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Foreword

ADAMarts comprises essays dedicated to architecture and media arts. The architectural contributions in this volume focus on a wide range of areas, from research on the space under bridges, seen as an opportunity or a threat in our busy everyday life, by Zane Vēja, to an analysis of disused territory next to Ķīšezers in the Čiekurkalns neighbourhood, by Ramon Cordova and Signe Pērkone. "Can newly built structures embody and endure the uniqueness of past nobility?" – this hard question is raised by Igors Malovickis and Reinis Saliņš, authors of a competition design for a future learning centre, the House of Courage.

The articles by media arts researchers also include a broad spectrum of topics. Chris Hales describes new practices in experimental film, emerging as a result of artificial intelligence developments in machine learning, as a latent revolution in filmmaking. Aigars Ceplītis focuses on the embodied activity of perception and expression within 360° stereoscopic spherical film. Voyce S. Durling-Jones presents a brief overview of colonial assimilation practices and explores how digital humanities can enhance the process of documenting and revitalizing endangered Indigenous languages.

All authors are united by an immersive environment and enthusiasm for their subject area, whether it is the man-made environment of Riga Historical Centre, disused territory on the outskirts of Riga, or the passionate story of the future of endangered Indigenous languages in the broad natural landscape of Canada.

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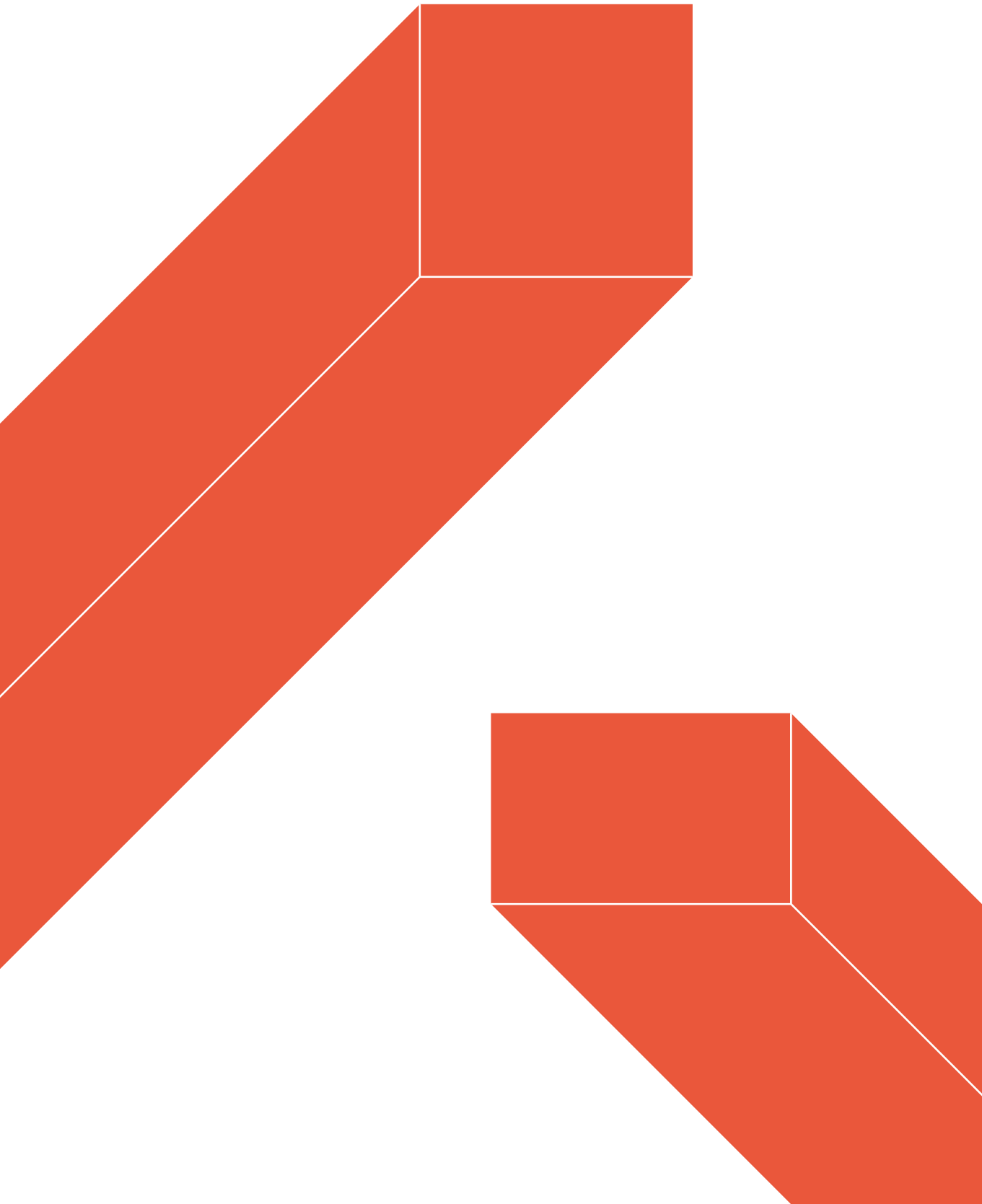

Architecture and Design

Signe Pērkone,
Ramón Córdova González

A Processual Development Vision as a Material-Discursive Tool

Approaching a disused Ķīšezers waterfront territory in Čiekurkalns

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Abstract

This article will introduce the case study of a marginal, degraded, and underdeveloped territory in Riga, alongside the authors' attempt to create a vision for the future of this territory in search of balanced and coherent development. This does not presuppose economic growth and building a lot of new buildings and roads as a cure-all. Development here is seen more broadly as the change and becoming of the territory over time. We depart from the question of how to develop a vision for the transformation of a marginal territory that would balance public and private interests, work across multiple scales, and respond to changing circumstances over time. The article will describe the particular situation of the site, outline the research methods, set out tools for developing a vision, and discuss possible steps for its implementation.

Keywords

urban regeneration, material-discursive practice, vision development, relational thinking, assemblage theory, affordances, urban intervention

...

Introduction

The city is composed of many overlapping layers – some material, some not – and their juxtaposition defines the city as we know it, not just as physical space but also its cultural, political, and economic processes, all of which together create a distinct framework of possibilities. These layers are not static but ever flowing and changing, continually impacting one another, sometimes making the possibilities difficult to see. Even so, there are places in the city that seem to be blank spots in the collective imagination, where the urban form disintegrates, giving way to fragmentation and scarcity of flows. These may be marginal spaces or overlaps where one type of urban logic clashes with another. These may also be undeveloped areas or degraded territories in need of revitalisation, and often it is precisely their marginal condition that hinders their transformation. Adding to the complexity, there are many stakeholders involved in city development, and the development itself has varying drivers and executers, be they top-down or bottom-up, privately driven or publicly initiated. While these actors can work together, more often than not they seem to be at odds, leading to a power disbalance, privileging certain kinds of interests over others, and resulting in further fragmentation of the urban fabric that neither addresses the public needs for a liveable environment, nor creates strong communities.

This article will introduce a case study of just such a marginal, degraded, and underdeveloped territory in Riga, alongside the authors' attempt to create a vision for the future of this territory in search of balanced and coherent development. This does not presuppose economic growth and building a lot of new buildings and roads as a cure-all. Development here is seen more broadly as the change and becoming of the territory over time. The article will describe the particular situation of the site, outline the research methods, set out tools for developing a vision, and discuss possible steps for

its implementation.

The territory in question is located next to Ķīšezers lake in the Čiekurkalns neighbourhood in a blank spot on most Rigans' mental map of the city. The initiative for this project came from the latest *Free Riga* undertaking, which aims to bring new life to the old building of the Riga Technical University Faculty of Mechanical Engineering, Transport and Aeronautics in Viskaļu Street 36 (later in the text referred to as the '*V36* building'), which became disused when the faculty moved to the new campus in Ķīpsala. The concept for the *Free Riga* project is an Institute for the Design of Quality of Life (*Dzīves kvalitātes dizaina institūts*), aiming to bring together artists, innovators, and educators, and so the idea of *quality of life* is also a theme when looking at the development of the territory as a whole. Considering the large scale of the building and the unprecedentedly long *Free Riga* lease contract of 25 years, it seems certain that a significant amount of new activity will arise in this area and create plenty of change over time, not only bringing new actors and flows but also putting this site on the map and potentially making it attractive for further development. While the *V36* building itself is huge, covering around 15'000 m², it is only one among many abandoned buildings in a much larger territory spanning approximately 40 ha of a distinctly shaped peninsula of Ķīšezers (Figure 2). It might seem surprising that this territory has not been developed until now, being in such a desirable location, but it is also disadvantaged by being enclosed by manufacturing and infrastructure zones, as well as areas of limited accessibility due to containing State defence-related functions.

Taking into account these challenges, we at the *Urban Institute* felt it relevant to look at the site more broadly, beyond the scope of immediate *Free Riga* activities, and ask how this site could connect in meaningful ways to the rest of the neighbourhood and the city. Taking this as a test case, we pose the question of how to develop

Figure 1. Intersection of spatial moments in the project territory (Riga: Signe Pērkone, Ramón Córdova González, 2021)

a vision for the transformation of a marginal territory that would balance public and private interests, work across multiple scales, and respond to changing circumstances over time.

Approach and Theoretical Framework

This project differs from standard practice due to the fact that there was no client as such. While, indeed, the work focuses in and around the territory *Free Riga* is occupying, they were not the ones to commission this research and the strategy for the general development of the territory. This creates an unusual freedom, rarely experienced in spatial practice, but also poses a whole set of new questions and challenges. Commonly there is a client, be it a private developer or a government institution, which defines location, programme, and implementation of any project, implicitly mandating the architect to protect the client's interests. In these cases, the architect's and urbanist's creativity is employed in the search for the most appropriate arrangement of the brief's components in the given plot of land. However, in this case, since there was neither a specific client nor a determined plot of land and therefore

no brief, the work was not bound by the typical problem-solution dialectic, enabling the authors to firstly step back and consider how to approach and understand this territory, and then what kind of work would be useful and retain its relevance in this strangely loose situation. Being private-sector trained architects, we would have found it all too easy to play the part of both the client and the artist – draw a clear boundary around a site and, to the best of one's ability, design a masterplan for general development. But such an approach would naively replace the ambiguity of the situation with wishful thinking, smoothing out the questions, contradictions, and unknowable aspects. Furthermore, such an approach also presupposes definite urban growth, which in a city like Riga is by no means certain. As such, the work would only serve as an intellectual exercise, without much possibility of realisation, as the slightest change in the circumstances surrounding the potential development could render the proposal useless.

Instead, we choose to develop a vision as a material-discursive tool. Following Barad (2003), the term '*material-discursive*' is used in order to indicate that discursive practices and material phenomena are always mutually implicated in the processes of becoming. In these processes, one does not precede the other, nor can they be reduced or explained in terms of the other. Within the framework of this project, a vision for the territory is developed as a process, using tools that enable working simultaneously on both the material and the discursive level, focusing on the process itself rather than forcing preconceived discourses onto the territory or working solely towards a material conclusion. The vision is developed, then, with the full awareness that not all challenges can be addressed architecturally or even spatially and that the design of built form is but a small part of the negotiation-based urban transformation processes in the field. It is an experimental approach and as such should not be done single-handedly but in close collaboration with interested parties and should incorporate different types of knowledge and expertise.

In order to work in this unconventional way, it is necessary to wholly reconfigure how one approaches a territory, for it is not simply an expanse of land with its physical limits and properties. It is a complex system or 'assemblage' that is never static but rather formed and reformed by the constant encounter between various human and non-human entities. Working a territory as an 'assemblage' (a concept developed by Gilles Deleuze and Felix Guattari (1987)) shifts the attention from the individual elements or even the whole that they form to their interrelations and the originating properties that are irreducible to any of the components in themselves (DeLanda, 2016). Thus, the assemblage is not a passive constellation of heterogeneous elements, but has true agency gained through the novel capacities that arise from the relations within and those to the outside. Relational thinking acknowledges the constantly changing and evolving nature of being, as well as the fact that it can never be fully known, as what an assemblage can do "is never exhausted by the appearance of what it seems to be doing" (Kousoulas, 2018:298). This approach allows for accepting ambiguity and contingency as conditions that bring possibilities as opposed to something that should be eliminated. The theoretical framework of assemblage theory also changes the significance of creative intervention. As opposed to striving for definitive solutions, an intervention needs to plug into the existing and enter into relation with other components. Its effectiveness is measured by productive transformation within the assemblage or *vis-à-vis* the relation to the broader context. Therefore, it is an approach which, instead of attempting to impose from above, strives to work within what is immanent to the territory, what is already there and what it can already do.

Working the territory as an assemblage also requires a re-examination of our own position and role as spatial practitioners. There is a myth in the architectural profession that an architect can observe and enter a situation as an independent and objective outsider, when in fact nothing can be further from the truth. The moment one interferes in space, one becomes part of the assemblage and brings one's own agency to it. In that moment, the assemblage already changes. A reciprocal relation of mutual affectivity is established. Our role should thus be considered as simultaneously an external actor and an internal component of the territory, no longer attempting to control from the outside but entering the assemblage and accepting its changing impact on oneself as well. As Guattari suggested, an architect is no longer the artist of built form but someone who offers one's services "in revealing the virtual desires of spaces, places, trajectories and territories [...] an intercessor between these desires, brought to light, and the interests that they thwart. In other words, [...] (one) will have to become the artist and artisan of the sensible and relational lived experience" (1989:232). This means that one is required to constantly individualise one's approach, instead of striving to find the recognizable aspects of a given situation and reacting to them with premeditated solutions. Of course, it is not possible or even reasonable to assume the need to forget all one's previous knowledge and experience when embarking on a new project in order to avoid preconceptions and impositions. The knowledge and experience that one brings to the assemblage simply needs to be applied in its situated capacity (Haraway, 1988). This means coming with one's embodied knowledge but leaving a sort of gap, a space where a gradual and tentative connection between the particularities of the unfamiliar and those of the already grasped and experienced can connect in productive ways, enriching the praxis of intervention and enabling more ethical decisions when intervening.

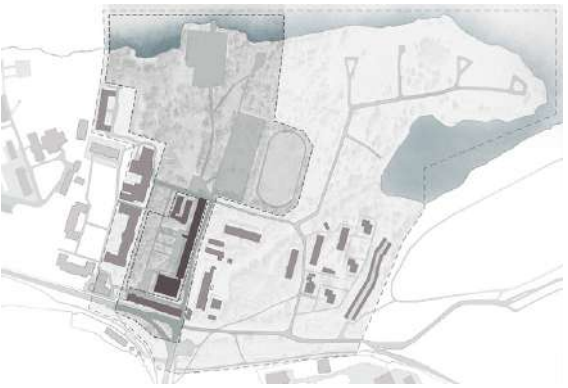

Figure 2. Working the territory in multiple scales (Riga: Signe Pērkone, Ramón Córdova González, 2021)

Research and Synthesis

With this approach, we aim to undertake a careful investigation of the territory covering multiple scales, in order to enable any intervention to plug gently into the existing. This necessitates working in a non-linear way and moving back and forth between scales, findings and proposals for one informing those for the others. Thus, in order to better understand the site and its development capacities, the territory was considered in four scales, drawing inspiration from Rem Koolhaas' and OMA's 1995 book *S,M,L,XL*: the *XS* scale with the *V36* building and its courtyard, the S scale connecting *V36* to the lake, the *M* scale encompassing the whole peninsula until Ezermalas Street, and the *L* scale looking at the wider neighbourhood (Figure 2). This does not mean that each scale could be addressed in exactly the same way; after all, each one provides particular challenges and opportunities. Rather, each scale had to be addressed with specific tools relevant for that particular scale, which enables gaining a better understanding of the assemblage as a whole. This opened the door to look at and address different kinds of relations, such as those between the

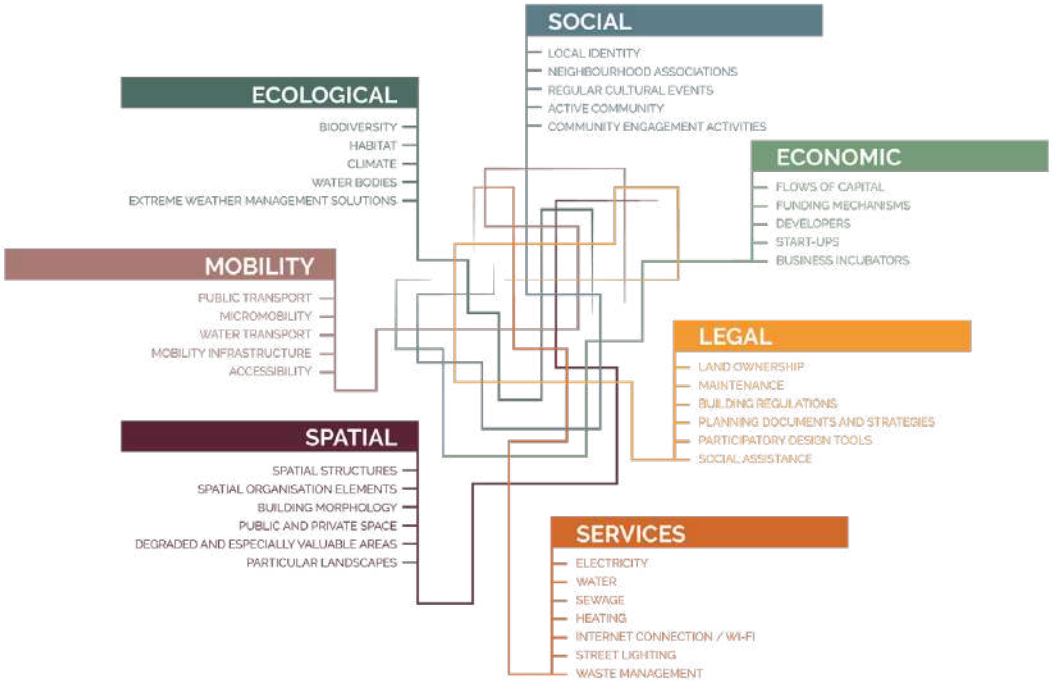

Figure 3. Research framework – overlapping types of infrastructure (Riga: Signe Pērkone, Ramón Córdova González, 2021)

building and the courtyard, the courtyard and the lake, the development area and the neighbourhood. The work entails a careful search for what can be done now so that the work does not become redundant if some unforeseen aspect is revealed or there is a shift in existing power relations.

