performance. The instructions explain the use of the transparent sheets with lines and points. After spreading them with or without overlay on a suitable surface, perpendiculars, which are dropped from the points to the lines, indicate frequency, amplitude, timbre, duration and point of occurrence in an established period of time and the structure of the event. The instruction concludes with even more freedom for interpretation:

³¹³ for instance 1952, Cage’s tape collage *Williams Mix*, made up of some 600 tape fragments arranged according to the demands of the I Ching; cf. Nechvatal, *Immersion Into Noise*, p. 43.

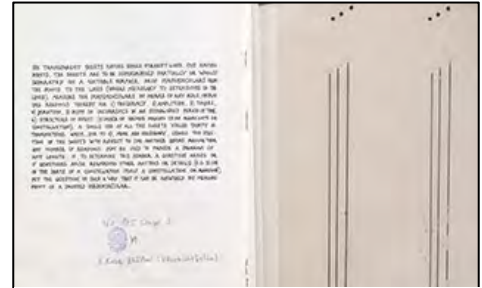
³¹⁴ The technique is explained here: Chuang, John, *A Musical Dice Game for Composing a Minuet*, 1995, Available: <http://sunsite.univie.ac.at/Mozart/dice/>, 13.03.2013.

³¹⁵ *The Bride Stripped Bare By Her Bachelors, Even*; cf. Duchamp, Marcel, *La mariée mise à nue par ses célibataires même. Erratum musical.*, 1913.
<<http://www.allmusic.com/composition/erratum-musical-la-mariée-mise-à-nu-par-ses-célibataires-même-for-interchangeable-instrumentation-mc0002367053>>.

³¹⁶ “The apparatus composing the piece is comprised of three parts: a funnel, several open top cars, and a set of numbered balls. [...] The placing of notes (numbers) in the score was determined by the way in which the balls came through the funnel and were taken out of the cars. [...] The composition itself was determined by Duchamp in his description of the system and his examples of musical scoring.”; vid. Kotik, Peter, “Music by Marcel Duchamp – CD booklet.” (Berlin: Edition Block EB-202, 1991.

³¹⁷ Cage, John, “Variations II.” (1961.)

Any number of readings may be used to provide a program of any length. If, to determine this number a question arises or, if questions arise regarding other matters or details, [...] put the question in such a way that it can be answered by measurement of a dropped perpendicular.³¹⁸



Ill.79: The instruction and notation for John Cage's Variations, 1961

Cage and Duchamp experienced their joint musical apex in 1968 during a game of chess, thus creating the musical composition *Reunion*, which was aleatorically composed by triggering a series of photoelectric cells underneath the chessboard. Each move activated or cut off the sound coming live from several musicians. Sylvère Lotringer gave the following description of the event: “All it took was plugging in their brains to a set of instruments, converting nerve signals into sounds.”³¹⁹

Another example is spatial distribution of sound as a means to explore counterfactual thoughts. To describe an example of my personal recollection, I explored

³¹⁸ “Six transparent sheets having single straight lines. Five having points. The sheets are to be superimposed partially or wholly separated on a suitable surface. Drop perpendiculars from the points to the lines (where necessary to extensions of the lines). Measure the perpendiculars by means of any rule, obtaining readings thereby for 1) frequency, 2) amplitude, 3) timbre, 4) duration, 5) point of occurrence in an established period of time, 6) structure of event (number of sounds making up an aggregate or constellation). A single use of all the sheets yields thirty determinations. When, due to 6), more are necessary, change the position of the sheets with respect to one another before making them. Any number of readings may be used to provide a program of any length. If, to determine this number a question arises or, if questions arise regarding other matters or details (e.g. is one of the parts of a constellation itself a constellation, or aggregate), put the question in such a way that it can be answered by measurement of a dropped perpendicular.”; vid. Ibid., pp. n. pag., back cover.

³¹⁹ Lotringer, Sylvère, “Duchamp werden.” *Crossings: Kunst zum Hören und Sehen* (Wien: Kunsthalle Wien (exh. cat.), 1998).

moments of retrospective considerations in a performance by Daniel Teige of Iannis Xenakis' *Persepolis*³²⁰ in the garden of the castle in Karlsruhe.

Xenakis was an architect and composer who applied stochastic methods and probability theory in his creative process. In his completed work, we hardly find a reference to this method. But listening to *Persepolis* in a large area, covering twice the size of a football-field, the listener is able to grasp only a small part of the whole composition during the sixty-minute-long performance. No matter whether walking through different "rooms" framed by speakers or positioned in a single spot – each member of the audience will most likely witness a different composition.

A year earlier in a symposium at ZKM, Teige described his experience with the performance of *Persepolis* in different venues.³²¹ Depending on several factors, such as the location and atmosphere, he reported the performance of the same piece as always completely different, although the source was exactly the same, running from digitised tapes and not dependant on the interpretation of individual musicians. The same observation is valid for other performances of spatially distributed sound.

These examples are effective for recorded or live audio performances. A special case of evoking counterfactual thoughts with audio are records with parallel grooves. Although here, it is effortless to play the record again and "If I only..." considerations are not as likely as in an occasional performance. Not recognisable without magnifying glasses, parallel grooves are cut into the vinyl disc using a special technique, and just one of the tracks is played, depending on where the stylus is placed. Some classic examples

³²⁰ Concert

Iannis Xenakis with Daniel Teige: "Persepolis" in the Karlsruhe Palace gardens, June 02, 2012

³²¹ Teige, Daniel, Xenakis' *Persepolis*: ZKM | Zentrum für Kunst und Medientechnologie, 2011 (Published).

date back to the early days of gramophone records, such as a fortune telling disc from 1901 or the disc *Miracle Derby*³²² with its commentary on a horse race. Five different tracks begin with the same introduction, but in each, the race evolves differently and a different horse is the winner. The most impressive example of this technique is *The MAD Mystery Record*,³²³ which was sold as a supplement to *MAD magazine* in 1980. Eight different tracks describe “A Super Spectacular Day”, depending on where the needle is placed. As before, all eight tracks begin with the same introductory phrase but branch off during the playback into a different description of the day and deliver a counterfactual listening experience – challenging the listener to discover all the tracks on the record.³²⁴

As part of my practical research, I experimented with this technique on a record with two parallel grooves, which is supposed to be an aid for decision making: *Decision Disc N°1*.³²⁵ The record comes with my instructions:

Are you confronted with a difficult choice? Don't you know whether to do something or not? Then pose your question, play the record and you'll easily find the right solution! After listening to the record you either will be content with the

³²² “Miracle Derby.” *Youtube.com* n. d.,
<<http://www.youtube.com/watch?v=B1T7iStzDNk>>.

³²³ MAD Magazine, *It's a Super Spectacular Day*, Norick Music (ASCAP), USA, 1979.
<http://www.youtube.com/watch?v=myyc812X1_I
<http://www.junkyardclubhouse.com/2008/07/12/great-big-beautiful-wonderful-incredible-super-spectacular-day/> <http://www.kempa.com/2004/02/26/fate-as-the-dj-parallel-grooves/>>.

³²⁴ The same technique was used in an artistic context on side four of the double album of the collaboration between Anderson, Burroughs and Giorno. Depending on where the needle lands on the multi-grooved record, a track by either of the three artists is played; cf. Anderson, Laurie, Burroughs, William S. and Giorno, John, *The Dial-A-Poem Poets: You're the Guy I Want To Share My Money With*, Giorno Poetry Systems GPS 020-021, USA, 1981. <<http://www.ubu.com/sound/guy.html>>.

³²⁵ Reinhuber, *Decision Disc N°1*.

suggestions or will have a better idea. In the rare case of still not knowing what to do, listen to the flip side.

The two parallel tracks contain a variety of computer voices either suggesting “Yes” or “No.” However, I personally favour the B-side, which contains a confusing composition of “Yes,” “No,” “Perhaps” and “Maybe.” The text of this one-minute piece is connected to certain paintings by Ed Ruscha. In particular, I

consider *I Think I'll...*³²⁶ as a masterpiece

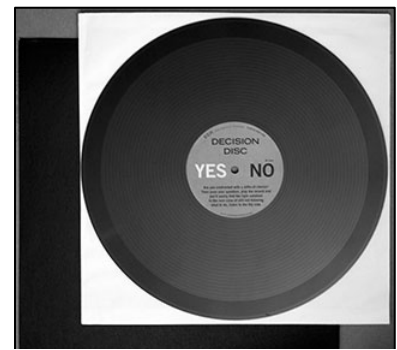
emphasising the struggle of indecision with such

phrases as “I think maybe I'll...,” “maybe... no,”

“maybe... yes,” “on second thought,” “wait a

minute... I... I...” which are positioned all over the

canvas.

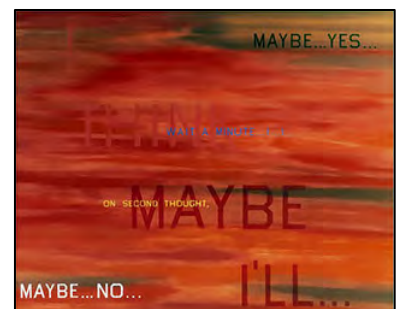


Ill. 10: Elke Reinhuber, Decision Disc N°1, 2012

To conclude my survey in the field of music, I consider spatially distributed sound in particular to be a powerful way to evoke counterfactual thoughts. Therefore, I experimented in this way with audio and applied it in my immersive panoramic installations. (Compare with Chapter 2.2.1.3. The Audio),

3.5. Virtual Reality

To be whatever we would like to be appears to be only possible in virtual worlds. We can create our avatar, our virtual other self, according to our dreams and wishes,



Ill. 11: Ed Ruscha, *I Think I'll...* 1983, Gallery of Art, Washington, DC

³²⁶ Ruscha, Ed, *I think I'll...*, 1983. National Gallery of Art, Washington, DC. <<http://www.edruscha.com/site/item.cfm?pk=330>>.

completely different from our real personality. Even more – we can return to a certain decision and revise it to experience other options, which otherwise is only possible through the theoretical assumptions of counterfactual thinking.

Computer games and virtual worlds are such a vast field for exploration, it is impossible to cover the topic in this thesis and I mention it only for completeness. Regarding alternative lives or parallel worlds on the internet, *Second Life* is one of the leaders in the market. Many earlier attempts to establish virtual reality spaces were not as successful as *Second Life*, because many other users playing the same game were needed to establish a functioning parallel world.

In general, we find in games the most obvious counterfactual media: the user is capable of returning easily to a saved turning point and trying other options. In the world of computer games, it is one of the simplest tasks to start over again. A player dies and is born again, although sent back to the beginning of one level or the latest saved state. By then the player has learned – hopefully – where the danger zones are and will most likely try to avoid them.

First-person shooters in general relate closely to counterfactual feelings. The player is presumably going to identify her- or himself with the virtual protagonist in the game. Genre-defining games like *Doom* should be mentioned, by way of example. Once fatally shot, the player starts over and knows on the second attempt how to react and where to take cover or what special precautions to take. Intermediate levels can be saved and different possibilities explored in order to reach the next level in the best possible manner. Nowadays, first-person shooters offer more surprises and are not as easy to outwit as they used to be, and even offer different endings, depending on the method of play. Still, the counterfactual aspect is obvious.

Adventure games, as well as first-person shooters, are different forms of narrative computer games that represent actions in a timeframe. The ability to always be able to make decisions reversible determines the counterfactual assessment of this genre: if unsuccessful with a particular step, the player just goes back to the last saved point. The peak of video games in which counterfactual fate corrections were easily carried out – unlike the games which are played by groups – lasted until the advent of networked games, but defined today's image of the sociopathic gamer, relying only on himself.

This section, about virtual reality in regard to counterfactual thinking, would have enough material for a whole thesis in itself. The most relevant aspects for my research can be even better perceived in the previously mentioned debate on film and literature.

3.6. Summary

Based on the results of the different sources of inspiration, which I consulted, it can be said that counterfactual thinking (in all kinds of fictional narrative) is a popular contemporary trope.

The various strategies used to represent alternatives to a path in life can, in my opinion, be best observed in movies. In linear time-based media, I consider it as a challenge of story telling to guide the audience to a retrospective turning point, usually in the life of the lead character. For that reason, I have categorised different approaches to a genre that I have called “counterfactual film.” The relationship with literature and the performing arts is evident, as they provide the basis for many movies.

Video games, in contrast, already offer by their nature the possibility for players to return to a last saved turning point and enable them to revise their choices and to experience alternative pathways through the game. Platforms and environments of

computer-generated reality offer the chance to virtually escape into another world and, embodied by an avatar, be whoever the player would like to be for a certain period of time.

I consider spatially distributed sound to be very powerful and important in evoking counterfactual thoughts. Therefore I applied it in my immersive installations. The performance advances through time, but the audience can only listen to the part, which is audible from the chosen position and misses all the other sections. In this regard, it is most closely related to our experience of “real” life

4. Pluriverse and the Best of All Possible Worlds (Argument)

In this chapter, I will introduce the terminology and conceptual history of *counterfactuals*. I will also propose that the term be expanded to include the fine arts and summarise the research into the term counterfactualism in the relevant disciplines. The concept of counterfactuals is already recognised in historiography, philosophy, physics and in the discipline I consider to be the most important for my research, psychology.

What they all have in common is a desire to review turning points and evaluate different consequences. The reason may not only be the regret of a decision or the outcome of an event, it can also evolve from a curiosity to imagine possible alternatives. By doing so, the actual result is reinforced.

