walkingwhiledrawing

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Wieso muss ich immer als erstes an diese Figur von Satre denken, aus Bronze oder Kupfer, auf jeden Fall goldbraun glänzend und sich gegen den Wind lehnend. Die Haltung wirkte irgendwie unnatürlich, nicht, dass es dort keinen starken Wind gegeben hätte, der Wind war da, fegte nass von der Meeresluft über die breiten Dünen bis auf den höchsten Hügel hinter dem der Wald beginnt. Man kann aber keine Skulpturen bauen, die gegen den Wind kämpfen, deren Mantel vom Sturm nach hinten gerissen wird, keinen Körper, der sich mitaller Kraft dagegen lehnt. Skulpturen sind starr, sie sind kalt, sie stehen, sie liegen nicht im Wind, sie sind an den Boden gekettet und da bleiben sie auch. Es gibt eine Fotografie von Satre, da stand er da, genau in dieser Haltung, deshalb die Skulptur. Das Foto in braunweiss, zumindest glaube ich, das es so war. Wieso das Foto nicht ausgereicht hat, weiß ich nicht. Alles hier liegt im Wind und im Nebel, es ist so, als wenn er die Landschaft zusammenhält. Zwischen den Dünen ist es still, kein Rauschen, der Wind hat Furchen in den Sand gezogen, gebleichte Äste wie Knochen und trockenes Gestrüpp mit kleinen Blüten. Ich will nicht sagen, es fühlte sich an wie am Ende der Welt, ich weiß nämlich nicht was das sein soll, das Ende der Welt. Eher wie ein Schnitt in der Zeit, ganz eindeutig mit Allem verbunden, ohne aber dazuzugehören. Die Sonnenuhr stand ein paar Meter weiter am Weg entlang, wenn man an Satre schon vorbei gekommen war. Dunkler, glänzender Stein inmitten eines Kreises mit Stufen, auf den Hügel gebaut an dessen äußersten Rand eine Karte angebracht ist, welche die darunter liegende Dünenlandschaft beschreibt. Als wir nachts hier waren konnte man die Dünen nicht sehen, man hatte das Gefühl der Ozean läge direkt unter uns, der Wind klang wie Wellen, ich war mir sicher das waren Wellen, aber da war noch dieses große, leere Stück Land dazwischen, völlig lautlos von der Dunkelheit verschluckt. Nachdem alle Anderen gefahren waren habe ich noch manchmal den Fuchs gesehen, der an einem Abend an unserem Weinglas genippt hat. Die Dünen lagen im Nebel, ich hatte rote Handschuhe im Supermarkt gekauft und die Fingerkuppen abgeschnitten, damit ich trotzdem den Stift halten kann. Seltsam brutal sah das aus, die abgeschnitten roten Stoffenden auf der grauen Plastiktischplatte, daneben Flusen und Wollreste, wie frische Bluttupfer. Manchmal, es war immer nachmittags, mischte sich unter den schweren Nebel die Musik eines Geigenspielers, hell und klar bahnte sie sich ihren Weg mit dem Wind. Als ich anderthalb Jahre später wieder komme erfahre ich, dass auch die Einwohner die Figur von Satre nicht

mögen, niemand weiß so richtig, was sie dort soll. Die Sonne strahlt, der Sand ist weiß und strahlt zurück, der Himmel ist blau und unsere Füße rutschen weg, wenn wir versuchen die Dünen hochzuklettern. Als ich das erste Mal morgens zur Sonnenuhr gelaufen bin, lag noch etwas Dunst über den Hügeln und ich bin zu der Karte, um nachzuschauen, wo die russische Grenze verläuft. Das Tal in dem die Dünen liegen wird death valley genannt, eigentlich ist es aber das Tal der Stille, so nennt man jetzt die andere Seite des Hügels, eine Vertauschung, bei der es geblieben ist. Ich versuche die Stille auszuhalten, zwischen den dunklen, grünen Flechten fiel es mir nicht so leicht, es ist als wenn sie jedes Geräusch verschlucken, wie ein Luftpolster oder Watte, alles ist gedämpft, Vogelfedern verfangen sich im grau. Vor ein paar Tagen habe ich kurz vorm Schlafen gehen gelesen, dass ein Feuer im größten Atomkraftwerk Europas ausgebrochen ist. Irgendwann bin ich trotzdem eingeschlafen, erst wollte ich noch jemanden anrufen, damit ich mich beruhige, dann wurde mir irgendwann klar, dass das nicht geht. Man hat die Regeln geändert, wir dürfen durch die Dünen laufen, das war sonst nicht so, nur nicht auf den Großen, damit sie nicht wegrutschen. Das sagen die frisch aufgestellten Hinweisschilder „...damit auch nachfolgende Generationen die Landschaft genießen können". Dieser Sand rutscht seit Jahrhunderten weg, schiebt sich ins Meer, es sollen schon Dörfer darunter begraben worden sein. Dessen Bewohner:innen mussten umsiedeln, damit sie nicht vom Sand verschluckt werden. Wir fragen uns, an welchen Tag man sich gesagt hat, dass es jetzt Zeit wäre, stand man da schon bis zu den Knien im Sand? Kam er durch die Fensterritzen reingerieselt? Kann man die Dünen beim sich ins Meer drängen beobachten? Wir folgen der Gruppe durch den heißen Sand in den Wald, neringa forest architecture walks, hier steht ein Denkmal für die Gleitschirmflieger, man ist mit dem Flugzeug die Sandhügel heruntergerrant und hat gehofft abzuheben. Damals hat sich niemand für rutschende Dünen interessiert.

Introduction

> „Way-finding is the original function of the environ- mental image [...].
> But the image is valuable not only in this immediate sense in which it acts
> as a map for the direction of movement; in a broader sense it can serve as
> a general frame of reference within which the individual can act,
> or to which he can attach his knowledge. In this way it is like a body
> of belief, or a set of social customs: it is an organizer of facts
> and possibilities. […] (Lynch, 1960)

This work is dealing with different aspects of space and spatial drawing, especially focusing on our subjective perception of surrounding while walking and therefore moving through space as well as the different approaches of documenting this experience, including my own project. Apart from that it is outlining the development of space as a term in contemporary urban and sociological theory as well as pointing out the limits of geographical mapping and introducing different interpretations of cartography and space throughout locative media art projects. Furthermore it will elaborate Michel de Certeaus "rhetoric of walking" and other aspects of spatial thinking he describes in his book "The Practices of Every Day Life" (1980) that are matching with my project *walkingwhiledrawing* as a theoretical framework.

In the last chapter of this text I will reflect and document the process of my work over the last two years , specifically focusing on my final project which I conducted in the Parnidis Dune in the Curonian Spit in Nida, Lithuania. *Walkingwhiledrawing* is based on the documentation of surroundings by drawing while walking at the same time with a drawing machine I designed for this intention. The drawing-records of my walks as well as the method themselves have been developed and transferred to different media and created varying approaches to my interpretation of space. The project culminated when translating my drawing records into 3D with a VR-painting program and making them accessible to visitors in 3D-glasses through a spatial installation. It is exploring the limits and possibilities of spatial drawing as well as proposing a subjective narration on experienced space which is contrasting the traditional system of mapping and recording the environment used primarily for broader social orientation.