In order to broaden our view beyond the spatial aspects normally prioritised in architectural investigation, we decided to take different types of infrastructure as the basis for our research. Importantly, 'infrastructure' here does not entail only underground communications or roads but is viewed more broadly as 'enablers'. Infrastructure is a valuable point of departure in its capacity to "create conditions and provide possibilities for change without dictating what is going to happen" (Sendra, 2020:53). This is also how 'infrastructure' links the research part of the project and the proposal, which can thus retain an aspect of ambiguity. There are many layers of different kinds of infrastructure that enable the city, but for the purpose of analysing and reading the territory in different scales, we primarily looked at seven types: social, economic, legal, communications, ecological, mobility and spatial infrastructure (Figure 3). Some aspects under investigation pertain to more than one mode of infrastructure, evidencing how all components of the assemblage are interrelated. All these types of infrastructure form an underlying structure of possibilities from

which other, more complex, phenomena can emerge.

This approach is about looking beyond phenomena as distinct objects or even relations between different phenomena and asking the more relevant question of how phenomena constitute themselves from the relations which are interwoven before their very existence (Debaise, 2012). For instance, a school is a complex phenomenon enabled by many layers of infrastructure, from spatial resources to the institutional framework, from teaching practices to available funding. It follows that, if there is a problem with education in the neighbourhood, we might ask which layers of infrastructure this problem stems from. By analysing infrastructure networks and the emerging services (or lack thereof) on the neighbourhood scale (*L*) we are able to identify gaps, which signal what might be necessary for balanced neighbourhood development or what deficiencies on the larger scale local development could address. On the other hand, infrastructure analysis on the local scale (*M*) enables a close reading of the territory, revealing borders, barriers, and obstacles, which need to be addressed to enable productive development that would promote social and material flows. In other words, structuring the research and analysis based on different types of infrastructure respects the existing while revealing gaps, where the energy of intervention could be applied the most effectively. The conclusions from this first stage of research were synthetised by identifying *strengths*, *weaknesses*, *opportunities*, and *threats* of the assemblage and grouping these key points into categories that correspond to the types of infrastructure researched. All future intervention needs to neutralise the threats and actualise the opportunities while taking into account the strengths and weaknesses of the territory.

Developing a Proposal Through Research by Design

Since we have established that a singular large-scale masterplan would not be an appropriate response to the particular situation and the outlined approach, it becomes necessary to diversify the 'proposal' part of the project. A vision for the territory is developed with a set of heterogeneous tools, which are applied and revised in their use in a non-linear way. Furthermore, there is no clear boundary between research and design; rather, the work continues as research-by-design, where proposals and interventions reveal further information about the site and its capacities. In this case the vision combines guideline-based strategy for balanced overall development, speculative work with potential scenarios, and testing interventions on a scale of 1:1 in the site. The initial research is synthesised into development guidelines, which help establish a strategy for the transformation of the site. Looking further, findings from the research and analysis let us guess what kind of constraints could impede development of the area or what kind of collaboration models between stakeholders could enable it, thus creating particular starting points for testing development scenarios, which in turn show how the guidelines can be implemented under different constraints. The 1:1 interventions, on the other hand, form a link between now and the future, which could actualise some version of the scenarios. The scenarios are speculative snapshots of possible futures meant to foment discussion and not necessarily create a template for definitive action. Research and analysis remain a fundamental part of a project like this even in its further stages so that necessary adjustments to the strategy and proposals can be made while not losing sight of the whole, if new information is discovered or other stakeholders appear.

The elaboration of development guidelines as one of the tools for the vision comes from a

desire to address all scales while acknowledging the complexity of the larger scales and the impossibility of encompassing all of the stakeholders and balancing the whole scope of their needs in one concrete proposal. Instead of trying to provide specific design solutions, the guidelines speak more about *how* an intervention works and what it *does*. Most importantly, the guidelines encompass aspects of development that go beyond the spatial and the physical, touching on social and legal aspects as well. In a way they correspond to general good practice in designing liveable neighbourhoods while at the same time also being specific to the territory. The three pillars set forth in the project are 'spatial variety', 'accessibility' and 'collaboration'.

Spatial variety includes integrating different functions within a development to avoid large monofunctional areas which necessitate a high intensity of motorised transportation; heterogeneous density and various typologies of outdoor space, which means creating a gradation of public, semi-public and private outdoor spaces while increasing the building intensity around the public areas (for example, along the main streets) in order to liberate and make more open the private and semi-private areas; also, aesthetic variety is important in providing engaging urban space and encouraging people to move around and experience it, and the movement of people at different times of the day helps local businesses while making the neighbourhood safer in general (Sim, 2019). Throughout all this, it is essential to preserve and nurture the existing natural values and specifics of the site, creating a mixture of old and new, intervention and preservation.

The *accessibility* aspect of the guidelines covers the need for better connections between the site and the neighbourhood, as well as official public access by the neighbourhood inhabitants to the lake. It also means access to public outdoor space with amenities for different age groups and interests. More broadly, there is a need for access to basic services, including affordable housing, education and health services.

This leads to the *collaboration* aspect of the guidelines, one of its main points being collaborative planning tools and balancing interests and needs of different stakeholders in order to avoid gentrification, increased social tensions and disenfranchisement of certain groups. *Collaboration* is an important tool for building strong and sustainable communities. All of these are general principles that should be taken into account if the territory is to develop in a balanced way. In essence, these guidelines strive for equal political representation of all actors so that those who are impacted by change have an actual say in it. Every actor and every stakeholder can take part in implementing them, whether through official steps or in everyday action.

If we consider the points outlined in the guidelines as goals that guide us in all scales, each scale still has its own specifics and thus needs a particular approach, which can entail sub-goals and specific strategies towards achieving them. It is clear that the sheer scale of the neighbourhood makes it impractical to offer a strategy for its overall development, but it is still possible to work towards achieving particular improvements that are steps in the direction of overall liveability and a rise in the quality of life. For the purpose of this project, we look at the neighbourhood from the perspective of development in the M-scale territory – how it connects to the wider area and what it means for the neighbourhood on the whole. Synthesis involves identifying other underused areas in the neighbourhood with the potential for development, and problematic areas with obstacles, as well as barriers between these areas and the project territory.

In the interest of merging new development in the *M* and *S*-scale territory seamlessly into

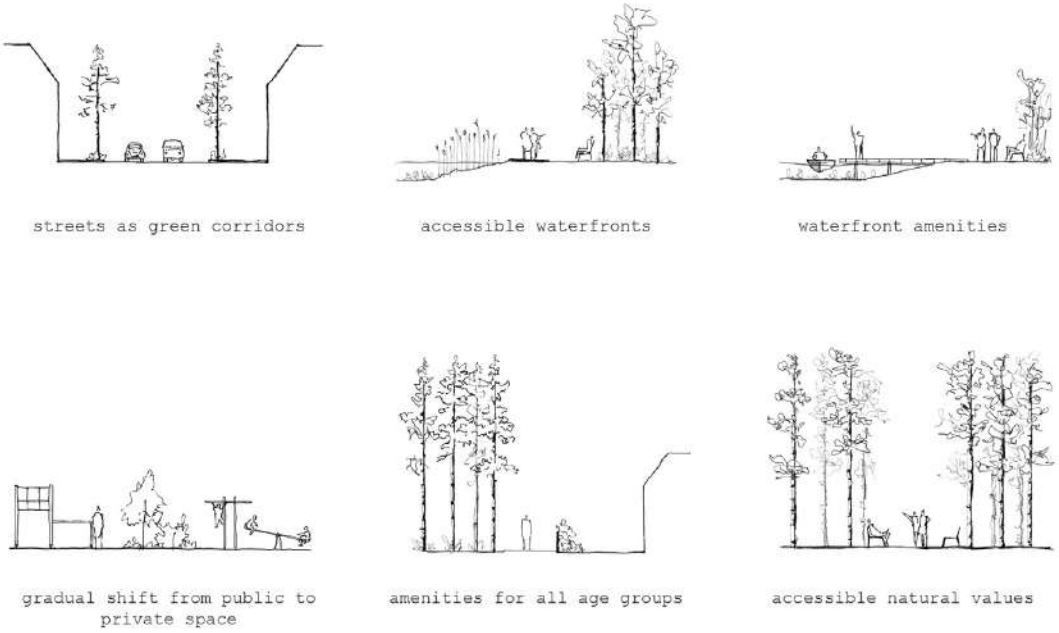

Figure 4. Public outdoor space guidelines for the neighbourhood (Riga: Signe Pērkone, Ramón Córdova González, 2021)

the neighbourhood, the first task is to identify necessary links (whether existing ones to be improved or new ones to be created) between the development territory adjoining the lake, the existing neighbourhood centre, and other neighbourhoods in close vicinity. Given the publicly desirable location of the territory in question, it is important that meaning and enjoyment are created in the new development not just for new users but also for existing inhabitants nearby, and physical connections along with freely accessible public outdoor space are prime tools to this effect. New real estate developments on the outskirts of the city, where structured street patterns disintegrate, usually result in patchwork urban form that either cares little for the space around the buildings or strives to make the development inward-looking to provide privacy to the inhabitants by controlling who comes and goes. We argue that precisely the leftover spaces – streets and open areas, green spaces that can be shared between various buildings or complexes – are those that merit the most attention in striving for a concise cityscape and neighbourhoods that support the full spectrum of activities of a rich life, not just disconnected functions and commuting (Figure 4).

Buildings need to be designed giving particular care to the narrow space where the ground floor meets the street – how the inside spaces relate to the outside ones and whether this intermediary layer promotes lingering, encourages micromobility and provides opportunities for interesting encounters. Large developments do not need to be uniformly dense throughout but should ideally provide users

with different degrees of private, semi-private and public space, as well as varying levels of openness and enclosure, achieved by increasing the building intensity along the main streets and leaving more open space in the interior of the block. Such an approach to spatial design carefully directs and focuses flows, thus enabling functions that depend on urban activity (such as culture and commerce) while also rationalising, for instance, the planning of public transport links.

While the principal guidelines are public and can be employed by anyone planning, building, or intervening in the territory in any way, whether on a small scale or in a wide sweep, they also help us to develop an urban transformation strategy specifically for the site on the S scale. The main difference and reason why it was decided to propose a strategy as opposed to a phased masterplan is that, even though both would propose serial spatial interventions in accordance with the guidelines, a strategy can be more flexible and adapt in the face of contingency. The goal of the strategy is to connect the *V36* site to the neighbourhood on the one side and the lake on the other while enlivening the territory, bringing activity and flows, and creating a much-needed public green space for the Čiekurkalns neighbourhood. Since there has been no top-down impetus from the municipality to create public access to Ķīšezers yet (even though there is a large plot of land belonging to the State which could easily facilitate this), the idea is to occupy the disused territory bit by bit and prove that it has active public use potential. The gradual occupation of the territory will serve to test various solutions and find out what works so that, when more solid investment (hopefully) comes, there will already be a first-hand source of information about activities and uses that have the potential for further development, offering the chance to balance the interests of the territory and its community with those of whoever intends to carry out the development.

To that effect, the strategy branches out from the current moment, when specific, if limited, steps can be taken, to the future, where possibilities multiply based on different possible constraints and development impulses that could arise, introducing more ambiguity in the scenarios, which envision a more distant future. Time is as important as space when working on urban transformation, as time is what links the first steps that can be implemented now with the speculations about possible futures. A strategy does not finish after the physical intervention on site takes place but requires mechanisms for feedback, adjustment, and revision over time, creating a continuous, contingent process. As the work on site continues, some early possibilities laid out in the strategy are eliminated while other new ones are revealed. In this way there is no clear distinction or break between the research part and the proposal, as design and intervention become another way of gathering information about the territory, its processes and potentials. Each intervention merits close observation to see how it works within the assemblage, whether it is absorbed or rejected, and how the whole changes over time.

Devising specific, physical 1:1 scale interventions that could be applied immediately on the *XS* scale to start implementing the urban transformation strategy of the site makes clear the necessity of conceiving these as affordances, and not objects whose use precedes and predetermines their form. Affordances are possibilities for action provided to an actor by the environment (Gibson, 1989) and thus they are neither part of the environment, nor the actor, as they depend on the relation between the properties of the environment and the skills of the actor that enable one to pick up the affordance. “By the virtue of our many abilities, the landscape of affordances we inhabit as humans is very rich and resourceful” (Rietveld and Kiverstein, 2014:325) and so substances, surfaces, objects and other living beings offer many

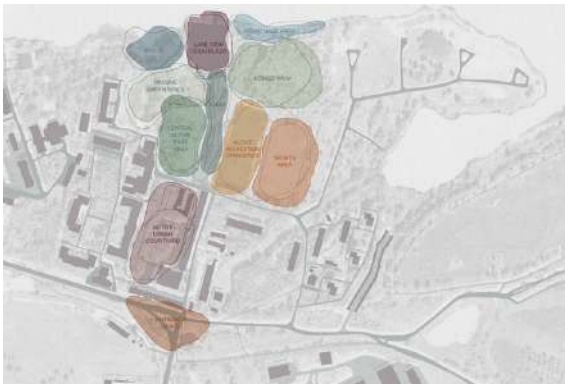

Figure 5. Creative reading of functional spaces – looking for affordances (Riga: Signe Pērkone, Ramón Córdova González, 2021)

Figure 6. One of the future scenarios – developing the site through experimentation and revision (Riga: Signe Pērkone, Ramón Córdova González, 2021)

ways to engage with our environment. Creating the strategy for intervention entails reading the site as it is currently, experiencing it as any user visiting the territory does. Any component of an assemblage has both material and expressive properties. For instance, there are several wide expanses paved with concrete slabs or asphalt in the otherwise green territory. They have obvious material properties but at the same time, for the knowledgeable user, they express the military history of the site, as these plots were used to store heavy machinery and military vehicles. However, these areas also have an aspect that merges the material and the expressive by how they draw a user in with the simple variation in surface, its contrast of openness and enclosure. Doing a kind of embodied 'creative reading' of the space and identifying still latent and emergent possibilities based on existing user flows, uses and physical aspects such as surface cover, vegetation groupings, topography changes and the presence of water, we can start to both pick up existing affordances of the site and speculate on how to supplement them. The existing structure of the site is overlapped by groupings of desirable activities, which can then start to be tested in real life (Figure 5 and 6). Since this emergent layout is not set in stone, it is bound to be revised and updated as solutions get assessed in real time.

With this in mind, the first intervention we designed is a robust modular structure that can be used singly or combined in various ways with others of the same kind to provide a more varied scope of potential uses. The structure has a sturdy frame for easy construction and relocation, a roof, and a horizontal surface that can be moved in three different heights, thus suggesting different affordances. The modules will first be used for displaying the vision project in the upcoming opening exhibition but afterwards they can be taken outside into the territory and freely used, moved, and adapted by *V36* residents and guests (Figure 7). In the words of Pablo Sendra, "none of these elements has a fixed function, but rather they contain capacities that will vary depending on how they interact with other material and non-material elements" (2020:74-75). The structures are introduced as disruptions in the territory that trigger new relations and possibilities to actively

engage with the environment. Instead of defining and mandating, they encourage discovery and play.

The act of intervention needs to be understood as a parameter as opposed to something that produces finished objects, in the sense that it is not the final form or aesthetics of the object that matter the most but rather what it actually does in the territory and what affordances it offers to further explore the potentials of it. Referring to an intervention as a parameter alludes to the fact that it is meant to be manipulated and later on updated according to the discoveries made throughout its use. A series of such interventions together works as tactical acupuncture of the site, which is an appropriate first step in its development, given the large scale of the territory, limited resources and restrictions resulting from ownership issues. This urban acupuncture approach is a way to 'palpate' the territory lightly (May, 2005) in order to reveal its virtual capacities and activate different areas. The idea is that by intervening with, or palpating, different aspects of the assemblage, it will reveal possibilities to "eventually intuit the reciprocal affectivity of a system's actions, not only in relation to the one intervening with it but also in relation to its own, system-specific organisational levels" (Kousoulas, 2018:298).

Here is where the gap between the research stages and the creative stages is bridged, since in order to gain a certain understanding of an assemblage it is necessary to manipulate it. On the other hand, the aforementioned strategy for the urban transformation of the site helps us evaluate how the parameters are working. The strategy does not overrule the reality of the parameters; we learn from them along the way and find out how to change and update them in order to achieve better results and more productive interactions while being open to the parameters telling us how to update the strategy and the overall goal.