In an addition to these disciplines, I propose the inclusion of related work in the fine arts and to encapsulate it with the term *counterfactualism* as a hypernym. For a more precise definition in the arts, I suggest three categories for the ways in which counterfactualism can be applied:

- Artists can experience counterfactual thoughts in the process of art production.
- Artists can reveal counterfactual thoughts in their life with an artwork.
- Artwork can evoke or activate counterfactual thoughts in the audience.

Most of these explorations are based on my artistic practice, but at the same time on an intensive research in international contemporary arts.

4.1. Definition and Terminology

Counterfactual is a relatively new word. Its first appearance in English dictionaries was in the middle of the last century.³²⁷ It is a combination of ‘counter’ and ‘factual,’ that is, a conditional statement plus the expression of something, which is contrary to fact. There is a clear distinction from fiction, which is purely imaginative: counterfactuals are based on real events, on facts; the possible alternatives are usually fictional.

The first analysis of counterfactual conditionals was advanced in 1946 by the analytical philosopher Roderick M. Chisholm³²⁸ and in 1947 by his colleague Nelson Goodman.³²⁹ They articulated a theory of the ways in which to express counterfactual arguments in a formalised language. As Goodman put it: “The problem is to define the circumstances under which a given counterfactual holds while the opposing counterfactual with the contradictory consequent fails to hold.”³³⁰ These counterfactual conditionals can be perceived as conditionals in the *irrealis* mood, as research fellow Markus Schrenk recently applied both meanings synonymously.³³¹ He cites Charles Burton Martin as a reference to support the argument: “‘Causal’ counterfactuals have a place of course, but only as clumsy and inexact linguistic gestures to dispositions and they should be kept in that place.”³³² These discussions prove far too complex for my

³²⁷ *Dictionary.com* 2009, Random House, Inc., 13.03.2013, <<http://dictionary.reference.com/browse/counterfact>>.

³²⁸ Chisholm, Roderick M., “The Contrary-to Fact Conditional.” *Mind* 55 (1946).

³²⁹ Goodman, Nelson, “The Problem of Counterfactual Conditionals.” *Journal of Philosophy* 44 (1947).

³³⁰ *Ibid.*

³³¹ Schrenk, Markus, “Konditionale Analysen des Begriffs der Disposition aus der Sicht der Empiristischen Wissenschaftstheorie.” Magisterarbeit zur Erlangung des Grades eines Magister Artium, Rheinische Friedrich-Wilhelms-Universität zu Bonn, 2000, pp. 108, Footnote 137.

³³² Martin, Charles Burton, “Dispositions and Conditionals.” *The Philosophical Quarterly* 44 (1994). Cited following Schrenk, “Konditionale Analysen des Begriffs der Disposition aus der Sicht der Empiristischen Wissenschaftstheorie.” p. 6.

research, since the use of counterfactual conditionals exemplifies the endeavours in the empiricist philosophy of science to describe all phenomena with empirical terms.

The term as we know it today, is well established in the research of psychology, historiography, philosophy and physics, but not yet in terms of the fine arts. To understand the origins and related fields of research, I will give a brief introduction as to how and where counterfactuals naturally appear and in which setting the term is established.

In psychology, counterfactual means primarily a person's real-life experience, followed by retrospective considerations about a missed opportunity or a wrong decision, which could have concluded in a better outcome than the actual life-path. It is often connected with regret.

Historiography deals with actual historical facts and subsequent thought-experiments: the ways in which some historical events could have been written differently, for example, if a battle, an election, or a summit talk had had different consequences.

The concept of counterfactuals appears in philosophy and in physics in relation to several models of parallel universes and also in quantum physics. Slavoj Žižek refers to the American historian of science and palaeontologist Stephen Jay Gould's *Time Scales and the Year 2000* with the following words:

It can be claimed that today we are approaching a homologous threshold: a new "life experience" is in the air, a perception of life that explodes the form of the linear, centred narrative and renders life as a multiform flow; even in the domain of the "hard" sciences (quantum physics and its multiple-reality interpretation;

neo-Darwinism) we seem to be haunted by the chanciness of life and the alternative versions of reality – to quote Stephen Jay Gould’s blunt formulation, which uses a cinema metaphor: “Wind back the film of life and play it again. The history of evolution will be totally different.”³³³

In the following, I will give a brief insight into the disciplines in which counterfactuals are already well established.

4.1.1. Psychology – Counterfactual Thinking

The most relevant research for counterfactual thinking in my opinion is based in cognitive psychology, which explores internal mental processes regarding retrospective analysis of one’s path of life. It was established in relatively recent times as a field of research and is associated neurophysiologically with prefrontal, in particular orbitofrontal, cortex activity.³³⁴

Counterfactual thinking can be described as a mental attempt to change an aspect in the past hypothetically and to imagine what could have been different and how the present and even the future might differ from now on. Most likely every one of us asks questions from time to time: what would have been, if I had done something else? Or if I had left earlier I would I have missed the train?

The research area of counterfactual thought observes these questions in context and explores their effect on emotions, conduct and well-being. The researchers want to

³³³ Žižek, *The Fright of Real Tears*, p. 78.

He is citing: Gould, Stephen Jay, “Time Scales and the Year 2000.” *Conversations About the End of Time*, eds. Gould, Stephen Jay, Eco, Umberto, Carriere, Jean-Claude and Delumeau, Jean (Harmondsworth: Penguin Books, 2000), p. 41.

³³⁴ Contreras, Fernando, Caño, Agnes, Benejam, Bessy, Crespo, José M., Menchón, José M. and Vallejo, Julio, “Poster 63: Counterfactual Thinking in Schizophrenia Patients.” *Schizophrenia Research* 117 (2010), 13.03.2013.

know: why do people have such a strong propensity or desire to generate counterfactuals, and what functions do counterfactual thinking serve? What are the determinants of counterfactual thinking and what are its adaptive and psychological consequences?

Counterfactual thinking is not related to the dissociative identity disorder syndrome (DID),³³⁵ in which patients shift between different self-identities. Although, a vague connection might be seen when I point to artists, who are revealing possible selves in their artwork. It is a conscious approach to imagine alternative identities.

For the research on counterfactual thinking, the starting point could be designated as 1982, when Daniel Kahneman and Amos Tversky published a chapter on simulation heuristics in their book about the dubiety of human judgement. It describes the idea that people simulate models of episodes mentally and examine the contents and implications, rather than using available heuristics (for instance an intuitive “what if?” analysis.) They proposed the idea that counterfactual simulations were normality-restoring. People tend to deny what appears to them as abnormal.³³⁶

Another proposal by Kahneman in research with Dale Miller, was that the more likely an event, the more people tended to imagine how things could have been changed: a flight missed by only five minutes, not thirty, is more likely to evoke counterfactual thoughts. It is easier to accept that the gate closed a while ago; but with a near miss, one is likely to think one could have made it: if I only hadn’t stopped at the yellow traffic

³³⁵ International Society for the Study of Trauma and Dissociation (2011): Guidelines for Treating Dissociative Identity Disorder in Adults, Third Revision, *Journal of Trauma & Dissociation*, 12:2, 115-187, Routledge, London UK, 2011

³³⁶ Kahneman, Danny and Tversky, Amos, “The simulation heuristic.” *Judgment under uncertainty: heuristics and biases*, eds. Kahneman, Danny, Slovic, P. and Tversky, Amos (New York, NY: Cambridge University Press, 1982).

light, if I only had gone a little faster.... The proposed ideas were elaborated in 1986 in their paper *Norm Theory*.³³⁷

Counterfactual thoughts are likely to be activated after an experience with negative emotions. Victoria Medvec, Scott Madey and Thomas Gilovich continued research into the effect of so-called “outcome closeness” on Olympic medallists. Silver medal winners were not as content as bronze medal winners. The reason lies in the upward or downward comparison. Silver medal winners were close to winning the gold medal, whereas bronze medal winners almost did not win any medal at all.³³⁸

In Tracey Moffat’s photographic series *Fourth*, it is easy to observe the immense disappointment of just having missed the medal at all. She stated in a press release “It’s sadder than coming last because when you come Fourth you have just missed out on a medal. [...] Almost a star!”³³⁹ The idea for her series grew from counterfactual considerations. Moffat was asked, if she were interested to cover the Sydney Olympics as official photographer. Not being contacted again formally, she imagined to capture only photographs of the losers if she were engaged as Olympic photographer, and finally presented the Fourths in her artwork.

Counterfactual thoughts are commonly associated with strong emotions like regret, guilt, relief and satisfaction, and social assessments: blame, responsibility and causal judgements.³⁴⁰ Nowadays they are related to learning, behavioural regulation,

³³⁷ Kahneman, Danny and Miller, D. T., “Norm Theory: Comparing Reality to its Alternatives.” *Psychological Review* 93 (1986).

³³⁸ Medvec, Victoria Husted, Madey, Scott F. and Gilovich, Thomas, “When Less Is More: Counterfactual Thinking and Satisfaction Among Olympic Medalists.” *Journal of Personality and Social Psychology* 69 (1995).

³³⁹ Moffat, Tracey, “*Fourth*”, *press release*. Sydney: Roslyn Oxley9 Gallery, 2001 www.roslynoxley9.com.au/news/releases/2001/08/02/13/, 13.03.2013.

³⁴⁰ Markman, Keith D., Klein, William M. P. and Suhr, Julie A., eds., *Handbook of Imagination and Mental Simulation* (London: Psychology Press, 2008).

planning and the correction of mistakes as part of an automatic cognitive pathway involving counterfactuals, intentions and implementation of behaviours.³⁴¹ On the other hand, in the early days of the research, poor coping skills, psychological error or bias were connected to counterfactual thinking and regarded as dysfunctional.³⁴²

Current research distinguishes between upward and downward counterfactual thoughts, but rarely the horizontal. In the *emotional amplification hypothesis*: upwards describes a situation which could be better today, whereas downwards is connected to the thought that it could be worse if something had been different in the past.³⁴³

In a 2006 study, Audrey K. Miller and Keith D. Markman stated that counterfactuals are more likely to focus on controllable events than on uncontrollable ones and that controllable situations are more likely to evoke upward rather than downward thoughts and enhance retrospective control perceptions.³⁴⁴

The scientists Roese and Olson described the importance and functional basis of counterfactual thoughts. Although upwardly directed thoughts cause negative emotions, they have a preparatory function: they let us learn from the past and allow us to act differently in the future, whereas downward counterfactual thoughts console us and let us feel how lucky we were, because it could have been worse.

Especially in this regard, the opinion of researchers has changed massively. In earlier publications, upward counterfactual thoughts were seen as a negative influence,

³⁴¹ Contreras, Caño, Benejam, Crespo, Menchón and Vallejo, "Poster 63: Counterfactual Thinking in Schizophrenia Patients."

³⁴² Epstude, Kai and Roese, Neal J., "The Functional Theory of Counterfactual Thinking." *Journal of Personality and Social Psychology* 12 (2008), 13.03.2013 <<http://psr.sagepub.com/content/12/2/168>>.

³⁴³ Mandel, David R., Hilton, Denis J. and Catellani, Patrizia, eds., *The Psychology of Counterfactual Thinking* (London: Routledge Chapman & Hall, 2005), p. 3.

³⁴⁴ Markman and Miller, "Depression, Control and Counterfactual Thinking: Functional to Whom?".

but today, it is thought that both directions help to optimise future actions. Based on these ideas, researchers are approaching counterfactual thinking as an important function in the development of a kind of psychological immune system.³⁴⁵

Even more, a study by management professors Laura Kray and Philip Tetlock suggests that counterfactual thinkers are more motivated, analytical and believe there is meaning in their lives. “The irony is that thinking counterfactually increases the perception that life’s path was meant to be,” states Laura Kray, “which ultimately imbues one’s life with significance.”³⁴⁶ While one might argue that believers of destiny would be less inclined to be analytical, the research also found that people who think counterfactually and find meaning in their lives are more apt to believe life is not a product of chance and that they can make valuable choices.

The versatile research in psychology helps to understand counterfactual thinking and provides the basis of the ways in which counterfactuals can be transferred to fine arts, the artist or – even more important – the audience.

4.1.2. Historiography – Counterfactual History

Historians speculate on “what if” counterfactuals as an alternative to events that actually occurred in history. It is supposed to be useful in order to ascertain the rightful outcome of an event or the veracity of an historical figure.

³⁴⁵ Mandel, Hilton and Catellani, eds., *The Psychology of Counterfactual Thinking*, p. 3.

³⁴⁶ Kray, Laura J., George, Linda G., Galinsky, Adam D., Liljenquist, Katie A., Tetlock, Philip E. and Roese, Neal J., “From What Might Have Been to What Must Have Been: Counterfactual Thinking Creates Meaning.” *Journal of Personality and Social Psychology* 98 (2010), 14.04.2012 <DOI 10.1037/a0017905>.