Perception of space in artistic practices

Walking can also be regarded as movement of the body within a certain space, constantly changing its position to that space with every step that is made. How the space is being perceived by people depends on their interaction and personal relation with it. Therefore space is a physical or virtual place where spatial meaning is defined by social actions.

In the sixties, philosophers and sociologists such as Henri Lefebvre (1974, 1991) and David Harvey (1985, 2001), regarded space as determined by capitalistic structures which lead to the alienation of residence in urban spaces. This development can also be found in the artistic practices of that time such as the collective "Letterist International" that I will get back to later. Nowadays, the discussion has moved to a rather subjective perspective on space and its acquisition which takes into account the interaction between structures and their players (Martina Löw, 2001). Apart from shifting the discussion to an individualistic point of view, there has also been a huge development in terms of mobility and digitalization in the last years. The complexity of space has been increasing throughout digital and physical space, which provide new opportunities to create and interpret ways of spatial thinking. However, this also makes it difficult to differentiate between the physical and digital location of ourselves. Before introducing several artists that have been dealing with questioning space by using the practices of walking and mapping in their artistic work, I want to give a brief theoretical background on researchers that have influenced current spatial theories.

One important and recently rediscovered researcher in the field of (social) space and urbanism that I have previously mentioned, was the philosopher and sociologist Henri Lefebvre who was also one of the most popular French Marxists. His theories about space arose from a feeling of alienation in the city and the effects of capitalism in society in the 1960s and 1970s: „He thus identified the crisis of the cities as „conflicted space", which were the result of an increasingly challenged abstract space facing dissolution due to the fact that urbanism has become the result of a „bureaucratic society of controlled consumption" and thus disconnected from all human needs." (Lefebvre, 2003, p. 163 in Wiedmann/Salama p. 7). In 1970 he wrote his book „La revolution urbaine" and in 1974 „La production de l'espace", where he introduced his theory on (so-

cial) space. In his view, every urban space is a „historic product of its society interacting with the surrounding environment" (Wiedmann/Salama, 2019, p. 6). Lefebvre identified three dimensions of space: perceived space, conceived space and lived space. The perceived space of a city is everything which developed through daily interaction of the users with the space, resulting in a certain infrastructure. Conceived space describes the space which is „produced by knowledge and ideologies" (Wiedmann/Salama, 2019, p. 6), in other words the representation of spatiality by the most powerful producers of society. The more subjective dimension of a place is called the „lived space", which is developing from peoples attachment to a certain space and creating personal and individual symbols. He believed that space has a huge impact on society: „(Social) space is a (social) product ... the space thus produced also serves as a tool of thought and of action ... in addition to being a means of production it is also a means of control, and hence of domination, of power.§" (Lefebvre, 1991, p. 26)

Lefebvre was forgotten in the academic world for a number of years although his theories on space came up again and provided inspiration for urbanists such as Edward Soja who introduced the term „spatial turn" which refers to the discussion of the redefinition of space in cultural science and sociology and deliberately oppose space in its historical context. The discussion on the spatial turn is still relevant with fast growing cities with ever-increasing mobility, digitalization and globalization and is particularly significant for the field of urbanism, space, spatiality and mapping in artistic research. In the following, I want to introduce artists who have been dealing with different aspects of space and our relation to it.

One of the most popular artistic performances on space in the city was made in 1956 by Guy Debord and the anticapitalist collective „Letterist International", a group of artists and researchers who invented the principle of „dérive" (drifting), that describes the action to walk randomly in typically urban surroundings. The walks were made in a group of three of four people and could last for several hours, depending on the weather and the physical conditions of the group. It is based on the idea of moving spontaneous and intuitively through space and therefore perceive the surrounding atmosphere without integrating in the ordinary urban system that involves routes and direction to create an „automatic disorientation" (O'Rourke, 2013, p. 9). This should reflect their

feeling of a fragmented city due to post-modernism and capitalism. To contrast a modern, efficient society and the changes in urban living that were caused by that, the principle was to concentrate on accidental occurrences happening while walking and emotional connections to the surrounding in general. It was also a statement to criticize monotonous daily routines in advanced capitalism. To describe the theoretical idea behind „dérive", Guy Debord formed the term „psychogeography" which he defined as "the study of the precise laws and specific effects of the geographical environment, consciously organized or not, on the emotions and behaviour of individuals" (Debord, 1955, p. 23).

The contemporary artist Christian Nold locates himself in the field of emotional cartography, which is overlapping with the field of psychogeography in many ways although he is focusing on the subjective perception of space rather than the effects of capitalistic structures on society.
In 2004, he developed the project „Bio Mapping", that „involved thousands of participants in over 16 countries" (Nold, 2009, p. 3). Nold built a Bio Mapping device, which is worn by the participants while they are walking through the city, measuring their Galvanic Skin Response and reporting their geographical position to the connected Global Positioning System (GPS). The Galvanic Skin Response is based on a lie detector and measures changes of the sweat level of the wearers fingers. Nold started his project „as a critical reaction towards the currently dominant concept of pervasive technology, which aims for com- puter ‚intelligence' to be integrated everywhere, including our everyday lives and even bodies." (ibid, p. 3) The results from the walks can be visualized on mapping software such as Google Maps afterwards and so linked together „the personal and intimate with the outer space of satellites orbiting around the Earth". (ibid, p. 4). They create „Emotional Maps", although the term can be seen critically, as the device does not measure emotions but the Galvanic Skin Response which generally indicates a change of emotion but is also merely a reaction of the body that can have varying reasons.
From the reports of Nold talking to the people that were wearing his device and later saw their own „emotional map", they often used the map „as an embod- ied memory-trigger for recounting events that were personally significant for them" but also described the outcome not as emotion but rather „a variety of different sensations in relation to the external environment such as awareness,

sensory perception and surprise" (ibid., p. 5). The discoveries they made are reminiscent of the experiments of dérive by the Letterist Internationale. People were also meant to walk randomly in the city and it was the Bio Mapping device that prompted the participants to reflect on their surrounding from a more abstract, private and subjective perspective. Nolde also recognized a change in the reports of participants if they were using the device in the area they were living in. „Instead of being just about their momentary sensations in the space, participants told stories that intermingled their lives with the place, local history and politics…often leading to discussing the lack of public space and identifying its social and political causes" (ibid., 6-7). The device has caused divided opinions, while it can be seen as a tool showing „Egocentric Subjectivity" that leads people to more integration with technical systems rather than sharing social space. It can also „empower us to move away from the individual brain towards communal mind hacks and a radical rethinking of ‚self'" (ibid., p10).

The work of Christian Nold can be counted as an example for locative media art projects which describe media of communication that are bounded to a location. Karen O'Rourke points out their importance in the art scene as „a way for artists to renew with the tradition of site specific art that left the rarefied air of museum and gallery to investigate the world outside" (O'Rourke, 2013, p. 125). Locative media art projects are „a combination of GPS, mobile data communications and mobile computing" that allows „the annotation of space" (ibid., p. 125). Also O'Rourke mentions overlapping terms that are used when referring to the topic, such as „augmented reality (enhancing reality with computer-generated sensory input), pervasive computing (computers embedded everywhere), and the Internet of things (the networked interconnection of everyday objects) (ibid., p. 125).