Every component of this development vision project is meant to do more than one thing and serve more than one purpose, all of them being interlinked and mutually related. Among other things, the vision as a product becomes an open-source tool (as it includes both analysis / research, and synthesis / proposal) for civic agents to lobby the interests of the community in the development process of the territory. For us, it is proof that theory does not precede design and it is possible to produce knowledge by doing, to do research by design, and to produce a development vision as a material-discursive tool. In the context of this article, which is distributed through the realm of institutionalised education, we wish to point out how architectural education gives students the training to ask questions, define briefs, and employ experimental methodologies, while there tends to be rather little room for this in standard architectural practice. However, this project aims to illustrate the possibilities to still look at the city with wide open eyes, being proactive and thus opening avenues for different kinds of creativity and experimental approaches, in order to foment discussion and work across professional disciplinary boundaries. We would like to conclude with a quote that speaks to the potential of alternative approaches to design and development, which acknowledge contingency and uncertainty, as well as the undeniably social and public realm in which such urban interventions play out:

"Designing disorder means designing urban interventions that are flexible, adaptable and open to constant change; which encourage the emergence of informal, spontaneous and unplanned uses of the public realm; which stimulate cultural expression; and which create an atmosphere of tolerance toward difference and the unknown through the construction of common places where people can interact and share interests and experiences."

Pablo Sendra (2020:52)

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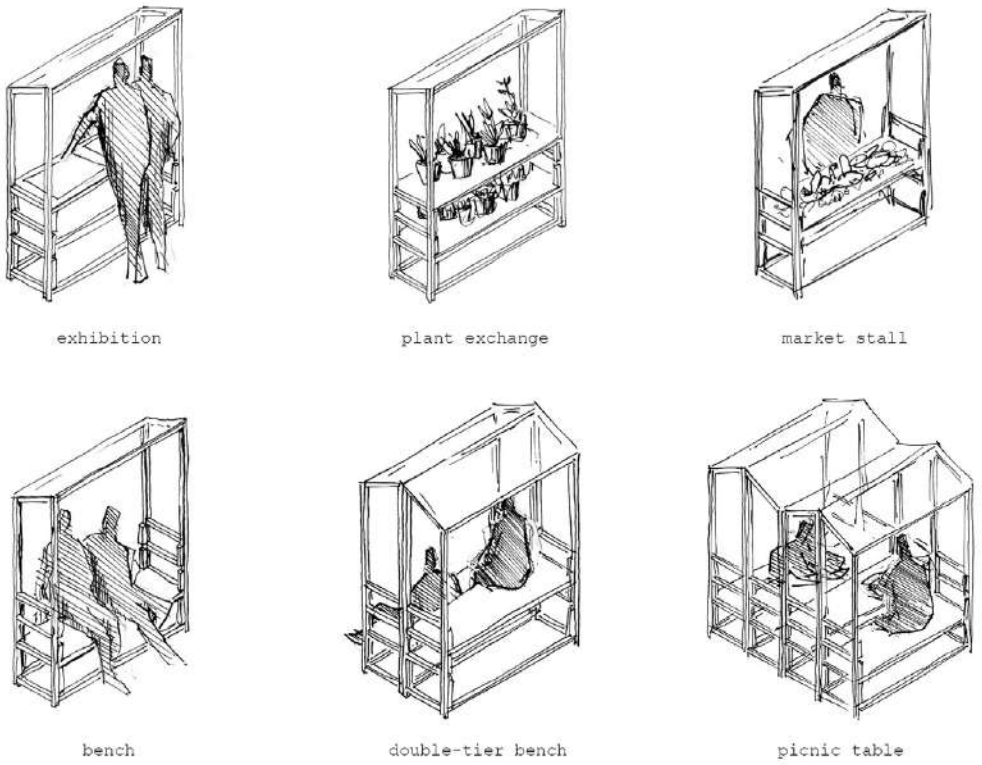

Figure 7. Various ways of using the modular structures
(Riga: Signe Pērkone, Ramón Córdova González, 2021)

Figure 8. Inhabiting the site
(Riga: Signe Pērkone, Ramón Córdova González, 2021)

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Critical Architecture: The Totaltheater by Gropius and the Museum of Infinite Growth by Le Corbusier

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Abstract

Early modern architecture has not only reinvented formal vocabulary but also challenged lifestyles and building types. A critical attitude towards functional agendas has emerged, as incorporated in the design occasionally. Yet breaking with the given formulas of function has remained an overlooked right, as architecture discourse has predominantly focused on creating a form for a given function, rendering criticism a blurred tool for design. Critical Theory, starting with the Frankfurt School, has focused on the concept of criticism as a methodology and provided a framework for how the inquiry may achieve human emancipation: by explaining the restrictive structural conditions, providing a practical solution, and setting up a normative perspective. The unrealized projects of the Totaltheater and the Museum of Infinite Growth by modern pioneers Gropius and Le Corbusier, based on critical assessments of the existing functions for their respective building types, transformed their criticism into a design concept and proposed a reinterpretation of what kind of experience a theater and museum should offer. Their main spatial properties, namely the radical shapeshifting, the totality of their interiors, and the anti-hierarchical understanding, enabled them to provide space for alternative content: avantgarde drama in the Totaltheater and contemporary artifacts in the Museum of Infinite Growth. They can be seen as examples of critical architecture, in the sense that the form itself acts as a self-reflection of the function in addition to fulfilling it.

Keywords

critical architecture, critical theory, function, form, Walter Gropius, Le Corbusier, museum, theater

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Introduction

In his *On the Art of Building in Ten Books*, Leon Battista Alberti defines architectural beauty around the concept of harmony and the formal composition of parts (Alberti, 1988), which was to become a cornerstone for the modern imagination of architecture, which would tentatively influence the design paradigm in the 20th century, too. An architectural object succeeds aesthetically, according to Le Corbusier (1925), when its parts form a harmonious whole and "we gauge such success through imaginatively perceiving as much" (Fisher, 2015). Visual perception has been the core criterion of architectural aesthetics, while the architect's practical mission in modern times has mainly been creating a pleasing form out of the function. Design has been predominantly carried out as a problem-solving activity with the possibility of multiple answers aiming toward a fitting, delightful, and pleasing appearance. There are numerous ways to conceive a form – following the functional necessities to "give the form" or "finding the form" to place the functional elements inside afterward. Modern architecture also provides a colorful palette of rational shapes versus subjective ones while, recently, parametric design and AI have opened up new and hybrid-form creation opportunities. In each scenario, the process from the given function to the end visual composition seems to be the main gateway to *venustas*. Yet, whether the "art of architecture", in the words of Alberti, widens the horizon of the beholder remains a rarely discussed issue. The phase before the step from function to form has been a grey area for architecture. Can the architect disagree with the prescription of the function itself? While beauty has been related to harmony throughout history, modern arts not only opened up a fresh field for disharmony but also turned antagonism into a trademark feature in public opinion. Like the absurdities of Dadaists or the subconscious journeys of Surrealists, can architects use a special language to shake and

shock, generating a self-confrontation in the minds of inhabitants?

Any redefinition of the given function should be communicated in that special language, too, in order to be carried out. Architecture nevertheless is a language, Umberto Eco would argue. In his analysis of the column, Eco (1972) claims that architectural signs are a "system of…objects and… spaces that communicate possible functions". He further explains that in architecture, "the communicative aspect predominates over the functional aspect and precedes it". And with that, he moves beyond the symbolic ornamentation from Antiquity to Postmodernism, implying that every architectural element is a sign which carries information on how it functions. Derrida would add that functions and building types also delineate how we can and cannot behave by structuring our way of life in a singularity. As he puts it in *Of Grammatology* (1967/1996), all language – and Western philosophy in particular – carries the dominance of one particular way of thinking and therefore needs to be overturned as previously fixed categories.

How can architects have the right to criticize the functional programme they are prescribed and question the presuppositions, beliefs, habits, and our way of thinking? Is it possible to criticize building types as a normative category of living and overturn their subtle normative seeds through design?

Critical Theory

It is no coincidence that criticality gained attention as a central trait of philosophical inquiry in the aftermath of the First World War, in the Institute for Social Research, which saw the arrival of the Frankfurt School philosophers. Criticism and the concept of crises are etymologically rooted in the same ancient Greek word *krinein*, which means to separate, and the tragedy of the war paved the way for a (productive) intellectual crisis. Critical Theory as a movement, which is closely linked to the *Frankfurt School*, has given a crucial role to the criticism of societies and of the history of thought as a methodology while having had many different aspects and quite distinct historical phases that span several generations. (Bohman, 2005)

Critical theorists maintain that the primary goal of philosophy is to understand and help overcome the social structures through which people are dominated and oppressed. Especially Adorno and Horkheimer, among many others who can be linked to Critical Theory, focused on critique to reveal and challenge power.

The use of criticism in philosophy goes back to Immanuel Kant, famously in the very title of his *Critique of Pure Reason*, by which he means examining and establishing the limits of validity of knowledge, by digging deep down to its irreducible concepts. Not surprisingly, Karl Marx, who has been a major influence on Critical Theory itself, explicitly developed the notion of critique of false consciousness and economic relations, linking it with the practice of social revolution, as implied in his *Theses on Feuerbach* in 1845: "The philosophers have only interpreted the world, in various ways; the point is to change it."

"Critical Theory" in the narrow sense designates several generations of philosophers and social theorists who have distinguished a "critical" theory from a "traditional" theory according to a specific practical purpose: a theory is critical to the extent that it seeks human "emancipation from slavery", acts as a "liberating … influence", and works "to create a world which satisfies the needs and powers of" human beings (Horkheimer, 1992/1972, p. 246). Such theories aim to explain and transform *all* the circumstances that enslave human beings. A critical theory provides the descriptive and normative bases for social inquiry aimed at decreasing domination and increasing freedom in

all their forms.

While Critical Theory is often thought of narrowly as referring to the *Frankfurt School*, which begins with Horkheimer and Adorno and stretches to Marcuse and Habermas, any philosophical approach with similar practical aims could be called a "critical theory", including feminism, critical race theory, and some forms of post-colonial criticism. In the context of criticism through design, Critical Design in line with the *Frankfurt School* will be taken into consideration.

It follows from Horkheimer's definition that a critical theory is adequate only if it meets three criteria: it must be explanatory, practical, and normative, all at the same time. That is, it must explain what is wrong with current social reality, identify the actors to change it, and provide both clear norms for criticism and achievable practical goals for social transformation.

A critical social inquiry attached to practical emancipation can also be translated into the practical creativity attached to critical social inquiry – a designer's criticality, which can deal with many aspects of social life, such as gender roles, privacy, inequality, the climate, or in-field discussions. Any critical assessment in architecture will be correlated to the purpose of that very aspect, how it unfolds against the individual and social perception. Even the Vitruvian categories of *firmitas* and *venustas* have purposes, *raisons d'être*. Yet the purpose of being functional, *utilitas*, is what connects the designed space to the action of the inhabitant. It is inevitable for a critical social inquiry to ask how spaces ideologically and normatively prescribe our action. By placing such a critical reading of a building's given function into the focal point of the design, the critical act might have an aesthetic outcome, too. The way the inquiry is integrated into the design as a result of the re-examined function will be experienced by inhabitants even if not noticed. The gap between the prescribed and inverted functions might open up a field of experimental and aesthetic awareness.

Throughout history, building types themselves have altered and the production of the built environment has experienced many leaps in terms of function. The reconsideration of a particular function has been one of the main engines of architectural history. Modern times brought on drastic transformations in many aspects and, thus, opened up the possibility of new spatial arrangements with fresh aesthetic and structural aspects. In particular, the antagonism of modernist arts and architecture has been evident in many ways – especially about materials, anti-traditional lifestyles, and compositional choices. While modernist architecture might have turned out to be the norm after the Second World War and has become subject to criticism itself, its origin remains the soul of the protestor. Breaking with the given assumptions has only rarely and symbolically been for the sake of it – it has had a subject and a specific context. Some of the modern classics crystallize its critical attitude towards the pregiven types of building and functions, as it is well documented how early modernists propagated the modern lifestyle.

Whereas many *avant-garde* architectural enterprises include a questioning of the prescribed function, Le Corbusier and Walter Gropius, in their two trademark yet unrealized projects, went to extreme lengths in taking the redefinition of the building type as the starting point of their design. In the context of Critical Theory, Horkheimer's three aspects have become prominent in considering a design critical. The design must, firstly, critically engage to function as the content of the form; secondly, offer a practical design solution; and, thirdly, imply a creative vision as well. The Totaltheater and The Museum of Infinite Growth questioned the existing functional agendas, offered concrete solutions and put forward a future perspective about the function

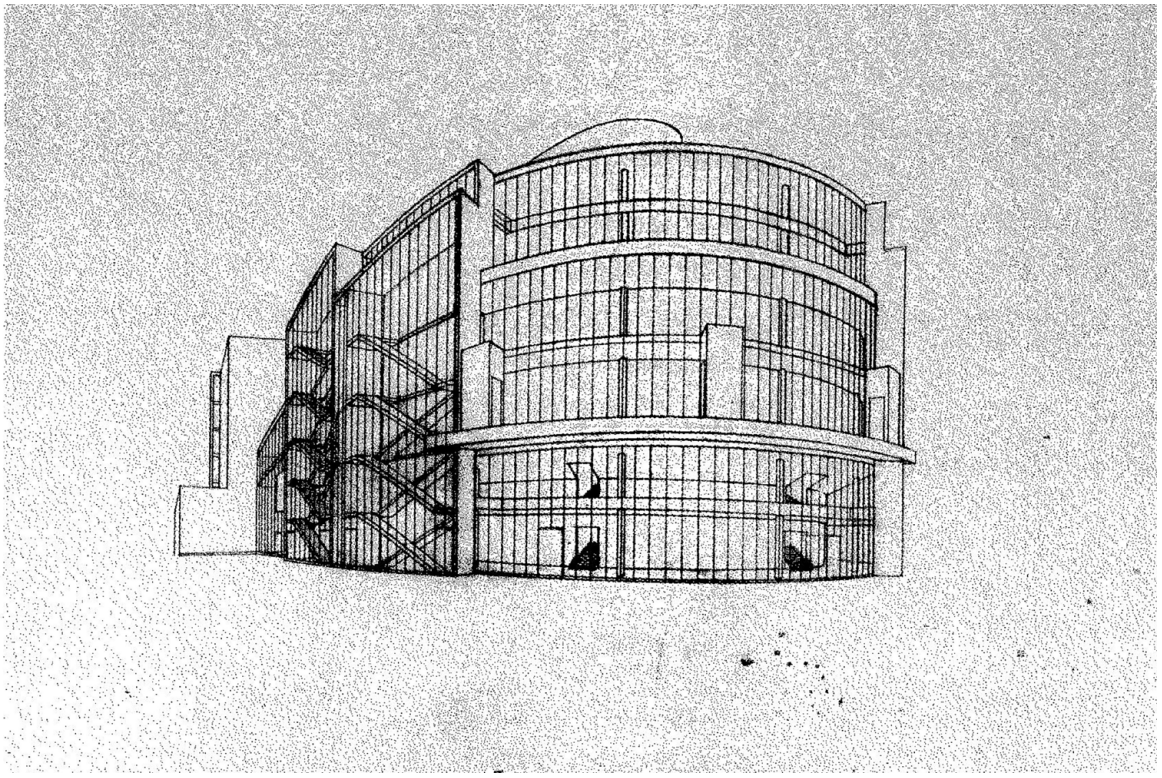
as a critical act, which itself has become the main concept of the design.

The Totaltheater

The Totaltheater Project, designed by Walter Gropius and Erwin Piscator, famously challenged the given ways of performing plays and stage design in 1927. Walter Gropius was still the director of Bauhaus and Piscator was a palpable presence in the political theater scene. The Totaltheater design meant the juxtaposition of Bauhaus's spatial laboratory work with the modern epic theater, which aims to ensure an active response from the audience. Walter Gropius's alternative and non-formal understanding of architecture did respond to Piscator's need for a theater structure that will attract the audience and bring them into the action (Berdini, 1984, p. 80). Back then, "the viewer's life horizon was reduced to the horizontality that stands in front of it, to the fixedness" (Woll, 1984, p. 127), as in the classical distinction of the stage inside the frame and audience of the theater since the Renaissance.

Complaining that he had been trying to "fill the new wine into old barrels", Erwin Piscator was convinced that nothing but a brand-new theater structure, that is, a theater architecture that incorporates the latest acoustic and optic facilities, can reveal the potential of its own vision. Walter Gropius was one of the few who, as an architect,

Figure 1. The Totaltheater (Cambridge, MA: Harvard University Gropius Archive. 24.19, 1927)



could flirt with modern machinery and design the flexible space that Piscator had dreamed of. The Totaltheater, then, should be regarded as a combined effort by the client and architect, while the Gropius-Piscator tandem should be regarded as a collective design agent. Although never realized, the project contained a revolving stage, which could be converted to an arena-stage, amphi-stage, or proscenium-stage in addition to the utilization of recent technological developments, which allowed innovative drama and mainly political epic theater to be performed for the masses. The shapeshifting theater with a remote control in the hands of the director was the symbolic and principal design ingredient to break with tradition.

Gropius and Piscator thought that Berlin's labor district of Kreuzberg was quite suitable for the Totaltheater. Besides the difficulty of securing land in the center, the reason for the slightly peripheral location can be found in the target audience of Piscator's drama, which is the worker community. Through its transparent surface on the front façade, the building tended to open itself to the cityscape. Instead of different foyers in the entrance implying class distinction, a single and transparent foyer where all the audience would be together can be considered as another gesture of the Totaltheater's tendency to equalize, just like the elimination of balconies inside.

