

A RADICAL TECHNOLOGY OF THE NON-SELF

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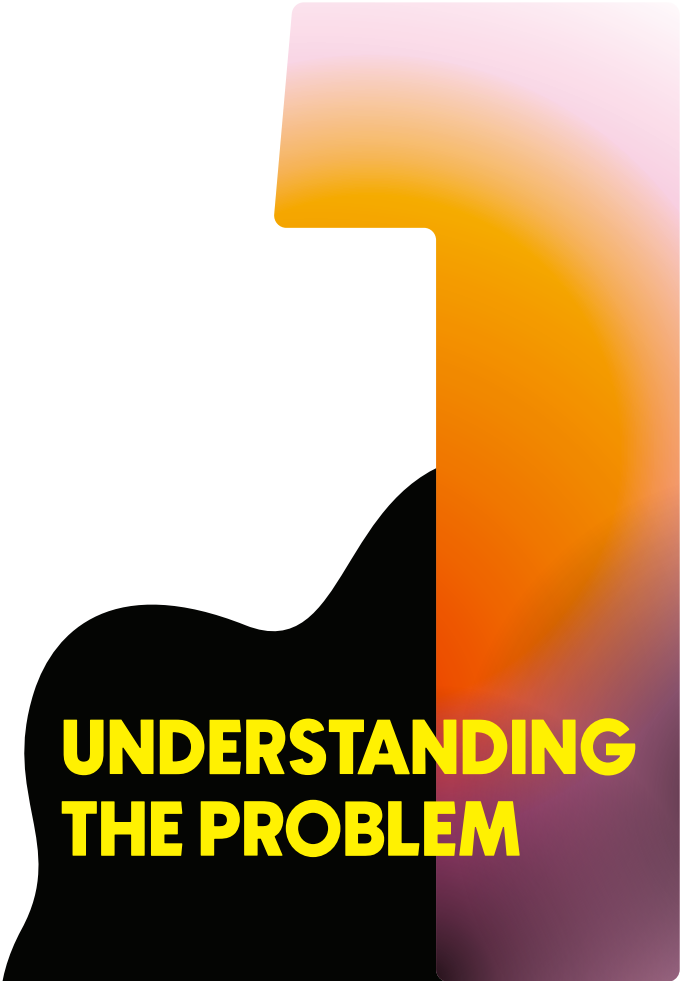
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INTRODUCTION

The thesis seeks a solution to support mental health, a goal that has sprouted from the impression of *I am not feeling well and my environment is not feeling well*. During my recent research that has been conducted for designing a serious game to support the rehabilitation of the upper limb after stroke, I have learned about the advantages of serious games, and the initial idea was to utilize these advantages in designing a VR experience that can support mental health.

To collect requirements of an experience that serves a wide audience, first, general issues of our society are investigated. As a next step, existing approaches towards the solution are explored, and attributes are collected that can be considered in the design of a new attempt to fulfill the collected requirements. Based on these learnings, an initial idea is sketched, which is then evaluated by user candidates and experts as an iteration step in the design process. As a result, the concept of an experimental serious game is presented, a potential *Radical Technology of the Non-self*.



UNDERSTANDING THE PROBLEM

To find a solution that can serve a wide audience, a more general and a less subjective problem needs to be defined than the incipient I am not feeling well and my environment is not feeling well impression. General issues in society and their causes need to be investigated in order to achieve that.

The Burnout Society

To start with, I delved into the book *The Burnout Society*¹. In this work, Byung-Chul Han collects issues in our society that lead to burnout and depression. It has to be noted, that the book was written before the Covid-19 pandemic, and starts with the following diagnosis, which immediately feels outdated to the reader in 2021

Every age has its signature afflictions. Thus, a bacterial age existed; at the latest, it ended with the discovery of antibiotics. Despite widespread fear of an influenza epidemic, we are not living in a viral age. Thanks to immunological technology, we have already left it behind. From a pathological standpoint, the incipient twenty-first century is determined neither by bacteria nor by viruses, but by neurons. Neurological illnesses such as depression, attention deficit hyperactivity disorder (ADHD), borderline personality disorder (BPD), and burnout syndrome mark the landscape of pathology at the beginning of the twenty-first century.

However, the issues collected in the book were not resolved by the pandemic, in fact, many of them have been amplified. In an article² Byung-Chul Han reflects on the diagnosis with the statement:

Soon we shall have sufficient vaccine to beat the virus. But there will be no vaccines against the pandemic of depression.

The writer sticks to the original issues that are explored in *The Burnout Society*, from which the most relevant ones are collected in the following.

1 (Han, 2015)

2 (Han, 2021)

Achievement society

Twenty-first-century society is no longer a disciplinary society, but rather an achievement society.

The new human type, standing exposed to excessive positivity without any defense, lacks all sovereignty.

Positivity in this context doesn't mean anything towards good but is the opposite of negative which is less than zero, and means a lack of something. This *lack* has been replaced with *too much*. The too much has to be maintained in every aspect of modern life, and where it is not present, the need for it is felt, more and more has to be *achieved*.

The depressive human being is an animal laborans that exploits itself – and it does so voluntarily, without external constraints.

The exploiter is simultaneously the exploited.

Is it possible to leave this infinite recursion behind and change behaviour? If the exploiter is the exploited, it means the problem lies and can be solved within each member of the society. How is it possible to interrupt the system of one externally? Given the same pattern regarding the members of society, is there a solution that would interrupt many recursions and change many behaviours?

The lack of profound boredom

Excessive positivity also expresses itself as an excess of stimuli, information, and impulses. It radically changes the structure and economy of attention. Perception becomes fragmented and scattered.

If sleep represents the high point of bodily relaxation, deep boredom is the peak of mental relaxation.

First and foremost, depression is creative fatigue and exhausted ability.

Our community of activity stands diametrically opposed to such rest.

The “gift of listening” is based on the ability to grant deep, contemplative attention – which remains inaccessible to the hyperactive ego.

The loss of ability to contemplate – which among other things, leads to the absolutization of *vita activa* – is also responsible for the hysteria and nervousness of modern society.

The *vita contemplativa* needs to be restored. We need to slow down, or even stop. We must learn to sink into deep boredom, and to control our eager attention to stimuli. What are the tools that can help support that?

Fleeting lives

The modern loss of faith does not concern just God or the hereafter. It involves reality itself and makes human life radically fleeting. Life has never been as fleeting as it is today. Not just human life, but the world in general is becoming radically fleeting. Nothing promises duration or substance.

If everything is fleeting, even human lives, we should look for values to hold onto. What are the values that promise continuity or substance?

Self-definition of good life

The capitalist economy absolutizes survival. It is not concerned with the *good* life. It is sustained by the illusion that more capital produces more life, which means a greater capacity for living.

If the economy is not concerned with *good life*, society should be. Its members have to be critical and analytical on what a good life would be like for them. Other than achieving more.

As a conclusion, the following tasks have been collected that will be addressed in this project:

1. Interrupt achievement society
2. Creating a space for profound boredom
3. Defining/creating “handles” in life
4. Exploring the *good life*

Capitalist Realism and Psychedelic Socialism

Following up on the previous section, the question needs to be answered, how - or if at all - it is possible to interrupt achievement society. The book *Capitalist Realism: Is there no alternative?*³ explains the difficulty of this task, but also presents a possible option.

Capitalist realism

It is easier to imagine the end of the world than it is to imagine the end of capitalism. – Fredric Jameson and Slavoj Žižek

Capitalist realism: the widespread sense that not only is capitalism the only viable political and economic system, but also that it is now impossible even to imagine a coherent alternative to it.

The 'realism' here is analogous to the deflationary perspective of a depressive who believes that any positive state, any hope, is a dangerous illusion.

This malaise, the feeling that there is nothing new, is itself nothing new of course.

For most people under twenty in Europe and North America, the lack of alternatives to capitalism is no longer even an issue.

Capitalist realism as I understand it cannot be confined to art or to the quasi-propagandistic way in which advertising functions. It is more like a pervasive atmosphere, conditioning not only the production of culture but also the regulation of work and education, and acting as a kind of invisible barrier constraining thought and action.

With these lines, Fisher paints the attitude of society towards capitalism; it is impossible to imagine an alternative to it, and the lack of another option is becoming less of an issue, it is an invisible barrier. It shows why it is so difficult to achieve that desired interruption. However, in the following, he offers an option that could push us – at least – to look for alternatives.

Invoking the Reals

Capitalist realism can only be threatened if it is shown to be in some way inconsistent or untenable; if, that is to say, capitalism's ostensible 'realism' turns out to be nothing of the sort.

So one strategy against capitalist realism could involve invoking the Real(s) underlying the reality that capitalism presents to us.

To see further than the reality that capitalism illustrates for us, society needs to face the Reals covered by capitalism.

Environmental catastrophe is one such Real.

But Green issues are already a contested zone, already a site where politicization is being fought for. In what follows, I want to stress two other aporias in capitalist realism, which are not yet politicized to anything like the same degree. The first is mental health.

The 'mental health plague' in capitalist societies would suggest that, instead of being the only social system that works, capitalism is inherently dysfunctional, and that the cost of it appearing to work is very high.

The third Real is bureaucracy. To exit the realism of capitalist realism, its dysfunctionalities should be realized and resolved. By looking for solutions to these issues, alternatives are explored that are actually interrupting the aforementioned infinite achievement recursion. Thus, the offered options are to invoke environmental catastrophe, the 'mental health plague' or issues with bureaucracy, which lays the ground for this project aimed to support mental health.