The first experiments on locative media art projects already started in the 1980s and early 1990s when for example there was the usage of radio transmission between artists to communicate instructions for a performance or fax transmissions to draw lines of traces that the artist made during traveling to different places. The artist-engineer Steve Mann was one of the first artists that combined different technologies to trace his ways. In the 80s, he built a „backpack-based computer controller for photography and a system for real-time transmission of photography, video and text." (ibid., p. 126). He also took into account the aspect of surveillance through new media and for example transformed himself

into a cyborg by designing the „WearComp", which is a wearable camera that documented everything through the wearers eyes. In 1994, Mann was wearing the device for two years, in which his view on the world could constantly be streamed online. (ibid., p. 210).

The last example on locative art projects I want to give is the artist Jeremy Wood, who uses GPS to draw while walking. The GPS is used as a media of „ongoing research into writing over the earth and drawing with ourselves as we move" (ibid., p. 132). He compares the usage of the GPS recording of his movements with the different ways of utilizing a pencil while drawing. As the GPS recording can cause straight lines (when for example driving in a car or train), it can also show rather uncertain movements while walking around in the city. In addition it also shows the speed level of the walker, just like the progression of a pencil while drawing. The GPS information then gets 3D animated and so represents the drawing Wood made on a specific place, such as his work „My Ghost" from 2009, that showed nine years of walking in London.

There are many other artists who are involved with research in space, mapping and movement related to locative art. They are dealing with the disconnection from our bodies to physical places as a response to an increasingly digitized environment but also new technologies influence new ways of tracking, documenting and mapping the world which help to redefine the perception of our surrounding. It can be argued that digitalization provides an advantage for moving around the globe and making things more accessible to people however it also predetermines our perception by taking away the possibility to discover our surroundings in an unbiased way. In his essay "The Computer for the 21st Century" 1991, Mark Weiser criticizes that „virtual reality focuses an enormous apparatus on simulating the world rather than on invisibly enhancing the world that already exists" and suggests that „Machines that fit the human environment, instead of forcing humans to enter theirs, will make using a computer as refreshing as taking a walk in the woods".

With digitalization there is the inherent danger of standardization and surveillance, but also considerable potential in reflecting on our own perspectives and perception of space which provide a chance to create diverse tools of communication which illustrate complex links between location and situation in more accessible ways.
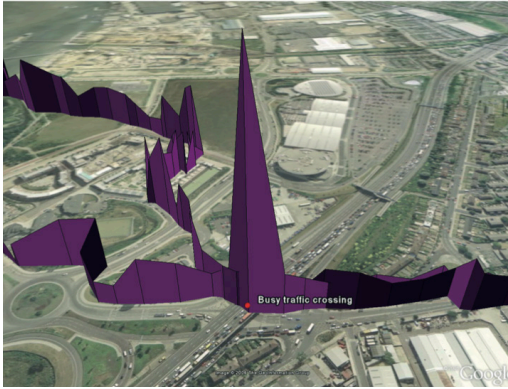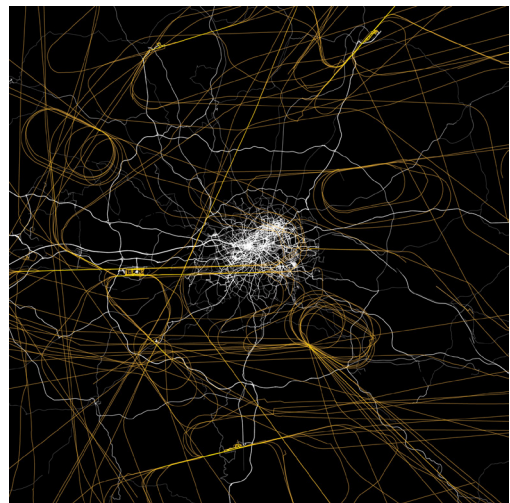
Christian Nold / Visualisation of Bio Mapping data shown in Google Earth

Christian Nold / Bio Mapping device

Steve Mann / WearComp

Jeremy Wood / My Ghost

The Practices of Every Day Life by Michel de Certeau

Michel de Certeau (1925-1986) was a French Jesuit, sociologist, historian and philosopher on contemporary urban life and culture. His most popular work "The practices of everyday life" (L'Invention du Quotidien) was published in 1980 and deals with the theory of peoples actions in every day life and their consumptive activities. The book points out different approaches on these topics and is divided into five parts. I have decided to focus on part three, which is called 'spatial practices' and is dealing with peoples every day actions when moving through urban space as I found it relevant to my observations and discoveries during my project.

Certeau introduces his thoughts in the first chapter 'walking in the city` which is examining the practice of walking regarding space and movement. To visualize his thoughts, Certeau describes his observations when looking at Manhattan from the 110th floor of the World Trade Center and comparing this panoramic view and his position with the experience of walking 'down there' in the streets. According to Certeau, looking at the city from above creates an illusion of the place, it can only be experienced and understood when being part of its daily life: "The panorama-city is a "theoretical" (that is, visual) simulacrum, in short a picture, whose condition of possibility is an oblivion and a misunderstanding of practices" (p. 93). The observer is absent from the intermeshing of every day life while the walkers "...follow the thicks and thins of an urban "text" they write without being able to read it" (ibid.). This interaction of accidental passings and mutual, unconscious adaption of practices of the pedestrians can be described as a network "a manifold story that has neither author nor spectator, shaped out of fragments of trajectories and alterations of spaces" (ibid.).

The following part of the chapter is talking about the city as a concept, as this text is primarily focusing on walking practices this part will be skipped and continue with the second which is called "The chorus of idle footsteps". Taking up the metaphor of an unconscious network of encounters/meetings/passings, Certeau describes footsteps as "an innumerable collection of singularities" whose "intertwined paths give their shape to the spaces" and are "weave(ing) places together" (p. 97). The practice of walking is creating a spatiality which is implying movement and so can not be traced in a still image like a map: "Surveys of routes miss what was: the act itself of passing by". With tracing these

paths, the geographical system "transforms action into legibility" (ibid.), but also deletes every subjectivity and purposeful experience from the action and "causes a way of being in the world to be forgotten" (ibid.). Furthermore Certeau finds a more differentiated way to describe the aspects of walking through space. He compares a speaker appropriating a language with a walker appropriating a certain topographical system. With using the language to speak, it becomes an action, an "acoustic acting-out of language" just like the action of walking through a place is a "spatial acting-out of the place" (p. 98). The third part of his analogy is pointing out a pragmatic contract on how we walk referring to the spacial conditions as something comparable to the verbal enunciation between interlocutors that are interacting based on the situation they are in. He suggests to regard the act of walking "as a space of enunciation" (ibid.). This assumption leads to the following thoughts that determine the spatial system from the pedestrian 'speech act'. As the spatial system is determined and ordered by its possibilities and interdictions, the walker is moving through this order but may interpret it depending on the situation and so is more flexible in using it. Also the rules he or she defines are valid for an indefinite period of time. That way the walker "transforms each spatial signifier into something else" and selects "certain fragments" to actualize his or her enunciation and create discreteness.