Indeed, the holistic interior concept removed the sharp distinctions not only among the audience but also between the audience and the play. The intertwining of the stage and the audience might have seemed to them as a necessity to draw the audience into the play. The new possibilities of blurring this border, the totality itself, was going to be a central theme for epic theater. The use of projections all around the inner walls was another attempt to cut across the classical borders. Also, theater had entered a fierce competition with cinema, as the film industry was just developing and sound films were about to emerge.

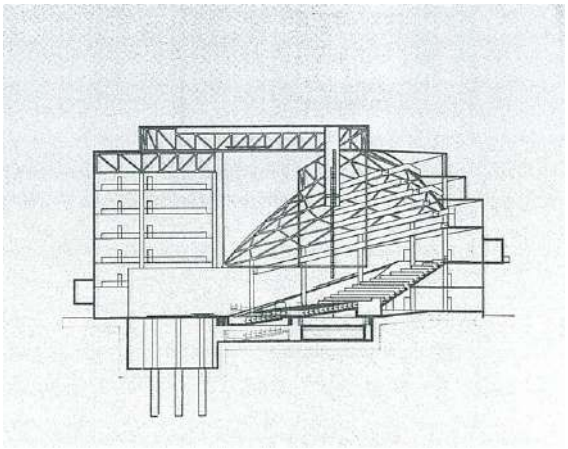
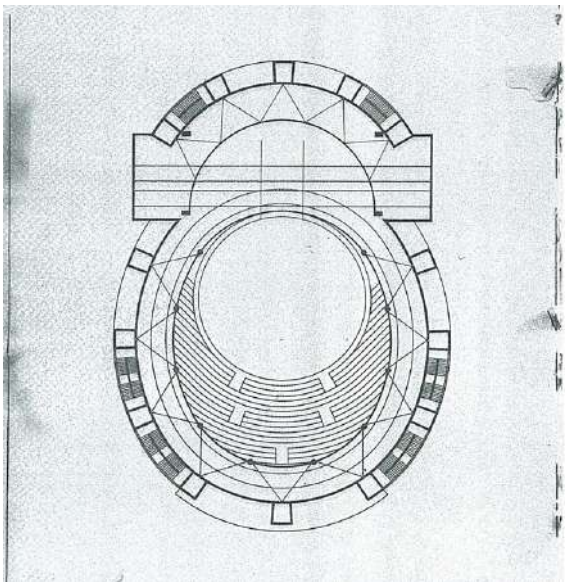


Figure 2. The Totaltheater (Cambridge, MA: Harvard University Gropius Archive. 24.83, 1927)

Figure 3. The Totaltheater (Cambridge, MA: Harvard University Gropius Archive. 24.84, 1927)



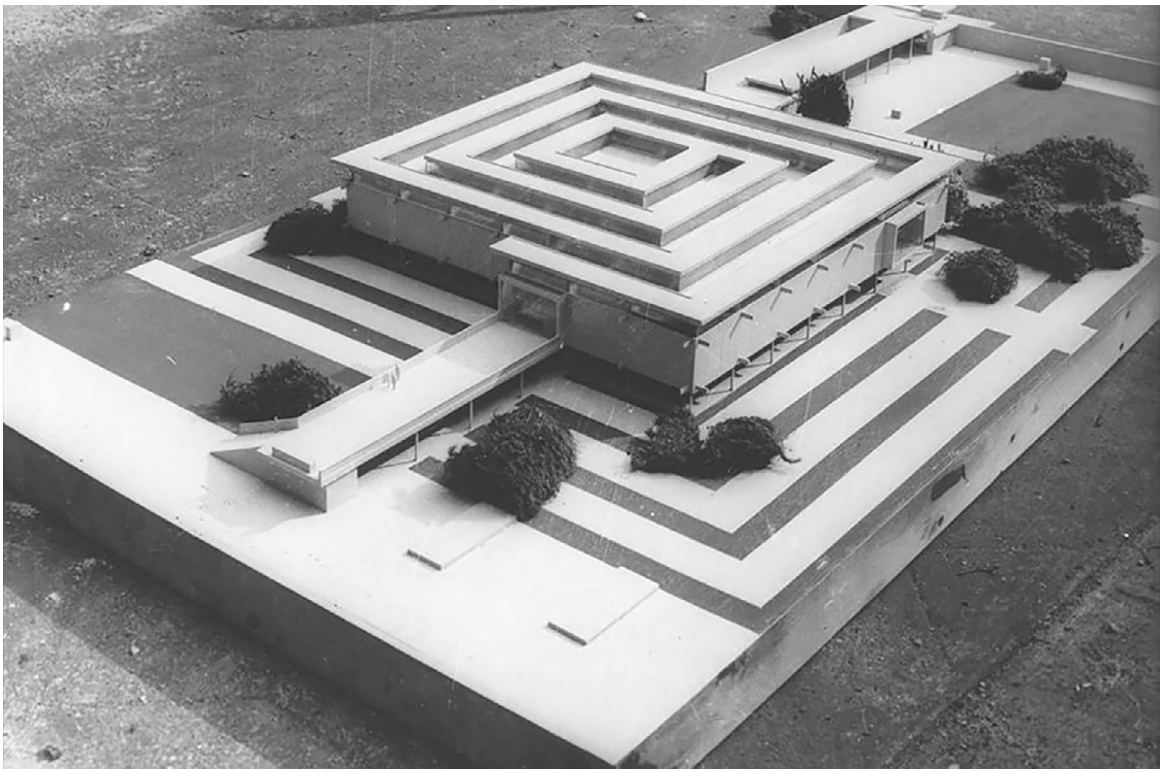


Figure 4. Museum of Unlimited Growth (Paris: Fondation Le Corbusier/ADAGP (photo: Lucien Hervé), 1939)

What made the Totaltheater critical towards the given was that, firstly, it was supposed to have a total effect. The design aimed to include the audience in the play, to make them an active part of it instead of passive participants, and to convey the play's supposedly enlightening social message and symbolize the anti-hierarchical point of view. Secondly, the transformation of the stage types provided for the dynamism and flexibility accompanying the need for social change. Thirdly, the machinery and additional technical facilities such as stage cranes, rails, and projections gave the director instant control over the performance. In their almost-realized project, Gropius and Piscator redefined theater and the theater building as an immersive and active experience.

As a result, it can be said that the central design idea of the Totaltheater was to distinguish itself from buildings in the same function. It was an effort to overcome the existing definitions of the function by criticizing it rather than providing a form for the given function.

In addition to hosting plays as an (unrealized) building, its design claimed to be the answer to the question of how to perform theater in another way. This particular meaning of the building, though, is not an explicit discourse but rather latent content expressed spatially.

The Museum of Infinite Growth

Another example of critical early modern architecture is the unrealized series of projects by Le Corbusier. It might not be surprising to say that Le Corbusier was obsessed with some of his ideas, but it is curious that his greatest fascination was his museum. His museum projects give the impression of being examples of a single template, which is called the Museum of Infinite Growth: a never-ending construction in the shape of a spiral. Numerous times – 22 to be precise, excluding 14 possible proposals in correspondences – he proposed his typical museum for different locations and even placed it in his urban plans, which might well be considered product placements. In the end, Le Corbusier succeeded in constructing his ever-extending museum three times but as a static version.

Although the idea can be found in the very first project of his self-edited *oeuvre complet*, the art school, the preliminary museum building inside the Mundaneum complex of 1929 can be regarded as a crossroads where all his museum designs and exhibition spaces are linked. In other words, the World Museum of the Mundaneum represents a prototype, if not the end product, for the future museums.

Several museum projects were proposed throughout the 1930s. The first of Le Corbusier's typical museums was named the Living Artists Museum in 1930, whereas the Contemporary Aesthetics Center of 1936 is a variation of it. In 1939, he revisited the idea and labeled it as *Musée à croissance illimitée*, Museum of Infinite Growth. As an unrealized project, Le Corbusier's Museum of Infinite Growth can be seen as the most generic expression of his museum idea and the archetype of it.

Afterward, Le Corbusier often returned to his museum template. All museum projects after World War II refer precisely to the archetype, including his realized museum buildings. Le Corbusier put his museum template into practice three times in Japan and India in the 1950s. During the construction process, Le Corbusier's idea underwent substantial changes as he went in the direction of integrating locality into his architecture in the post-war cultural climate. Many other proposals emphasize how important his take on the museum was to the architect. In addition to the unrealized projects of the Delaunay Museum

Figure 5. Museum, Chandigarh
(Paris: Fondation Le Corbusier/ADAGP, 1952)

Figure 6. The National Museum of Fine Arts of the West (Paris: Fondation Le Corbusier/ADAGP (photo: Olivier Martin-Gambier), 1955)

Exposition, the International Art Center in Erlenbach, and the 20th Century Museum in Paris, he tried to convince many potential clients to build his museum, as can be seen in his correspondences.

The reason for the number of his attempts and his persistence can be found in his unique perspective on the museum. According to Le Corbusier, a museum should represent its own time by growing as time passes, so that new artifacts from the present can be added. The infinite growth brings forth the spiral shape as a reference to nature. The spiral lends a geometric order to the growth, which, in turn, sets the length of the parts and paves the way for standardization of the parts of the museum during the construction for practical reasons. And the preference for an anti-hierarchic arrangement leads to the open plan, introducing a fluent and total space with multiple vistas so that the different parts of the museum artifacts are connected, not isolated from each other. His template redefined the museum conception through the features of expansion, standardization, and spatial flow, as well as the existence of various perspectives for the observer, all of which in turn reflect his vision of what a museum should be: a living and ever-changing space.

Le Corbusier's museum ideas were not aesthetic solutions towards how a typical museum should be, but an attack on the traditional understanding of the museum itself, a redefining formula, whose means are the forms, rather than the words. They exemplify Le Corbusier's critical attitude regarding how to redefine a building type and show how his criticism generates the form. Le Corbusier's museum shows us that architecture does not have to be an attempt to create the appropriate form for a function and that it can be an exploration of the function itself. It is a critical meditation on what the particular building type, the museum, is. Le Corbusier's design transforms the function, offering a practical solution and a normative understanding at the same time.

Through the Infinite Museum, he criticized the accepted functional scheme of the building type and replaced it with counter-norms. His museum approach offers a solution to a problem that was identified simultaneously – rejection and suggestion coexist in the practical process of design. The criticism of the building type itself is the starting point. A design that has constructed its aesthetic perception by deconstructing the given basis also has a liberating influence on the conventions. It is not a form after all, but a radical transformation of the content through the form.

Both projects by the two influential virtuosi have remained unrealized. Albeit theoretically, Walter Gropius went to severe lengths tackling the theater in the late 1920s, while Le Corbusier's museum demonstrates the most sensitive version of his utopianism.

Their radicalism might have been the reason for this, as both projects tried to express the opposite of a given framework – their own function – in the hope that they might dialectically create a conscious possibility of questioning. As an inherent part of its meaning, the proposed experience within the three-dimensionality offers a criticism tool to architecture as a branch of art. An architectural space, which can also be the spokesperson of the innovation it contains, has the potential to provide moments of critical inquiry within the emotions it arouses.

The cognitive critical meaning can be part of the aesthetic perception connected through the redefined daily life or, more precisely, the building type by questioning the purpose of the function. That is when architectural productivity as a critical stance directly takes on the human being and life itself becomes its subject.

The twin towers of unrealized, art-related classical modernity cut across borders, while redefining their function in terms of radical shapeshifting,

the totality of their interiors, and anti-hierarchical understanding of their objects. Their purpose was to provide space for new content in their own ways – avantgarde drama in the Totaltheater and contemporary artifacts in the Infinite Museum. Their skill lies in the way they practically transformed their critical standpoint into a central design concept instead of appealing to sheer symbolism to question habits.

That is the special language of architecture. It emerges when the critical attitude towards the function is expressed through three-dimensionality, redefining daily life, and helps to free up the minds of inhabitants. If opening new windows is what all great art does, it might well be the moment, or shall we say the place, where architecture becomes art.

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Towards Liberty of Thought

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Abstract

Can newly built structures embody and endure the uniqueness of past nobility? This idea of permanence, and therefore of time, inevitably confronts us as we introduce ourselves to the manifesto of an architectural competition for a future learning centre, the House of Courage. The manifesto envisions the centre's planned programme and its mission to strengthen our youth's ability to resist automatic stereotypes and to promote the persistence of humane ideals in times of hardship. The genesis for this noble idea in a specific location on Mazais Balasta dambis can be traced back to a historic act of courage that contains an emotional dimension still present within the fragile urban context of Ķīpsala island, Riga. This extraordinary act of unselfishness is an event that deserves an empathetic and architectural continuation of its nobility, yet the amplitude with which the knowledge is intended to be passed on contradicts the intimacy of the place. Our decision to take part and tackle the apparent duality of the competition task forms an irreducible opposition that guides us in our eventual work, where we seek spatial genuineness and tireless approximation. A new space for education must be able to strengthen the character of the place and avoid certain peculiarities of public typologies that risk surrendering the authentic nature of the nearby setting. To respond to ideological unpredictability, we seek to study the principles discussed in object-oriented ontology (OOO) that permit the act of architectural decentralization to dismantle any form of spatial and moral hierarchy between human and nonhuman objects. In the pursuit of liberty of thought, it is the aura of the place that becomes the basis for the revelation of courage hidden within each of us. The following body of text reflects on our thoughts about belonging to a place and time and serves as a guide to our work methodology, which ultimately resulted in a proposal for the House of Courage.

Keywords

Žanis Lipke, learning centre, freedom of speech, architecture, belonging, permanence, spatial mutations

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Prologue

Initiated as an extension to the nearby Žanis Lipke Memorial – a meditative space that reflects on the strength that lies within one of humanity's most tragic memories – the NGO "Memorial of Žanis Lipke" announced an architectural competition for the House of Courage in October 2020. The centre was proposed to be built in a land plot next to the Memorial and his family property in the historical part of Ķīpsala island, Riga (Figure 1). While the general mood of the competition was to build upon the past nobility of Žanis Lipke, it inevitably stumbled upon the problem of the mass and gravity of an architectural event in a fragile environment. Žanis Lipke was able to succeed under extraordinary circumstances, using the urban setting to his advantage, thus embedding the memory of his courage into the tiny streets of Ķīpsala. As our generation aspires to sustain the dialogue about the exceptional nature of his actions, we are also dangerously close to hurting the delicateness of the same context. The actions of Žanis Lipke are part of the layers of information that the urban fabric carries and should be retained for tomorrow's generations.

Urban Context

The location of Ķīpsala island bears historical significance due to its proximity to local ports and the industry of Riga. Early on, a spatial character suitable for the local fishermen and their needs emerged on the island, accompanying their generally modest wooden houses with fragments of industrial ensembles. The character of the island remained the same until the Second World War – a time when the Riga dock worker Žanis Lipke sheltered Jews in his household. The urban fabric of Ķīpsala embraced an act of unimaginable human courage – countless souls destined to perish were saved among the island's timid and secretive streets [1]. In the post-war period, the

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Žanis Lipke rescued over 50 Jews during the Nazi occupation of Riga from 1941 to 1944; up to 12 people could simultaneously hide in his household in Ķīpsala.

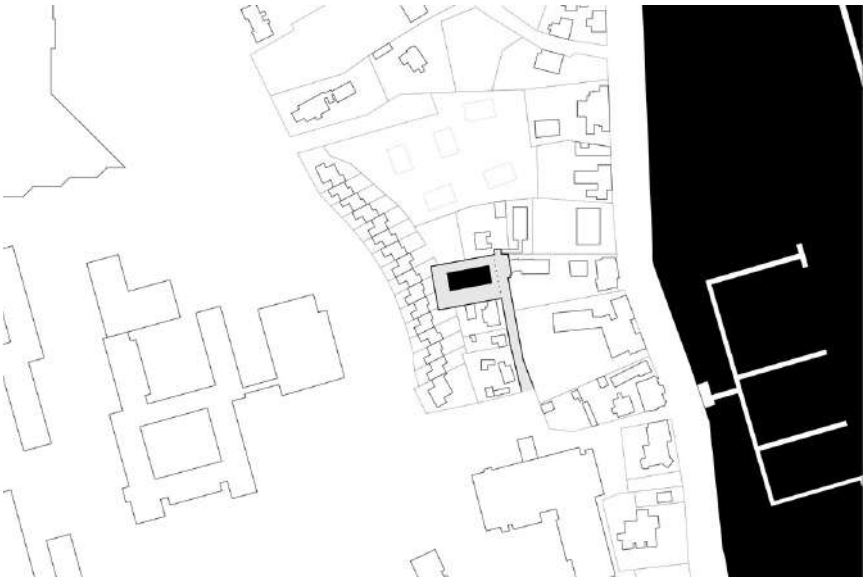

Figure 1. Proposed territory for the House of Courage (Riga: Reinis Saliņš, Igors Malovickis, 2021)

island gained a much more important ideological role – its natural location directly across from the city's historical centre encouraged the governing bodies to imagine a new silhouette for the city, countering the historic outline of Old Riga. Soviet grand planning gestures added large academic and corporate ensembles to the island's context. The western part of the island began its transformation into the nationally significant Riga Technical University (initially Riga Polytechnic Institute) campus in 1963, which is now a part of the *Knowledge Mile* [2] infrastructure and is included in the academic development strategy of the highest level. The southern part of the island just across Kalnciema Street, a major roadway connecting the east and west banks of Riga, at first hosted a former Soviet mouthpiece complex – the Press House – but is now transitioning into one of the city's central business districts run by commercial and financial enterprises of late capitalism. The quiet and authentic part of the island is now partly home to the wealthy elite, who have transformed the humble fishermen's houses into the city's lavish "cribs".