The first written speculations on alternatives to historical events appeared very early, about 25 BC in the book *Ab Urbe Condita*³⁴⁷ by Roman historian Titus Livius who questions what would have happened if Alexander the Great had expanded his empire westwards instead of eastwards: in *If it had happened otherwise. Lapses into imaginary history*,³⁴⁸ John Collins Squire collected essays by different authors from various background, including well-known politicians such as British Prime Minister Winston Churchill³⁴⁹ who contributed ideas of an alternative history. Squire applied a framing narrative to his compilation in which the soul of a historian is taken to the heavens of all historical researchers in history, where all eternal archives with all knowledge are stored. The savant discovers an archive with all unrealised possibilities and an archangel explains to him the importance of the real event, similar to the goddess Pallas who presents to Theodorus the best of all possible worlds in Leibniz's *Theodicy*.³⁵⁰

According to historian Niall Ferguson, Squire's collection, which was mainly written by novelists and journalists, was not grounded in reality and therefore soon forgotten.³⁵¹ In 1997 Ferguson edited a collection of essays in counterfactual history, *Virtual History: Alternatives and Counterfactuals*. This time he ensured valuable research by inviting only history scholars to write the essays. For my investigation, I appreciate in particular Ferguson's excellent introduction, which provides a good

³⁴⁷ Livius, Titus, "Ab Urbe Condita." trans., Roberts, Reverend Canon, *The History of Rome, Vol. 2*, ed. Rhys, Ernest, vol. Book 9, sections 17-19 (London: J. M. Dent & Sons, Ltd. (Everyman's Library), 1905).

³⁴⁸ Squire, John Collins, ed., *If It Had Happened Otherwise . Lapses into Imaginary History* (London: Longmans, Green, and Co., 1931).

³⁴⁹ Churchill, Winston S. "If Lee Had Not Won the Battle of Gettysburg." *Ibid.*, pp. 173-196.

³⁵⁰ Leibniz, *Theodicy: Essays on the Goodness of God, the Freedom of Man, and the Origin of Evil* pp. 92-93.

³⁵¹ Ferguson, Niall, ed., *Virtual History . Alternatives and Counterfactuals* (New York, NY: Basic Books, 1999), pp. 9-10.

insight into the field. He refers as well to examples of other disciplines with which my research was reinforced.

Robert Cowley collected and edited a large number of essays (although in my opinion not of the same quality as those collected by Ferguson) in *The Collected What If? – Eminent Historians Imagine What Might Have Been*,³⁵² which consists at the time of writing, of three volumes,³⁵³ and was followed by *What Ifs? Of American History*. The collections contain essays, asking for example “What if the Persians had won the battle of Salamis?” or “What if Great Britain had remained neutral in World War I?” and other speculations.

Though in the genre of fiction, a popular example, which draws the background for its setting from the concept of alternative history, is the bestselling novel *Fatherland* by Robert Harris. It is set in an imaginary world in which the German Third Reich won World War II. He uses historical facts to develop several characters and places and spins a fictional world around them.³⁵⁴

Literary scholar Christoph Rodiek describes in his book *Erfundene Vergangenheit (Invented Past)*,³⁵⁵ how counterfactual history requires the knowledge of the real story and the background information to appreciate, and sometimes even to understand, the thought experiments. He sees similarities to parody – it does not make as much sense if the person does not know the context, although parody is more trivial and burlesque in

³⁵² Cowley, Robert, ed., *What if?™ The World’s Foremost Military Historians Imagine What Might Have Been* (London: G. P. Putnam’s Sons, 2000).

³⁵³ Each of the three volumes contains at least twenty assumptions.

³⁵⁴ Harris, Robert, *Fatherland* (London: Hutchinson, 1992).

³⁵⁵ Rodiek, *Erfundene Vergangenheit: Kontrafaktische Geschichtsdarstellung (Uchronie) in der Literatur*.

his opinion. Rodiek uses the metaphor of the real history shining through a transparent layer.

He further explains that in Latin languages, the word *Uchronie* is used to describe a section of counterfactual history, a homogenous alternative course of history, which appears to be plausible. The French philosopher Charles Renouvier established the term *Uchronie*³⁵⁶ in 1857 for a narrative text describing a possible course in history, which never occurred. The word is similar to Utopia – a place that does not exist – constructed from the Greek word *chronos* and the prefix *U*. Therefore it stands for a hypothetical time that never happened.

Elements of counterfactual history also appear in popular movies: for instance in *Watchman* with Richard Nixon not resigning in 1974, or *Inglourious Basterds* with Adolf Hitler being blown to pieces in 1944.

4.1.3. Philosophy – Possible Worlds

In philosophy, apart from the formalistic reasoning in the field of logic, the concept of possible worlds is a reference to counterfactuals, as previously stated. The 17th century German philosopher Gottfried Wilhelm Leibniz provided, in his *Theodicy*, an example of his philosophical principle of plenitude as an infinite number of possible worlds. He paraphrased Laurentius Valla's book *Dialogue on Free Will* in which the author propounded that we live in the best of all possible worlds and describes in his *Theodicy* how Theodorus questions the fate of Sextus. While the high priest sleeps in the temple of the goddess Pallas on his journey to Athens, the goddess leads him in his dreams into the hall of an upside-down pyramid, where he is able to explore beautiful worlds. The

³⁵⁶ Ibid., p. 9.

further they go, the more wonderful the worlds become. The one that appears best and most magnificent to him turns finally out to be our real world, although the fate of Sextus has not been changed, he is still condemned to a miserable future. Jupiter explains that his fate serves greater things and thus confirms that they are indeed living in the best of all possible worlds, though not in favour of one individual.³⁵⁷ This could serve as an example, that instead of pondering over things that could have been or could be, we should appraise the current existence.

Giorgio Agamben, the contemporary Italian philosopher, refers in his book *Bartleby o della contingenza* to this passage while he reflects the potential in the possibility of being able to do something or doing it for real.³⁵⁸ In this way, the awareness of the capability to do something virtually, lets us explore in the extreme case, another counterfactual universe.

Voltaire responded to Leibniz's assumption in 1758 with a controversial response to the statement that we live in the best of all possible worlds, in his satirical novel *Candide*.³⁵⁹ The teacher of Candide, the hero of the book, is Dr. Pangloss who repeats like a mantra that: "We live in the best of all possible worlds." Many examples of the downsides of our existing world are ironically turned into positive arguments.

The classical Greek philosophers Aristotle and Plato had already pondered the epistemological status of subjunctive suppositions and their non-existent but feasible

³⁵⁷ Leibniz, *Theodicy: Essays on the Goodness of God, the Freedom of Man, and the Origin of Evil* pp. 369-373, §§413-417.

³⁵⁸ In the regard to the potential writings of Bartleby.

³⁵⁹ The first German translation was entitled *Candide oder die beste aller Welten – Candide or the best of all possible worlds*.

In 1956 Leonard Bernstein composed an operetta with the same title, based on Voltaire's text, including a quintet 'Best Of All Possible Worlds', cf. Bernstein, Leonard, *Candide* (operetta). (New York, NY: Boosey & Hawkes, 1956.

outcomes. The term itself also appeared in philosophy as recently as the 20th century.

David Lewis, known for his *controversial modal realist stance*, published a book in 1973 entitled *Counterfactuals*. It argues that:

- possible worlds exist;
- every possible world is a concrete entity;
- any possible world is causally and spatiotemporally isolated from any other possible world; and
- our world is among the possible worlds.



Lewis suggests with this theory that all counterfactuals are true.³⁶⁰ Philosopher Robert Stalnaker's concurrent theory (1968, 1975) indicates that *possible world* is better referred to as an alternative way in which the world could or might be seen,³⁶¹ whereas David Lewis claims *the actual world* and other *possible worlds* are just like actual worlds. In my view, Lewis' theory appears counterintuitive, because being consciously present in more than one possible world is extremely difficult to imagine.

Although it could be seen as a contradiction for counterfactual reflections, I consider the idea of *eternal recurrence* worthwhile to mention. It implies that the universe and its events have already occurred and will recur endlessly in the same way. German philosopher Friedrich Nietzsche established the idea of an eternal recurrence.³⁶²

³⁶⁰ Lewis, *Counterfactuals*, passim.

³⁶¹ Stalnaker, Robert C., "A Theory of Conditionals." *Studies in Logical Theory*, ed., Rescher, Nicholas (Oxford: Basil Blackwell, 1968).

³⁶² § 341 in the fourth book of *'The Gay Science'* (1882); vid. Nietzsche, Friedrich, "Aphorismus 341 (Die fröhliche Wissenschaft: Viertes Buch . Sanctus Januarius)." *Werke in drei Bänden*,

He wrote about the delusion of a demon telling us that nothing can be changed and we will have to experience the same pain and the same pleasures over and over again.

Attempts to visualise the eternal return are, for example, either the symbol of a Möebius strip or an ouroboros,³⁶³ a circle formed by a serpent or dragon biting its own tail. The symbol of the ouroboros dates back to ancient traditions and can be found in different cultures. The representation is very powerful: a perfect, beautiful circle on one hand, on the other a scary monster digesting itself in order to be reborn in a loop.

This would imply that, if we are going to relive everything over and over again, we have no choice in our decisions and actions, but at the same time, possible alternatives to one's life could only appear virtually in one's mind – if at all. To explore the nuisance of a predetermined, recurring moment artistically, I created a work titled *Eternal Return N°1* that involves an endlessly turning phonograph record.³⁶⁴

ed., Schlechta, Karl, vol. 2 (München: Hanser, 1954).

³⁶³ C. G. Jung mentions the ouroboros himself as a reference to alchemy and a symbol of eternity and immortality, cf. Jung, Carl Gustav, *Mysterium Coniunctionis . Gesammelte Werke XIV*, Gesammelte Werke, vol. 14, 20 vols. (Olten, Freiburg im Breisgau: Walter-Verlag, 2011). The Jungian psychologist Erich Neumann refers to it too, cf. Neumann, Erich, *Ursprungsgeschichte des Bewußtseins* (Frankfurt am Main: Fischer Taschenbuch Verlag, 1999).

³⁶⁴ The record contains one locked groove, which means that the stylus of the pickup head remains in this groove and the track is supposed to play endlessly. Without repetition, the duration of the track is 1.8 seconds long and consists of the word “forever,” spoken in an automated female voice, with a male voice on the flip side. *Eternal Return* has so far been presented in three shows, each time with slight variations. Initially I intended to imply audience participation so that the audio could be slowed down, sped up or even stopped and reactivated, but I abandoned the idea during the first show in *129gallery* in Berlin. Not only is this counteractive to my initial intention, but it is also a technical issue due to the fragility of archaic vinyl records. The second edition was shown at the annual show *Sommerloch* at HfG Karlsruhe, in which the optimised record was playing for the duration over the period of six days. Again the record was slightly optimised, the track starts on the actual version with a spoken text about Nietzsche's idea of the eternal return and ends into the loop with the word “forever.”

4.1.4. Physics – Quantum Mechanics

The possibility of parallel worlds and the reversibility of time has been discussed³⁶⁵ in the context of several theories in quantum physics and for the assumption of the “Bell inequalities,”³⁶⁶ the expression *counterfactual definiteness*³⁶⁷ is used.³⁶⁸

In quantum physics time can flow backwards and particles may be in more than one place at once, but we are only able to observe them in one state. The thought experiment of Schrödinger’s cat is an

often-cited phenomenon to describe the possibility of several quantum states at any given moment. In this theoretical contemplation, the observer does not know if the cat in the box is alive or not – but as soon as the box is opened, the cat will certainly be dead.

Scientists are searching, among other things, for an explanation of how our universe was created. Common theories like the Big Bang hypothesis are bottom-up, which means one starts from the initial conditions and works forward.

World-renowned British quantum physicist Stephen Hawking argues, together with Thomas Hertog, that we cannot know anything about the initial conditions of the “very early universe:” we can only know about the final state, which we are experiencing

³⁶⁵ McCall, Storrs, ed., *A Model of the Universe: Space-Time, Probability, and Decision* (Oxford: Oxford University Press, 1994).

³⁶⁶ “Bell’s Theorem.” *Wikipedia, the free encyclopedia*, Wikimedia Foundation, 13.03.2013, <http://en.wikipedia.org/wiki/Bell%27s_theorem>.

³⁶⁷ “This implies that there is a subtle assumption in the argument that realism is incompatible with quantum mechanics and locality. The assumption, in its weakest form, is called counterfactual definiteness. This states that if the results of an experiment are always observed to be definite, there is a quantity that determines what the outcome would have been even if you don’t do the experiment.” vid. Skyrms, Brian, “Counterfactual Definiteness and Local Causation.” *Philosophy of Science* 49 (1982), <<http://www.jstor.org/stable/186879>>.

³⁶⁸ Finally, one subtle assumption of the Bell inequalities is counterfactual definiteness; cf. “Bell’s Theorem.” *Quantiki. Quantum information wiki and portal*, Quantiki, 13.03.2013, <http://www.quantiki.org/wiki/Bell's_theorem>.

right now. We therefore have to work backwards in time to determine what the initial conditions might have been.³⁶⁹ The science editor Roger Highfield summarises their argument as “in this way, [...] the universe did not have just one unique beginning and history but a multitude of different ones and that it has experienced them all.”³⁷⁰ String theory allows the existence of an “unimaginable multitude of different types of universes in addition to our own, but it does not provide a selection criterion among these and hence no explanation for why our universe is the way it is,” Hertog is quoted as saying in the same newspaper article.

Two models of the idea of the reversibility of time exist: the model featured by classical dynamicists like Isaac Newton, who viewed time as



Ill. 2: Elke Reinhuber, I Know Where I'm Going! (Heidenheim), 2010

essentially reversible, like a movie that can be played backwards. The adversary idea stems from the science of heat, thermodynamics.³⁷¹ According to the representatives of this group, the entropy of the universe is always increasing and the changes cannot be undone, just like a burnt piece of paper can never be the original white sheet again. Most people are aware of the forward direction of real time – from the past through the present (in which we always are) into the future.³⁷²

³⁶⁹ Hawking, Stephen W. and Hertog, Thomas, “Populating the Landscape: A Top Down Approach.” *Physical Review* 73 . series D.12 (2006).