Another aspect that Certeau is mentioning is the meaning of "here" and "there" regarding the walker defining the relation between his or her position to the space, or, to use his metaphor of speech, the relation between the speaker and his or her interlocutor. This introduction of speech is being compared to the phatic dimension of language as a function of communication which is removed from transporting information but only rehearsed social gesture. When walking, recurring and automatic sequences of walking are interacting with the surrounding and so "create(s) a mobile organicity in the environment, a sequence of phatic topoi" (p. 99). When thinking back to the map, which is reducing paths based on the spatial order, it is not doing justice in representing the meaning of how pedestrians are moving through space and therefore experience it in detail: "Walking affirms, suspects, tries out, transgresses, respects etc., the trajectories it "speaks"" (ibid.). The individual style of walking can be translated into "stylistic figures", which are expressing a rhetoric of walking: "The art of "turning" phrases§ finds an equivalent in an art of composing a

path." (p.100). It is representing the individual in their manner of communication but also referring to the norm, which influences their subjective approach of operating and being in the world. With using "tropes" as another linguistic comparison, Certeau defines further stylistic figures that describe the appropriation of places. To validate these thoughts, he consults two core assumptions. First of all, the practices of space are contrary to a constructed order of space and therefore manipulate them. Secondly, they are not matching with the definitions of their "literal meaning" (ibid.) that have been made by the urbanistic system, but rather develop another deviating meaning. The resemblance of the characteristics of the "verbal figures" and the "figures of walking" can be recognised when regarding their behaviour as based on isolated actions which create an inconstant meaning depending on their use. From this arises a certain ambiguity "in the way a tremulous image confuses and multiplies the photographed object" (ibid.). Apart from that Certeau suggests that the "geometrical" space of urbanists and architects can be compared to the "proper meaning" of language that linguists and grammarians define to create a normative level when it comes to discuss the "drifting of "figurative" language" (ibid.). Similar to the limitations on maps, the abstraction of both things is creating a normative idea or a simplified description of the experience and meaning of the user.

Walking is an interaction with the space, which causes numerous situations and occasions that are temporary and therefore part of a constantly changing process: "it inserts multitudinous references and citations into them (social models, cultural encounters, personal factors)." (p.101). Referring to J.-F. Augoyard, Certeau points out two stylistic figures: Synecdoche and Asydeton, whereas the Synecdoche means "using a word in a sense which is part of another meaning of the same word" (ibid.) and Asydeton is leaving out linking words to connect sentences in within themselves or with each other. The Synecdoche can be a metaphor for specific characteristics of a place that are named as a reference when talking about it (for example talking about a specific square in order to talk about the whole district it is placed in). The Asyndeton in the sense of walking describes the action of moving through space and omitting parts of it, a fragmentation of the passing by. While the Synecdoche emphasizes a particular spatial element and "make(s) it play the role of a more", the Asyndeton is curating and "creating a less", "opens gaps" looses connections and therefore

shows its discontinuity (ibid.). In this sense, "A space treated in this way and shaped by practices is transformed into enlarged singularities and separate islands" (ibid.). Both practices cannot be separated from each other. The rhetoric of walking is based on a uncertain structure"a discourse relative to the place / nowhere (or origin) of concrete existence" (p. 102). This uncertainty is expressed in "figures of action", "spatial stories" or as Certeau using Rilkes term in "trees of gesture": There is no way to fix these spatial gestures and actions to a place, but if there might be a chance to see a trace of them, a "forest of gestures" (ibid.), Certeau refers to the graffiti of New York written in subway stations and can only be captured when passing by. They are created to over-emphasize fragments of a statement, marking and interacting with the space but also there is no order and frame that leads to a specific meaning.

Spatial Stories

After reflecting on walking as an action and having its own rhetoric when moving through space, Certeau attends the last chapter of "Spatial Practices" to "Spatial Stories", talking about our narrative of communicating about ways and distances. The section"Tours and maps" is dealing with the visualization of places as a map and therefore illustrates interesting approaches that are over-lapping with thoughts that I had when developing my own practice of tracing places.
To talk about how people are giving instructions in order to describe how to get to their apartment, Certeau is quoting C. Linde and W. Labovs research that identified two types that they call the "map" and the "tour type" (p. 119). The first type is giving the instruction referring to the spatial order of the place and the location of things ("the girls room is next to the kitchen"), whereas the second is giving instructions on how to move in the space to get to the destination ("You turn right and come into the living room") (ibid.). After evaluating their survey, the data showed that only three percent of the interviewees answered in the "map" kind of way, which has been pointed out as an indication for the "tour-type" with giving instructions for operating in the space and be counted as a "speech-act (an act of enunciation)"(ibid.) to be more common for the daily use. In the following, Certeau uses this example to explain his thought on "the relationships between the indicators of "tours" and those of "maps",

where they coexist in a single description" (ibid.). The "tour" is based on the narration of an itinerary while a map is rather "a plane projection totalizing observations" (ibid.). In daily life interactions, the "tour" is the predominant way of description, although forms of mapping can appear here as well. If this happens they often refer to the "tour-type", the action leads to the seeing: "If you turn right, there is..." (ibid.). In some cases a tour can also use a certain point of mapping reference to indicate actions from this location. In both situations the mapping is included in the narration of the tour and causes a certain effect or presume given spatial limits of the space. In that way "the chain of spatializing operations seems to be marked by references to what it produces (a representation of places) or to what it implies (a local order)"(p. 120). To summarize the evaluation, its suggesting itself that there is an entanglement of both types when it comes to the description of routes and places.

Despite these facts, maps do not include spatial actions as they are described in the type "tour" and both ways exist separate to each other. Certeau points out that this has not always been the case and only developed in the last centuries, whereas the first medieval maps were based on routes which were measuring the walking distances between places and were creating a narrative about places which marked special occurences through images: "not a "geographical map" but instead a "history book"" (ibid.). Geographical cartography started to change between the 15th and 17th century. Certain marks remained indicating the historical background of the places and describing the local environment or trading routes etc., but the map became more popular. Its abstract geometric form "colonizes space" (p. 121) building a "totalizing stage on which elements diverse origin are brought together to form the tableau of a "state" of geographical knowledge" (ibid.). It can be said that maps are trying to represent an objective view on collected knowledge of places, they want to "form tables of legible results", deleting spatial stories, which are on the contrary are narrating tours talking about the "treatments of space" (ibid.).

walkingwhiledrawing

*"Place is an organized world of meaning. It is essentially a static concept.
If we see the world as process, constantly changing, we should not be
able to develop any sense of place." (* Tuan, 1977)