The long, dark night of the end of history has to be grasped as an enormous opportunity. The very oppressive pervasiveness of capitalist realism means that even glimmers of alternative political and economic possibilities can have a disproportionately great effect. The tiniest event can tear a hole in the grey curtain of reaction which has marked the horizons of possibility under capitalist realism. From a situation in which nothing can happen, suddenly anything is possible again.

As a next step, to get a little closer to the solution; to seek a possible way out of capitalist realism, and to explore possible “glimmers of alternative political and economical possibilities”, the article *Psychedelic socialism*⁴ by Jerermy Gilbert has been processed. The article was written after the death of Mark Fisher, and hence their collaboration, and a draft of Fisher’s book *Acid Communism: On Post-Capitalist Desire* that Gilbert has received, Gilbert shares a mixture of his own and Fisher’s views. It is partly a follow-up from where we were left with capitalist realism.

Acid communism

‘Acid Communism’ became Mark’s term for a political sensibility shared by both the psychedelic experimentalists of the counterculture and by the political radicals of the 60s and 70s.

Acid as an adjective, describes an attitude of improvisatory creativity and belief in the possibility of seeing the world differently, in order to improve it, deliberately ‘expanding’ consciousness through resolutely materialist means.

... various apparatuses of power function not just by feeding us lies, but by affecting us negatively in order to make us feel less able to act in the world, less able to think creatively or dynamically. From this perspective, ‘raising’ consciousness isn’t just a matter of giving people information about the sources of their oppression, but of enabling them to feel personally and collectively powerful enough to challenge it.

Even if it seems rather impossible, interruptions in the achievement society should be the goal. As such, something like the adjective ‘acid’ is necessary, the world needs to be seen differently. What are the options to ‘raise’ consciousness, to enable people to feel personally and collectively powerful? Gilbert argues that the radical potential of utopianism and counterculture of the 60s and 70s should not

4 (Gilbert, 2017)

be dismissed. In the following, options toward this kind of consciousness-raising are discussed, which are the *technologies of the non-self*.

Technologies of the self and the non-self

Techniques of self-transformation like yoga, meditation, (or even psychedelics, in theory) might have some kind of radical potential if they are connected to a wider culture of questioning capitalist culture and organising politically against it.

What new forms of expression may emerge in the years ahead, nobody can predict. What seems certain, however, is that the struggle against neoliberalism and authoritarian conservatism will require forms of culture and political organisation which are collectivist without being conformist, liberating without simply breaking social ties.

Consciousness-raising has always meant coming to an understanding that one's 'personal' problems are in fact not individual, discrete, private elements of private experience at all, but the effects of large-scale social and historical processes; and that the solution to those problems cannot be found through individual actions of any kind, but only through solidarity and creative collaboration with others with whom one shares material interests.

So far it was not clarified that the project should seek a solution that builds a community. In the beginning, a plan was shaping that focuses on individual experience, on raising the consciousness of one, investigating techniques of the self. This was not the right approach, the focus must be shifted towards tools that support collaboration, that make a wider culture questioning the capitalist culture, from technologies of the self, the technologies of non-self should mutate. It should be a step towards building and experiencing a community, a step towards consciousness-raising in the quoted sense. The issue is not the separate problems of many individuals, but "the effect of large-scale social and historical processes".

In fact in the words ‘acid’ or ‘psychedelic’ designate anything in phrases like ‘acid communism’ or ‘psychedelic socialism’ (or just ‘psychedelic culture’) then they could be taken to refer to a set of practices and ideas which are at one and the same time mystical and materialist - a materialist mysticism which acknowledges the complex potentialities of human embodied existence, without tying that recognition to any set of supernatural or theistic beliefs. This materialist mysticism would treat the investigation of technologies of non-self as one of its key priorities.

The task is to design practices and ideas that are one, and at the same time mystical and materialist.

A super-therapy to enhance the joyous affect

By ‘super-therapeutic’ I mean something more than just fixing people up, repairing some of the damage done by daily life under advanced capitalism so that they can get on with their lives. I mean something which might have those effects but also go beyond them, enabling people to become extraordinarily empowered precisely by enhancing their capacity for productive relationships between others (which capacity is precisely what John Protevi names, after Deleuze and Spinoza, ‘joyous affect’).

This indicates that the planned solution should not be created only for leisure during the experience, but should have a long-term effect. Tools must be evaluated that can change behaviour. Serious games are meant to serve this purpose, and therefore they are further discussed later.

Here, it is also emphasized that the project needs to consider enhancing “the capacity for productive relationships between others”, again moving the project further in the direction of investigating technologies of the non-self, which are therapeutic above individual therapies, they are ‘super-therapeutic’.

One mundane material issue here is time. In a capitalist society, most people survive by selling their time for currency which they can exchange for consumer goods. ... As long as too many people have to sell too much of their labour power for too little money, simply in order to survive, then they will have to spend too much time at work. Under these circumstances, only specialised professionals will ever have time for a really transformative practice.

If the issue is time, we must look for a solution that is time-efficient. That feels contradictory with the goal of interrupting achievement society, or to support slowing down, seeking in profound boredom. Time efficiency fits the pattern of exhausting capitalist strategies. Just like a corporate training where participants are taught meditation exercises, so that at the end, they can perform better. Therefore, time efficiency should not be the manner of the experience, yet tools can be investigated that allow participants to be *elsewhere* faster. The *elsewhere* is important in the described *acid* context, but also helps in the interruption of the individual deep in the achievement recursion, to experience a scenario in contrast to the capitalist realism. With this statement, I am preparing the reasoning by my choice of investigating virtual reality as a possible tool, where *elsewhere* can just be put in a headset.

Just as Mark intuited, 'psychedelia' or the 'acid' or 'acid communism' need not designate any particular interest in drugs as such. They might simply refer to a general willingness to deploy material technologies of non-self in order to explore forms of consciousness and potent collectivity not limited by the ideological forms of liberal individualism.

Psychedelic socialism would be one manifestation of a quite contrary tradition, which understands freedom and agency as things which can only be exercised relationally, in the spaces between bodies, as modes of interaction. It would be the creation, constitution and cultivation of spaces of collective creativity (be they schools, laboratories, dancefloors, ashrams, workshops, or gymnasias) which it would seek, while recognising how hostile capitalism must always be to them.

For now let's say that I'm saying that yoga and discos could be useful

radical technologies, when used correctly. And I don't know exactly what 'correctly' would mean – but I invite us all to try to find out. And an aim of any 21st century socialism, or any Acid Communism, should be yoga and discos for all... (all who want them, anyway).

The main learnings of this article is that the solution should move in the direction of creating relations and community, rather than trying to fix individuals one by one, to aim consciousness-raising by technologies of the non-self, including traditional, analogue methods such as practising mindfulness. The goal should be to increase capacity for productive relationships, not only to achieve temporary success during the planned experience, but also to take something away from it for a longer period. As suggested, yoga and discos could be useful radical technologies, and as a follow up to that thought, the concept of radical technologies in the context of digital zeros and ones are evaluated as possible useful tools in the next section.

Radical Technologies

Since the very first idea was already to include VR technology, a more distant, critical thinking towards technologies needs to take place. *Radical Technologies*⁵ is full of concerns in view of the existing technologies that already surround us, as well as the Stacks that implement, maintain and benefit from them. The chapter *Radical Technologies – The design of everyday life* starts with a very realistic image, where it is illustrated how we are living in the net of different technologies.

You are sitting at a café recommended to you by an algorithm, at a table that was cut on a CNC machine; you pay for your coffee with cryptocurrency, which you do by tapping your smartphone against the register; the voices of children playing an AR game filter in from the street.

The question pops up: Do we need more of these? Greenfield projects that the truly transformative circumstances will not arise from one technology alone, but from different technical capabilities combined. These combinations are possible since all technologies have the same basic language of zeros and ones. Many solutions only need to be implemented once, and often are available open source. Then it becomes a building block of a bigger project, it solves a necessary step to achieve the overall goal. This is also what makes it possible in this project to even consider working with VR technology. The game engine Unity that is used for implementation is a free software for students, and many of the mentioned building blocks are present in it as packages. Many implementation problems are solved already, and it creates the opportunity to experiment with such a valuable tool in a budget-wise limited project like this one.

5 (Greenfield, 2017)

These are the seeds of possible futures, seeds that with effort and care might yet be grown into wiser, more considered, more just and generous way of living together upon the Earth.

As a conclusion of this chapter, a *Radical Technology of the Non-self* needs to be designed that supports the so far collected requirements. To further shape what this technology could be, existing approaches are explored in the next chapter.

**EXISTING APPROACHES
TOWARDS THE SOLUTION**

This section starts with the evaluation of some potential approaches for *technologies of the non-self* including the *Positive Lexicography* project of Tim Lomas, and isolation tanks. Then the concept of serious games is introduced through the lessons learned from my recent research for my bachelor thesis *Designing a Serious Game for Upper Limb Rehabilitation After Stroke*. The bachelor thesis research inspired the initial idea for this project too, to design a VR experience that supports mental health. Following that, given the interdisciplinary approach of this research, a *Scientific State-of-the-Art* summarizes the learnings of relevant scientific work.

The Positive Lexicography

The first *technology of the non-self* approach is the *Positive Lexicography* project by Tim Lomas, who is a researcher in positive psychology. This field of psychology is not about identifying or solving problems, but about trying to give more attention to what is already available and positive. There are several practices to achieve this, such as collecting three things one is grateful for every day, thanking someone from the past with a gratitude letter or noticing more positive events in our environment. The latter can be supported by having a richer vocabulary of these concepts.