The historic property of Žanis Lipke is located on Mazais Balasta dambis, a secluded street invisible from any major accessways and sometimes even overlooked by the city's maps. It has a unique atmosphere which is characterised by blocked wooden fences, lush greenery escaping hidden territories and the creation of individualized spaces within these plots. The street is an artefact of the past that communicates about the history of the place much more than any new addition ever could (Figure 2). Juhani Pallasmaa (1996) in his essay *The Eyes of the Skin* argues that "buildings and cities are instruments and museums of time. They enable us to see and understand the passing of history, and to participate in time cycles that surpass individual life." The ideological aspiration of the centre resides in the planned location next to the Žanis Lipke Memorial. Designed by Zaiga Gaile and opened in 2012, the Memorial is a very well-crafted structure with an introverted nature, shying away from unnecessary attention. With its praise of shadows and a sense of materiality, the Memorial curates the individual's experience towards an emotional reconstruction of the hardships that

Figure 2. Mazais Balasta dambis during November 2020 (Riga: Reinis Saliņš, Igors Malovickis, 2020)

Žanis Lipke and the people he and his family saved had to face. The Memorial is a sensory object that, to use Zumthor's (2018) expression, embodies the feeling of history rather than communicating mere facts and information.

A closer inspection of the site reveals certain rules of engagement. While the archetypal public typology is an apparent mismatch for the intended location, ensuring the continuity of the past nobility is quintessential for the legacy of Žanis Lipke and human courage as a whole. The centre's anticipated programme indicates a potential expansion of the Memorial's educational capacity, meaning that the visitor volume would increase significantly and that the building would be better suited for a public campus area rather than a delicate network of streets and private dwellings. The prospect of hosting 220 [3] more people appears to be completely foreign to Mazais Balasta dambis (Figure 3). Public buildings are magnet objects that attract people, which is why they are often used as planning tools to activate and improve certain areas and to involve the public.

The House of Courage would face a philosophical dichotomy if we attempted to adjust the privacy of the street to a more public condition. The nearby academic environment is an urban dimension that would be a better fit for such an institution – one that is more public, accessible, predictable and easily controllable. It would emphasize the programme of the learning centre much more successfully, broaden the centre's resources and

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The Knowledge Mile is a cluster of education infrastructure on the left bank of Riga, consisting of multiple universities, institutions and cultural establishments.

3

The competition programme required a space for 150 people with two additional spaces for 30 people each. Taking into account the employees, the maximum number of people present would be 220.

capacity and thus reach a much wider audience. From an urban planning point of view, an academic learning centre should not be established on the hidden Mazais Balasta dambis. It is a functional entity that does not fit the climate of the place.

Confronting the Difficult

A well-established social and systemic comfort comes at its convenience, making genuine novelty harder to achieve. Inconvenience and its discourse are not schematic and programmatic positions that can be controlled with functional and pre-defined methods. While society's and especially youth's ability to resist automatic stereotypes can be practised anywhere, places that play by the rules pose a greater risk for authenticity and curiosity. Freedom from governing bodies and the liberty of thought inspires movements; their motivation speaks and establishes emotional contact directly with the individual. They are autonomous and usually form spontaneously – as an antidote to structured and organized processes and in moments of need for an alternative. A perfect and important example of remaining aware despite the prevailing opinion is Žanis Lipke, who experienced his most courageous moment in one of humanity's darkest hours and listened to his conscience, contradicting the predominant point of view. It is this exact notion that the House of Courage must employ – the ability to involve youth and steer towards a better future through the possibility of open discussion.

While the presence of an idea is external to a physical building, architecture has the ability to shape the setting and to encourage the individual to remain vigilant. The spirit of a movement – *an event* – is reflected in *The Tennis Court Oath* (1789-1794) (Figure 4), a work by the French neoclassical painter Jacques-Louis David depicting the democracy of the collective act – the adoption of the republic's constitution in Versailles, at the peak of the French Revolution. Spatial uncertainty

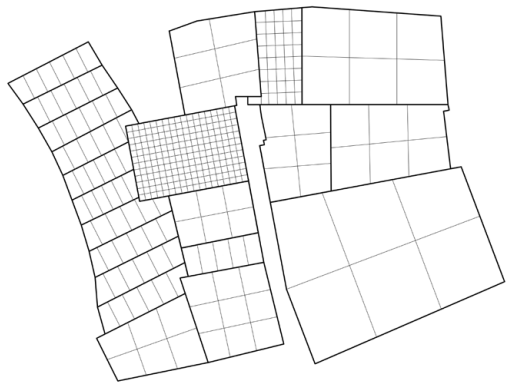

Figure 3. Defragmentation scheme depicting 220 more people in the proposed territory in comparison to the present human volume on Mazais Balasta dambis (Riga: Reinis Saliņš, Igors Malovickis, 2021)

over human action and the ability to spontaneously adapt to the occasion is present in the work. The adjacent spaces instinctively turn into grandstands and unite with the main hall, granting people the possibility to be a part of the event. By avoiding domination over the action, architecture immediately becomes a part of the movement and the process; it fulfils its duty as an independent structure and mediates the setting for human expression.

Emotional analysis of the given task indicates that a place where different generations can come together to practice courage and discuss difficult issues should exist. It becomes clear that such a place has to be free from the confines of the *system* and specific ideologies. Conventional design principles should not limit society's efforts towards self-regulation and an independent, critical and democratic dialogue. The existence of such a place is justified by the individual and their freedom rather than mere academic logic or the prevalent opinion.

Figure 4. Jacques Louis David, *The Tennis Court Oath*, 1789-1794 (Paris: Paris Musées / Musée Carnavalet, P67, 1791)

In conclusion to the urban and sensory analysis of the task, it is still evident that functional and normative solutions are, no doubt, an essential part of sustainable architecture. These principles should be respected with regard to the future building, yet the presence of the formal should not articulate an integral part of the centre's architecture. The individual's experience and spatial literacy should be at the centre of the event that is the House of Courage. It should enrich the human condition in a way that an archetypal public building with a formal approach could never achieve.

On Freedom of Speech

The importance of free speech as an integral part of society's intellectual and social progress was prominently argued by the 19th-century British philosopher John Stuart Mill in his essay *On Liberty* (1859) as well as many post-war thinkers. Mill identified not only the dangers of government censorship but also the threat of a social culture where diversion from the conventional results in peer pressure and potential expulsion from society. He states that "there needs protection also against the tyranny of the prevailing opinion and feeling" (Mill, 1859). Free speech is a basic human right that must always resist the domination of a single opinion. The idea that life is unthinkable and inviable as an isolated and individual act is at the heart of collective cooperation and mutual negotiation and therefore of social cohesion. Mill believed that the path towards righteousness is through collaboration and unification of different opinions because each of them likely carries a certain amount of truth. Such plurality of ideals was further defended by Isaiah Berlin, who argued that there are many genuine values. Berlin argued for differing opinions in *The Crooked Timber of Humanity* (1990), explaining that "collisions of values are of the essence of what they are and what we are".

Žanis Lipke is a constant reminder of the importance of free speech and the liberty of thought. He was a single individual who thought and acted differently, becoming one of the few. "If all mankind minus one, were of one opinion, and only one person were of the contrary opinion, mankind would be no more justified in silencing that one person, than he, if he had the power, would be justified in silencing mankind" (Mill, 1859). While the Western world became much more liberal during the second half of the 20th century, the notion of free speech remains fundamental and concerns every new generation.

Despite a more liberal attitude in modern society, societal fragmentation tends to have a cyclic pattern and may resurface along with the usual polemic about generational progression [4]. One of the factors influencing the current generational tension may be the advent of the global Age of Information and the subsequent shift towards new emerging technologies that have brought different tools for public engagement. The onset of rapid information transmission has also paved the way for new kinds of manipulation techniques – psychological and emotional rather than physical – the effects of which are currently evident not only in certain marginalized or radicalized groups but partly in the systemic institution itself. The usually autonomous Western academia has since faced a wave of polarization and the rise of an environment where politicized skirmishes extend beyond intellectual reasoning [5]. American social psychologist Jonathan Haidt (2012) in his essay *The Coddling of the American Mind*, argues that the expansion of digital socializing tools has made the young generation much more sensitive towards differing opinions. Social "bubbles" have become more common, and personal confirmation bias has started to prevail over critical-holistic thinking. The fragmentation of Western academia over the last 20-30 years suggests that even

intellectual institutions are not exempt from periodic fluctuations. Even today – considering the possibility of the House of Courage – we find ourselves in a moment of generational, technological and political transition, which will inevitably bring about corrections in the order of public thought. The youth of the future should be able to critically weigh differing opinions and avoid the domination of one narrative.

The complexity of the competition task distances us from the generic and formal, which we believe would fragment not only the existing spatial context but also the idea of courage itself. To remain true to its mission, the learning centre must be able to withstand the test of time and endure the influx of generational dogmas that come with each new age. As Mill argues: "yet it is as evident in itself as any amount of argument can make it, that ages are no more infallible than individuals; every age having held many opinions which subsequent ages have deemed not only false but absurd; and it is as certain that many opinions, now general, will be rejected by future ages, as it is that many, once general, are rejected by the present" (Mill, 1859). It is impossible to predict the fate of today's seemingly open way of thinking. What we think of as healthy, progressive and fair today might carry a retrospective context and be seen as a harsh past filled with prejudice. This may be true not only of our discourse but also of the means of material and emotional expression that we use as a society.

Backdrop for Human Activity

The physical manifestation of the House of Courage needs to withstand the technological and visual aesthetics that come with the unending rainfall of contemporary doctrines. Each generation constructs its means of expression the same way as each era defines its principles. The continuity of thought indicates that our current spatial needs may be specific to our generation and may be revised in due time. "Aesthetic and cultural practices are peculiarly susceptible to the changing experience of space and time precisely because they entail the construction of spatial representations and artefacts out of the flow of human experience," writes David Harvey (1992). While revisions always happen, the House of Courage should avoid the "Tyranny of the New" [6] (Caruso, 1998) over humane ideals and ethics that have been shaped throughout our existence. The building's compositional principles should complement rather than dominate the architecture. Juhani Pallasmaa (1996) writes that "we have a mental need to grasp that we are rooted in the continuity of time, and in the man-made world it is the task of architecture to facilitate this experience." The idea of permanence represents the ability to refrain from fading techniques, allowing the building to belong to a history, to an atmosphere and to a place.

To become a backdrop for a yet undefined human activity, the structure of the House of Courage should be decentralized to resist the privileging of one object over another. Both the individual and the building should be considered as equal entities that reject any mutual hierarchy between the two objects, thus interacting freely. American philosopher Graham Harman, in *Object-Oriented Ontology* (2018), argues that objects can gain meaning through the perspective of human perception. By renouncing the anthropocentric view, human perception is decentralized and becomes a part of object-oriented ontology. Considering that material and space are objects that gain meaning through human perception, space – the aura of the place – and the structure also gain the ability to adapt to any intellectual and functional state. Furthermore, a *human object* – the individual – and a *nonhuman object* – the building – are to be considered as sovereign and

4
While abandoning the past and embracing the future was proclaimed in the *Manifesto of Futurism*, its legacy is evident with modern movements that produce countless manifestos for a better collective future.

5
The academic polarization is most noticeably present with the formation of the so-called "intellectual dark web" – an informal group of thinkers that oppose what they regard as increasingly authoritarian tendencies within progressive movements in Western countries.

autonomous objects with their unique structure and nature. Despite mutual autonomy, the building cannot exist without human activity just as the spirit of the movement cannot exist without an authentic and authority-free environment. Both objects – the individual, of the present and the future, and space – intertwine, activate one another and change along the way. The theory offers us an understanding of the possibility that can be the House of Courage and what questions the centre as an object may face in the future.

The House of Courage

The constantly changing nature of the House of Courage makes it unnecessary to fully define its vision. The centre's character will be outlined by its main object, the individual and their discourse, the dynamics of which are impossible to foretell. Today's community will support the young generation's courage studies, but in due time, youth will begin to construct their own specific dialogue. For this reason, our proposal for the House of Courage is deliberately envisioned as a decentralized, imperfect and limitless setting for activity. The backdrop to this notion can be traced back to the competition brief, where many of the core decisions were left in the hands of the authors / architects. The proposed structure should be as liberal as the task set by the initiators. Any fixed solutions would fail this assignment, because we, the authors, surely cannot foresee the specific development of the centre over time. That is why the idea of the House of Courage is designed as open-source code and permits the incompletion of its ideology. Just as specific materiality is generally important, it becomes secondary to the centre's metaphysical structure. The House of Courage is not about appearance but about presence.

The building's spatial protocol is a reference to its basic purpose, which allows us to shape the space for liberty of thought. The user of the building – the individual – is a direct subject of architecture and an equal object within its ontology. The centre's spatial approach aspires to give each individual a platform for expression and the possibility to develop their voice and human strength, as well as the ability to create the story of the House of Courage. The ever-present layer of context shapes the architecture of the building and allows it to become a backdrop for human activity. The House of Courage employs the liberty of expression, permits the coexistence of different views and avoids guidance towards specific thoughts. It is the spatial continuum and the absence of the altar that liberates the space from designed hierarchy – the rejection of the stage is a recognition of equality among individuals.

The spatial structure of the House of Courage is a totalization of elements – a series of autonomous objects and voids that organize the internal part of the building (Figure 5). Similar to the fundamental principles of *Gestalt* psychology, each spatial object within the structure of the House of Courage is an integral part of the functioning of the system; however, beyond their autonomy, elements form a single whole, *oneness*, which is perceived as more than the sum of its parts. Although initially independent, the objects are united and can reorganize into multiple spatial continuities (Figure 6). Consequently, the organizational dynamics of the building are defined by another significant object: the individual who shapes the story and the aura of the place. The freedom of spatial organization, its sequential order, would not cloud the overall autonomy of the building's fundamental structure; instead, it would reinforce a true decentralization. The structure's authenticity would flourish in the face of possible unpredictability. In this sense, the objects also become elements of architectural experience; they become encounters, confrontations that interact with memory (Pallasmaa, 1996). Human activity fills the void and dismantles the border around certainty, allowing the required spatial composition to be arranged, which in turn permits

Figure 5. Interior view of the House of Courage (Riga: Reinis Saliņš, Igors Malovickis, 2021)

6
"The Tyranny of the New" is an essay by Adam Caruso. In this case, the essay title is used as a term to symbolize Caruso's and our search for parallels between the ever-increasing capitalist society and newness in architecture.

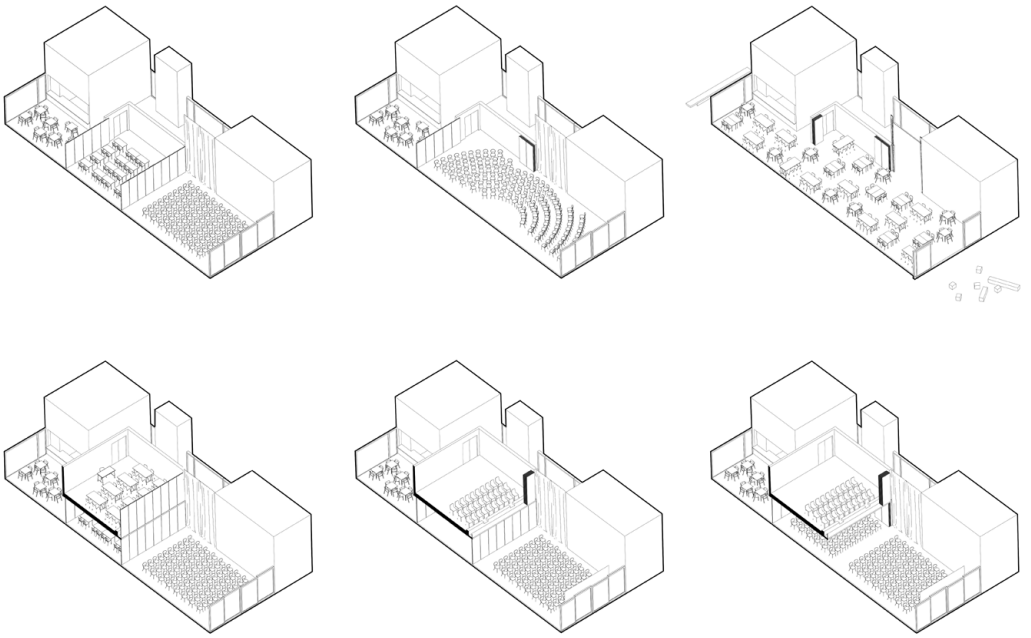

Figure 6. Spatial mutations
(Riga: Reinis Saliņš, Igors Malovickis, 2021)

the House of Courage to fulfil its mission. "The objects which surround my body reflect its possible action upon them," writes Henri Bergson (1991). Without the individual, the building becomes a regular, autonomous spatial entity.