³⁷⁰ Highfield, Roger, “Stephen Hawking’s explosive new theory.” *The Daily Telegraph* (2008), June 26th 2008.

³⁷¹ Prigogine, Ilya, *The End of Certainty: Time, Chaos and the New Laws of Nature* (New York, NY: Free Press, 1997), p. 120.

³⁷² Mandel, Hilton and Catellani, eds., *The Psychology of Counterfactual Thinking* p. 1.

4.1.5. Unifying the Research in Counterfactualism

As outlined in this section, I observed a tendency for the research on counterfactuals in a range of disciplines, but have not yet mentioned the usage of the conditional clause in linguistics, the way in which counterfactuals are expressed in writing. Cognitive psychologists Jonathan Evans and David E. Over focus on the conditional in their publication *If*.³⁷³ In 2004, they regretted that their research about counterfactuals was poorly integrated into philosophical work on counterfactuals, as well in the literature on counterfactual thinking in judgement and decision making and social psychology. Their book *If* concludes:

‘If is more than worthy of the academic effort devoted to its understanding since the ancient Greek philosophers first argued about it, and will doubtless remain a major focus of enquiry in cognitive science for many years to come. It is the linguistic device for stimulating hypothetical thought, and it is this facility – above all others – that identifies the extraordinary and unique kind of intelligence that defines us as human beings.’³⁷⁴

According to recent research, communication and awareness between the different disciplines seem to have improved. At this point, I suggest counterfactualism as a common term in order to bring all the disciplines together, in particular with the addition of the fine arts. Art has the power to reveal implicit assumptions and unify various fields of research.

³⁷³ Evans, Jonathan St. B. T. and Over, David E., *If*, Oxford cognitive science series. (New York, NY: Cambridge University Press, 2004).

³⁷⁴ *Ibid.*, p. 131.

4.2. Transfer of the Term Counterfactualism into the Fine Arts

After this brief digression into other disciplines, it seems obvious that there is an increasing interest in counterfactual thought, a contemporary phenomenon, which is inherent for a society satiated with choices for nearly everything in life.

Counterfactuals and popular culture have a highly significant relationship, as David Dunning and Scott F. Madey remarked in their conclusion to the article “Comparison processes in counterfactual thought:”

Perhaps the best argument for the significance of counterfactual reasoning in everyday life comes from its prevalence in works of popular art. The reactions of characters in plays, books and movies frequently turn on thoughts about what might have been.³⁷⁵

In contrast to plays, books and movies, only a few artworks can explicitly be called counterfactual, for example works in which the artist explores an alternative life.

Therefore I propose to expand the term and establish three categories:

- **Experiencing** counterfactual thoughts in the process of art-making.

This category is relevant for many artists, although they are often not aware of it and it is hardly visible in the final outcome of the work

- **Revealing** counterfactuals in the artwork itself.

I propose this section for artwork in which the artist imagines a parallel, alternative life to the actual present

- **Evoking** counterfactual thoughts in the audience.

³⁷⁵ Dunning and Madey, “Comparison Processes in Counterfactual Thought.”

In this division, the viewer is supposed to be an active recipient and might still leave with the impression of having missed something, not having been able to explore the whole artwork or the whole content of it. This might be the case for a piece of art, which is spatially distributed and varies depending on position and point of view. It could be valid as well for non-linear work, which precludes different outcomes recurring instantly, but states clearly that possible alternatives exist with a certain attraction.

In the following, I will provide an insight into my ideas of counterfactual art, methods to avoid or evoke counterfactual thoughts which also point to difficulties in the usage of the term.

4.2.1. Fact or Fiction

The problem in regard to the transfer of the definition for counterfactuals is that most artworks, movies and narrations, which I would suggest in this context, are fictional and therefore missing facts. As mentioned earlier, in literature, some texts use real locations, persons or other historical details. Here, to enjoy and understand the intention of the author, the reader must stay alert and be aware of some of the relevant facts.

*Fatherland*³⁷⁶ is a popular example of a novel in which Robert Harris uses real settings and persons, but plays with several imagined additions. Jorge Luis Borges deals with truth and fiction in a multi-faceted manner. Sometimes he uses facts, sometimes he makes them up believably and confuses the reader with a roller-coaster ride between reality and fiction.

In movies many examples exist, some based on literature, some on performances; however most of them are completely fictional and narrate counterfactual stories like

³⁷⁶ Harris, *Fatherland*.

Capra's *It's a Wonderful Life*, referred to previously in the quotation from Hilary P. Dannenberg³⁷⁷ as a counterfactual movie, although it lacks any component of reality. I would argue that movies, especially the existence of the main characters, become reality for the audience immersed in the narrative, obviously limited to the time of screening.

Additionally, movies offer a wide range of different approaches to the ways in which counterfactual thoughts can be presented to an audience. Looking at them, we can gain good insight into various possibilities of the ways in which counterfactual thinking can appear and furthermore be visualised, in a narration. I have already discussed some of the most significant examples in Chapter 3.3. Movies. Not only in the art of moving pictures, but in the fine arts as well, the distinction between fictional (even surreal) and counterfactual art is marginal.

For example the painting *La trahison des images*³⁷⁸ by René Magritte plays with this juxtaposition. We see a painted pipe on his picture, but a text underneath tells us that this is not a pipe: "*Ceci n'est pas une pipe.*" So the viewer might question – what other than a pipe is it that we see? It is an approach to picture three-dimensional reality in another two-dimensional medium; it is the image of a pipe, but not the object itself that we are used to calling a pipe. Magritte used the same approach in a series of paintings. In his *Ceci n'est pas ...* works, he points out that no matter how closely, through realism-as-art, we come to depicting an item accurately; we never do catch the item itself.



Ill. 3: René Magritte, *La trahison des images* (The Betrayal of Images) 1928/29

³⁷⁷ Dannenberg, *Coincidence and Counterfactuality: Plotting Time and Space in Narrative Fiction* p. 222.

³⁷⁸ *The Treachery of Images*, 1928/29; cf. Foucault, Michel, *This is Not a Pipe*, trans., Harkness, James (Berkeley, CA: University of California Press 1983).

This contradicts Kendall Lewis Walton's theory of 'make-believe'. Walton points out in *The Mimesis as Make-Believe* that in our imagination anything is a possible substitute for reality; for instance a trunk of a tree in the forest believably becomes a bear in a child's game.³⁷⁹

Artists like Sophie Calle and Cindy Sherman could also be discussed at this point. In the case of Sherman, the connection to her real, existing world is not important for the practice of her art. She disguises herself like an actor behind the face and body of the person being represented. For this reason she would, in my opinion not fall into the category of counterfactual art.

Calle, by comparison, leaves the audience in doubt, as if the stories such as in her work *Des histoires vraies* really occurred to her the way she describes them, or if they are purely fictional, happening in an imagined world parallel to hers. She holds documentary proof of the situations and occurrences, but it often remains unanswered in her work as to whether she set up the scenes herself, added a fictional story to an existing photograph or if they really ever happened at all.

Rodney Graham's different identities as artists, which he could potentially be, are in my opinion the most obvious examples of counterfactual art. His audience is presumably aware of his "real" work as an artist but his alternative artist-lives are believably staged. In this type of work, which reveals the counterfactual thoughts of the artist (whether true or fictional) the audience is confronted with alternatives to the artist's life as it is being lived.

³⁷⁹ Walton, Kendall Lewis, *Mimesis as Make-Believe . On the Foundations of the Representational* (Cambridge, MA: Harvard University Press, 1990), p. 11.

These examples prove that the relation between reality, even an imagined reality and a fictional, alternative world, is relevant for the classification. Therefore I suggest, that it is not important to refer to the factual world only; the parallel world, the fictional story told, must be believable and it must immerse the spectator to make the work counterfactual.

As we have seen in the definitions of other disciplines, all counterfactual approaches describe a parallel, imaginary alternative to what has happened in reality. For media and the fine arts, I propose that the term should be extended to fictional life-stories.

The additional categories I proposed earlier deal with the stimulation of counterfactual thoughts in the audience, or the consideration and evaluation of retrospective alternatives during the production of works of art. I will explain this in more detail with reference to some examples.

4.2.2. Experiencing Counterfactual Thoughts

Based on my own experiences, I claim retrospective considerations to be an important part in the process of art production. In conversation with fellow artists during my residency at *Cité Internationale des Arts* in Paris,³⁸⁰ I found that artists in all disciplines tend to develop counterfactual thoughts at different stages in the artistic process. In painting and composition, these considerations appeared often at a point in the process at which the artist is trying to determine whether the work is complete or if it still needs improvement or maybe if it felt even better at an earlier stage. A performance artist

³⁸⁰ COFA studio #2053, 2011, July-September; most of the artists I questioned prefer to remain anonymous.

mainly questioned the intensity of her rehearsals – how perfect can an interpretation become without ruining the piece by over-rehearsing?

Generally speaking, there are artists, who are prone to counterfactual ideas, in particular sculptors, working with carving, cutting or similar reductive and subtractive methods. I consider it as easily comprehensible how counterfactual thoughts appear in the process of their work: once the material has been removed, it cannot be returned to the original sculptural medium. However, that may also be true with additive processes, for instance while modelling with clay, which might necessitate a constant process of shaping and re-shaping of an object. Painting also falls into the category of additive methods and follows a steady procedure of applying, erasing, testing, erring and reworking once found solutions, until the result seems to please.

These cases could be connected to the description of maximisers, introduced in Chapter 2.2.3.1.2. Training and Guidance: they always aim for the best and their great dissatisfaction in not achieving a high standard can lead to retrospective regret and result in a fear of making decisions. For most of the artists with whom I spoke, it was a challenge to achieve the best possible result without retrospective considerations regarding further improvements of the work.

Nevertheless, the artistic field that I cite as the most counterfactual-thought-evoking discipline is, in my opinion and according to my own experiences and training, photography. It is not just a matter of an array of proper decisions – a multitude of external factors influence the image. Moving images, in contrast, reproduce a situation with movements and from various points of view. The single frame disappears in a split second and is replaced by the following one, hardly noticeable or even impossible to

remember. In photography everything is compressed into one single image, into the fraction of a second while the shutter is released.

Natural light, movement and expression, the blink of an eye, the right position, the selection of camera, focal length, focus, exposure and aperture are components that affect the final photograph. The captured instant is the moment that will be remembered. German photographer Silke Helmerdig describes aphoristically all the possibilities of her equipment, which eventually records one single moment, similar to Agamben's notion of the potential of a blank white sheet of paper³⁸¹ or Aristotle's *tabula rasa*:

But as much as the image, once exposed and processed turns into evidence, the material offers any possibility for every image imaginable in the non-exposed. It is a possibility of a continuity, of a before and an after, of a decided moment becoming a decisive one, but still being only one possible one out of the continuity of time.³⁸²

The well-known French photographer Henri Cartier-Bresson described the connection between photography and the opportune moment in his book *Images à la sauvette*³⁸³ (*The Decisive Moment*):

³⁸¹ Agamben, Giorgio, *Bartleby oder die Kontingenz gefolgt von Die absolute Immanenz*, trans. Maria Zinfert, Andreas Hiepkö (Berlin: Merve Verlag, 1998), p. 13.

³⁸² Presentation at Goldsmith College, London in 2011; as printed matter: Helmerdig, Silke, "Der Mythos vom entscheidende Augenblick." *Konturen . Zeitschrift der Hochschule Pforzheim* 31 (2012), 13.03.2013 <http://www.hs-pforzheim.de/De-de/Hochschule/Konturen/Documents/2012/Personalia/Professorin_SilkeHelmerdig.pdf>. "Wenn jedes Foto durch die Belichtung und die Entwicklung Spuren in Beweismaterial umwandelt, so enthält das unbelichtete Material die Möglichkeit jedes vorstellbaren Bildes. In dieser Möglichkeit liegt eine zeitliche Kontinuität, ein Davor und Danach, ein entscheidender Augenblick, der doch nur ein entschiedener ist, eben nur ein möglicher aus einer unendlichen Reihe von möglichen."

³⁸³ Cartier-Bresson, *The Decisive Moment*, p. 102.

To me, photography is the simultaneous recognition, in a fraction of a second, of the significance of an event as well as of a precise organisation of forms, which give that event its proper expression.³⁸⁴

For him, photography is the supreme discipline in an appreciation of the right moment, the *kairos* in everyday life. In 1957, he stated in an interview for *The Washington Post* that “photography is not like painting, there is a creative fraction of a second when you are taking a picture. Your eye must see a composition or an expression that life itself offers you, and you must know with intuition when to click the camera”³⁸⁵.

The importance of the right moment has already been mentioned in regard to Greek mythology. *Kairos*³⁸⁶ or *Cærus* is the personification of the opportune moment. If we think too long about a possibility, the chance might be gone; if that opportunity has passed, it cannot be recovered, which could lead to counterfactual considerations.



Ill. 5: Kairos, marble relief, ca. 350-330 B.C.



Ill. 4: Henri Cartier-Bresson, Derrière la gare Saint-Lazare, Paris, 1932

³⁸⁴ “Photographier: c’est dans un même instant et en une fraction de seconde reconnaître un fait et l’organisation rigoureuse de formes perçues visuellement qui expriment et signifient ce fait.”; vid. Miller, Russell, *Magnum . Fifty Years at the Front Line of History: The Story of the Legendary Photo Agency* (New York, NY: Grove Press, 1999).

³⁸⁵ Bernstein, Adam, “The Acknowledged Master of the Moment.” *The Washington Post* (2004), August 5th 2004.