A key way in which language shapes experience is through the boundaries it creates within the experiential world. Crucially, languages all differ in this respect, which influences how their speakers experience and understand their lives.⁶

The Positive Lexicography is a collection of words that cannot be translated into English by any other word. By definition, it is “*an evolving index of ‘untranslatable’ words related to wellbeing from across the world’s languages*”. The project allows the submission of new words, therefore it is ever growing and has a community building quality. Learning these concepts of different languages is not only beneficial for each participant, but also supports the goal of enhancing the capacity for productive relationships between participants. This enhancement happens through a better understanding between the participants, as a result of the newly learned concepts that the participants now share. We can therefore consider the interaction with the *Positive Lexicography* a possible *technology of the non-self*.

Immersion: Isolation Tanks & Virtual Reality

Isolation tanks resolve many of the collected issues. Flotation-REST (Restricted Environmental Stimulation Technique) is a complementary and alternative medicine therapy⁷. During flotation-REST a person is lying in a completely dark and quiet tank, filled with high concentration salt water which results in high buoyancy, so the person can float. The method induces deep relaxation through minimization of sensory input. A study⁸ with a seven-week flotation program with a total of twelve flotation sessions with sixty-five healthy participants had the effect of decreasing stress, depression, anxiety and severe pain, and at the same time increased optimism and sleep quality. Another finding of the same study found correlation between mindfulness and altered states of consciousness; those individuals that reported higher levels of altered states of consciousness during flotation-REST also experienced higher level of mindfulness (as measured with MAAS) and thus were open and receptive to here-and-now as well as a mindful state in daily life.

Many of the participants used different methods like medication, yoga, massage and physiotherapy prior to the floating sessions to reduce pain, stress and other individual health issues, and they reported never having felt this much relief like after the Flotation-REST therapy.

As such, flotation-REST seems to be a great resource as a technology of the self, with the empowering effect probably even as a technology of the non-self. However, since access – especially regular access – to experience isolation tanks is very limited, it is worth investigating what other tools could

7 (Jonsson & Kjellgren, 2014)

8 (Kjellgren & Westman, 2014)

have similar benefits, but that are also accessible to everyone. Deep relaxation through floatation-REST could help participants to find a similar state of relaxation in daily life. Isolation tanks support this deep relaxation with full immersion, and VR is also a tool that accommodates immersion. VR can be experienced already with cardboard goggles⁹ and a mobile phone. Improved experience and interaction require better tools, but ones that are still accessible, and with time, more and more affordable. Also, given the digital implementation, the experience needs to be created only once, and then it can be delivered to everyone. These support the initial idea of designing an experience for VR, accordingly, the beneficial findings of floatation-REST will be considered during the design process.

Learnings of Designing a Serious Game for Rehabilitation

My recent research for my bachelor thesis at the Technical University of Vienna was *Designing a Serious Game for Upper Limb Rehabilitation After Stroke*. After a stroke occurs, patients are affected to varying degrees, but with very specific effects. The main goal of rehabilitation therapy after stroke is to regain independence in Activities of Daily Living (ADL), by taking advantage of the neuroplasticity that occurs after the event. A high level of repetition of exercises can be used to relearn movements and improve cognitive skills, but exercises therefore often become boring, patients lose motivation and the therapy becomes an even harder work both for the patient and the physiotherapist. Serious games have the engaging and motivating quality of games and can help to overcome the mentioned issues. Therefore, to support rehabilitation, a VR serious game was designed with

an accompanying mobile application that allows physiotherapists to adapt the virtual environment to each patient. The virtual environment offers a safe space to practise and improve in ADL, and at the same time accommodates arm and hand opening exercises that support the recovery of the affected upper limb.

The main learnings of the research were that it is necessary to find new support for rehabilitation, and VR can be a beneficial supplement to traditional therapy. Serious games can be motivating and they help to maintain engagement in necessary activities, including therapy. The digital tool allows therapists to track participant recovery more precisely and also to have an overview on the achieved improvements. This work has inspired to design a VR experience as a possible tool to support mental health and the further investigation of the qualities of serious games, which is elaborated in the next chapter.

Scientific State-of-the-Art

The relevancy of the selected science papers relate to the idea shaping so far: *a Radical Technology of the Non-self*. It is planned to be an experience in virtual reality, with the inclusion of mindfulness techniques and concepts from the *Positive Lexicography*. The learning of scientific work is extracted from papers in the context of applications that are implemented for VR and support mental health.

There are many studies that investigate the efficiency of including technology to support mental health. Li et al.¹⁰ summarizes the current applications of VR in psychotherapy, with beneficial implementations in various fields.

10 (Li et al., 2020)

Wang et al.¹¹ implemented a VR experience as a reaction to the detrimental impact of Covid-19 pandemic and related measures. The work of Wang et al. emphasises the necessity of research for alternatives that can improve physical and mental well-being in home settings.

The findings of Yildirim and O’Grady¹² provide empirical support for the efficiency of a brief VR-based mindfulness intervention. Participants undergoing a VR-based intervention reported greater levels of state mindfulness than participants in the (only) audio-based intervention. However, Andersen et al.¹³ did not find a significant difference in the results between the group of participants exposed to the sound of a guiding voice paired with a virtual visual environment, and the group only exposed to auditory guidance. This result might be a consequence of the particular design or implementation, the participants’ experience was assessed using self-reported measures of perceived concentration, temporal duration, stress reduction and comfort. The writers encourage longitudinal studies and studies relying on alternative metrics (e.g., physiological measures).

Kasiṇa

A study¹⁴ was exploring how meditation skills can be supported by VR and with biofeedback through electroencephalography (EEG). The basis of the study was to visualize kasiṇa in the virtual environment. In Buddhism, kasiṇa refers to a class of basic visual objects of meditation. There are ten kasiṇa mentioned in the Pali Tipitaka:

11 (Wang et al., 2021)
12 (Yildirim & O’Grady, 2020)
13 (Andersen et al., 2017)
14 (Moseley)

1. earth (*paṭhavī kasiṇa*),
2. water (*āpo kasiṇa*),
3. fire (*tejo kasiṇa*),
4. air, wind (*vāyo kasiṇa*),
5. blue, green (*nīla kasiṇa*),
6. yellow (*pīta kasiṇa*),
7. red (*lohita kasiṇa*),
8. white (*odāta kasiṇa*),
9. enclosed space, hole, aperture (*ākāsa kasiṇa*),
10. consciousness (*viññāṇa kasiṇa*) in the Pali suttas and some other texts; bright light (*āloka kasiṇa*) according to later sources, such as Buddhaghosa's *Visuddhimagga*.

The *kasiṇa* are typically described as a colored disk, with the particular color, properties, dimensions and medium often specified according to the type of *kasiṇa*. The earth *kasiṇa*, for instance, is a disk in a red-brown color formed by spreading earth or clay (or another medium producing similar color and texture) on a screen of canvas or another backing material.¹⁵

As the user engages in deep meditation with the help of bringing the focus on a selected *kasiṇa*, audio feedback is given based on the deepness of the relaxation, tracked by an EEG device. For the audio biofeedback, an actual audio synthesis process was developed which allows for modification in real-time to adapt as the brainwave reacts. The study showed that having the virtual *kasiṇa* perceived beneficial feedback and helped with deepening the meditation. Also, where the concentration was lost, the biofeedback mechanism seemed to help to recover the state. These findings are relevant to the current work as objects and their attributes in the virtual environment functioning as *kasiṇa* have proved to support mental relaxation. Utilizing the objects (and their attributes) of this project as *kasiṇa* should be considered during the design process.

Mind machines

The same study¹⁶ also did an experiment with mimicking mind machines. A mind machine (aka brain machine or light and sound machine) uses pulsing rhythmic sound, flashing light, or a combination of these, to alter the frequency of the user's brainwaves.¹⁷ Mind machines can induce deep states of relaxation, concentration, and in some cases altered states of consciousness. The commercially available mind machines such as the Procyon and Proteus utilize a light and sound mechanism of specific frequencies to induce particular mental states. The eyes are closed and a kind of Ganzfeld effect is seen upon the eyelids with myriad shapes and changing patterns, which is synchronized to synthesized or sampled sound played at particular frequencies. The Ganzfeld effect, or perceptual deprivation, is a phenomenon of perception caused by exposure to an unstructured, uniform stimulation field. The effect is the result of the brain amplifying neural noise in order to look for the missing visual signals. The noise is interpreted in the higher visual cortex, and gives rise to hallucinations.¹⁸ Perceptual deprivation therefore has a similar effect to the one described during sensory deprivation experienced in isolation tanks.

The experiment in the mentioned study with mimicking a mind machine was implemented through procedurally generated mandala type imagery. As a result, the subjects were unlikely to stay fixed, in concentration, to any one of these moving patterns but were likely to have a "wide focus" which is actually entering into a different meditation technique entirely. The study argues whether this is meditation

16 (Moseley)

17 (Mind Machine)

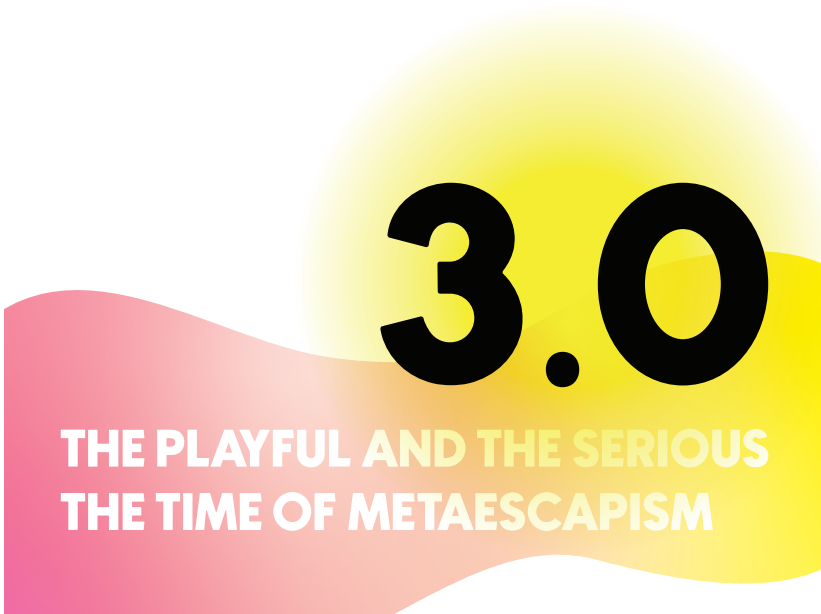
18 (Ganzfeld Effect)

or actually inducing some kind of trance. Mind machines can definitely be considered to support achieving an *acid* (as in the sense discussed in *1 Understanding the Problem: Capitalist Realism and Psychedelic Socialism*) mental state, and should be considered in designing the VR experience.