Epilogue

The intended location has no room for careless strategies that can hurt the privacy of the neighbouring dwellings, making the centre's anticipated programme a difficult fit for the place. The building's metaphysical structure supports equality and rejects vertical hierarchy, demonstrating that a responsible approach to the emotional and human condition involves purging the irrelevant. The competition requirement to create a roof terrace or a visual landmark would strengthen the sensation of rising above everybody else, just as it would expose the usually hidden neighbouring backyards. This semantic condition is satisfied by the winning proposal but strongly opposed by us. It contradicts the defining aspects of the place, which are the only conditions that justify the possibility of the learning centre in that specific location. The quiet character of the neighbourhood does not demand visual stimulation, activity or eyes on the street [7]. The building should be able to balance between the specificity of the place and the authenticity of its function – it should be able to absorb public flows but avoid extroversion towards the

neighbouring environment (Figure 7 and 8). Its physical manifestation should complement the modesty of local wooden architecture, embodying its simplicity and spatial tectonics developed over time. As Adam Caruso (2001) states in his essay *The Emotional City*, architecture should be sensitive to those emotional qualities that define the city, melancholy, expectance, pathos and hope. It is the sense of belonging that guides us in our attempts to construct the building with a material that matures and changes with the passing of time, linking it to a historical memory and the tangible reality of the place. "All matter exists in the continuum of time; the patina of wear adds the enriching experience of time to the material of construction," writes Juhani Pallasmaa (1996). The compromise between the public and the private allows us to establish a link to the Žanis Lipke Memorial through the means of semantic opposition. While the Memorial remains completely introverted, the House of Courage should invite the public. The new centre is not conceived as a statement in front of the Memorial, but merely as a continuation of the knowledge it represents, obtained in difficult times of colossal courage.

The House of Courage should be a place where individuals can form intellectual revolutions, be unafraid to speak out, and where the possibility of a parallel culture [8] is articulated and discussed. Change is a messy and difficult process, but one that needs to happen from time to time, which is why the House of Courage should become the amplifier of society and a place to come together and grow. It needs to become a place that nurtures fearlessness and intellectual confrontation of the difficult because that is the only way we as a society can grow and mature.

We the authors do realize that it is impossible to escape the layers of the present time. Our intent is to look for conceptual justification for various architectural manipulations and their true nature, which does not speak of beauty *per se* but represents our vision of authenticity and lasting values.

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7

"Eyes on the street" is a term introduced by the American activist Jane Jacobs in talking about humanizing neighbourhoods, allowing more people to be out on the streets, thus making the urban space much safer.

8

"Parallel culture" is a term proposed by the authors of this essay. It describes a hypothetical, decentralized and ever-present parallel medium, where free dialogue and resistance to censorship or external influence are constantly ongoing.

Figure 7. Axonometric view of the House of Courage
(Riga: Reinis Saliņš, Igors Malovickis, 2021)

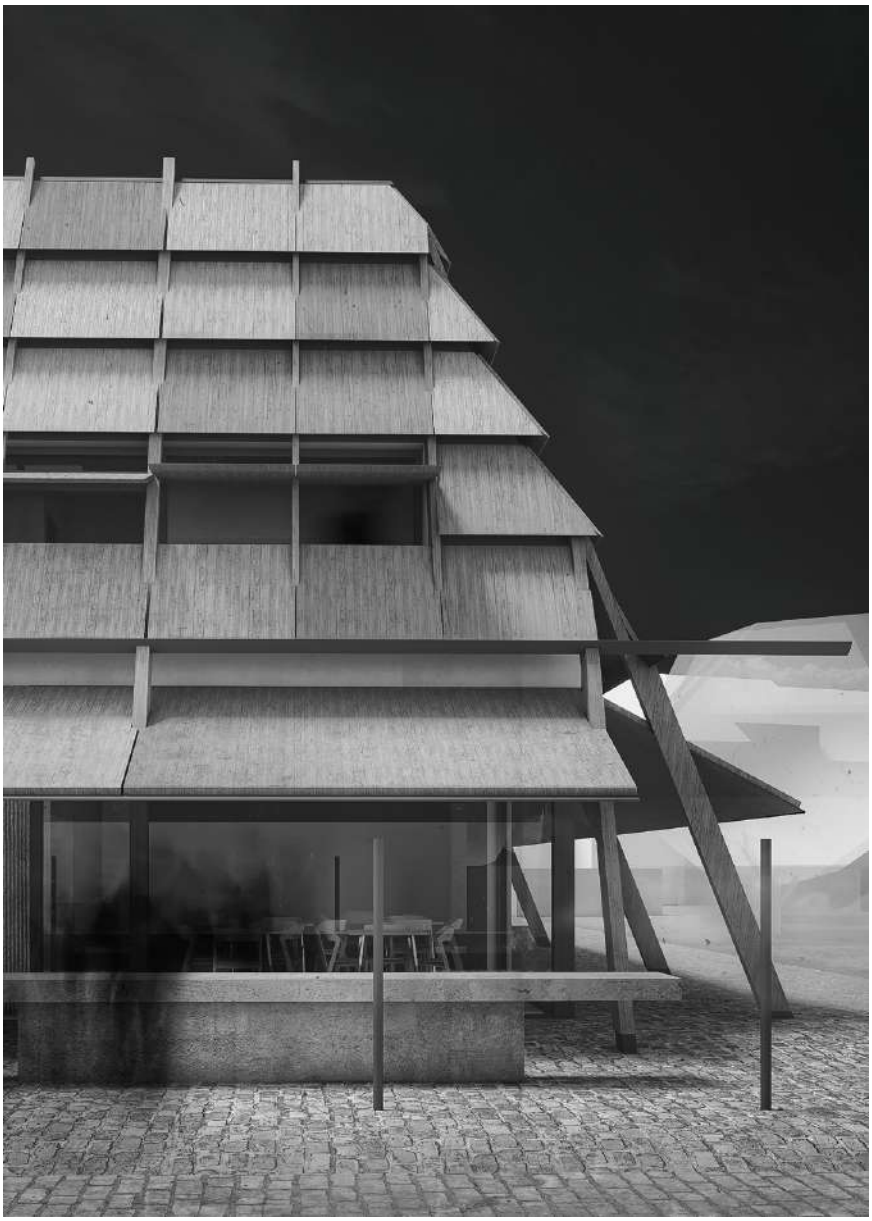

Figure 8. Exterior view of the House of Courage (Riga: Reinis Saliņš, Igors Malovickis, 2021)

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Zane Vēja

Under the Bridge: Space Seen as an Opportunity or Threat?

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Abstract

Elevated infrastructure – highways, railroad lines, and waterfronts under bridges – comprises places where major gaps disrupt the overall continuity of the city fabric. However, while they provide fundamental linkages within cities, these massive, elevated network structures can also cause fragmentation on the urban fabric ground level, particularly restraining pedestrian mobility. Overall, these structures ensure the expansion of neighbourhoods, thus creating countless unused spaces under elevated infrastructure that cannot be regarded as part of the road or the street.

This research paper examines Riga city lost spaces – unused urban spaces under elevated infrastructure – analyzing both their shortcomings and the potential opportunities to become part of the social life of residents. Attention is paid to two important large-scale objects, Gustava Zemgala overpass and Riga Central Railway Station, whose territorial conversion is related to the construction of the Rail Baltica tracks and the multi-modal public transport hub. In both cases, elevated infrastructure creates a valuable space below what could be seen and used for the neighbourhoods' social / spatial connector.

The last part of the article focuses on the ongoing project of the new Rail Baltica station, more specifically the area of Riga Central Railway Station from 11th of November Embankment to the Stockmann shopping centre, which will be reconstructed, while the railway will be located on an estacade. The author presents a spatial design proposal for this newly created territory, emphasizing the preservation of open and transparent public space under an elevated infrastructure by providing a wide range of active functions and points of social interaction. The design proposal includes large-scale traffic reorganization, with a focus on pedestrians, cyclists, and public transport accessibility.

Keywords

elevated infrastructure, mobility, undefined city space, urban public space

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Introduction

Linear infrastructure in the contemporary city has determined the physical form of the urban fabric and prevails over the image of the landscape. In a dense urban environment, bridges, roads, railways, and highway networks serve a primary purpose, providing for fast movement of vehicular traffic. Therefore, it could be considered that mobility provided by infrastructure networks has become an increasingly important part of the functional city (Verheijen, 2015). The main definitions used frequently in this text and introduced by the author are *linear infrastructure* and *elevated linear infrastructure*, which are based on Cabinet of Ministers Regulations No. 240 "General regulations for spatial planning, use and building" (MK Nr.240, 2013). For further clarification, the focal point of this article is on those built infrastructure formations that create additional urban space underneath, which could be used for public outdoor space amenities.

But the planned built form is not the decisive factor that characterizes the contemporary city; much of the city is occupied by large spaces which cannot be included in the building category. These spaces consist of parking lots; undeveloped and ruined land areas; former industrial, now brownfield territories; public parks; huge children's playgrounds and theme parks; unused plazas near high-rises; and high-speed roads and urban expressways. This inaccessibility exists because these modern spaces cannot be categorized, but are rather called gaps, hiatuses, *junkspaces*, lost spaces or non-places, which cannot be associated with buildings or places (Franck, 2007). These issues highlight the significance of the complication that these territories have no affiliation and coherence with urban space. Therefore, the territories have difficulty in carrying out valuable functions, which is why there is a need to prevent their formation as completely independent urban elements and fully integrate them into the city (Trancik, 1986).

Figure 1. Buffalo Bayou Promenade
(Houston: SWA Group (photo: Tom Fox), 2015)

Figure 2. Underpass Park (Toronto: PFS Studio (photo on the right-side: Tom Arban), 2016)

Case Studies

Since in Riga the concern about revitalizing spaces under elevated infrastructure is a relatively new topic, there is a lack of comprehensive research related to unused spaces under elevated infrastructure. It is necessary to study foreign examples, evaluating them not only in terms of functionality and social aspects, but also in terms of cooperation models that have helped to implement these projects. Cooperation models are considered as one of the leading factors for successful implementation of a project, including both the planning and construction process and finalized project maintenance. Therefore, this section will be dedicated to reviewing several international examples.

Each unused space under elevated infrastructure is in a way unique; therefore, diverse rejuvenation strategies may be applied. For example, spaces like tunnels act as a psychological barrier for pedestrians, who choose other, safer walking routes, avoiding unpleasant city spaces. In other cases, larger-scale unused spaces create a physical barrier, leading to city-scale urban fabric disruption. Accordingly, selection of the case studies is based on different rejuvenation strategies, collaboration models and influencing factors. The results of the research reveal several main cooperation models: the public/private collaboration model, the public organization and government collaboration model, the neighbourhood connection model, and the social function implementation model. There are several successful examples in Houston, USA; Toronto, Canada; and Zaanstad, Netherlands. Each shows how neglected parts of the city could be integrated into a coherent urban fabric.

The first case study comprises revitalization of an urban waterfront. This case study represents a public-private partnership – *the Buffalo Bayou Promenade* in Houston, USA, is one of the largest investments in public parkland ever carried out by the City of Houston. This project was the result of an historic public-private partnership to revitalize Houston's downtown urban waterfront. The project includes such functions as a park, a promenade, green infrastructure, a recreation area, a social events area, and pedestrian pathways. Although this megastructure in its original form

corresponds to the problematic category of the previously mentioned elevated infrastructure, it is now very well integrated in the city. The most important change is that the elevated freeway does not create disruption in the city's urban fabric; it causes neither a physical nor a psychological barrier for pedestrians. This case study represents reinvigoration in both spaces: the upper and lower level of infrastructure merge homogeneously with city movement (*SWA Group*, 2015) (Figure 1).

The next case study, "Underpass Park", represents an active public park providing diverse recreational and social opportunities while connecting new and existing local neighbourhoods and nearby parks. This previously neglected city space is part of a bigger urban revitalization project in Toronto, Canada. Before the revitalization, this area, as in the first case study, was a degraded place – unused space under the highway, a boundary line splitting several neighbourhoods. The public space location serves as a link between Corktown Common, River Square and the neighbourhoods on both sides of the overpass, providing such functions as a park, basketball courts, a skatepark, a playground, a flexible community space, an open-air art exhibition space and community gardens (*PFS Studio*, 2016) (Figure 2).

The third case study represents the collaboration model of a city administration, private business owners and social groups living in the area. The *A8ernA* project in the Netherlands is an attempt to restore the connection between the two sides of town, separated by an elevated highway, and to activate the space under the road. The new road crosses town by cutting through the city's urban fabric; moreover, this elevated highway separates important city administration and civic buildings. The city administration turned to various social groups, asking them to express their wishes. The wishes and suggestions of the community are laid out in a document called *A8ernA*, from where the name of the project arose. As the columns of the highway are about seven meters high, the space under the elevated structure had broad potential. As a result, the area has been transformed into a multifunctional space, including community, activity, commercial and parking spaces. There is a skatepark and playground area, a breakdancing stage, table soccer, a soccer field, a basketball pitch, parking, a covered square with a supermarket, "letter columns", a flower and fish shop, a light fountain, another cross street, a sculptural bus stop, a mini-marina, a "panorama deck" and a view of the river. Out in the open is a park of small green hills with hollows where one can hold barbecues in summer and an enclosure for ballgames. (*NL Architects*, 2003) (Figure 3).

These international examples demonstrate the diversity of rejuvenation strategies, various collaboration models, and potential applicability to Riga city case studies.

Spatial and social survey of Riga. Problematique and potential of linear infrastructure.

Riga city's spatial composition depends on linkage and comprehension of the infrastructural systems involved: a waterway, railway, and highway. Therefore, a monocentric structure is not applicable to the centre of Riga. A large part of the premises belonging to these territories falls into the category of unclassified urban space. The Daugava is the most remarkable natural feature in Riga city space. It divides the city into two parts, whereas in the spatial composition, the river Daugava forms the central core of Riga, which can be crossed by 5 bridges, adjacent to numerous elevated overpasses, which form unexplored areas around the bridges and the waterfront.

Alongside this, 19th-century railway tracks play a large but negative role in the structure of the city. The railway tracks form linear barriers that divide the city and are difficult to cross; the elevated level crossings create a whole series of undeveloped

Figure 3. A8ernA, upper image - before, lower image - after (Zaanstad: NL Architects, 2006)

urban space. For example, the central railway station, with arrival tracks in the very centre of the city, separates Old Town from the suburb of Maskavas forštate, where a large part of the tracks is located on an artificial embankment, thus creating tunnels at intersections with crossing streets.

Over the past few years, major multi-level infrastructure nodes have been built over the railway, waterway, and urban environment. For example, Salu Bridge overpass and Dienvidu Bridge overpass form multi-level infrastructure nodes on both banks of the river; moreover, in the centre area both nodes form connections to Krasta and Maskavas Streets, thus creating large areas of new urban space between the adjacent Maskavas forštate suburb residential area and the river Daugava waterfront (Figure 4).

To link and integrate these undefined, leftover spaces into the urban environment, the necessary qualities and social aspects of urban public spaces must be mentioned here, which are decisive from the point of view of the end-users. The great accessibility and freedom that any space provides, offering various opportunities for exploration, creating spontaneous conditions for various activities – these aspects stimulate the liveliness of the place and the circumstances of social interaction. Social interactions and activities comprise all activities that depend on the presence of others in public spaces. Social activities include children at play, greetings and conversations, communal activities of various kinds, and finally – the most widespread social activity – passive contact, that is, simply seeing and hearing other people. Social activities occur spontaneously, as a direct consequence of people moving about and being in the same places (Gehl, 2011). This implies that social activities are indirectly supported by the spatial quality and functionality of the public space.

Mapping: unused spaces under elevated infrastructure. Riga.

As mentioned in the previous section, describing the main problems and potential of linear infrastructure, this article focuses on the territory of the centre of Riga, and the main elevated infrastructure objects are located in the central part of the city, connecting both banks of the river Daugava. In an urban context, it is important both to assess the current situation and to look at the city's development and future strategies. There are several such cases in Riga that should be highlighted and emphasized.

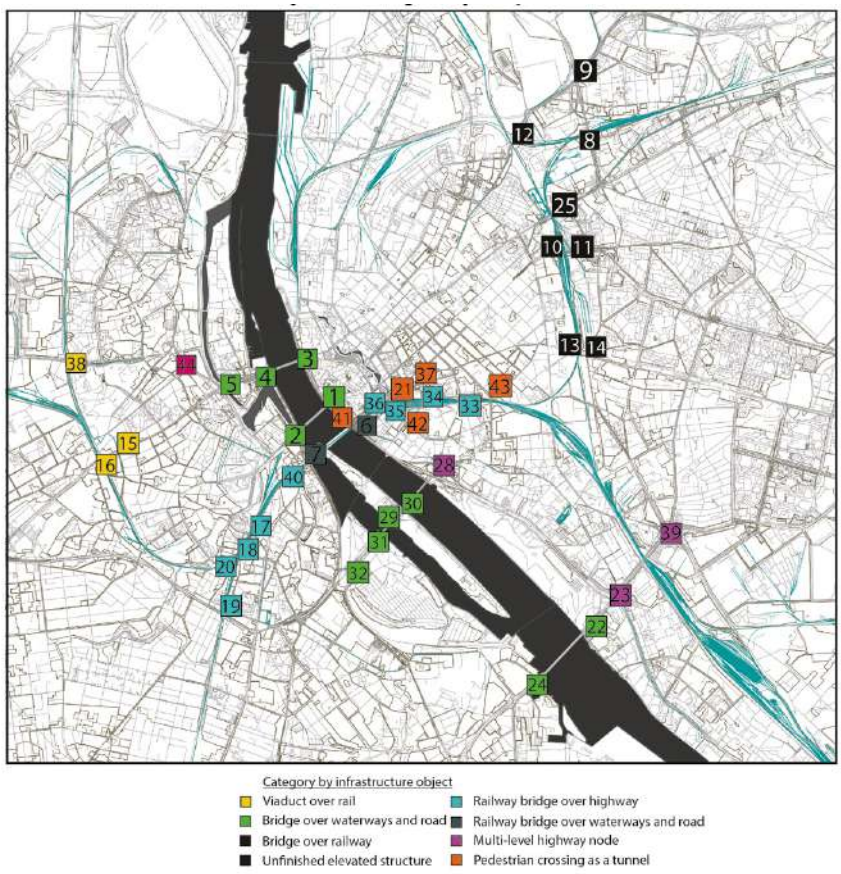


Figure 4. Map showing elevated infrastructure objects in Riga city (Riga: Zane Vēja, 2018)

One worth mentioning is Gustava Zemgala overpass, a relatively new overpass, the last stage of which was built at the beginning of 2011; the territory fragments and divides Čiekurkalns neighbourhood, creating almost 10 ha of unused space under the overpass. This is a very complex and important area, as it is located on the outskirts of the newly established residential / business district New Teika and acts as a splitter, yet it could be developed to serve as a unifying element of the Čiekurkalns community (Figure 5).