I first started my project in 2020 whilst studying in my Erasmus semester at
Vilnius Art Academy in Lithuania, although at that time I already had in mind
to work on the topic of subjective orientation at places when exploring and
discovering them. I was interested in how people remember the routes they
chose to get to certain places and how their perception of the time it takes
to get there correlates with their familiarity with the route. I started to draw
lines of my daily walk from home to the Art Academy and back based on how
I was remembering the distances between every street corner where I had to
turn. Throughout this process I recognized how I was building a visual map
in my head which was not based on street names and directions but rather
a personalised orientation based on things and places that crossed my way
and were attracting my attention. I was interested in the contrast between
the subjective and complex image of a city that people draw in their heads to
orient themselves compared to a common map, which is a tool to help peo-
ple to orient themselves in a city with showing its road network in a reduced,
generalized image. Although cartography tries to help people find their way in
new places, it is neither showing the city how it looks like nor referring to the
readers personal references of orientation. At that point I became interested in
not only remembering and reflecting on my way but also wanted to find a tool
that allows me to record my subjective perception in real time. A camera might
be the tool that first comes to mind for this kind of record as it is a real time
documentation and allows to focus and zoom to reproduce my the personal
perspective. However a camera for me made has limitations and made me feel
like I was only observing but not so much interacting with the surrounding. As
drawing is my main tool of artistic practice, I wanted to develop a possibility
to draw while I am walking. I designed a 'drawing machine', which is an A5
wooden board that is connected to two rolls (one on the top and one on the
bottom) so one can scroll paper over the board. Also there is a knob to turn the
paper-scroll which allows continual drawing whilst moving.

With this tool I started to do my first 'walkingwhiledrawing' experiments in Vilnius and in the dunes of Nida at the Curonian spit of Lithuania. In the beginning, I was focussing on translating directly and intuitively what I was seeing while walking, without putting myself under any limitations and rules. My aim was to not stop to complete my drawing but to keep on walking and capture the moments passing by. By doing this I learned how to abstract my surrounding with reduced shapes and lines, that can be seen as a notation of looking and moving while drawing. Also, the drawing and moving is connected to the rhythm of scrolling the paper, which combines all the parts to create a performative act of drawing, walking, scrolling and looking. Drawing and walking are melting in one action, rather focusing on the movement and paying more attention to the process of drawing with its gestures in the specific moment than the outcome of the drawing after finishing the walk.

Furthermore I experimented with using different kinds of pencils and colours for objects I picked beforehand such as trees, street signs etc. This shaped my perception but also made it more difficult to keep a rhythm of walking, scrolling and drawing when I had to switch the pencils at the same time. In the end I decided that I would rather use a fixed drawing medium (like drawing with chalk, charcoal, pencil etc..) for the walk I was planning in advance rather than changing my tools in between to keep a constant rhythm of drawing and walking. Apart from that I tried to hold the 'drawing machine' in a horizontal instead of a vertical way. The horizontal way of drawing seems to fit with wide landscapes while the vertical drawing fits well with surroundings where one can find many objects and where the horizon is mostly hidden, such as in urban areas.

Nevertheless, when I was experimenting with holding the tool in a horizontal way while walking, this also meant that the scrolling buttons were on the sides instead of on the top of the paper, which made me feel like I should move sideways, as the movement of the paper went sideways as well. Also the format of the paper encourages one to draw the whole scene instead of sketching structures and shapes of things. After those experiments which I mainly made in Nida, I decided that holding the 'drawing machine' vertically and just using one drawing tool was the most suitable way for me.

The process of using the drawing machine is interesting for the user in terms of perception and developing their own style of notation however the finished scroll itself is a rather still documentation of the whole movement and so not

transporting the idea of moving. Therefore I started to do video records of my-self scrolling through my drawing-walk with the machine to show its movement though I was not satisfied with the result as it kept the drawing in the frame of the drawing machine and was more a repetitive act of using the machine even without moving around in the surrounding so I decided to focus on transferring the drawings into another medium to develop a new entrance to my project.
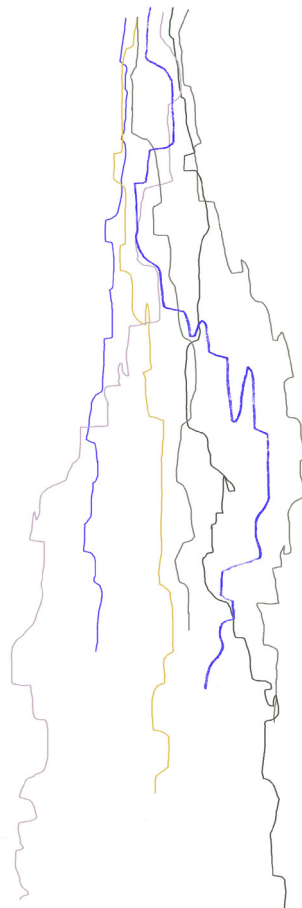
Documentation with lines of walking in Vilnius (2020)

walkingwhiledrawing, Nida 2020

walkingwihiledrawing, Nida 2020

Transfer to other media

My first impulse when I got back to Vilnius from Nida was to recreate the drawings into larger scale paintings, drawing all parts of one walk on top of each other. That way one painting contains one walk, although its different parts are all overlapping each other and one can not see them clearly any more. The effect is a chaotic mixture of lines, which come together more or less randomly, which I liked because I never knew how they will interact with each other. It shows the confusing and fast moments when its impossible to capture the scenery completely. I started to paint with oil colours, adding a bit more white for each new layer to give the painting more depth and distinguish the different layers.

Although it was interesting for me to reconstruct my drawing with painting, I had the feeling that sticking to the concept of only using what was already there did not leave any freedom to create impulsively and so the painting itself lost its meaning and value and was merely a scaled up version of my drawings. Additionally it was also not a medium that could show the movement which I was trying to display and instead freezing my walks in one image.

Upon returning to Bielefeld I started to search for ways to animate my drawings but was unable to find a satisfying solution until I was introduced to VR-painting through a workshop at the FH Bielefeld. The experience not to be limited by the edge of a paper or a canvas and to place lines in a space where you can walk around and look at them from multiple perspectives opened up new ways of composing my work. It is a way of sculpturing and drawing at the same time and brought me to the idea to transform my 2D-drawings back into 3D and so create spatial installations in VR.

I started with a project which was based on the staircase in the house where I am living. The staircase has four levels and I decided to draw it when walking downstairs and then again when walking upstairs. That way I created two versions of the staircase, depicting the upwards and downwards perspectives. These two versions were developed with four drawing walks, each walk was focusing on a different detail, for example, only the banister, objects in the staircase or the shapes of the walls. When I imported the scans of my drawing scrolls in the VR-space, the process of drawing the lines in 3D and then transforming them to the perspective of how they were meant when I was drawing

them in 2D was a very important step for me. I liked the fact that they were working in 3D as long as you would look at them from the same reference point as when I was drawing them but if you would look at the object from different angles, they were hardly recognizable. The architecture of a staircase with its repeating floor levels conveniently emphasized the contrast of the up-stairs and downstairs perspective of perceiving space in a drawing.