Biofeedback

The EEG-based biofeedback loop in the study is something to explore in future work. As another example for EEG based feedback, Choo and May¹⁹ attempted to translate learning outcomes of mindfulness practice with gamification into a VR educational software. Their game is equipped to collect EEG data to observe the participant's state of mind. This data provides participants in this case with visual feedback of their performance and progress, e.g. white flower in a virtual scene open only when the user is mindfully meditating.

19 (Choo & May, 2014)



3.0

THE PLAYFUL AND THE SERIOUS
THE TIME OF METAESCAPISM

In this chapter, some principles of game design are studied further. Serious games are investigated in combination with the Homo Ludens concept, and it is discussed how metaescapism has evolved during the Covid-19 pandemic, how tools for escaping reality can now be considered as sources to experience reality.

The Playful and the Serious

The work has moved in the direction of designing a serious game, however, the rules of a game seem too strict for the aimed experience. Designing something playful and serious, while maintaining player activity and allowing free action at the same time is quite complex. Before moving on to defining a solution, to grasp a little better what makes a game a work, the article *The Playful and the Serious: An approximation to Huizinga's Homo Ludens*²⁰ by Hector Rodriguez has been studied. It is exploring game design with the reference of Johan Huizinga's work, and it moves strictly defined game design in an experimental direction. It also explains how the playfulness of a game can be combined with a serious meaning in the game design.

The modern study of play can be traced back to the publication of Dutch historian Johan Huizinga's groundbreaking study *Homo Ludens* (1983). Huizinga's book describes play as a free and meaningful activity, carried out for its own sake, spatially and temporally segregated from the requirements of practical life, and bound by a self-contained system of rules that holds absolutely.

Serious games

Serious games by definition are games that are not designed for leisure purposes, and therefore focus on 'serious' areas such as the economy, education, military, politics and health. They are not primarily designed for entertainment, enjoyment or fun, but are designed to educate, train or change behaviour during play.²¹

This definition seems to partly contradict with the goals that were set in the previous chapter and to Huizinga's

20 (Rodriguez, 2006)

21 (Sardi et al., 2017)

description of play; that the experience should be free. But the concept cannot just be dropped, education and change in behaviour are goals that are set for the experience.

Huizinga, in fact, claims that most serious pursuits exhibit playful aspects. If this line of argument is pursued to its logical conclusion, Huizinga can be enlisted as an ally rather than an opponent of the serious games movement.

This statement helps to resolve the contradiction between the playful and the serious. It shifts the focus from this contradiction to the intersection of the two. In the following, it is further explored what is necessary for the player to experience play, how it is possible to achieve playfulness in a serious domain and what could be handled more open-mindedly during game design.

Playing can be part of the learning process because the subject to be learnt is, at least in some respects, essentially playful. The use of serious games in the learning process therefore illuminates the fundamental nature of the subject being taught.

The point is that the subject matter of education is in some respects already playful.

The first question for serious game designers in the field of education should always be: What aspects of the subject matter in question exhibit ludic features? And how can a game designer exploit and highlight these aspects?

These questions will be considered during the game design process described in the next chapters.

Meaningful play

Meaningful play is achieved when the player can perceive how their actions affect the game.²²

22 (Burke et al., 2009)

The philosophical starting point of Huizinga's study is the observation that, where there is play, there is also "meaning". Playing makes sense to the player.

To describe play is to describe its "meaningfulness".

Consequently, this should be the next task to consider during the game design process. There are certain gamification elements that connect straightforward meaning to player actions. When the player jumps on a coin, they earn points, the points are at the end summed up, the final score is the feedback to the player on their achievement. A leaderboard can be implemented to show the scores of the best players, the more points a gamer gets the higher rank they get. This straightforward gratification gives a very clear meaning, but this experience should offer a break from exactly this strategy. In this case, the meaning should come from the experience as a whole, and the player's actions should support the experience too. In the following, there is more explanation on how the experience of play can be achieved.

The experience of play

Huizinga sometimes writes that play is "free", by which he means that the fundamental motive of play is the experience that it affords.

But the word "experience" does not refer to the inner states of an isolated ego. The player's experience essentially unfolds within a structured situation.

Playing consists in a trans-individual process of action and reaction, which often takes on a to-and-fro quality reminiscent of dance. It is the pattern of this movement, rather than the psychological make-up of the individual participant, which fundamentally characterizes the experience of play. Instead of saying that "someone is playing", it might be better to say that "there is playing going on".

The to-and-fro nature of the game is between the player and the designer. There's a reaction to the player's action,

or a player reaction is required to the game's programmed actions. We have a communication tool in spite of a case where the communicating parties are actually not acting in the same space, nor at the same time.

Homo Ludens

The main thrust of *Homo Ludens* is to demonstrate that many valuable achievements of human culture depend less on rational thinking than on a deep-rooted craving for ludic experience.

Ludic experience can be channeled into situations that highlight our awareness of our own bodies, the risks of interpersonal trust, the fluidity of individual identity, the relationship between individual autonomy and reciprocal interdependence, etc.

Community formation and the magic circle

According to Huizinga, the consciousness of play as a separate and self-contained sphere is often reinforced by the pervasive tendency to enclose the players within a spatiotemporal frame, the so-called "magic circle", which isolates their game from the more serious tasks of daily living.

The magic circle can be a place, a group of people, a timeframe or also just a mood. Similarly to when we play catch ; we aren't just running, or escaping. Or when 'Mafia'²³ is played, and a group of people dispose of some unevenly distributed pieces of information and another world is created where some players are mafia members, some are villagers, players can kill or also save others. And just like that, when the game ends with either the mafia or the villagers winning, the players are just a group of people, they don't kill or save lives anymore. This shifting in and out of the game in itself can be considered as a tool which can offer topics for discussion or education.

23 (Mafia (Party Game))

My suggestion is that serious games can address fundamental aspects of social philosophy and social science. ... Consider a game where the boundaries of the magic circle are not yet clearly defined, and its rules not yet finalized; the game itself would consist in the tentative and risky process of negotiating these rules and boundaries. A competition could also be held without a referee, so that all or most decisions have to be reached by the negotiated consensus of all players. This competition may even take place in a public space, without a precise starting or ending time.

Conclusion

Serious game designers can enhance the playfulness of education by treating the learning process as an exploratory arena. Student players explore their relations to themselves and to others through the process of playing. The key word is “exploration”. The designer does not create a game with the expectation that players will learn a pre-defined set of ideas or skills. Instead, the designer constructs a system of constraints, such as a simulation or a set of simple instructions, and then allows the player actively to learn by exploring and tinkering with the system.

The article helped with shaping the experience further. However, the activity needs to be meaningful, no logic nor straightforward gratification is necessary to create a ludic experience, to create a game. The playing happens between the player and the designed environment. There is space for exploration in play.

Perhaps the next step for experimental designers working with digital technologies is to suspend their absolute commitment to some distinct sphere called “play”, or to some self-evidently distinct art form called “game design”, and begin designing frameworks for actions that may or maynot be considered playful. This project demands a struggle against deep-rooted assumptions about what constitutes a proper game genre and game design method, and to cultivate an attitude of open-minded receptivity to the ambiguities, contingencies and potential risks of human play.

From postescapism to metaescapism

The *elsewhere* has been mentioned before, daily living has to be interrupted to have space for change, the magic circle from the previous section is also an *elsewhere*, it encapsulates the play. The article *From Postescapism to Metaescapism: Video games as a Return to Reality*²⁴ explores the escapism functionality of video games, and draws a new aspect to the relation between reality and gaming experiences considering the Covid-19 pandemic. Originally video game media was considered as a form of escapism, basic game narratives took place in fantasy or fantastic settings.

They never intended to respond to reality or interpret it. Far from changing it, they refused even to explain it.

They served as tools to escape the real world for a while to replenish the necessary energy to face daily routines again. However, in the last ten years gaming culture has been dominated by postescapism. Rather than escaping reality, video games offer the means to its exploration and explanation.

In essence, the postescapist paradigm covers a whole range of developments, including ‘serious’ games (those designed outside the entertainment context, in order to meet the challenges of education, defense, management, healthcare, etc); gamification, which draws on game-design elements to motivate employees, clients, students or patients, but above all regular games designed for the scope of entertainment.

As a result of the rise of indie games, the range of games broadened and diversified, they gave voice to different issues including concerns about the capitalist global order. When Covid-19 has changed our lives from one week to another, and pretty much nothing could be considered

normal, but video games were one of the things that didn't change at all. The earlier routines vanished, familiar reality = *famireality* became surreal and artificial. And at the same time, simulated virtual environments remained exactly the same, offering an escape back to pre-pandemic *famireality*.