Riga Central Railway Station is located in the centre of the city, in the middle of the most important points: the Central Market, the bus station, and Old Town. The importance and topicality of this area is confirmed by the tenders announced in recent years, which include the reconstruction of the Central Market, the reconstruction of the central bus station and the construction of the Rail Baltica track and the multi-modal public transport hub. A local plan is being developed for the area with the following main objectives: to define the preconditions for developing Riga Central Railway Station and its surroundings and for creating a multimodal traffic unit in line with 21st century trends and integrated into the city structure; to create a

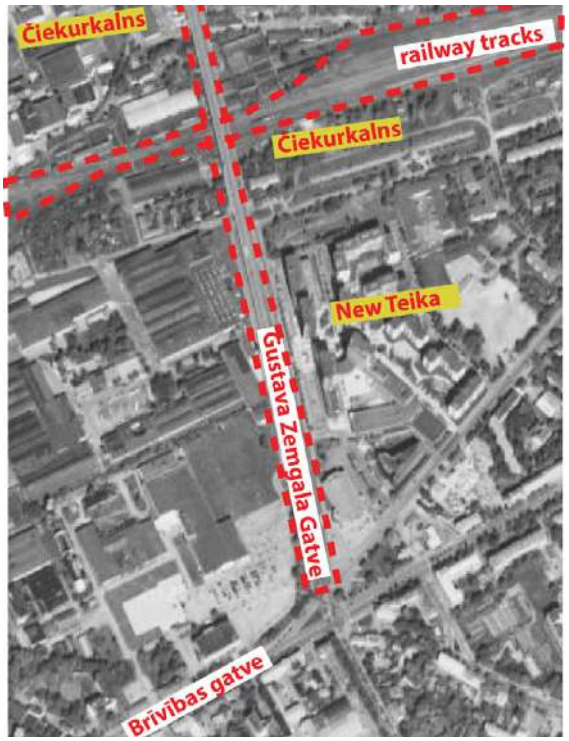
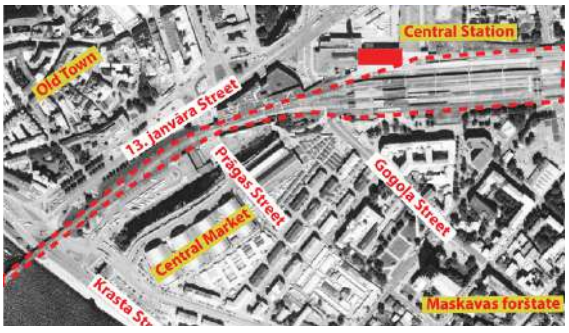


Figure 5. Gustava Zemgala overpass separating Čiekurkalns and New Teika neighbourhoods (Riga: Zane Vēja, 2018)

Figure 6. Riga Central Railway Station, indicating the railroad system that divides Old Town and the Maskavas forštate neighbourhood (Riga: Zane Vēja, 2018)



better link within the city (between Old Town and Maskavas forštate); and to improve the attractiveness of workplaces and residences in the local planning area using the railway infrastructure of Rail Baltica (Balgalis, 2018). The main design proposal of the Rail Baltica project includes dismantling the existing railway embankment and placing the new tracks on an estacade, thus creating a wide-open public space under elevated infrastructure in the city centre. The length of the planned estacade from Krasta Street to Prāgas Street is approximately 350 meters and creates around 9,000 m² of space under the elevated infrastructure. This open city space serves as an urban connector between Old Town and the Central Market neighbourhood (SIA "Eiropas dzelzceļa līnijas", 2018) (Figure 6).

In both cases mentioned, it is important to investigate aspects on property ownership and management rights. The state roads and their adjacent land, including the road-land partitions and all the structures included in the network of these roads, are the property of the Republic of Latvia, transferred to the state joint stock company *Latvian State Roads*; in some cases, ownership may be transferred to the municipality. Both in the case of Gustava Zemgala overpass and in the case of Riga Central Railway Station and the Rail Baltica project, the land and infrastructure are owned by the state; after complete acceptance of the construction work, the question of the management of this infrastructure will arise. Beyond the issue that the function of the space under the Rail Baltica rails has still not been clarified, it is necessary to investigate the legislative background.

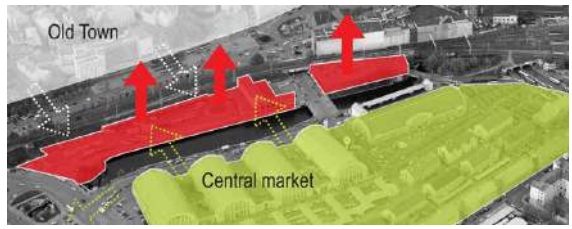
Analyzing legislative norms and definitions related to elevated infrastructure, it can be concluded that the only reference to space below or around an infrastructure object is made in definitions of road and railroad infrastructure, indicating that both include airspace in the road segment; however, it

Figure 7. Urban integration scheme (Riga: Zane Vēja, 2018)

is not precisely defined, nor are possible usages and restrictions specified. Regarding Riga Central Railway Station and Rail Baltica (Rail Baltica, 2018), legislative parties are expected to face new challenges and uncertainties; for example, the term "estacade", designating the new structure for the tracks, is not defined in legislation. Consequently, neither regulations nor the practice of how to proceed in this case have been arranged.

In both cases, we can conclude that to a large extent (100% in the case of the Central Station embankment and partly in the case of Gustava Zemgala overpass) the land belongs to the state and is transferable to Riga municipality. The preferred scenario would then be for the municipal development department and construction board institutions, in cooperation with residents and the neighbourhood association, to determine the application of the best spatial and social functions for each territory.

As stated previously, one of the main rules for the quality of urban space is the comfort and well-being of the city. At present, both cases mentioned here are not used for pedestrian movement or any social function and could rather be called both psychological and physical barriers. Spaces creating a psychological barrier are ones we tend to avoid: dark and uninhabited spaces. A second barrier is created by spaces that are separated physically by fencing or lack pedestrian pavement, thus creating a complicated crossing.



Spatial proposal – Rail Baltica project: Riga Central Railway Station, the area from 11th of November Embankment to the Stockmann shopping centre

Considering the topicality of the Rail Baltica project, the article will offer a design proposal for the territory around Riga Central Railway Station, the area from 11th of November Embankment to the Stockmann shopping centre. The main development goals of the territory were the *Riga City Development Strategy for 2030*, stipulating that the Riga city centre should be transformed, focusing on several main priorities: high-quality open public outdoor space; exposure of car traffic to pedestrian and cyclist flows; and health and sports activities in city parks and by the water (Rīgas Domes attīstības departaments, 2014).

One of the starting points of the design was evaluation of the research area, including an analysis of functionality and traffic movements. More precisely, based on the development goals of the city of Riga and the design proposal developed by Rail Baltica, several key aspects had already been identified:

1. Within the framework of the Rail Baltica project, the area from 11th of November Embankment to the Stockmann shopping centre will be reconstructed, and the railway will be placed on an estacade, thus revealing open, public space under elevated infrastructure in Riga city's historical centre (Rail Baltica, 2018).

2. Due to the construction of the new Rail Baltica track next to the adjacent rails, it has been determined that the *Titanic* car parking building will have to be significantly rebuilt or the building will need complete dismantling. The demolition of the building would free up public urban space by the water and provide for a wider pedestrian area, addressing the current connectivity problem between the Central Bus Station and Central Railway Station.

The author in his spatial proposal offers the partial removal of bus traffic from the western part of the plot, closer to Krasta Street, maintaining only the international bus flow. Using the new free space under the railway tracks would allow for the construction of a separate international bus station and platforms in a strategically suitable place, directly between the Central Market and Old Town – the most important sights of the city (Figure 8). Alongside this, the poor-quality underground pedestrian crossings under Satekles Street and 13. Janvāra Streets are to be dismantled and replaced with wide surface pedestrian crossings that will connect Old Riga with the Central Market (Figure 7).

The spatial proposal target is to keep an open and transparent area under elevated infrastructure, while providing active functions as much as possible. New buildings are to be integrated – an international bus station, a café, a restaurant, a co-working space, a boat rental, and an art space

Figure 9. The spatial proposal target is to keep an open and transparent area under elevated infrastructure (Riga: Zane Vēja, 2018)

will be placed under the estacade, thus ensuring social and functional diversity. To provide a clear architectural connection between Old Town and the Central Market area, the space under the elevated infrastructure is to be complemented with steel arches, similar to Railway Bridge and the market pavilions (Figure 9).

Old Town and the Central Market now have poor-quality pedestrian connections: one underground pedestrian crossing through a tunnel and one ground-level pedestrian overpass located far from pedestrian traffic routes. The spatial proposal is to create two 9m-wide pedestrian crossings over 13. Janvāra Street to provide a better connection between Old Town and the Maskavas forštate neighbourhood.

The proposal includes traffic reorganization; 13. Janvāra Street traffic lanes must be reduced to two lanes in each direction. Traffic reorganization includes Krasta Street traffic flow reduction to two lanes in each direction and traffic moving away from the waterfront, closer to Central Market. This will provide for a wider, more open waterfront, to be complemented with boat moorings and sports activities (Figure 10).

Along 13. Janvāra Street, a wide bicycle lane is to be created, separate from pedestrian movement.

Figure 8. A strategically important point is that tourist buses can park here under the bridge – now in the most important part of the city – and tourists can easily go to Old Town on one side and to the Central Market on the other (Riga: Zane Vēja, 2018)

The new Railway Bridge is to be supplemented with a pedestrian/bicycle lane, which has two connections with the street level: a separate bicycle bridge circling over the water and connecting with Ķengaraga promenade and a further slope connecting with the pedestrian bridge over Kārļa basin towards the Central Market pavilions.

Inclusion and development of two waterfronts is solved within the framework of this spatial proposal. Firstly, the Daugava waterfront would become a very wide, open waterfront supplemented with necessary activities, providing a quality urban environment. By offering several boat moorings, a wide pedestrian viewing platform over the water and promenade between Railway and Vanšu Bridges and an outdoor skatepark and promenade would be established under Railway Bridge. The Kārļa basin waterfront would become available for pedestrians; the shoreline would be lowered to the water level and there would be an amphitheatre for musical and art events as well as a circular-form pedestrian footbridge over the water. The space under the pedestrian bridge would be used for kayak, canoe and SUP board rental – to provide more active water life in the city centre (Figure 11).

The aim of this article has been to highlight the problem as such, to emphasize the most topical places of large infrastructure objects in the city of Riga which significantly affect neighbourhoods, creating divisions and thus establishing huge, unused spaces, which could be categorized as urban gaps, and to propose a contemporary design solution for the chosen site. It is important to point out that the author's proposal for space under elevated infrastructure entails a spatially functional diversity that provides for both physical and social interactions and creates a necessary connection between two different neighbourhoods. The proposal includes such important aspects as rearranging the traffic, focusing on the flow of pedestrians and cyclists, and highlighting the spatial qualities of the space: waterfronts and landmarks. Based on the analysis of international examples, the achievement of this proposal would require the application of a collaboration model: cooperation between the state, local government, and the private sector, as well as inviting representatives of the respective neighbourhoods. This type of cooperation model has proven to be the most optimal means of representing the interests of all parties.

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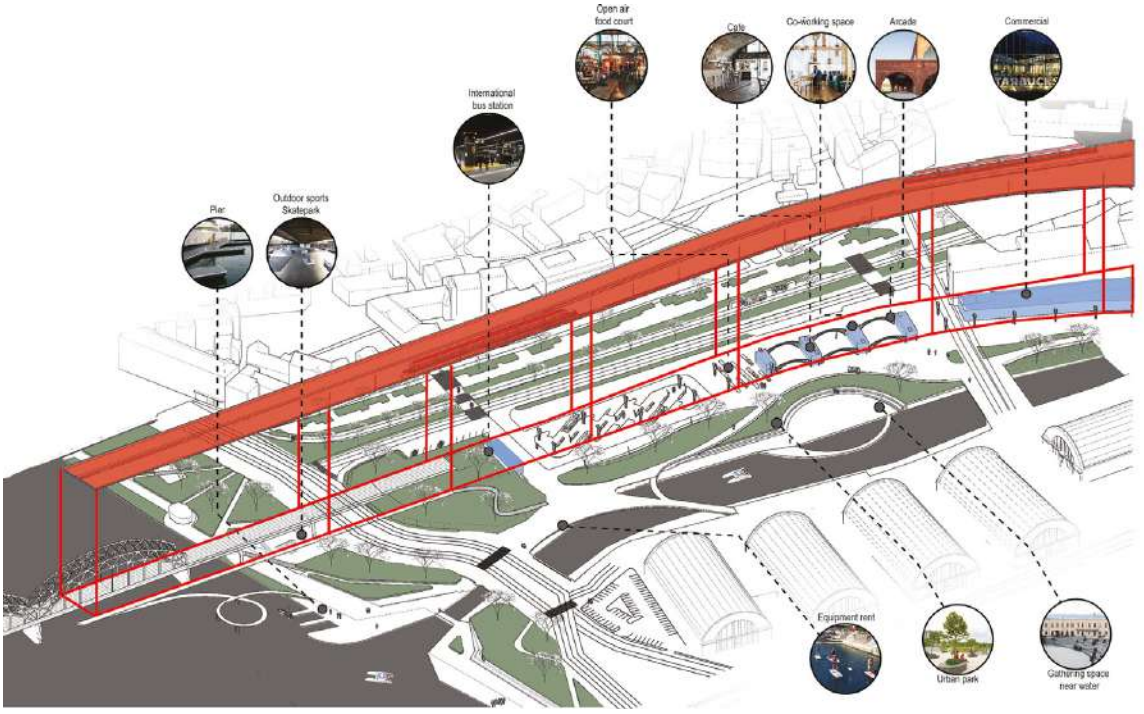
(right) Figure 10. Design proposal. Traffic reorganisation and pedestrian crossings on 13. Janvāra Street (Riga: Zane Vēja, 2018)

(below) Figure 11. Design proposal. Axonometric scheme with function implementation (Riga: Zane Vēja, 2018)



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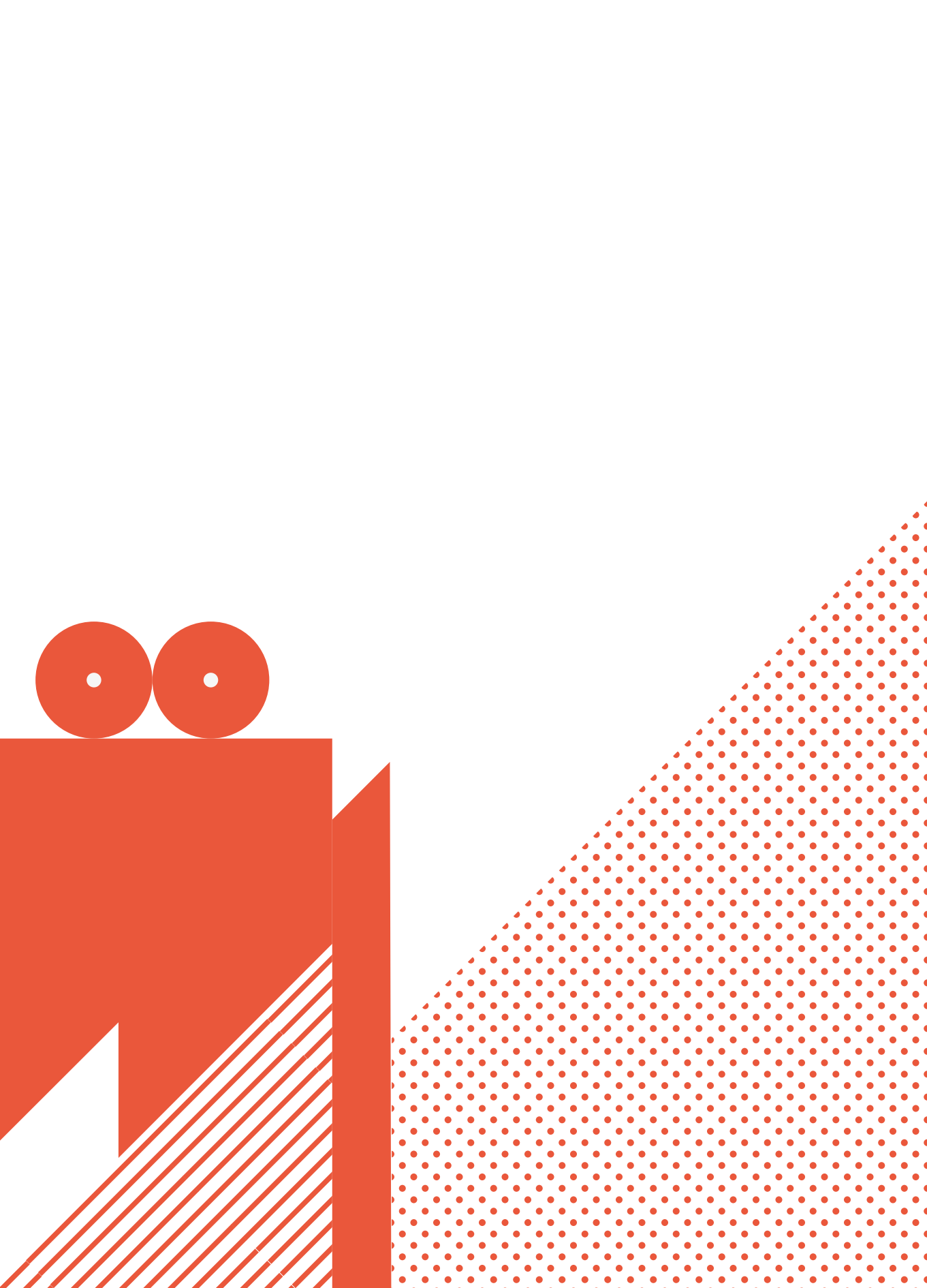

Audiovisual Media Arts

Chris Hales

Artificial Intelligence: The Latent Revolution in Filmmaking

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Abstract

New practices in experimental film are emerging as a result of artificial intelligence (AI) developments in machine learning and generative adversarial networks (GANs). The author describes this as a Latent Revolution in filmmaking, complementing Lev Manovich's so-called Velvet Revolution in motion graphics that occurred in the mid-1990s. A review of current artistic and filmmaking practice using AI leads to the identification of the role of AI and GANs as creative partners, contributing their own ideas and imagery to complement those of the filmmaker. Experimental films produced recently using AI-based techniques are analysed; some of these could be said to be an extension of traditionally recognised practices, whereas others demonstrate new processes and result in novel genres of film that have little or no historical precedent. The primacy of latent space is highlighted as being a major characteristic of GANs that can lead to new kinds of creative imagery and in particular the 'latent spacewalk film'.