Apart from showing the project in the VR glasses I also showed two videos that demonstrated both staircases to make my work more accessible with other media. When exhibiting the project in an exhibition with the FH Bielefeld and EN-SAD at the Goethe Institute Nancy, France I realized that wearing the VR-glasses was a barrier for the visitors and also it is an experience that can not be shared with others. Filming my drawing-sculptures with the camera in the VR-glasses instead gave me the opportunity to build up a certain dramaturgy of how the space can be experienced and to reproduce my own perception. At the same time this meant I was leading the visitors along a predetermined route which was different from the experience they have when wearing the VR-glasses. Although I got closer to solving my problem of how to show the idea of moving through surroundings using the VR-glasses, I still found it difficult displaying the performative act of drawing in the VR-glasses.

Nida 2020

Nida 2020
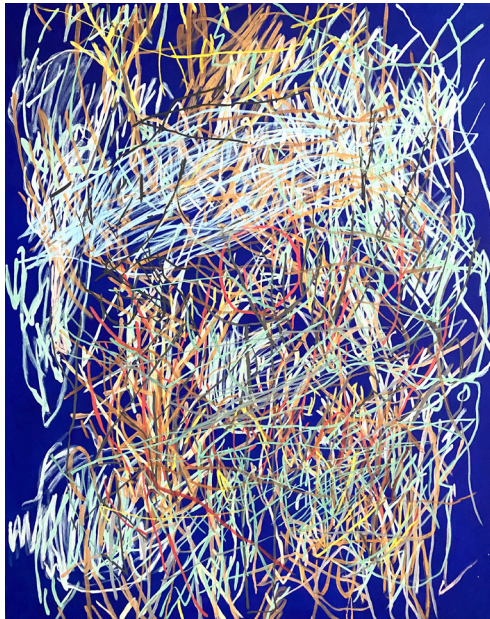
Nida 2021

Bielefeld 2021

downstairs, 2021

upstairs, 2021

Parnidis Dune

When I started thinking about my final work, I knew that I wanted to find a way to transfer my 3D animation from the VR-space to a non digital space by building an installation that provides a surface for analogue images and projection. It should show the different aspects of all parts that are involved in the project and also create a similar spatial situation to the one that can be experienced in the VR-glasses. I spent some time struggling with the question which place I should chose for the project. After considering many different locations I decided not to draw in a street or place in an urban area or inside a building but focus on more organic shapes in nature. When experimenting with some drawing-walks in Bielefeld I could not find a place that I understood as a self-contained system like the staircase. The city feels like a composition of interweaved actions, places and memories to me, which are constantly linking and dissolving. I could not determine one specific spot and separate it from the rest.

After reflecting on my project and its process since I started it in 2020 I decided to go back to Nida where I made my first experiments with the drawing machine. Although I knew the place already, I was still able to explore it and therefore observe my own ways of perception in an unbiased way. I spent two weeks at Nida Art colony, an artists residency situated directly next to the Parnidis Dune, one of the most popular parts of the natural heritage of the Curonian spit in Lithuania at the boarder to Kaliningrad Oblast, Russia. I developed the daily routine of walking and drawing in the dunes for two or three hours after breakfast and then work on other parts of the project like writing or planning the next walks in the afternoon. While walking in the dunes, it was hard to orient myself because most of the time one can only see huge sand hills and the sky. The vegetation is reminiscent of a desert, especially when walking in the valley instead of on top of the dunes where references of orientation such as the sand clock, the forest or the sea are not hidden and is not unlike being on another planet. One can easily get confused about directions and distances feel much longer because of your steps slipping away in the sand the whole time. All these conditions were linking to my idea of finding a place in nature that creates a the self-contained system that had both an inner and outer view. Also the sparse landscape made it easier for me to draw my site with various approaches but at the same time not to feel overwhelmed by too many con-

trasting details. During the first days that I spent in Nida I explored the dunes and searched for an area on which my project could be based. I decided for a spot where the dunes were built up in a narrow oval so that there was an inner part, an enclosed inside centre and also an outer part where one could walk on top of the dunes and look at the surrounding landscape. Some defining features of the landscape when looking from the inside was a large sand hill 50 metres long and therefore almost as long as the whole site which measured approximately 85 metres. This larger dune was tapering to a point where it met with a smaller and more flat dune, on the opposite side running out with small hills. This part of the dune was located close to the sea, whereas the big dune was closer to the forest. Although one could see the forest and sandclock which were located on the edge of the dune landscape, when walking on top of the sand hills they were far away and the closer surrounding was sand hills as my site was more or less located in the centre of the Parnidis dune. I tried to figure out a way to define references to rebuild the landscape in VR later. When I was translating the staircase my reference on the drawings was a mark which was showing the moment when I was entering the next floor level. This reference of orientation helped me to assign the parts of the 2D-drawings to their spatial function and place them in the 3D-sculpture. Also the staircase had a repeating architecture with the same sized floors on the levels, one window on each level and the steps in between, which made it simple to retrace each walk and then finally rebuild the staircase.

Although I found landscape references that helped me to assign my draw-ings to certain spots of subjective orientation in the dune, the organic and sparse surrounding could not be depicted in the same way as the staircase, as its spatial limitations were not that clear. Apart from that, the movement through the staircase was determined by its architecture and my rule to walk up- and downstairs, while my approach to recreate the dune was more open and directed towards an explorative and intuitive documentation of the place. Nevertheless I had to find a way to trace my drawing-walks to have a reference for the spatial order so that I could recreate them in VR afterwards. As I did not want to be distracted by marking my trace in the drawing while walking I chose a GPS-record, which measured my route in metres as well as the starting time and duration of my walk, as documentation. Furthermore I decided on a fixed drawing technique and spatial references, such as details or rather ab-

stract defining shapes of the landscape that I want to focus on. This way I split my perception in different layers which would be joined together and append each other when combining them. On top of that I assumed that some spots of the landscape would contain more layers of drawing in the VR-landscape than others and I would subconsciously draw things that attracted my attention more often than others. Therefore they would appear more frequently in my drawings and naturally reflect my subjective perception of the place more strongly by being overemphasized in the VR-landscape as an accumulation of sketches of one spot. With this method objects would appear that define the landscape and that were also interacting with each other in terms of distance, size etc. and so are dealing with the rules of spatiality. At the same time they are not working as objects themselves because they are made from fragmented drawings of various perspectives. I was interested in the contrast between the subjective perspective of each walk which is working within itself and the impossible landscape that comes out when combining them. This way of recreating places reminded me of my thoughts about maps that I had in the beginning of the project. The experience of walking cannot be compared to a trace of a certain path, combining all the different drawing-traces shows how they fail to work within one landscape.