³⁸⁶ In classic Greek, two words for time existed: *chronos* (χρόνος), referring to chronographic time and *kairos* (καιρός), meaning the right or opportune moment, a time in between, a break in the continuity of time, a moment in which something special happens. The approach to visualise Kairos represents him with a lock of hair on his forehead indicating that while he advances he is easy to catch, yet, when he passes by, the right moment has expired, as the back of his head is bald. The oldest remains are according to my information a bas-relief from the third century BC, which is displayed in Trogir and a relief of Kairos by Lysippos, (Turin Museum).

At this point, I should admit that my tendency to work in series and my preference to present multiple images might arise from my difficulty in making decisions, in choosing one iconic image and ignoring all the others, when each might also have their specific qualities.

In my opinion, the tendency to work in series, with collections and lists is as well a method to avoid or defer choices – and in this regard minimise counterfactual thoughts in the process of art production.

4.2.2.1. Examples

To illustrate my statements, I would like to mention some artists who appear in their photographic work to be cautiously avoiding counterfactual thoughts by capturing an array of images simultaneously or respectively over a period of time.



Ill. 2: Barbara Probst, #49: N.Y.C., 555 8th Avenue, 05.21.07, 4:02 p.m. 2007. 12 parts: 92 by 137 centimetres each

The German photographer Barbara Probst³⁸⁷ dissects and disperses the “decisive moment” in her body of work entitled *Exposures* and offers a comprehensive account of the event. Radio-controlled cameras capture simultaneously different perspectives and points of view of one moment in time at a particular location. This is reflected in the titles of her work, for instance *Exposure #49: N.Y.C., 555 8th Avenue, 05.21.07, 4:02 p.m.*³⁸⁸

³⁸⁷ *Exposures*, 2001-2009, seen at Stills gallery, Edinburgh, July 2009; cf. Probst, Barbara, *Exposures*, eds. Irvine, Karen and Bate, David (Göttingen: Steidl 2007).

³⁸⁸ Probst, Barbara, *Exposure 49*, 2007, USA. <<http://barbaraprobst.net/work/exposure-49/>>.

In this particular example, Probst displays a range of a photographer's possible choices for her multiple-perspective portrait with twelve synchronised cameras. Each shot is taken from a different vantage point, angle and distance, with diverse lenses, depths of



Ill. 3: Barbara Probst, #94: N.Y.C., Washington & Watts Streets, 10.18.11, 1:02 p.m., 2011. 3 parts: 168 by 112 centimetres each

field, and in colour or black and white. By surrounding the portrait subject, which we see from different directions, close-up-details of the face of the young lady mix with distant shots, even revealing the set-up by not hiding the other cameras. In this way, the background and configuration for the collage of images is explained. Another work I would like to mention is *Exposure #94: N.Y.C., Washington & Watts Streets, 10.18.11, 1:02 p.m.*³⁸⁹ in which we see a young woman walking in the middle of an intersection. In the background of the three-image-series are different urban settings, which do not seem to be connected with each other. The images achieve their association only through the immediately recognisable person in a distinctive green coat, walking in the horizontal centre of each picture. On a closer look, we notice that the woman is captured from three different angles, but exactly in the same split second, which gives a spatial dimension to this frozen moment. And again, the cameras visible in the images suggest the concept of the triptych. The press release from *Stills gallery* in Edinburgh remarks that “the resulting images reveal a number of diverse realities and undermine the notion of photographic ‘truth.’” The description continues: “As viewers we find

³⁸⁹ Probst, Barbara, *Exposure 94*, 2011, USA. <<http://barbaraprobst.net/work/exposure-94/>>.

ourselves in the unnatural position of being able to apprehend the same instant from multiple perspectives, to experience time as spatial rather than linear.”³⁹⁰

Probst succeeds in avoiding waiting for the decisive moment in her work by creating it herself and capturing it from various angles. Instead of presenting her final choice to the viewer, she offers a range of perspectives on the subject, similar to the *model of multiple perspectives* which I introduced in the dissection of counterfactual movies.

The work of Hasselblad-Award-Winner 2012 Paul Graham differs,³⁹¹ although the titles in his series *The Present*³⁹² are unsurprisingly similar to the ones by Barbara Probst and indicate the location, date and time such as *Uptown, 19th October 2009, 2.03.40 pm*. In his large-scale two-piece photographic prints, it appears at first glance as if he just missed the right moment and captured the before and after: insignificant street scenes, random encounters between everyday passers-by. Observers might wonder whether something happened in between, after they



Ill. 4: Paul Graham 125th street, 9th March 2010, 2.09.36pm, 2010

succeed in linking the images by observing individuals or objects, which provide an indication of the short timespan between both images. For instance, a lady crossing the street with a distinctive red backpack or a man with a blue baseball cap behind the window of a café in 125th street, 9th March 2010, 2.09.36pm, which are recognisable in

³⁹⁰ Barbara Probst . *Stills Gallery*, 2009, Stills Gallery, Available: <http://www.stills.org/exhibition/past/barbara-probst>.

³⁹¹ O’Hagan, Sean, “Photographer Paul Graham wins 2012 Hasselblad award.” *The Guardian* (2013), March 8th 2013.

³⁹² Seen at Galerie Charlier|Gebauer, Berlin, 2012

both of the adjacent images. The work does not reveal an answer to the question whether something happened in between. Rather, Graham emphasises the significance of each apparently insignificant moment by hugely enlarging the diptychs to various sizes, so the viewer becomes immersed in the situation. The slight difference in the framing indicates that Graham works with a handheld camera and proves to the viewer that it is highly unlikely the images were staged. Sometimes the shallow focus shifts from one person to another. He stated in an interview that he pursues

[...] the breaking down of the decisive moment, not allowing life to become this single frozen shard, trying to reflect something of the flow of time in the work.

[...] You don't need a multiplicity of images. You show what happens, then what happens next. And so you shift your focus. You don't need to show 10 other moments, you've implied that it's a continuum and what you thought mattered shifts quickly and transforms itself into another thing that matters for that instant.³⁹³

In the same interview, he remarks his preference of photography over film, because it does not require the “‘tyranny of narrative’ and is ‘much more an accurate reflection of the way life comes at us, unbidden, and without perfect little narratives.’”³⁹⁴ In this manner, he leaves all the possible stories in between his captured moments to the imagination of the viewer.

Silke Helmerdig often deals with the memory of one particular moment, the one which is captured on film, while our personal memory is susceptible of change. Sigmund Freud compared the human memory to a magic writing pad in his note on the

³⁹³ Jobey, Liz, “Paul Graham: ‘The Present’.” *Financial Times* February 10th 2012.

³⁹⁴ *Ibid.*

*Wunderblock*³⁹⁵ – our memory is overwritten repeatedly with new impressions, but fragments remain which keep shining through and are re-mixed in our unconscious mind to become our imagined past,³⁹⁶ which often differs from the real past.

Transferring his notion to counterfactual thinking, it might often seem easier in our



III. 5: Silke Helmerdig, *The Decisive Moment*, 2008 - 20 b/w, each 50 by 60 centimetres

memory to improve pivotal points than it was in reality.

In her series of street-photography, entitled *Decisive Moment*, Helmerdig works with the everyday observations of amateur photographers and combines two shots in a sequence with a half-frame camera.³⁹⁷ In a similar way to Graham's diptychs, the viewer is invited to connect both sections of the picture, although Helmerdig offers a wider range of possibilities: sometimes in both halves of the image the same person is taking a picture by pointing a little camera in different directions. For some images, she puts herself into the position of the amateur and photographs what they might have seen, irrelevant observations which become relevant because the photographer decided to freeze them on celluloid (or nowadays a digital memory card.) In some of the images, the background is similar and the picture-taking people differ, sometimes the backdrop is connected like in a movie sequence.

³⁹⁵ magic writing pad

³⁹⁶ Freud, Sigmund, "Notiz über den 'Wunderblock'." *Internationale Zeitschrift für Psychoanalyse* XI.1 (1925).

³⁹⁷ A type of camera which was popular in the 1960's. The photos on a 35mm-film were only half the size of the standard 36x24mm format, therefore twice as many pictures fit on the film. The images have a vertical (portrait) orientation as opposed to the horizontal (landscape) orientation on common cameras of the Oskar Barnack heredity.

Her work approaches the question of the decisive moment on an additional level.

Helmerdig-as-the-photographer observes tourists while capturing their environment and releasing the shutter themselves; although for her, the most



Ill. 6: Hiroshi Sugimoto, *Theatres*, Radio City Music Hall, 1978

important aspect is the black section in between both images, the part which has the potential to contain any image possible. In a personal conversation, Silke Helmerdig referred to Hiroshi Sugimoto's photographic series *Theatres*,³⁹⁸ which represents the interiors of different cinemas with a white screen. He chose an exposure time equivalent to the duration of each movie and refers to the whole body of work as "Time Exposed". Although there is nothing to see on the screen in the theatre but a white square, his photographs contain the whole movie, every single image. Even more, art-historian Michael Schwarz³⁹⁹ points out that only the illumination of the movie made it possible to capture the interior of the theatre.

The examples mentioned above provide imaginative attempts to avoid counterfactual thoughts in regard to the decisive moment, although they still offer a multitude of possibilities for retrospective deliberations.

4.2.3. Revealing Counterfactual Thoughts

Artwork revealing counterfactual alternatives to the artist's life is the most evident and prevalent category in my research.

³⁹⁸ *Hiroshi Sugimoto: Theaters*, n. d., Hiroshi Sugimoto, Available: <http://www.sugimotohiroshi.com/theater.html>.

³⁹⁹ Schwarz, Michael, "Das Verschwinden des Bildes im Bild . Anmerkungen zu den ›Theaters‹ von Hiroshi Sugimoto" in: *Bildersprechen* Gruppe ›Gemeinschaftspraxis‹, eds., (Köln: Salon Verlag, 2003), pp. 215-222.

So far, several artists, including myself,⁴⁰⁰ have explored and visualised lifelines alternative to their own, even if it is just an extravagant self-portrait. Various approaches to the ways in which multiple identities are explored and presented exist, of which I summarise a few.

One early photograph investigating multiple perspectives of the artist is Umberto Boccioni's *Io – Noi – Boccioni* (I – We – Boccioni.)⁴⁰¹ Boccioni is



Ill. 7: Umberto Boccioni, *Io – Noi – Boccioni*, 1907

standing five times in a circle, and we see him from five different angles simultaneously in the resulting photomontage from 1907.⁴⁰² He is obviously the same person in all the segments of the montage, but offering diverse viewing angles. The image brings connotations to facial symmetry to mind and exposes the ways in which the impressions of a personality change subtly with the point of view. We find the same approach ten years later in the *Five-Way Portrait of Marcel Duchamp*⁴⁰³ and a century later in Lorna Simpson's video *Chess*, this time the female artist additionally explores a male identity.

Going further back in time, I propose that the first self-portrait to be categorised as counterfactual art was painted as early as 1792 by Angelika Kauffmann: *Self-Portrait Torn Between Music and Painting*.⁴⁰⁴

Kauffmann painted herself in the age



Ill. 8: Angelika Kauffmann, *Self-Portrait Torn Between Music and Painting*, 1792

⁴⁰⁰ In particular with *Me&Myself* and the *Urban* "2.2. If Only I Had... (Counterfactual Art

⁴⁰¹ Boccioni, Umberto, *I - We - Boccioni*, 1907

⁴⁰² Coen, Ester, *Umberto Boccioni* (New York

⁴⁰³ Duchamp, Marcel, *Five-Way Portrait of M* Francis M. Naumann Fine Art.

⁴⁰⁴ Kauffmann, Angelika, *Self-Portrait Torn Bet*

of fifty in a similar composition as the paintings of *Hercules at the Crossroads*,⁴⁰⁵ only this time, she herself is the central figure and tempted by the arts. Her head is turned towards the left side of the painting, saying a slightly regretful farewell to her abandoned career as a musician. Kauffmann addressed how she had to choose between two major focuses in her life – music or painting. In my opinion, she explores to visualise her reflections on an alternative path of life counterfactually, in particular by conceiving of the topic as a self-portrait.⁴⁰⁶ The art historian Bettina Baumgärtel considers it audacious for Kauffmann to refer to the myth of a male hero in her painting.⁴⁰⁷ She appears rather strong, especially because her decision seems already to be made.

Her French colleague, the painter Marie Guillemine Benoist worked at nearly the same time on *Innocence Between Virtue and Vice* (1790/91); however her image does not impart an obvious personal revelation. Most likely, it was rather surprising at this period of time to see women depicted at the crossroads of life – especially in a self-

Museum of Fine Arts, Moscow.

⁴⁰⁵ Kauffmann found inspiration to her self-portrait in several depictions of Hercules dilemma, like by:
Carracci, Annibale, *The Choice of Hercules*, 1596. National Museum of Capodimonte, Naples.
Poussin, Nicolas, *Hercules at the Crossroads*, ca. 1636/37. National Trust, Stourhead, Wiltshire.

Batoni, Pompeo Girolamo, *Hercules at the Crossroads*, 1748. The House of Liechtenstein, The Princely Collections, Vienna.

West, Benjamin, *Hercules at the Crossroads*, 1764. Victoria & Albert Museum, London.