The pandemic has revealed the role of gaming platforms as our non-human friends and companions that allow us to safeguard ourselves, our environments and networks as well as our familiar ways of life.

The distinct realism of video games is concerned with the reality of experiences and emotions as much as with the audiovisual information. This is why a whole range of aesthetically not-quite-realistic games turn out to be realistic enough in terms of their depiction of the actions portrayed in the gameplay.

Video games make travel and free movement possible under all circumstances, they offer live interaction which were missing during the pandemic. Even if they are far from anything (pre-pandemic) real, they “seem closer to reality than many of our recent ‘real-world’ experiences”²⁵.

Although the planned virtual experience didn't have the metaescapist aspect as an initial goal, it should be considered that the pandemic is not over, and that games can be a beneficial supplement²⁶, and help with the lack of *famireality* experienced when analogue reality is more surreal than virtual reality.

25 (Vetushinsky, 2021)

26 (“Playing Video Games in Lockdown Can Be Good for Mental Health,” 2020)



3.1

PITCHING THE PLAN

Based on the conclusions of the previous chapters, the idea of a VR experience is sketched here. An extra iteration is planned in the design phase in order to include the learnings of user-centered design methodology²⁷. The project idea is pitched to possible participants, and is also discussed with psychologists. The plan is outlined more loosely to allow questions and ideas during the feedback round. The discussions were also used to experiment with possible participants: one of the scenes were described during a guided meditation, and afterwards a survey was conducted. Based on the received feedback, the planned experience was further elaborated and described in detail in the next chapter.

27 (Dopp et. a.)

Learning Concepts in the Context of Well-being

The initial idea is to create a VR serious game that implements the concepts from the *Positive Lexicography*. As discussed earlier, VR technology is capable of supporting immersion, and therefore can achieve the desired interruption from everyday life. The *Positive Lexicography* is an ever-growing, inclusive collection of words which supports the goal of community building and *enhancing the capacity for productive relationships* between participants, through understanding concepts from different languages, a possible *technology of the non-self*.

The selected concepts are grouped into scenes where their shared elements are present (this will make more sense in the following when the scenes are described). In this project, four scenes are designed in detail, and further suggestions are made in the 5 *Future Work* chapter. The scenes are planned for VR and can be experienced with the help of the Oculus Quest headset. Each scene allows user interaction with the environment too. The inclusion of the technology allows another desired feature from the previous chapter, it can provide *famireality* in altered reality. In the following, the four scenes are introduced briefly, including the words that are presented in them.

The scenes

To experiment a little with the potential participants, not all – already penciled – details are described during the pitch of the idea. The questions that the potential participants might have, will back up the inclusion of the missed details and the initial scenes can be shaped further during the discussions.

The Moon, Crystals and Salmon

The words

Ėit: Placing quartz stones/crystals in streams (e.g., so that they shine/sparkle in the moonlight, thereby attracting salmon).

Gümüş servi: (original phrasing). Lit. silver cypress tree; the shining white glimmering of moonlight on water.

The scene

The participant is placed in a dark environment, where the main light source is the moon. The “floor” is water, there is an illustrated flickering light on the surface from the reflection of the moon. There are crystals, quartz stones, minerals (stones) floating around, there are many, also towards the sky. The further the stones are, the more they look like stars in the sky.

The interaction

The participant can interact with the stones. Stones can be put in the water, they can be put on each other to build volume, or a tower. Once a certain number of stones are put in the water, fish gather around them.

Forest and Light

The words

Shinrin-yoku: Lit. ‘bathing’ in the forest (literally and/or metaphorically); appreciating the restorative/rejuvenating power of nature.

Komorebi: Lit. wood is ‘leaking’ sunlight; dappled sunlight filtering through leaves.

The scene

The scene is rather simple, the sun is shining, and its light penetrates the branches and the leaves of the forest.

The interaction

At this point it is not decided whether this scene should offer an interaction. It is also possible that this scene’s sole purpose is relaxation and recharge.

Bonfire

The words

Brabbag: The act (and enjoyment) of warming the back of one's legs in front of the fire.

Fyrgebraec: The crackling sound of fire.

The scene

A bonfire is placed in the middle, it has the crackling fire sound. Some objects are floating around the bonfire.

The interaction

For this scene the interaction is still undecided, a bonfire could invite the participants for a dance, or some movements, but could also serve as a place for a gratitude practice, to think of and gather with missed ones.

Flowers

The words

Ikebana: ‘Arranging flowers’; ‘making flowers alive’; the Japanese art of flower arrangement.

Hanakotoba: The Japanese form of the language of flowers (in which flowers symbolically represent qualities, and so can convey emotion and communicate directly to the recipient or viewer without needing the use of words).

The scene

The participant is put in a bubble of flowers. There is also one in the center. The flowers can be moved around except the one in the center, functioning as an anchorpoint.

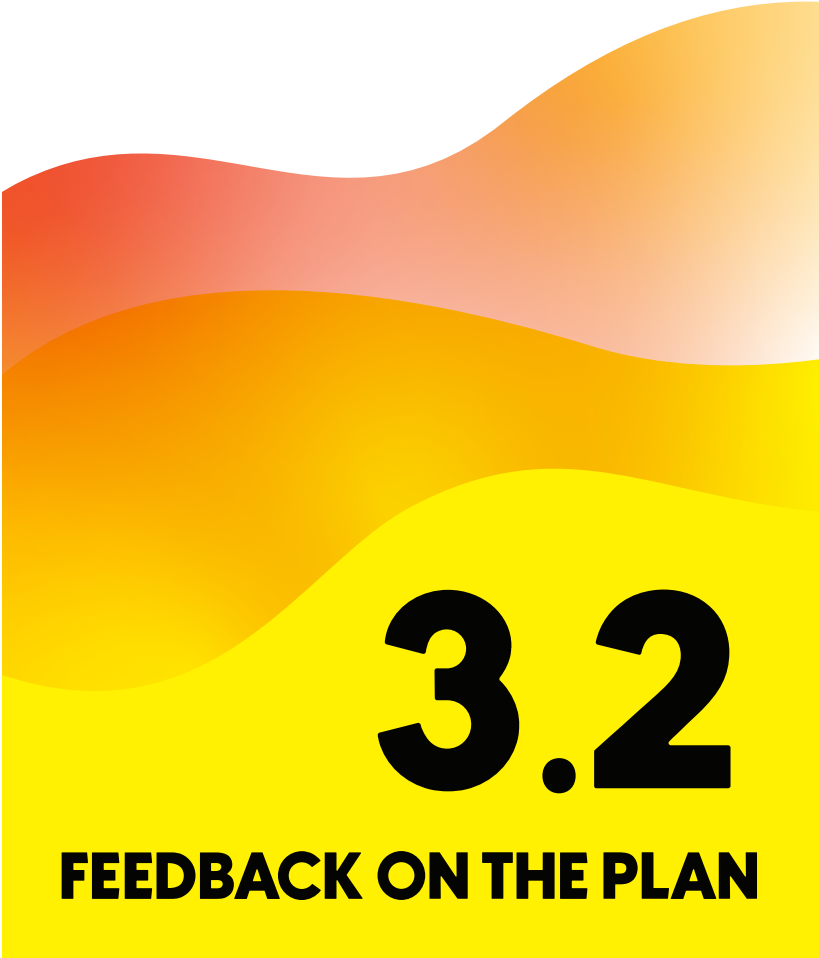
The interaction

The participant can organise the flowers into a bouquet, or into a free composition analog to practising ikebana. As the flowers are grouped, they start to communicate with each other.

Experiments with Potential Participants

During the experiments, the Flowers scene was described to groups and to individuals. The experiment always started with a relaxation (which was based on a Headspace article²⁸), and was followed by a visualization. During the visualization, first, the participants were asked to imagine a flower, to specify as many details of that flower as possible. The second part of the visualization was the description of the two concepts: ikebana and hanakotoba. The script of the experiment is in the *Appendix* of the thesis.

After the meditation, a survey was distributed, where the participants could share the first flower they had imagined. This survey is also presented in the *Appendix*. The collection of these flowers, and their attributes are the inspiration for the implementation of the Flowers scene, and that way, is intended to be a representation of a shared experience, bringing the project in the direction of a *technology of the non-self*.



3.2

FEEDBACK ON THE PLAN

Feedback was collected from a multicultural group of potential participants and experts of different relevant fields, including artists of various media and psychologists.

The feedback round with the potential participants allowed open-ended discussions. The overall feedback was positive, participants often responded to the painted scenes to be calming, that they already felt relaxed just by listening to the description of the scenes.

Whenever the language of the selected words were not mentioned, it was always requested. Therefore, this information should also be included in the design.

Participants suggested considering the implementation using other options, including posters or cards of the concepts, physical objects taken from the scenes like the stones, or flowers. A mobile application version was also discussed. The application would support the selected concepts with illustrations, and could serve as an accessible reminder of the concepts.

Given the multicultural quality of the participants, they were also asked to share traditions or rituals that they would associate with the described scenes. As an input, Estonian mid-summer traditions were shared, from which one was highlighted: one has to collect seven types of flowers and put them under their pillow. The dreams that night are said to predict the future! Another input was related to the Bonfire scene, also from Estonian folklore. There, the whole month of November is considered to be the month of the spirits. A way to guide the spirits home is to lit candles and make fire in saunas. Fire is said to be something that the spirits can see from a long distance and so it helps them to find

their way home.

Psychologists' feedback was also generally positive. The idea to have a scene where no interaction is required and serve as an experience solely to relax and recharge was welcome. Based on the feedback, the virtual environment could support users that have difficulties with relaxing, an assumption that is aligned with the findings in the *Relevant Work* section. Their feedback was also used in the implementation of the experiment script mentioned in the previous chapter.