Every day, after I finished my walks, I hung them on the wall in my room and wrote down their date, time, duration and metres. Also I imported the GPS-Data from my phone to Google Earth so that I could see the directions of my walks. After some experiments I understood that there was a large difference between drawing inside where the spatial mapping of things takes places in a certain room scale, whereas drawing outside in a desert landscape makes it more difficult to find references of distance. For example when walking through the valley of the dune and only focussing on the shapes of the hills, one would naturally draw them as they come but not smaller if they were further away. Certainly there are ways to make clear that things are more distant to the viewer, even with very similar abstracted landscapes but there are no ways to describe the exact distance in metres which is important when it comes to rebuilding them in virtual 3D-space. Every drawing had their own references of distance and spatiality within themselves, so it was hard to make them comparable to eachother. Even if only looking in one direction, it was impossible to focus solely on things that appear in a set distance, because the process of
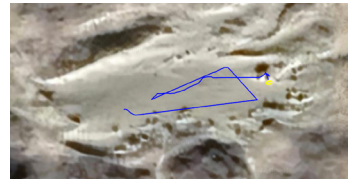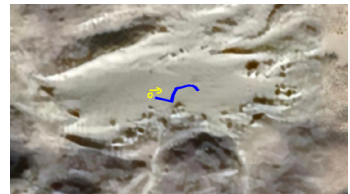
1. 2. 3.

1. Structures sand / charcoal
   03.03 / 13.47
   0:04 h / 96.7 m

2. Dune object / pastel chalk
   04.03 / 11.40
   0:06 h / 136 m

3. Dune object / pencil
   04.03 / 14.22
   0:00:51 h / 19.8 m

4. 5. 6.

4. *grass / brown pencil*
   04.03 / 12.08
   0:00:28 h / 9 m

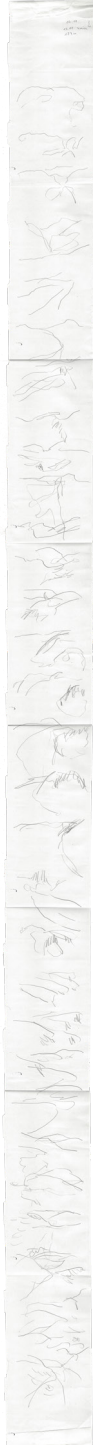

5. *shape dune / pencil*
   04.03 / 12.29
   0:00:28 h / 9 m

6. *outside, right way around /*
   pencil
   07.03 / 12.45
   0:05 h / 189 m

7.   *8.*   *9.*

7. outside, left way around /
   pastel chalk
   07.03 / 12.45
   0:06 h / 202 m

8. inside in a circle / pencil
   07.03 / 13.12
   0:04 h / 127 m

9. outside in a circle / charcoal
   09.03 / 12.44
   0:04 h / 198 m

drawing, walking and scrolling demanded a lot of concentration already. Apart from that this would have made my work rather conceptual and skip most of its intuitive and spontaneous parts I was hoping to capture.

One idea to overcome the problem of distance was recording my voice which was documenting what I was looking at and how far these things were away, but I found out that this was distracting me too much from drawing. In the end I decided to only use the GPS-Data and my memory to reconstruct my walks. I also chose to use other approaches of documentation such as writing about my memories of the place and how it felt, recording the surrounding sounds, sketching whole sceneries in my sketchbook from a fixed perspective and drawing a subjective map of the place.

Transfer to painting and spatial installation

After returning from Nida, I started to think about the installation I was planning to build and in what kind of way it might contain painting or larger drawings. As I was experimenting with oil already, my first thought was that I wanted to create a large canvas in the shape of the dune and project fragments of my walks on it. I chose oil because different to acrylic colours it does not dry as fast and it is possible to create a blurred effect which indicates a certain movement. Another approach was using pastel chalk on large, thin paper (61x86 cm), crushing the chalk in crumbs and then painting with my fingers to smear them on the paper. That way I did not create one straight line but fine tracings of the chalk that doubled the shape. This effect reminded me of a time exposure and the passing by of landscape. Apart from that, drawing with my fingers and creating the traces on the paper felt more like an embodiment gesture of the image than using a pencil. After experimenting with oil and drawing, I decided that the chalk drawing on paper relates more to the fragile moving image that I want to create. In addition I changed my mind about showing one big work but rather combine a collection of smaller situations. I chose elements from the drawing scrolls that were interesting to me in their shape and enlarged and interpreted them in colourful flat drawings. When planning the installation I tested the interaction of the drawing with the projection of my animations. The animation was showing the same spot that could be seen on the paper, but filmed as though it was set in the digital recreation in 3D of that walk. After

filming some of these situations and combining them with the drawing I found that it was an interesting effect if the projection was overlapping with the edges of the paper and that way enlarging the drawing. This led to the decision that my installation should not only contain drawings, but also a few places where the animation can overlap on blank paper. For the installation itself I planned to build a construction made from wood that is similar to the shape and the curvature of the dune to represent the spatial impression of the dune. Apart. In addition I had to consider the room where I would exhibit my work and where I could place the projectors as there must be a certain distance between them and the projection surface. I decided to have two rows of drawings, containing five drawings in each row and hang them with a distance of one metre to the ground. This meant that the construction would measure approximately four meters in its length and about 2,20 meter in its height, as the drawing were measuring 86x61 cm.

building-process of the spatial installation

drawing with charcoal, 2022

drawing with charcoal, 2022

Creation of the VR-space

At the same time I began to recreate my drawings in VR. In total, I made ten walks in the time between the 3rd and 9th of March 2022. The walks focused on varying spatial shapes, using different media for drawing and also were separated in walking outside on top of the dunes, focusing on the surrounding landscape and the inner part when surrounded by the dune. Some of the walks were concentrating on the shapes of the dunes or abstracting expanses of that place, while others focussed more closely on details like the structures of the sand or the grass. For the final landscape I worked with nine drawings and sorted out one which was based on the wind creating very tiny structures in the sand, as they were hard to assign afterwards. My method to transform the analogue drawings into digital drawings in VR was to paint on the scanned analogue drawing which I imported in the VR-glasses and transform the different landscape references into 3D drawings. I copied the line itself, but decided on a fitting colour, their opacity and if I want to use a thin or a thick brush. Also I deconstructed the lines of the analogue 2D drawing by placing them in a spatial order in the 3D space and eventually added surfaces between the lines to create a certain physicality. While doing this I realized that as soon as they were transformed into 3D drawings it was easier for me to remember which part of the landscape they were representing and therefore was able to assign them to a certain position in the VR-space.

That way I transformed each part of my drawing-record and then placed the different elements equally spaced on the GPS-trace, which was a satellite photo of the trace in Google Maps. The satellite photo of the landscape was also helpful to make sure that all walks were placed in the same direction. In addition it was another reference to assume where I have to place the different elements in relation to the trace. As I was describing before, my GPS-trace only showed where I was walking, which helped to reconstruct the landscape, but did not trace what I was looking at. Therefore the 3D drawings were not placed exactly on the GPS-trace but in the surrounding area. After placing all elements of one path in the 3D-space, my last step was to view it in real scale to find out whether the order I made fit when looking at the surrounding from that perspective. This was another approach to remember the original landscape of the Parnidis Dune, as the real scale conditions made me feel like I was transported back

there. The process of placing the different elements in a spatial order to recreate each walk in 3D was based on finding a balance between using the satellite image of the dune as a landscape reference, or my analogue drawing records and the memory of the place, keeping in mind that when combining them all in one landscape I had to find a certain spatial order that reconciles all nine paths. The satellite image depicted the dune from above, so I could have combined the picture with my 3D landscape references with placing them directly on the picture. That way I would have created the whole VR landscape by looking at it from above and could not include my personal memory of the place as well as the spatial order of the elements that were resulting from interpreting my analogue drawing records while walking. I made the decision to combine both approaches as I knew that the creation of the 3D-landscape containing all drawing paths demanded a comprehensible spatial order, thus making it accessible to visitors whilst also representing the subjective perspective of my analogue drawing records.