⁴⁰⁶ For a better understanding of Kauffmann's painting, Bettina Baumgärtel explained the paintress' background: she grew up as the only daughter of a painter and a musician. She associated music with her mother, who resembled emotion, muse, glory, dilettantism, whereas painting was on her father's side and stood for hard work, labour, duty, independency and ratio. Kauffmann painted herself as a singer with notations at the age of 13, but after her mother died three years later, she moved closer to her father's side by focussing on painting.

⁴⁰⁷ Baumgärtel, Bettina, *Angelika Kauffmann (1741-1807): zu Selbstentwürfen von Malerinnen der Aufklärung, Selbstbildnisse im Gewand des Herkules am Scheideweg. Vortrag vom 16. Juni 1992*, Berliner Wissenschaftlerinnen stellen sich vor, vol. 17 (Berlin: Zentraleinrichtung zur Förderung von Frauenstudien und Frauenforschung an der Freien Universität Berlin, 1992).

portrait. Baumgärtel sees in this type of artwork an indication of the obtained liberties of the French revolution.

I propose Kauffmann's self-portrait as one of the first paintings depicting a counterfactual idea to a chosen path in life. Obviously she became a painter, but observing her in a Hercules-like scene between the two muses implies that she had to make a choice in her life. The painting was executed at a time when her career was well established, so we can assume the retrospective meaning of the scenario.

Another remarkable approach, although not clearly counterfactual, is the long-term performance of Lynn Hershman Leeson. In 1972, she created (defined her appearance and her behaviour) and later simulated (played the role of the independently developing character) *Roberta Breitmore*.⁴⁰⁸ For more than nine years, the invented character had her own life, took part in social events, went to a psychiatrist and was even issued a driver's license and credit cards.⁴⁰⁹ Both the artist and her creation existed simultaneously, nearly like Dr. Jekyll and Mr. Hyde. In a recent artist talk⁴¹⁰ at ZKM Karlsruhe, she stated that Roberta was merely a media appearance and not intended to double her own life. Initially, Roberta was even conceived of as being played by a performer. Therefore, in my opinion she does not resemble an alternative life, though still a possible life of Hershman Leeson.

⁴⁰⁸ Hershman, "The Fantasy Beyond Control", pp. 267-273.

⁴⁰⁹ according to Lynn Hershman with even more credit than herself

⁴¹⁰ Hershman, Lynn, *Excerpt from the Artist Talk with Lynn Hershman Leeson*, rec 2012, March 15th, ZKM/MNK, Karlsruhe. <<http://www.youtube.com/watch?v=vC69xR4smAI>>.

By contrast, conspicuously counterfactual are Rodney Graham's explorations to be another artist.

Looking at his work *Lobbing Potatoes at a Gong 1969* (2006),⁴¹¹ the audience

presumably is aware that Graham is

not the twenty-year-old performance artist from 1969 who he pretends to be in this fictitious fluxus-event. It was filmed as an authentic black and white 16-millimetre movie. We see him in an improvised studio environment, dressed in a chequered shirt in front of an audience, believably contemporaneous, throwing potatoes at a huge gong. In addition, a limited edition of bottles of vodka, distilled from the potatoes which hit

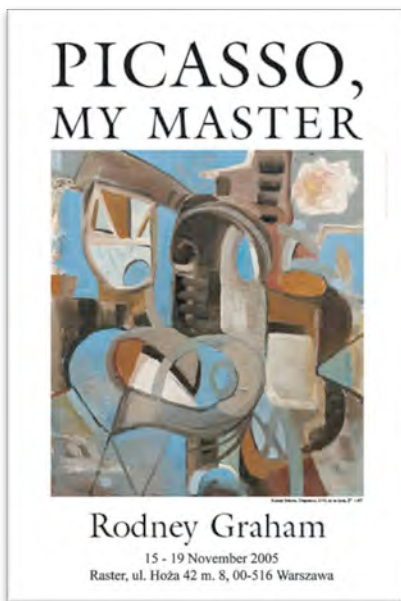


Ill. 10: Rodney Graham, *Lobbing Potatoes at a Gong 1969, 2006*

the gong, complete the work as performance-relic.

Early works of the made-belief artist were on display: a drawing of a huge circle with a radius of 132 centimetres entitled *Lead Gong R52/9B 1966* and the photograph *Potatoes piled up to block my studio door 1968* with – potatoes blocking a door. But this is only one of Rodney Graham's possible lives as an artist.

After his solo shows with paintings, *Picasso, my Master*, such as at Johnen Galerie Berlin in 2005, he repeated convincingly his exploration in emulating



Ill. 9: Rodney Graham, exhibition poster for Poster *Picasso my Master*, 2005

⁴¹¹ as seen at MACBA Barcelona, February 2010, cf. Graham, Rodney, *Lobbing Potatoes at a Gong*, 2006. Donald Young Gallery, Chicago.

cubist painters with *My Late Early Styles (Part I, The Middle Period)*(2007–9.)⁴¹² A photograph presents him as the neatly-dressed proud painter in front of his œuvre at an overloaded gallery-wall. And for those who were still in doubt that his career as a painter might just be a fabrication – they are provided with the remarkable catalogue *Wet on Wet*⁴¹³, which completed his late early styles in a perfectly matching design. The attentive



Ill. 11: Rodney Graham, *My Late Early Styles (Part I, The Middle Period)*, 2007-9



Ill. 12: Rodney Graham *The Gifted Amateur, Nov. 10th, 1962*, 2007; center part of a triptych

observer might recognise an image similar to the one Graham had already painted as he took the role of *The Gifted Amateur, Nov. 10th, 1962* (2007).⁴¹⁴

Graham’s complete transformations into different artists and musicians fit perfectly into the context of counterfactual art. However, in his recent works inhabiting other personalities and professions, which are staged for one photograph only, he crosses the line into tedious humour.

Talking of such, the “family portrait” *Five Identities*⁴¹⁵ from 2002 by Patrick Ireland, alias Brian O’Doherty, comes to mind. Despite the aesthetically not-quite-

⁴¹² Graham, Rodney, *My Late Early Styles (Part I, The Middle Period)*, 2007-9. Lisson Gallery, London.

⁴¹³ Graham, Rodney, *Wet on Wet: My Late Early Styles (Pt. 1: The Middle Period)*, Lisson Gallery publication, vol. Issue 46 (Köln: Walther König, 2008).

⁴¹⁴ Graham, Rodney, *The Gifted Amateur, Nov. 10th, 1962*, 2007. 303 Gallery, New York, NY.

⁴¹⁵ From left to right: Brian O’Doherty, Sigmund Bode (adopted in 1950, a fictive linguistic philosopher), Mary Josephson (adopted in 1973, a pen name under which he wrote art



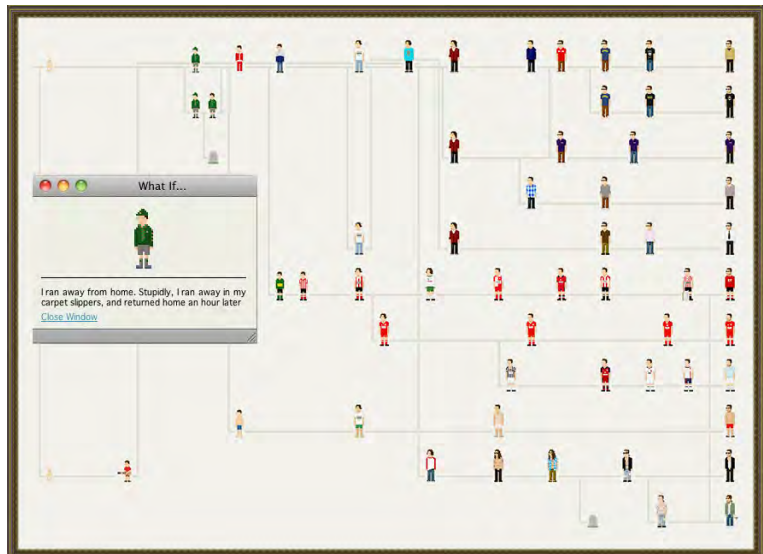
Ill. 13: Brian O'Doherty/Patrick Ireland, *Five Identities*, 2002

appealing collage, it refers to his brilliant personalities in real life. The trained doctor, artist, editor, director, art critic, activist, poet, art historian states:⁴¹⁶

Each of them has their identity and each was born out of different necessities. I always had the notion that everyone, depending on the circumstances in which they present themselves, is multiple. I've simply materialised some of the normal varieties of personality.⁴¹⁷

With the *nom de plume* Mary Josephson, he even completes his other alter egos with a feminist American writer.

A complete overview of alternative lives provides Craig Robinson with his online work *What if?*⁴¹⁸ He explores counterfactually, at the age of thirty-four, how his life could have



Ill. 14: Craig Robinson, *What if?*, 2004. Screenshot

commentary for Art in America and Artforum), Patrick Ireland (the artist and activist from 1972 was buried in 2008) and William Maginn (an early appropriation of the 19th-century Irish poet and wit).

⁴¹⁶ O'Doherty, Brian, "Strolling with the Zeitgeist." *Frieze*. March, 2013.

⁴¹⁷ O'Doherty, Brian and Bui, Phong, "In Conversation: Brian O'Doherty with Phong Bui (Interview)." *The Brooklyn Rail* (2007), 13.03.2013 <<http://www.brooklynrail.org/2007/06/art/dougherty>>.

⁴¹⁸ Robinson, Craig, *What if?*, 2003. <<http://www.flipflopfly.de/whatif>>. A classic arboreal structure of a lifeline with all turning points as an overview; it branches out at each point of decision, similar to the Fibonacci tree.



Ill. 15: Orkhan Huseynov, *Life Under Ground*, 2003

evolved differently at certain turning points; in a second diagram, he envisions how it could continue from this date on. Robinson scaled himself down to a miniature size of 15 by 45 pixels, including all the features necessary to make his potential identities distinguishable. The possible and impossible alternatives to his real life (a continuous line at the top) are explained by rolling the mouse over the icons and clicking to enlarge them to still tiny depictions, in the size of 30 by 90 pixels.

Providing a visual map with lifelines is a convincing strategy of representing counterfactual thoughts. Azerbaijan artist Orkhan Huseynov illustrated the lives of five individuals in his backlit diagram *Life Under Ground*.⁴¹⁹ At first glance it looks like an Underground map, straight interchanging lines with black circles at each switch-point. At a closer look, the assumed station names turn out to be milestones in life: birth, school, university, marriage, birth of child, and other personal events, ending in death. Whether Huseynov inhabits one of the lines remains open. Any viewer could relate to these lines in their generality, at least for a short distance along the tracks – and from there on, generate counterfactual thoughts about encounters and their consequence.

Paradigmatically, alternative deliberations begin at the moment of birth and hardly go beyond the preliminary parameters of gender and name. Media-art legend

⁴¹⁹ as seen in August 2007, Huseynov, Orkhan, *Life Under Ground*, 2003. 52nd Venice Biennale, Azerbaijan pavilion. <<http://www.saatchionline.com/art/Mixed-Media-Other-Life-Under-Ground/285385/1272296/view>>.

Peter Weibel⁴²⁰ explored the varieties of his actual self, attributed to events before his own birth, in his video performance *Parenthetische Identität* (parenthetical identity)⁴²¹ in 1973. Positioned next to a television set with a childhood photograph and later showing him as an adult, he reads to the camera reflections on his family relations. Weibel considered who he could be, if he had not been born as the first son of his parents. This leads him from the idea of being *halb-ich* (half-me) to an array of confusing relations, even pondering the option that he could have become his own mother and concludes that he would definitely be someone else as the child of another mother and another father.



Ill. 16: Peter Weibel, *Parenthetische Identität*, 1973. Videostill

In reviewing the scope of art, it is clear that in dealing with alternative considerations in an actual artist's life, the category of counterfactual art is already a well-established genre, though it has not been officially proclaimed as such.

4.2.4. Evoking Counterfactual Thoughts

Evoking counterfactual thoughts within the audience is, in my opinion, the strongest form of counterfactual art. However, according to my research so far, the stimulation of retrospective considerations with an artwork or the story told within are hardly ever conducted intentionally. Therefore, it is possible to observe different sub-categories.

⁴²⁰ Peter Weibel recalled (in a personal talk at ZKM, 2012, December 19th) a video he once made with a “what if” situation about his family relations. He explained his interest in the pluriverse and his fascination for probabilities, which would provide material for another thesis.

⁴²¹ Weibel, Peter, *Parenthetische Identität*, 1973, Vienna. <http://www.peter-weibel.at/index.php?option=com_content&view=article&id=104&catid=13&Itemid=67>.

4.2.4.1. Multi-Channel Video Installations

Multi-channel video installations often make it impossible for the viewer to follow all plot lines simultaneously and trigger counterfactual thoughts by not offering ways to perceive the whole work instantly.

The plainest way to achieve this could be with two projections facing each other, as I experienced in the two-channel video installation *Disorient*⁴²² by Fiona Tan at Sherman Gallery in Sydney, 2010. Seated between the screens, the audience is forced to turn their heads around in order to grasp what is happening behind their backs – and simultaneously missing the actions on the other screen, presumably asking themselves if they have missed something. By spatially opposing a slow pan through a *Wunderkammer* of items that could have been collected on Marco Polo's travels to contemporary scenes of his routes, the work became, in my opinion, a little more significant. At its premiere in Venice in 2009, the video was presented on two adjacent screens.