THE EXPERIENCE
IN DETAIL



In this chapter, the result of all the learnings and feedback are collected into a final design concept. The result is a VR experience supported by physical implementations, a *technology of the non-self*. The current concept consists of four scenes, each including a set of words picked from Tim Lomas's *Positive Lexicography*, which was introduced in the *2 Existing Approaches Towards the Solution* chapter. As the lexicography is an ever-growing collection, the same should apply to the project. The existing scenes can be further enriched based on participant feedback, additional scenes can be developed to represent more concepts. This is a general comment on the finality of the designed experience. Further attributes that could enhance the experience are discussed in the *5 Future Work* chapter.

The Scenes

In the following, the four scenes are described in detail. Each description follows the same pattern: first, the selected words are listed, then a general atmosphere is drawn and the most vital visual and acoustic elements of the particular scene are elaborated. The descriptions also include the planned interaction for each scene.

During the first overview on the lexicography, I marked words that I immediately wanted to work with. Some are related to each other, or can occur in the same setting as they contain the same visual elements. The selected words then were grouped into scenes. In a next iteration, to enhance the scenes, additional words were searched that could accompany the selection.

Although the etymology of the words is an interesting issue, it is not addressed in the thesis. For each of the included words it is noted from which language they originate, but

no further research took place in this direction. The origin and the meaning of each word is based on the work of Tim Lomas. His research is described in his book *Translating Happiness*²⁹. Inputs on the words from native speakers only enriched the concepts, they didn't conflict with the definitions of the lexicography.

All the scenes that are designed are outdoors, or this quality is not specified. Many scene details are inspired by elements I observed during my time outdoors on hikes. This year, I was more moved by natural phenomena and just being outside than ever before. As mentioned earlier, *famireality* was lost during the Covid-19 lockdowns, however, – when it was allowed – trips outdoors were an opportunity to feel normal, to experience something that didn't change in its essence. Concepts related to staying indoors were less appealing to me after this period.

Some elements of the scenes were visualised during guided meditations and relaxation practices. The aim of these was to analyse some things about myself, to recharge or to get over something. In the following description of the scenes, it will be specified what elements, or moods are taken from these visualizations. Another source of inspiration in conceptualising the elements of the scenes was *The Book of Symbols - Reflections on Archetypal Images*³⁰, the archive for research in archetypal images. The descriptions of these images serve the preservation of *famireality* and help the implementation of a shared language of visual elements.

Regarding the style of the implementation; instead of working towards a perfect copy of the chosen concepts, models

29 (Lomas, 2018)

30 (Ronnberg)

are designed to represent the most vital elements of these concepts. The models should illustrate the chosen words with their abstract ingredients, rather than perfectly simulating them. This design decision was also backed up with the metaescapist quality of video games discussed in the 3.0 *The Playful and the Serious, the Time of Metaescapism* chapter.

And now, find a comfortable position, take some deep breaths, and immerse in the scenes described in the following.

1 Moonlight, Crystals and Fish

The words

Tuka Ania Native central American / n. / tu:kə əni:jə / too-kuh ah-nee-uh. The ‘night world’; the ‘magical world’.

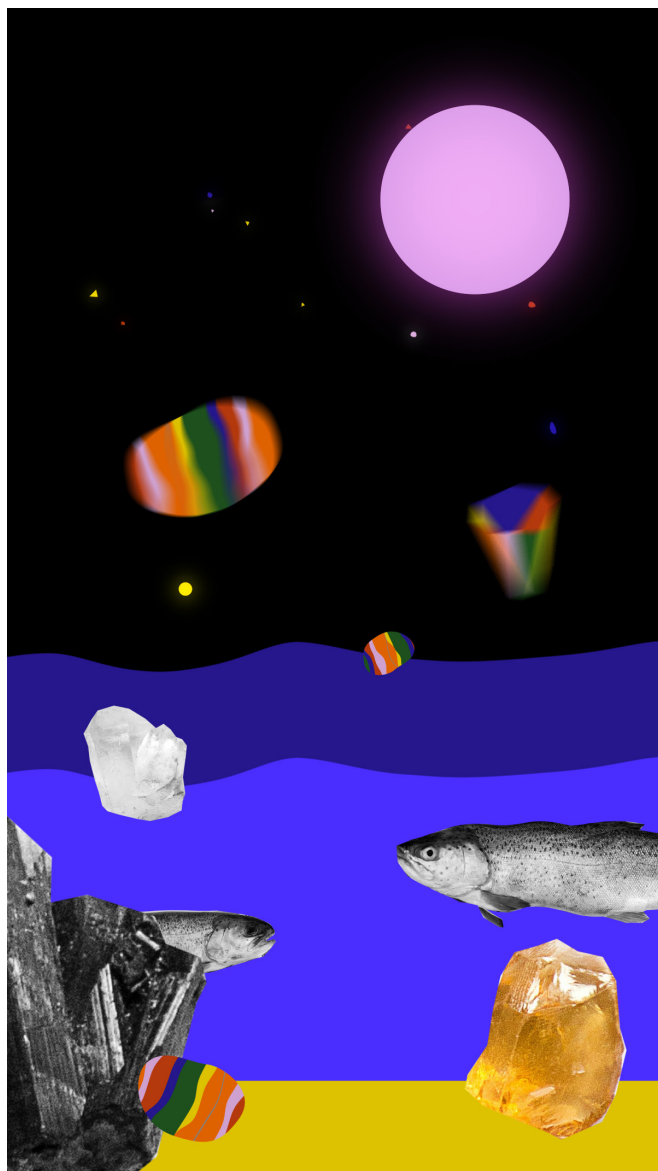
Mångata Swedish / n. / 'mo:ŋ,ɡɑ:ta / moo-on-gah-tah. Lit. moon (måne) road/street (gata); the path of glimmering light that moonlight makes on water.

Ezüsthíd Hungarian / n. / ɛz.u:st.id / ez-oost-id. ‘Silver bridge’; the reflection of the moon on water.

Nurikabe (塗り壁). Japanese / nu:ri:kɑ:bi: / noo-ree-kar-bee. ‘Plaster wall’; a yōkai (spirit) from Japanese folklore, which manifests as an invisible wall that impedes or misdirects travelers walking at night.

Èit Gaelic (Scottish) / n. / aɪt / iyt. Placing quartz stones/crystals in streams (e.g., so that they shine/sparkle in the moonlight, thereby attracting salmon).

Samir (سمر) Persian / n. / sa.mɪr / sah-meer. One who converses at night, especially by moonlight.



The scene

In this scene, the participant stands in a lake. The scene is dark, but the moon shines on the lake, causing a flickering, but calm light on the surface of it. After a while, crystals and stones emerge from the lake, some remain floating in a reachable height, some emerge further to the sky. As they settle, there is a gradual shift from crystals to stars.

The lake

Standing at the water's edge and gazing out over the surface, we pause and give way to dream, reflection, imagination and illusion; to other worlds below and beyond in ourselves, making lake symbolically the entry, for good or ill, into the psyche's unconscious dimensions.

Perhaps we think and dream so intimately next to the lake because it reflects us best as the most "bodylike" of the bodies of water. Different from an ocean or a great river, the scale of a lake can be encompassed by the human imagination.³¹

The scene is inspired by the practice of Èit, but the stream is replaced by a lake, and salmon are replaced by unspecific fish.

The crystals

One of the elements that I bring to the project from the visualization exercises, is a crystal. This crystal doesn't have super powers, but it can give one a boost, and get one out of a situation that is almost insoluble, it can remind one of their own power, it emits but also reflects light.

The Arabian alchemist Morenius expressed ... : "This thing [the philosopher's stone] is extracted from you: you are its mineral, and one can find it in you" (Jung 210). This tells us that we must patiently work throughout our life, like ancient alchemists, "with love and approbation" to transform what we least value – the dead, ignorant or

31 (Ronnberg)

The scene has a dark, calm atmospheric sound in the background. During interaction with the crystals and when crystals collide, a tinkling, glassy sound effect is played.

The interaction

The crystals are interactable. They are not affected by gravity, they float around the player, and stay in the position where they are put. The player has to place the crystals in the water. Once a number of crystals are placed in the water, fish gather around them.

Crystals can also be created by the players, giving them the option to interact with the scene more freely. It is still open whether to include controllers for the interaction, or to use hand gestures. To create crystals with the controllers, the player needs to press a button, but in this case, the controller can provide haptic feedback, making the crystal perceivable by vibration. As the controller sinks into the hand, it can create the sensation of holding an actual crystal. Conversely, if the interaction is simply a gesture of the hand, it is sufficient for the player to fully open the palm. The player's hand is visible in the virtual space, giving the player only a visual feedback of the crystal creation, but it gives more freedom not to hold a controller during the interaction and this implementation can deepen the perceived immersion in the scene.

2 Flowers

The words

Flōra Latin / n. / flʊə.rə / floor-uh. A Sabine-derived fertility goddess of flowers, youth, and spring.

Hanakotoba (花言葉) Japanese / n. / hæ.næ.kəʊ.təʊ .bə / ha-na-ko-to-ba. The Japanese form of the language of flowers (in which flowers symbolically represent qualities, and so can convey emotion and communicate directly to the recipient or viewer without needing the use of words).

Ikebana (生け花) Japanese / n. / ikə.bæ.nə / ik-uh-ba-na. 'Arranging flowers'; 'making flowers alive'; the Japanese art of flower arrangement.

Lǐ (理). Chinese / n. / li:i / lee-e. Law, order, rational principle; often used particularly with respect to the organic order found in nature (e.g., a flower as a systematic, cohesive organism).