After creating all nine 3D paths separately, I placed each of them on their trace on a satellite picture containing all traces in one image. I imagined all of them combined would result in one abstract landscape, a spatial collage of my drawing-walks. The resulting landscape showed an accumulation of fragments from each drawing on specific spots as I was expecting before but they were not placed exactly on the same spot. Apart from that, I had to deal with the fact that all the walks were working in their own spatial order as long as they were separated from each other, which was not the case if they were supposed to create one landscape combined with each other. On one hand, they were all drawn in a different scale, which meant I would have to transform their sizes in reference to their spatial meaning in the combined landscape by referring to the other drawing paths. On the other hand, I would have to place them in a new order of distance as the outer and the inner part had to be more separate from each other. When reflecting on whether I wanted to keep the scattered results which were an accumulation of all paths or to change them I decided to curate my drawings in a new order to place them in the spatial situation that I remembered, which meant that I had to remove them from the original place in their drawing path. In the end, I found a combination of all elements of my 3D drawing paths that were showing the different aspects of my perception from my analogue drawing records, but also opened up a new space by interacting
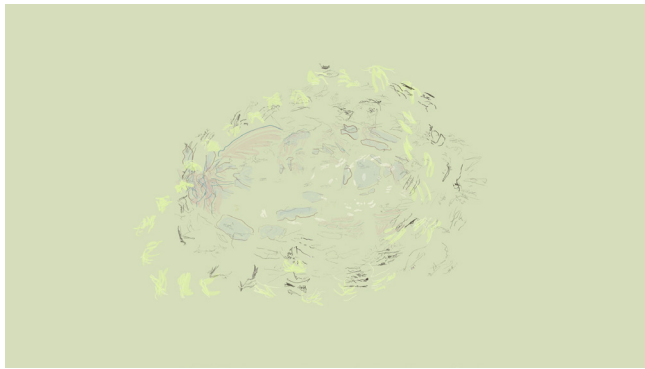
with each other and therefore recreating my version of the Parnidis Dune in VR.

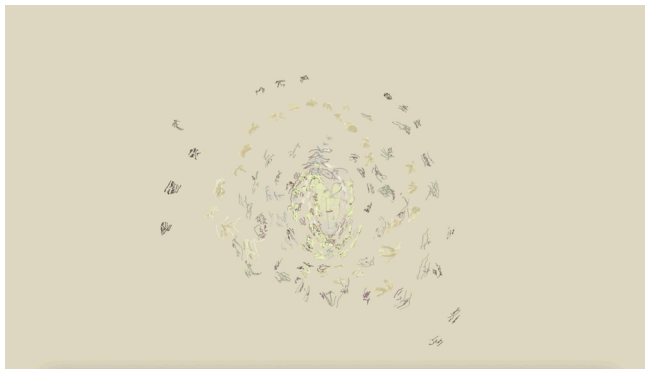*07.03/ 13.12 / Inside in a circle*

07.03/ 13.12 / Inside in a circle

GPS-Screenshot all traces

all traces in unchanged order

all traces in final order

accumulation of the drawings

outside perspective

inside perspective

The last step of my process was to build the spatial installation which should reflect and combine my different approaches as well as being reminiscent of the spatial conditions of the landscape. After defining its size of 2,20 x 4,50, which was determined by the size of my drawings and finding the right materi-al to realize a curved surface, I had to prepare the projections which should be seen from both sides. I decided to place the drawings on the outward curved part and project a full-screen animation of the walks on the inner part, which would support an AR-experience. Initially I was planning to show nine videos representing each walk by filming while walking them in the VR. The concept behind this was to link to the original drawings which I was planning to hang on the wall facing the installation. The animations should show the landscape in its real scale, which made it far more complex to animate regarding the lim-itations of the VR-Space which did not allow me to simply walk my drawing trace. After I saw the dimensions of the installation when we built it up the first time, I decided that I want to use the projection surface for animations that convey a simpler and not too abstracted version of the landscape rather than using walks which were focusing on details but did not create a spatial situation. I decided that I want to include animations which take place in my final landscape containing all drawings paths, as my idea in the beginning of the process was to create a simple entrance to the landscape in addition to the experience in the VR-glasses. In the end I chose three animations which were representing the individual walks in the dune and two animations that took place in my final landscape of the dune. In addition to my spatial Installation and the VR-experience with the glasses I planned to show the original draw-ings I made in Nida by adding their GPS-trace and further details, the drawing machine itself and a video documentation of me drawing and walking which I made in Nida in 2020 to give an insight into my working process and the place where it originated from.

Conclusion

Looking back at the process of the whole project from where it started and how it developed, my original idea went through many transformative stages and took shape whilst at the same time inspired continuing thoughts and approaches on movement throughout space and spatial drawing. The theoretical background of the terms space, mapping and especially Michel de Certeaus theory on the "rhetorics of walking" were very helpful for me to put my thoughts in order and view my work in a wider social context as well as keeping with the topic of space as an important political term.

My wish to capture the movement of passing by with drawing presented many obstacles, as the medium of drawing has the inherent characterization of not to move but to represent a fixed moment. This paradoxical situation is an example of how perspective, time, movement and spatiality cannot easily be translated in measures that explain how people experience them. Despite this fact, they are being measured all the time to build a certain norm. With translating my movement into drawing I wanted to create a different narration of space by focusing solely on my subjective perception and taking this documentation as a cartographer mapping a place. Instead of fixing geographical conditions to a certain spot, my approach was to represent that we experience our surrounding in a constant movement, changing and passing by.

In addition to that, the project evolved other aspects of spatial thinking with the transformation of the 2D analogue image into the 3D-drawing in the VR-space. To deconstruct the 2D drawing with using the same lines but place them in the 3D space somewhat reveals the rules of spatial drawing and represents its limits by creating almost absurd 3D-objects that were forced to work in a 3D space despite being originally created to be two-dimensional. It emphasizes the situation of the viewer being incapable to comprehend and capture their surrounding fully, but only what is in their angle of vision. When I started to define my final landscape in VR I had to make some decisions regarding the spatial order of the different paths and how to bring them together. At that point the project came to a turning point, as I had to find a balance between keeping my subjective orientation but also recreating a spatial situation in the dune that was resembling what I remembered from it. I found that there was a difference if creating a walking experience like it was the case with the staircase or a place

which is made for experiencing it without being guided and to discover more freely. With combining the GPS-Images, my memory and the drawing paths I found a satisfying solution, although I am curious to continue developing further methods to document places with my drawing machine when bringing them together in one landscape in VR. It would be helpful to find a method that makes it easier to distinguish my drawn objects to a set distance without being distracted from drawing and walking at the same time. With having this and other continuing ideas in mind, I am looking forward to do further research in varying spatial situations and proceed with this project

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