In Stan Douglas' two-channel video installation *Hors-Champs*⁴²³ from 1992, the audience is supposed to move actively around the two projections on one opaque screen. The title refers to what is "off-camera"⁴²⁴ in the colloquial language of film, so it connects with the capacity of certain images to create a sense of narrative space beyond what is immediately shown by the camera. The work presents a performance of Albert Ayler's *Spirits Rejoice* by a jazz quartet with one edited version in the style of music broadcasts from the 1960s. The musical performance was filmed with only two cameras

⁴²² as seen at Sherman Contemporary Art Foundation (SCAF), 2010, cf. Tan, Fiona, *Disorient*, 2009, as well: 53rd Venice Biennale, Dutch pavilion, 2009.

⁴²³ Douglas, Stan, *Hors-champs*, 1992. Centre Georges Pompidou, Paris.

⁴²⁴ *Blues for Smoke*, Whitney Museum of American Art, Available: <http://whitney.org/Exhibitions/BluesForSmoke/HorsChamps>, 13.03.2013.

instead of the four or five usually employed. Looking behind the screen, the unused material of the “official” version is assembled to a counter-narrative.⁴²⁵ Therefore the audience gets to see a “bonus-track” rather than missing sections from the

performance.⁴²⁶



Ill. 18: Left side of Yang Fudong's *No Snow on the Broken Bridge*, 2006. 35 mm film, black-and-white, eight screens; 11 minutes. Installation at Marian Goodman gallery, New York

Another example, and a projection which goes beyond our peripheral vision, is Yang Fudong's⁴²⁷ installation *No Snow on the Broken Bridge*.⁴²⁸ It confronts the audience

with eight screens in a semi-circle. Because of

the given distance and size of the projection, it is not possible to watch more than four screens satisfactorily at the same time, in my experience. However, Fudong engages the viewer with his graceful *tableaux vivants* into a meditative, dreamlike mood. While forgetting about time and space, whether a possible story-line might have been missed becomes secondary.

To apprehend the above-mentioned examples, it is necessary to observe the



Ill. 17: Right side of Yang Fudong's *No Snow on the Broken Bridge*, 2006. Installation at Marian Goodman, New York, 2006

whole work at least twice. While the narration does not often imply the danger of missing a possible plot, it is reinforced by the consistent audio track, which offers the very content at any point in the exhibition space.

⁴²⁵ Douglas, Stan, “Hors-Champs.” *Stan Douglas – Past Imperfect, Werke 1986-2007*. Staatsgalerie Stuttgart, Württembergischer Kunstverein Stuttgart, eds. Christ, Hans D. and Dressler, Iris (Ostfildern: Hatje Cantz Verlag, 2007).

⁴²⁶ Paterson, Andrew James, “The Revolution Will Be Televised: Stan Douglas’ Hors-Champs . review of media-art installation at Art Gallery of Ontario.” *FUSE*. 2004.

⁴²⁷ Fudong, Yang, Obrist, Hans Ulrich and Ardalan, Ziba de Weck, eds., *Yang Fudong: No Snow on Broken Bridge* (Zürich: JRP|Ringier, 2007).

⁴²⁸ as seen at Sherman Gallery, Sydney in 2011.



III. 19: Isaac Julien, *Ten Thousand Waves*, 2010. Installation view, Hayward Gallery, London, nine-screen installation, 49' 41"

Different, though, is Isaac Julien's nine-channel installation *Ten Thousand Waves*. Here, the viewer gets the impression of being able to perceive the elaborate essence from any view-point,⁴²⁹ whereas changing the arrangement of the work. The audio layer appears coherent and the screens are distributed in space in such a way that the impression changes from different points of view. It still does not evoke the feeling of missing sections of the profound narration which is based on the tragedy of drowned Chinese cockle harvesters in the United Kingdom,⁴³⁰ but has been transformed from a documentary into a poetic piece of art. An earlier work by Julien, *Fantôme Créole*, was installed at Centre Pompidou with two screens opposing two others. With this arrangement, it was possible to observe the desire of the audience not to miss any sections of the work. The British curator and art critic Marc Nash wrote that "Julien has explored the possibilities of a presentation that does not allow the viewer to see the whole work from any one vantage point."⁴³¹

⁴²⁹ This is valid for the installations in Sydney (Sydney Biennale, 2010) Munich (Museum Brandhorst, 2011) and Amsterdam (EYE Film Institute, Amsterdam 2012), which I have seen personally, though unfortunately I cannot speak for the version in Helsinki, which was spread over three adjacent rooms. In the installation at MOMA, New York (2013-15) the perception changes hugely with the viewing point: the audience is able to move around several floors and can either watch the work as a whole from a distance or view the piece fragmented from the same floor due to the above-head installed screens.

⁴³⁰ Lawrence, Felicity, Pai, Hsiao-Hung, Dodd, Vikram, Carter, Helen, Ward, David and Watts, Jonathan, "Victims of the sands and the snakeheads." *The Guardian* (2004), February 7th 2004.

⁴³¹ Nash, Mark, "Electric Shadows (Dianying)." *Isaac Julien: Ten Thousand Waves*, eds. Julien, Isaac and Connery, Christopher (London: Isaac Julien Studio and Victoria Miro Gallery, 2010).

Isaac Julien explained in a personal conversation⁴³² that it was an experiment for him, since the audience was supposed to become the editor of the piece. Seats were positioned in the centre of the exhibition space, and the viewers were



Ill. 20: Isaac Julien, *Fantôme Créole*, 2005, Installation View Centre Pompidou, Paris

expected to turn their heads in order to combine both double-projections. Instead of surrendering to this arrangement, the audience resisted the counterfactual approach of the work, missing some sections which could also have been deleted by the editor in advance, and pushed the cushions to the most distant area in the room, in order to appreciate simultaneously as much as possible of the piece.

German filmmaker Harun Farocki's work *Deep Play* from 2007 adds another content-related layer to multi-screen video installations, with additional relevance for my research on



Ill. 21: Harun Farocki, *Deep Play*, 2006, Installation view Dokumenta Kassel 2007

retrospective analyses.⁴³³ Farocki's installation, as seen at Documenta XII in 2007, consisted of twelve synchronised screens and gave insight into various aspects of the FIFA world championship finals in 2006. The audience did not necessarily get the impression of missing something by not being able to watch all projections at once (not only because the screens all clearly showed the same match, the result of which was

⁴³² Schlosshotel Karlsruhe, 08.02.2013; similar in an earlier interview, cf. Julien, Isaac and Camia, Chiara Marchini, "Interview." (2011), 13.03.2013 <http://interviewstream.zkm.de/?p=39#back_one>.

⁴³³ Farocki, Harun, "Quereinfluss/Weiche Montage." *ZeitSprünge . Wie Filme Geschichte(n) erzählen*, eds. Ruffert, Christine, Schenk, I. and Schmid, K.-H. (Berlin: Bertz, 2004).

already known.) Rather, the different perspectives provided additional information about the soccer match between France and Italy at a real-time length of two hours and fifteen minutes – all from multiple points of view.

Each screen displayed another vista of the match captured with different imaging technologies or rebuilt with computer graphics. One screen, for instance, displayed the Berlin Olympic stadium from outside for the two-hour duration of the event and used police radio as audio. On other screens, player movements were analysed with different and precise imaging systems, surveillance techniques or even displayed retrograde analysis with computerised avatars of players from both teams. Computerised voices reported the play-by-play or a presenter sometimes surmised what would have happened if the actual movement has been executed differently, or how the game could have been improved. In chess, this method, also called backward induction,⁴³⁴ is frequently used to examine possible moves and in particular to improve strategies for the next game. The same is applied to football, although many other coefficients might affect the outcome. This was particularly evident in the different cameras pointing to the lawn combined with sound of cheering crowds. Anyone who has watched an important match on television with a football-enthusiast has learned how the edited view of the transmission always gives a more objective impression than the one the referee on the field has.

The above-mentioned arrays for installation would provide an ideal environment for evoking counterfactual thoughts within an audience, although most of these examples explore the idea neither in content nor sound. The form of presentation often

⁴³⁴ Neumann, John von and Morgenstern, Oskar, *Theory of Games and Economic Behavior*, Third ed. (Princeton, MA: Princeton University Press, 1953). Nowadays the term is also used in economics and the research about decision-making.

adds supplementary information and different perspectives to some of the works, in particular *Hors-Champs* and *Deep Play*, for which my earlier introduced *multiple perspectives model* can be deployed. With the right content, multi-screen installations could be an ideal set-up for most of the categories which I observed in counterfactual movies; owing to the fact that they are immersive and often cover the peripheral vision, the complete work cannot be perceived at once.

4.2.4.2. Non-Linear Narratives

Another category I propose are non-linear narratives, which do not allow an instant return to a specific turning point, but make the existence of possible alternatives obvious.

Besides explorations with interactivity, such as American media-art-pioneer Lynn Hershman Leeson's early interactive videodisk *Lorna*,⁴³⁵ I refer in particular to Stan Douglas' and Linda Lai's recombinant works. In these pieces, each viewer is confronted with a slightly different composition or, in Hershman Leeson's work, is even a participant in a story with divergent results. This might lead to counterfactual thoughts about the work ("what if I selected another detail?" or "what if I entered the space one minute earlier?") wondering whether the work would have been more or less interesting, or what might have occurred to the protagonist in another combination of movie sequences. The structure of these pieces already suggests that the artists are intentionally withholding content from the viewers by providing choices or random combinations, and offering endless possible combinations.

⁴³⁵ 1979-83

Lorna tells the story of an agoraphobic woman suffering from loneliness and despair. She is afraid of leaving her one-room apartment; her telephone is the only contact to the world - outside, and she watches news and



Ill. 23: Lynn Hershman Leeson, *Lorna*, 1979-83

advertisements on her television set. Viewers – or rather participants – have the option of directing her life into several possible plots and endings by selecting numbers on a



Ill. 24: Lynn Hershman Leeson, stills from *Lorna*, 1979-83

remote control, similar to the one Lorna uses herself to change between television channels, in a rebuilt installation of her room. The numbers correspond with the objects in her room and open up chapters of her past and future life. Compared to contemporary video installations, *Lorna* might appear dated to the casual visitor. Nowadays the attention lies rather on the content and Lorna's psychology than on the sheer technical fascination of an interactive video-disc, so I would argue that the significance of Hershman Leeson's work can even be more appreciated today. *Lorna* consists of seventeen minutes video footage, which can be arranged by recombining the thirty-six chapters into several days of runtime. Lynn Hershman Leeson explained in an essay that "[t]he plot has multiple variations [...] and can be seen backwards, forwards, at increased or decreased speed, and from several points of view. [...] There is no

hierarchy in the ordering of decisions.”⁴³⁶ This forking path structure behind the scenes is what makes *Lorna* a counterfactual work of which each observer, who eventually becomes the protagonist of the installation, might get a different impression of Lorna, culminating in the three different endings: she either shoots her television set, commits suicide or moves to Los Angeles.⁴³⁷

If I were to choose only one artist for this category, it would have to be the Canadian video-artist Stan Douglas. In his body of recombinant work, he addresses directly the counterfactual machinery in our brains.

Most of his work is presented with at least two-channels, on video or film. What makes it particularly interesting for my research is that these channels are, in most pieces, not running in parallel or they are altered using techniques to recombine audio and visuals. There are either recombined loops with separate narrations and different duration, time lagged and resulting in a number of diverging combinations such as *Inconsolable Memories*. Or they are rearranged according to certain parameters by a computer system. With this method, *Win, Place or Show* (1998) offers 204,023 variations.

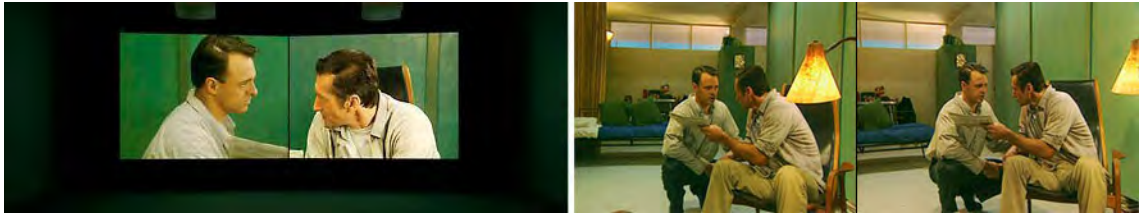
Journey into Fear (2001) is a single channel video, though with a runtime of 157 hours without repetition, the result of a combination in dialogues; and the duration of *Suspiria* (2003) is even specified as “infinite.”

Stan Douglas reveals about the technique of *Journey into Fear*:

⁴³⁶ Hershman, Lynn, “The Fantasy Beyond Control ” *Illuminating Video . An Essential Guide To Video Art*, eds. Hall, Doug and Fifer, Sally Jo (New York, NY: Aperture in association with the Bay Area Video Coalition, 1990).

⁴³⁷ Hershman stated on her former website, that for Northern Californians like her the worst of all endings is to move to Los Angeles.

The interior scenes have been synchronised to five parallel dialogue tracks. At particular branching points, a computer system switches between them, generating permutations of dialogue that can potentially run for more than six days without repeating.⁴³⁸



III. 25: Stan Douglas, *Win, Place, Show*, 1998; left: two-channel installation view, right: still of one of the 204,023 combinations

Apart from the technical background and its resulting presentation, which is hardly possible to watch as a whole without wondering what has been missed, the content of his work is closely related to the question, “what could have been?” In particular in *Inconsolable Memories*, Douglas entangles memories and imagined futures. In the 840 possible variations of *Klatsassin* (2006), he refers to the different contradictory perspectives in *Rashômon* by telling the story of the Chilcotin chief Klatsassin and the conflicts with British Columbia in a manifold way. The random character of the work relates to his desire to concede more freedom of interpretation to the audience and not to overload the work with too much explanation.