The scene

In this scene, there is one flower in the spotlight in the centre. Slowly, further flowers appear that surround the player like a bubble. The flower in the middle is my flower. This specific flower is also a product of a guided meditation, and it represents some attributes about me, especially the me of the time of the visualization. I have a strong relation to this flower, every now and then I get back to it and check on it.

The interaction

The flowers surrounding the player can be taken and added to the flower in the centre, so a composition can be created from the different flowers. Creating a free composition of the flowers is representing the practice of *ikebana*. To bring in the concept of *hanakotoba* to the scene, the flowers communicate with the player, and also with each other. This communication is presented by sound effects.

The extra flowers are not randomly designed either. As described in the 3.1 *Pitching the Plan* chapter, a survey was conducted to collect flowers from my surroundings. The collected flowers and their attributes are included in the implementation of this scene.

During the experiment with possible participants, when the visualization is finished, participants are asked to give their flower everything it needs and then to leave the visualization whenever they are ready. My flower, for example, had to be placed in a context. I put it in a group of flowers. That feeling is present in this virtual scene.

3 Bonfire

The words

Bon-bi (盆火) Japanese / n. / bɒn . bi / bon-bee. Bonfire, large fire; relates to the Japanese tradition of Bon (honouring the spirits of one's ancestors).

Brabbag Gaelic (Manx) / n. / bræ.væg / brah-vag. The act (and enjoyment) of warming the back of one's legs in front of the fire.

Fyrgebraec Old English / n. / fɪə.ɡɹ.breɪk / feer-guh-braik. The crackling sound of fire.

Peiskos Norwegian / n. / pɛɪs.kɔːs / piys-kors. Lit. 'fireplace coziness, sitting in front of a crackling fireplace enjoying the warmth.

Putuwa Australian Aboriginal (Gadigal) / n. / pə. tuː ə / puh-too-uh. Warming one's hands by the fire while gently squeezing someone else's hands.

The scene

First, there is a small bonfire in the dark scene. The crackling sound of the fire is the main atmospheric sound. On the ground, sticks are laid around the fire that should be thrown in the fire.

The interaction

The fire is growing as more sticks are thrown in it, and as it grows, spirits gather around it one by one. The spirits are floating spheres and simple geometrical objects. As more spirits gather around the fire, the crackling sound of the fire slowly fades into a more rhythmic sound, and the spirits start to pulse to the same rhythm, slowly moving around the fire.

4 Forest and Light

The words

Shinrin-yoku (森林浴) Japanese / n. / ʃɪn.ri:. jʊk.ə / shin-ree-yok-uh. Lit. ‘bathing’ in the forest (literally and/or metaphorically); appreciating the restorative/rejuvenating power of nature.

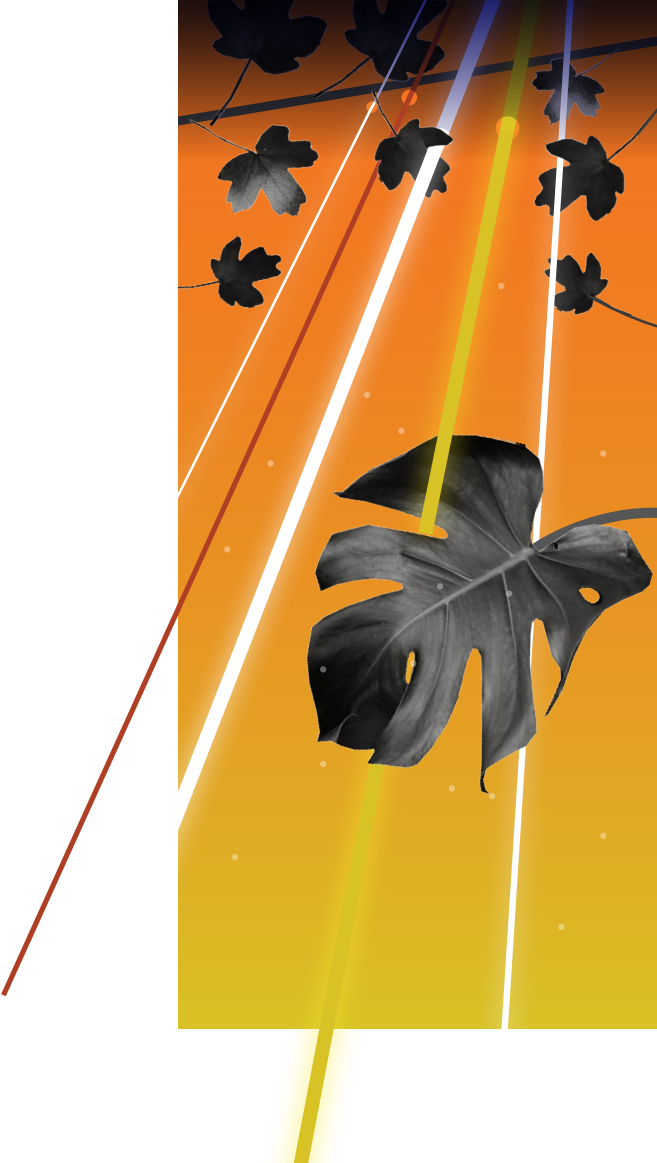
Komorebi (木漏れ日) Japanese / n. / kɒ.mɒ' ɹe.bi / ko-mo-reh-bi. Lit. wood is ‘leaking’ sunlight; dappled sunlight filtering through leaves.

Maienschein German / n. / meɪ.m.ʃam / may-in-shiyn. ‘May shine’; the green-gold sunlight that filters through young leaves in springtime.

Skogluft. Norwegian / n. / skɔ:g.lu:ft / skorg-looft. Lit. ‘forest air’; a practice and philosophy of bringing nature into the home (and so channelling the restorative power of forest air).

Smultronställe. Swedish / n. / smʊl.trɒn'stɛl.ɛ / smool-tron-stel-eh. Lit. a ‘forest berry patch’; a quiet, cultivated place to which one goes to retreat or relax.

Waldeinsamkeit. German / n. / valt'ain.za:m.kait / valt-ayn-sam-kite. Lit. forest solitude; the strange feeling of solitude or loneliness when alone in the woods.



The scene

The player is placed in a forest. Branches and leaves reach over the player, rays of charging light penetrate them.

The forest, with its exotic forces, is “outside” the inhabited precincts of consciousness, as village, city, household or castle. But the boundaries are often depicted as tenuous; many tales begin with the protagonist living “at the edge of a forest”, just as, inevitably, the worlds of typical and archetypal impinge upon each other. An unusual presence comes out of the forest or a magical animal is sighted there. One chances into the forest as into a daydream, and loses one’s bearings.³³

The interaction

This scene is purely designed for recharging, to experience the thought of recharging. To experience *shinrin-yoku*, *Waldeinsamkeit*.

As an experiment, diving into this scene could also be the implementation of mind machines. The Dreamachine of Brion Gysin is a cylinder with regularly spaced shapes cut out of its sides. There is a light source in the middle of the cylinder, and when it is turned on, the cylinder rotates with high frequency. It is meant to be looked at with closed eyes, upon which moving yantra-like mandala visual patterns emerge, and an alpha wave mental state is induced. The frequency of the pulsations correspond to the electrical oscillations normally present in the human brain while relaxing.³⁴ This experience is very similar to when someone travels with closed eyes, passing trees at a high speed, with the sun behind them causing a flickering light sensation on the closed eyelids. The connection between the Dreamachine to komorebi could be illustrated as a journey from a high speed pass in the

33 (Ronnberg)

34 (Dreamachine)

forest, to the slow arrival. This implementation is open to experimentation.

Timeline

The timely order of the scenes is the same as they are listed here. Once a number of fish has gathered in the *1 Moonlight, Crystals and Fish* scene and all the relevant words have been introduced, we move on to the *2 Flowers* scene. Once the player is done with the composition of the flowers, we move to the *3 Bonfire* scene. This third scene builds up continuously to rhythmic sound and lights, which is the connection to the flickering lights ‘on the way’ to the last scene: *4 Forest and Lights*. The last scene is open ended, the players can relax there as long as they want.

To maintain the ludic exploration experience, the words of each scene appear one by one. Some are explained in-between, some are triggered by user interaction, and serve as gratification. The sound effects also function as something to be explored in the scenes. The same type of objects can have different sound effects, for example interacting with the crystals doesn’t always give the same auditory feedback. The atmospheric sound always unfolds and presents more details as the user interacts, also serving as a gratification element.

Installation of the VR Experience

The VR experience is present in a *magic circle* (learned from *The Playful and the Serious* section), which is represented in the physical setting. Other than putting the head-mounted-display on and off, the borders of this *magic circle* are not strictly defined. The experience starts in the physical room and the player dives into, and leaves the VR experience gradually. The room of the installation should already have the atmosphere of the experience when a participant enters it, and should have some physical objects from the virtual scenes that become familiar to the participant after the experience. The inspiration for an ideal setting would be the laboratory of the miniseries *Maniac*³⁵. The planned experience is an attempt to achieve some changes and that experimental attitude could be equally expressed in the installation of the experience.

Physical Take-aways from the Experience

Each scene has a physical card, with a 2D illustration of the scene. These cards can be taken away after the experience, to function as a reminder. Additionally, temporary tattoos could be offered by the installation. Each tattoo would represent a key object of a scene and would serve as a more intense reminder. This idea has also received positive feedback from potential participants and experts.

35 (Maniac (TV Mini Series 2018))

The plot follows Annie and Owen, the two main characters during a pharmaceutical trial. It is a trial of a computer-supported medical treatment that detects the mental illnesses of the participants and supposedly heals them. The participants take part in group sessions but have individual experiences - normally. Due to an accident in the lab, Annie's and Owen's consciousness become connected and they experience this journey together. The miniseries reflect on many issues relevant in this work too. Citizens of the retro-future NYC painted in the series pay with their attention to advertisement, burnout is sensible in the general mood and as a solution, a technology supported acid experience is tested - where obviously things go wrong.



FUTURE WORK

Purposeful Sound

So far, sound was only handled from the aspect of atmosphere building and as a tool for feedback. During an initial meeting with composer József Iszlai, we were discussing further attributes of sound effects that could support this project. His additions fit exactly into the attributes of the project as outlined so far and expand further its toolbox and potentials. A summary of his input is presented in the following.

[Contemporary philosophy of deconstruction considers the act of listening to be a way of perception of self (*ressentir*), even more so, the experience of feeling-oneself-feel (*se-sentir-sentir*).

To be listening is thus to enter into tension and be on the lookout for a relation to self: not a relationship to me or to the self, but to the relationship in self.³⁶

Stemming from the heritage of Aristotelian thought, the sense of listening is dependent on a subject, or sense in itself cannot exist³⁷. We approach self-relation through listening, experiencing ourselves through the system of sonic referral. Identifying sound is the rediscovery and empowerment of the self through resonating bodies of sound. In contrast to visual perception which is related to the imaginary capture, the sonorous perception is more on the side of symbolic referral (*renvoi*, *return*). Jean Luc Nancy approaches the definition of listening through a participatory act:

The visual is tendentially mimetic, and the sonorous is tendentially methexic (having to do with participation, sharing, and contagion).

36 (Nancy, 2002)

37 (Primavesi & Rapp, 2018)

Participation through the means of the VR sound system opens up a possibility of guidance toward the self of the listener. Sonic impulses can be recontextualised and designed, allowing for a deeper sense of immersion, similar to experiences of the *participation mystique* (coined by Lucien Lévy-Bruhl, popularised by C.G. Jung). This experience allows for the erasure of the individual self-image, achieved through a rite involving musical harmony, based on an early system of tonal relationship.

The current Western system of notes is based on the latin measurement of pitches, using the successive notes of the scale derived from the following hymn (written by Paolo Diacono for Saint John the Baptist, cca. 750 AD):

Ut queant laxis	liberating guilt and fear
Resonare fibris	undoing situations, facilitating change
Mira gestorum	transformation, miracles
Famuli tuorum	connecting and relationships
Solve polluti	awakening intuition
Labii reatum	returning to spiritual order
Sancte Ioannes	

Solmization of successive pitches derived from this hymn was introduced by Guido d'Arrezzo (cca. 900 AD), thus being coined as the Guido system of Western solmization. Within this system all specific notes represent a power of mystique and cleansing, purposefully used by gregorian chants. These chants and their notes were believed to convey spiritual blessings when sung in harmony during religious masses (*participation mystique*).

This heritage follows the tradition of ancient Sanskrit language, modulation of spoken words, based on a slightly

different system of tuning. One of the most popularized examples being the droning “OM” sound (Vedanta philosophy’s mystical “yes”), the one sitting closest in pitch to the note Re or D, later defined by Latin culture as the note which would *undo situations and facilitate change*.

The archaic reading of musical notes can be used as reference or inspiration when designing and writing music for an immersive VR experience, as a tool to reconnect the listener to his or her self, inspiring a state of serenity and a deeper sense of delicate awareness.]³⁸

38 quoted from the collected ideas and feedback of József Iszlai

Smell and Biofeedback

Smell can be a powerful indicator of memories, and could also support immersion, therefore inclusion of smells should also be experimented with. Another feedback that could support immersion and relaxation is the inclusion of biosignals. They could be a source of information on the participant's state-of-mind. As suggested in the mentioned studies³⁹ in the scientific work review, EEG could be tracked and the measured values could initiate biofeedback loops that can support directing the participants' attention; e.g., to sink into the relaxation, or the return from the experience.

39 (Choo & May, 2014) and (Moseley)

CONCLUSION

The result of the project is a concept of an experimental VR serious game where participants can experience and learn new concepts related to well-being, supported by physical objects. It is an attempt to support mental health in capitalism, therefore, the design of the experience is a response to the requirements collected as the conclusion of the *1 Understanding the Problem* chapter: *Interrupt achievement society*, *Creating a space for profound boredom*, *Defining/creating “handles” in life*, *Exploring the good life*, by creating a *technology of the non-self* to enhance the capacity for productive relationships between participants, with the inclusion of a *radical technology* of our times. The experience utilizes the benefits of *serious games*, and was designed with the consideration of aspects to maintain the *ludic experience* for the participants, and the learnings of recent scientific work.

The concept currently includes the description of four scenes, each including various words of the *Positive Lexicography*. Since the lexicography itself is an ever-growing collection of words, so should be the project too. This master project should set the basis of, and serve as a prototype and pitch material to a longer and more detailed implementation. That implementation needs further design iterations based on user feedback. Experiments with light effects and sound frequency should take place to explore further qualities that could support fulfilling the set requirements. Further research should investigate how the immersion could be made deeper, e.g. with the inclusion of biofeedback or smells.

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APPENDIX

Script of the Flower Scene Experiment

Sit comfortably in a chair with your hands resting in your lap or on your knees.

Keep your back straight – sitting towards the edge of the seat might help.

Your neck should be relaxed, with your chin slightly tucked in.

Breathe deeply.

...

Defocus your eyes, gazing softly into the middle distance.

Take five deep, audible breaths.

In through the nose and out through the mouth.

In through the nose and out through the mouth.

In through the nose and out through the mouth.

In through the nose and out through the mouth.

In through the nose and out through the mouth.

Now you can let your eyes close gently.

Take a few moments to settle into your body.

Gently observe your posture, and notice the sensations where your body touches the chair and your feet meet the ground.

Feel the weight of your arms and hands resting on your legs.

Acknowledge your senses: notice anything you can smell, hear or taste, sensations of heat or cold.

Slowly turn your mind inwards.

Scan your body from head to toe, observing any tension or discomfort.

Start to feel the relaxation from the top of your head.

Feel how the skin relaxes on your skull.

Feel how your forehead is relaxing.

Feel how the muscles on your face are relaxing.

Feel how your jaw is relaxing.

Feel how your neck is relaxing.

Feel how your shoulders become heavy and they relax.

Feel your arms relaxing, feel your hands becoming heavy.

Feel the relaxation in your organs.

Feel how your body is becoming heavy, and you're sinking into your chair.

Feel your thighs melting - like when you enter a warm room on a cold winter day.

Feel your calves relaxing.

Feel your feet and toes relaxing.

Now turn your awareness to your thoughts.

Notice any thoughts that arise without attempting to alter them.

Gently note your underlying mood, just becoming aware of what's there without judgment.

If there's nothing obvious, that's fine, too.

Bring your attention to your breathing.

Don't make any effort to change it, just observe the rising and falling sensation that it creates in the body.

Notice where these sensations occur – be it your belly, your chest, your shoulders, or anywhere else.

For a few moments, focus on the quality of each breath, noting whether it's deep or shallow, long or short, fast or slow.

Begin silently counting the breaths: 1 as you inhale, 2 as you exhale, 3 on the next inhalation, and so on, up to 10.

It's completely normal for thoughts to bubble up.

You don't need to 'do' anything – just guide your attention back to the breath when you realise the mind has wandered off.

Slowly arrive in an empty space.

Now imagine a flower

You can think of any kind of flower.

If you have more ideas, just pick one, and let the others go.

Go closer to your flower.

How does this flower look?

Look at the head of the flower!

What kind of petals does this flower have?

What is the shape of the petals?

What is the colour of the petals? How do they feel?

Does this flower have a stalk?

If it does, how does this stalk look,

is it soft, or solid?

Does this flower have any leaves?

Where is this flower?

Is it rooted in the ground?

Is it maybe in a vase, or floating in a lake?

It can be anywhere.

Now walk around the flower again, and look at what condition your flower is in.

Does the flower need anything?

What would this flower need?

You can now give the flower whatever it needs, you can take care of it.

...

When you're ready, and you gave your flower what it needed, let the flower move a little further again!

Now imagine the concept of ikebana. It means 'Arranging flowers'; 'making flowers alive'; it is the Japanese art of flower arrangement.

Let your flower be surrounded with other flowers.

Imagine what composition you could build from the set of flowers. It can be a bouquet, but also a more free constellation, there are no constraints.

Once you've arranged the flowers, imagine that the flowers can communicate. Think of the word hanakotoba. It is the Japanese form of the language of flowers (in which flowers symbolically represent qualities, and so can convey emotion and communicate directly to the recipient or viewer without needing the use of words).

Now I let you in this scene for a minute, so you can play with the different compositions of flowers, and can observe their communication in the different settings.

...

Now, when you're happy with your final composition, and have experienced how the flowers communicate, slowly let them behind.

Let this imagine fade away,

you can be back to it anytime you want to.

Slowly come back to the present, to the room.

Become aware once more of the physical feelings: of the chair beneath you, where your feet make contact with the floor, your arms and your hands resting in your lap.

Notice anything you can hear, smell, taste or feel.

Slowly, move your fingertips.

Move your fingers, your toes!

Maybe you want to stretch your arms, your legs,

and when you're ready, slowly open your eyes!

The Flower Survey

Please feel free to draw any details or the whole flower!

How did the head of the flower look, how did the petals look and feel? (Shape, colours, texture...)

How did the leaves of the flower look and feel? (Shape, colours, texture...)

Did it have a stalk? If yes, how did the stalk look? (Shape, colours, texture...)

Did your flower need anything? If yes, what did it need?

In what condition was the flower?

In what environment did you find the flower?

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