Generally, Douglas focuses on the “hauntings and traces of lost potential, past encounters and missed futures”⁴³⁹ summarises film theoretician Lisa Coulthard. The desire to witness the rewinding and different possibilities entangled art critic Adrian

⁴³⁸ Searle, Adrian, “Twelve tubs of popcorn and a gallon of Coke, please.” *The Guardian* (2002), March 5th 2002.

⁴³⁹ Coulthard, Lisa, “Uncanny Memories: Stan Douglas, Subjectivity and Cinema.” *Scope* (n. d.), <<http://www.scope.nottingham.ac.uk/article.php?issue=12&id=1079>>.

Searle: “It is hard not to get caught up in Douglas’s cyclical, elliptical thinking – to keep going back, to begin all over again.”⁴⁴⁰ This is exactly what counterfactual art is about.

In her generative piece *Door Games Window Frames: Near Drama* (2012), Cantonese artist Linda Lai ⁴⁴¹ also explored the possibility of combining five-hundred movie clips from a database in a three-channel installation. Lai collected sequences with opening and closing doors and windows from Cantonese movies from the 1950s and ‘60s, moments that usually introduce a transition or a change. What I consider particularly notable is that Lai used eleven movies with only two male lead characters (Yin Tse 謝賢 and Ying Cheung 張瑛.) In this way, she adds another element, which I mentioned briefly in the chapter “Wind Back the Film of Life (Inspiration)” The director creates the character, which the actor is supposed to represent, reinforced through the editorial combination of tracks. By combining the work randomly, one person, the actor, is instantly transformed into different personalities with changing moods. It is no accident Lai used a Hong Kong remake of Hitchcock’s *Rear Window*,



Ill. 26: Linda Lai, *Door Game Window Frames: Near Drama*, 2012. Three-channel video installation, 11 minutes, Hong Kong she refers to the previously mentioned interview with him.⁴⁴²

⁴⁴⁰ Searle, “Twelve tubs of popcorn and a gallon of Coke, please.”

⁴⁴¹ Lai, Linda, *Door Games Window Frames: Near Drama*, 2012. “The Burning Edge, Making Space, Activating Form” Faculty Exhibition of the School of Creative Media, City University of Hong Kong, Hong Kong. <<https://vimeo.com/35050069>>.

⁴⁴² 陳皮, Pei Chen, Ji Zhu, 左几 and Ng, Wui, *Hou chuang 後窗*, Hong Kong, 1955.

I feel enchanted by the frequent use of big head shots and speechless facial expression. There's so much in these head shots that you can't reproduce the richness in words. You can't just label them 'happy' or 'sad', 'surprised' or 'fearful'. That's the magic of the moving image.⁴⁴³

Lai points to the micro-narrative movements of her work. They offer in endless variations, based on pre-set algorithms and her pre-selection, a counterfactual experience to the audience. By withholding content from the audience and at the same time making them aware of existing alternatives, non-linear narratives provide an ideal environment for stimulating counterfactual thoughts, and raise the desire to watch the other alternatives, either by returning interactively to a turning point or hoping for a convincing random-combination.

4.2.4.3. Augmented Reality

Augmented reality provides by nature the possibility of encountering an additional layer to the real world, possibly by direct information, by secret insights into a parallel world or by introducing counterfactual deliberations.

The gadgets used nowadays come very close to my idea of the visionary device with which the obscure stranger used to provide an insight to an alternative reality, as in Isaac Asimov's science-fiction story *What if...?*,⁴⁴⁴ written more than sixty years ago. Therefore I assume we cannot have any idea of the potential of what will be possible in the near future, should parallel universes really exist. Maybe there will be a device to

⁴⁴³ Lai, Linda, *An interview on "Door Games Window Frames: Near Drama" with EXiS (Experimental Film & Video Festival in Seoul)*, 2012, Available: <http://silentspeechesai.blogspot.de/2012/10/an-interview-on-door-games-window.html>, 13.03.2013.

⁴⁴⁴ REFERENCE?

display all our possible parallel paths in life and beam us into the desired world in which we long to be.



Ill. 27: Jeffrey Shaw, *Golden Calf*, 1994. Installation at Ars Electronica, Linz

Twenty years ago, with his virtual sculpture *The Golden Calf*,⁴⁴⁵ Jeffrey Shaw developed an early approach to expanding our notion of reality with the aid of a gadget. On a portable LCD-display, the image of a small 3D-sculpture was displayed, a golden calf on a plinth. By

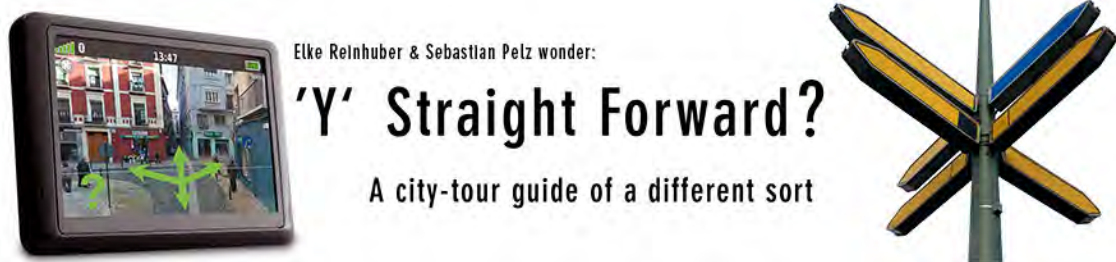
moving the display up and down and around a real but empty plinth, the view on the calf changed. For technical reasons, the resolution was still coarse: it was far from resembling reality. But for that moment, the viewer became absorbed in the presentation and tried to explore the calf from all view-points, like revealing a secret through magic glasses.

In my artistic research, I proposed specifically two concepts exploring the potential of augmented reality for counterfactual art.



Ill. 28: Elke Reinhuber & Sebastian Pelz, *Y Straight Forward?*, 2012. Counterfactual navigation screen

⁴⁴⁵ Shaw, Jeffrey, Duguet, Anne-Marie and Weibel, Peter, eds., *Jeffrey Shaw: A User's Manual, from Expanded Cinema to Virtual Reality* (Stuttgart: Cantz, 1997).



III. 29: Elke Reinhuber & Sebastian Pelz, *Y Straight Forward?*, 2012

*Y-Straight Forward*⁴⁴⁶ is a city tour guide offering choices of alternative routes, instead of directing the participant straight to the destination by the shortest path. By offering alternatives, the guide discloses what has been missed on the alternative route, rather than pointing to the sights on the actual route.

Another concept is designed to explore the contradiction of physical experience with visual perception. I devised a *Counterfactual Roller Coaster Ride*⁴⁴⁷ with an S3D pre-recorded movie of a roller coaster ride from the perspective of the passenger,

The real thing:



Your experience:



CoRoCoR
Counterfactual Roller Coaster Ride

III. 30: Elke Reinhuber, excerpt from the concept for a *Counterfactual Rollercoaster Ride (CoRoCoR)*, 2012

displayed on 3D video glasses. This movie is supposed to be seen while physically experiencing a ride through contrasting slopes and turns.

⁴⁴⁶ A proposal for Paseo Project with Sebastian Pelz, June 10th, 2012

<https://vimeo.com/44191943>

⁴⁴⁷ a proposal for the amusementpark Europapark, featuring thirteen different roller coaster rides

The most recent work of art, which totally captivated the audience, including myself, was the *Alter Bahnhof Video Walk* by Janet Cardiff and George Bures Miller, produced for Documenta 13. The artist duo recorded a twenty-six minute walk through the old train station in Kassel on video. The only way to watch the film was by hiring an iPod in the train station. Having done so, Cardiff gave instructions with her engaging voice. By aligning the screen with the actual backdrop of the station, a second layer was added for the viewer. It was very close to the actual setting and therefore easy to identify



Ill. 31: Janet Cardiff and George Bures Miller, *Alter Bahnhof Video Walk*, 2012. Documenta 13, Kassel

with. The architecture in the small-scale movie and in the station were congruent, whereas items such as the advertising board in the bakery indicated a shift in time; people, animals and moving trains reminded the viewer occasionally of the two layers, the verisimilar pre-recorded video and the physical existence of the station. Then, the sound of a brass band was audible; slowly musicians appeared with huge instruments from behind a column. The viewer, or better, the participant, was asked to walk behind them. Without hesitating, the immersed participant turned around and followed the voice and the image by aligning the recorded past on the small video screen with the present scenario of the station. The narration directed the viewer even further back in time, to traumatic events in the same location, the former central station, during World War II. On Cardiff and Miller's website is written: "An alternate world opens up where

reality and fiction meld in a disturbing and uncanny way that has been referred to as ‘physical cinema’.⁴⁴⁸

As in my *parallel universe model*, the questions ‘which is the real world’ and ‘whether there has something been missed in the other world’ might be asked. Cardiff and Miller’s work finally enables us to go right back to one of these frequently invoked turning points and replay one of the realities, but the other one will be missed, at least partially.

4.3. Summary

Having considered the range of fields of research and the variety of artwork relating to counterfactuals, I have attempted to propose a definition for counterfactual art.

After providing a glance into the conceptual history of counterfactuals in the various disciplines of psychology, historiography, philosophy and physics, I propose the transfer of the term to fine arts.

As it cannot be generalised easily, I have created three categories which describe the relationship of artist, counterfactual thoughts and audience, and given examples of each. I distinguish between retrospective analyses of the artist during the production of a piece of art, the revealing of a possible alternative life of the artist and finally, what I consider as most captivating but also the most challenging, the approach to present, to evoke and to stimulate counterfactual thoughts within the audience.

⁴⁴⁸ as seen in June 2012, Cardiff, Janet and Miller, George Bures, *Alter Bahnhof Video Walk*, 2012. Documenta 13, Kassel. <<http://www.cardiffmiller.com/artworks/walks/bahnhof.html>>.

Referring to my own artistic practice, in earlier pieces I explored alternatives to my actual existence and consider it a difficult and continually evolving task to immerse the audience in the work in such a way that their counterfactual thinking is stimulated.

5. Conclusion

To conclude my artistic research, I would argue that an increasing interest in counterfactuals can be perceived in recent decades. This can be found in a wide range of fields, from science and humanities to popular culture. Additionally, it has become clear to me that counterfactual art already exists, though it has not yet been categorised as a genre in the fine arts in itself. Consequently, my aim to establish the hypernym counterfactualism for this transdisciplinary tendency is the result of those observations.

With the background of analysing the conceptual history of counterfactuals in a range of disciplines and from my own experience, I commenced my practical research searching for the initial requirements for counterfactual thinking. The investigation of the three components *choice*, *decision making* and *counterfactual thinking* all led to separate artworks, each group of works being presented in an individual exhibition. While the pieces referred to the three elements of my investigation, they also correlated with and were based on each other, and illustrated my reasoning. Hence, I realised the importance of an appropriate technique for expressing my intention and rediscovered the significance of immersion, sound and space for my research.

The confrontation with choice was explored in a group of works entitled *I Know Where I'm Going!*, with two-dimensional media such as photography and graphic illustrations. *Decisions – A User's Manual* followed, dealing with the challenge and procedures of choosing. Decision making can be a time-consuming and difficult process; accordingly, the ideal media for representation proved to be time-based.

The experience obtained from these series of works resulted in my first attempt to create an artwork dealing with and evoking counterfactual thoughts within an unknown

audience: *Decidophobia*. Despite the significance of this installation for my practice-based research, I consider it as a starting point for further exploration, and a first attempt to define the basic requirements for counterfactual art. I suggest that this genre needs to fulfil at least one of the following criteria: it must be immersive, interactive, time-based, spatial or performance-based. For this reason, my concepts for an immersive, gesture-controlled installation and a site-specific augmented reality walk will develop into an even more rewarding counterfactual artwork.

As an additional step – and to understand my creative methods – I reviewed all of my personal sources of inspiration, which suggested retrospective deliberations. In order to approach my research question, I analysed different strategies of representing alternatives to a path of life, mainly through feature films, and categorised different strategies of the genre that I describe as counterfactual movies.

Based on this taxonomy and my experience with my own artistic practice, it was possible to discover counterfactual art in a range of artistic concepts. I distinguished between the counterfactual thoughts of the artist during art production (experiencing), the attempt to express the artist's counterfactual thoughts in the artwork (revealing; by far the most widespread and best-established category) and artwork stimulating counterfactual thoughts within the audience (evoking).

I consider the last category as the most interesting, but at the same time the most challenging category. As a starting point, I investigated the potential for further research and explorations in the field of multi-channel video-installations, non-linear narratives and augmented reality, and the ways in which counterfactual thinking could be activated, employed or consciously avoided in an artistic context.

Exploring the research evident throughout disparate disciplines offers great potential to scrutinise and consolidate the many manifestations of counterfactuals in the humanities, the arts and the hard sciences and would prove to be a very rewarding undertaking. However, a new, unanswered question arises from this research: how do artists control their audience with deliberate actions while – on the other hand – working totally unaffected, disregarding any concessions for the uninformed.

I regard it as the sublime privilege of being an artist to have the freedom to choose for my work whatsoever is of interest to me at this moment in time and to be a temporary explorer in any kind of discipline. Consequently, artists can look at the entirety, suggest visionary directions and open up new paths, or explore and connect diverging views and approaches in their research. In my case, I hope to pave the way for collective, transdisciplinary research on counterfactuals, including the fine arts, by proposing the term counterfactualism as a formal reference to this genre.

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