Keywords

experimental film, experimental animation, abstraction, neural networks, GANs, artificial intelligence, latent spacewalk

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Introduction

Reflecting upon a decade of moving image developments, Lev Manovich (2007) considered motion graphics to be a totally novel type of filmmaking brought about in the mid-1990s by what he termed the 'Velvet Revolution' (paraphrasing the peaceful democratic changes in Czechoslovakia) of Adobe After Effects, which was the first popular software designed to create and combine animation, compositing, and special effects on a personal computer. Both the process and the types of video that emerged represented, according to Manovich, "a new hybrid visual language of moving images in general ... which is also common to a large proportion of short 'experimental' (i.e. non-commercial) films being produced for media festivals, the web, mobile media devices, and other distribution platforms" (Manovich, 2007, pp. 69–70).

Moving to the present day, this paper seeks to draw attention to what seems to be a new revolution that has emerged rapidly in the creative community yet for the time being has remained relatively unnoticed: the use of artificial intelligence (AI) by artists, creatives and filmmakers. The emphasis here is on experimental filmmaking and the article will be supported with first-hand experience gained by the author in teaching AI-filmmaking workshops at RISEBA and other universities. Since the creative adoption of AI is happening so recently and so rapidly, all that is possible here is to take a snapshot based on the moment in time at which this article is written—there is nonetheless a sense that the text will seem dated soon after it is published.

As a counterpoint to Manovich, the term proposed here is the 'Latent Revolution' brought about by AI. The term 'latent' reveals that the revolution is still in progress (at least at the time of writing—Manovich was writing retrospectively) and is occurring almost unnoticed, whilst at the same

Figure 1. Photographs of the author processed with DeepDream (left) and style transfer (right) in the style of Van Gogh's *Starry Night* (Riga: Chris Hales, 2021)

time it references the so-called 'latent space' which is a unique characteristic of neural networks. Latency in the context of digital and analogue media has also been addressed by Sean Cubitt (2014) albeit without reference to AI. Although the ensuing discussion is focused quite specifically on experimental filmmaking, it must be borne in mind that using AI for artistic purposes represents only a fraction of its application across all aspects of society.

There are specific reasons why AI has rapidly developed and expanded into creative fields such as experimental filmmaking, and why at the same time it seems to have caught us unawares. In 1989 film visionary Gene Youngblood acknowledged the growing importance of computer code to the filmmaker (Youngblood, 1989) and "intelligent behavior" was suggested in the 2003 exhibition catalogue of the monumental *Future Cinema* exhibition (Weibel, 2003, p. 597), yet at the same time Hamlyn and Smith's recent book (2018) on new perspectives and practices in experimental animation makes no reference whatsoever to artificial intelligence. As recently as 2018 the use of AI for creative purposes was in the hands of a privileged few who had access to substantial computing power and possessed high-level knowledge of complex computer programming techniques. Although the creative act was at that time out of the hands of the majority, the phenomenon entered mainstream culture due to *DeepDream* (acidic-coloured hallucinogenic imagery often including nightmarish animal faces, as in Figure 1), style transfer (applying the style of one image to a different image, also shown in Figure 1) and 'deep fakes' (the transfer of facial motion onto a different face, as illustrated in Figure 2). Within a short period of time these techniques (and others) were being applied to generate attention-grabbing imagery on a variety of easy-to-use websites and mobile apps, usually for entertainment purposes. The *MyHeritage* website, for example, which had already introduced an AI-based colourisation tool called *DeOldify* in 2020, offered a *Deep Nostalgia* service in February 2021 to animate the faces of photographs of ancestors using the same process as 'deep fake'—it is, basically, a tool that creates short animated films based on faces. *Deep Nostalgia* became the latest viral sensation (as had happened earlier with the mobile phone app *FaceApp*) and its popularity further demonstrates how AI-based image manipulation is becoming increasingly mainstream and its current capabilities are being widely understood at the end-user level. The real

Figure 2. Stills from a short video sequence in which the impassive face of the Mona Lisa takes on facial expressions of the boy featured in Herz Frank's 1978 film *Ten Minutes Older* (Riga: Chris Hales, 2021)

revolution that is occurring, however, lies at the top end of the creative chain. Artists and creators are no longer disenfranchised and are now able to experiment with the *process* that creates the end product. There has been a sudden proliferation of easy-to-use software, combined with access to the necessary computing power, which enable the various capabilities of neural networks to be experimented with by non-programmers and creatives for their personal projects. How the field of experimental film is affected by this is the focus of the discussion that follows, subsequent to an introductory overview of AI-based terminology, techniques, processes and tools in the context of creative practice.

AI for Creatives and Filmmakers

Within the broad field of AI it would be more accurate to use the term 'machine learning' (ML) to describe the process by which a set of related data (images of faces for example) is trained into a neural network 'model' which is employed by software in a variety of ways. As a result of the algorithm and set of data on which it was trained, a model can be fed new data and will recognise patterns in it and can therefore make certain predictions and create its own patterns. Concerning machine learning itself, developments in generative adversarial networks (GANs) which pit a generator against a discriminator have proved to be easily applicable to artistic practice. Scientific papers demonstrating new varieties and modifications of GAN neural networks are being published almost daily, and it can be argued that the GAN is to the Latent Revolution what Adobe After Effects was to Manovich's Velvet Revolution.

Since the necessary datasets and models can be substantial, considerable computing power, usually beyond the capability of a desktop PC or laptop, becomes a necessity. Although plenty of open-source software code has been available on programming platforms such as *GitHub*, installing all the requisite and disparate software elements to successfully run platforms such as *Tensorflow* on a personal computer has always been a difficult and non-trivial task which would invariably require knowledge of a software language such as *Python*. This has proved an insurmountable obstacle for the majority of visual artists, and even if it was overcome the necessary computing power and available RAM memory would be limited to whatever the local CPU could muster: AI usually requires the computational power of graphics processing units (GPUs) which are many times more powerful than a typical central processing unit, the computer's CPU.

What has facilitated the recent uptake of machine learning techniques by creatives is the availability of software programmes that solve both these difficulties: firstly by offering cloud-based GPU time and secondly by easy-to-use software with

Figure 3. New styles of mittens created out of the latent space of a generative model trained by the author on 500 images of Latvian and Lithuanian mitten designs (Riga: Chris Hales, 2021)

understandable graphical user interfaces. The possibilities evolve almost daily but at the moment of writing *Runway ML* is such a software, originated by a graduate of NYU Tisch School of the Arts and specifically developed for ease of use by creatives and artists. Google's *Colaboratory* (*Colab*) *notebooks* offer an alternative, browser-based solution, which functions as a virtual machine: neither installation nor coding is required, yet the code is still revealed (and therefore demystified) in a series of annotated 'cells' that a user can activate in sequence. Many newly developed GANs and techniques published in scientific papers have their code made available in the form of a *Colab notebook*. Amongst other alternatives, Apple has introduced a software solution for its own platforms entitled *Create ML*.

Since it is more or less *de rigueur* for contemporary filmmakers to understand digital video editing software, the use of an additional software is by no means an insurmountable task. To make things easier, a great many datasets and pre-trained machine learning models have been made publicly available, meaning that creative outputs do not necessarily presuppose that filmmakers must harvest a dataset and carry out their own model training processes. This could be thought of as the equivalent of using the off-the-shelf filters/effects that come bundled with a video editing or post-production software: the starting point of any project in *Runway ML* is to select a model from a large variety offered by the software, some of which have been created by members of *Runway's* community. Undoubtedly, personalised models trained on a filmmaker's own dataset offer the best route towards uniqueness and originality but this requires a much greater commitment and the process is extremely time intensive and can require days of continual access to the computational power of a GPU: it is possible to do this with *Runway ML* but to do so would incur non-trivial costs. Similarly *Runway ML* permits the chaining of the output of one model to the input of another, which opens up fascinating possibilities for the creation of unexpected and unusual imagery—although to do this comes, again, at additional

usage costs.

Within the realm of ready-made models, a variety of different functions are commonly available which are trained with and acting upon data that might be in the form of text, visual imagery, and audio, and many of these have applications for filmmakers. Three common functions are generators, identifiers and stylisers. The former are GAN-based neural networks that can create new and original instances from the trained model content, with or without a prompt from the user, and their outputs can be readily seen in current websites such as those entitled This Person (or horse, or cat, etc.) Does Not Exist. GANs are equally effective using text-based models to produce sentences, stories and scripts. A recent (2020) GAN-based architecture of note is NVIDIA's *StyleGAN2*, which was developed on high-quality images and is able to generate impressively photorealistic face images down to the detail in hair and skin. Identifiers (or classifiers) could almost be thought of as having the inverse function and are most commonly employed to recognise objects or describe the content of a still image or video frame, or to find and identify faces and facial emotions. Stylisation, in particular transformation between images of different styles, is arguably the most well-known creative application of machine learning and, as alluded to earlier, is readily available through a variety of websites and apps. In the basic technique specific models are pre-trained to specialise in a certain artistic style, for example Claude Monet or Vincent Van Gogh, and the user need only supply an image indicative of content (image-specific features) in order to create a result in which the chosen style is applied to the content. A multi-style model enables the output to be produced as a weighted mixture of styles, whereas 'arbitrary' style models permit the user to supply not only the content image but also the requisite style. Stylisers are frequently applied to faces—the abovementioned *FaceApp*, for example, includes use of the style-based *CycleGAN*—and audio style transfer is also possible, although for the time being it is much less common.

Some ML techniques simply perform the function of video post-production tools and although of interest to filmmakers, they tend to replicate already existing non-AI functionality but do it differently and potentially more successfully. An example would be *ESRGAN*, which can upscale image/video resolution (so-called 'super-resolution'). AI-based processes can also be used to improve image quality, apply colourisation, and perform auto-cropping and green-screening. Additional AI tools exist to predict depth in an image, to animate the depth within a 2D image, and to perform motion capture. All of these tools might have an application in any kind of film, including those intended to be experimental artworks.

The key characteristic of generative neural networks is the concept of latent space—hence the term *Latent Revolution* suggested here. This will be discussed in more detail later, but a latent image can be considered a representation that is not mathematically modelled (as might be the case in 3D computer graphics) but is a vector-defined method by which the image can be formed from the manipulation of aspects of the dataset on which the GAN was trained. A neural network typically has many layers, each of which can make its own particular contribution to a generated image: novel images are therefore created from these generative models that are related to, but different from, those in the original dataset. Figure 3 shows outputs from a model trained by the author. Given sufficient computing power, it is possible to 'find' the equivalent of a user-supplied input image within the latent space manifold in a process called projection, which opens up possibilities to subsequently modify it in various ways—for example, aging a face or changing its expression is possible once the latent face representation has been found.

There is an additional characteristic of note, which is that many of the GAN-based visual outputs are generated in a square format, primarily because the model was itself trained on square format images. Whereas square negatives have always been popular in photography, the dimensions are more problematic with video and not commonly recognised as a valid format. This is a practical consideration that filmmakers, at least for the time being, need to take into account. Another practical issue is that not all models are specifically made to act upon video files—the majority of visual models function on a single image at a time, meaning that sequences of images need to be processed one by one and the outputs combined into a single video file when processing is complete.

AI as Creative Partner

Manovich not only examines his Velvet Revolution from the point of view of its audiovisual outputs, but also by analysing the new working practices it engenders:

"In the case of After Effects, the working method that it puts forward is neither animation, nor graphic design, nor cinematography, even though it draws from all these fields. It is a new way to make moving image media. Similarly, the visual language of media produced with this and similar software is also different from the languages of moving images that existed previously."

Lev Manovich (2007, p. 74)

Artificial intelligence also has the potential to fundamentally change the manner in which experimental filmmakers formulate and create their works—by acting as a creative partner. Although mainstream films are essentially collaborations between large teams of specialists, the experimental filmmaker has traditionally been a loner with a personal vision to express, concerned with all aspects of the filmmaking process from cinematography to acting, only occasionally bringing in a specialist for aspects such as the soundtrack (Malcolm le Grice, for example, recruited Brian Eno for the soundtrack of his 1970 film *Berlin Horse*). Formal partnerships or teamwork in experimental film are rare (an example being the Surrealist filmmakers the Themersons) and even informal collaborations are unusual—*Meshes of the Afternoon* (1943) is recognised as Maya Deren's creation even though it had cinematography and an acting role by her then-husband Sasha Hammid. Access to funding, equipment and facilities, and even screening opportunities have historically been difficult for the experimental filmmaker, although these particular aspects have become more democratised in the digital era.

What is revolutionary about the use of AI is that it is not merely a new type of tool but is a genuine creative partner that contributes ideas and content to the production of an artistic artefact, whether that be text, image or film. Artist and programmer Casey Reas explains that GANs "assist with creating unexpected images, unlike any that have been created before. They can be unlike photographs and paintings – they are truly something new" (Reas, 2019). Arthur Miller's recent book *The Artist in the Machine* (2019) analyses the nature of creativity and consciousness and looks at each step in the recent development of creative AI and the evolution of GANs. Miller investigates the authorship and/or co-authorship of creative works produced using AI, which is timely given that in 2018 the auction house Christie's in New York sold *Portrait of Edmond de Belamy*, created from a GAN, for $432,500. This somewhat controversial sale led to discussions about the nature of copyright ownership and whether the work was produced by a human artist, a machine, or the programmers of the GAN that generated the work. Miller concludes his book by suggesting that in the future machines will be fully creative and that computers will not only be capable of

Figure 4. Ten outputs from a model trained by the author on 400 images of the old-fashioned Supilinn district of wooden houses in Tartu, Estonia. The original training images were mostly sourced online (Riga: Chris Hales, 2021)

entertaining each other but will entertain humans to such an extent that some people might even come to prefer computer-generated creativity.

Whereas Miller tends to differentiate between visuals (artwork), text and music, filmmaking is to a certain extent a synthesis of all three. From my own anecdotal experience with teaching experimental film workshops based on AI techniques, a fruitful starting point for ideas is to enlist a text-based AI such as the website *Talk to Transformer* to generate meaningful sentences, prose and poetic fragments that might inspire or form part of the experimental film. This might be just a catchy title, some poetic phrases, multiple lines of dialogue, or even an entire screenplay: the experimental science fiction short film *Sunspring* (2016) was produced in a 48-hour challenge from a script generated by a GAN trained on science fiction novels and has been described as "hilarious and intense" (Newitz, 2016). The soundtrack of an experimental film is an additional component that can be wholly or partly created by AI, for example using audio style transfer, which dispenses with the skills of an audio specialist whilst producing unconventional results. Using a style transfer process exemplifies a human-machine partnership because it would be the filmmaker who chooses and supplies the audio samples and specifies how much the proportion of style and content is biased one way or the other. Regarding the predominantly visual aspects of filmmaking, numerous techniques and processes will be discussed below, but what is abundantly clear is that 'AI as creative partner' undoubtedly represents a novel method of making moving image media—in the same way that Adobe After Effects brought about new ways of working in Manovich's Velvet Revolution of the mid-1990s.

AI-based Experimental Films in Relation to Earlier Practices

Although the AI experimental film certainly entails a new approach with novel types of outcome, its multiple techniques need to be examined in detail and in the context of previous classifications of experimental film to determine whether these AI-made films represent something new or are actually an extension of traditional practices. In classifying experimental films Bordwell

and Thompson (2013), known mostly for their interest in traditional cinema, propose just the two categories of abstract form and associational form (which they exemplify by 'poetic film'). Peter Weibel (2002), a media artist/curator more in tune with contemporary media art, considered experimental approaches based on materiality (emphasising the celluloid or videotape itself, or the technology of its representation), multiple narratives, multiple screens, time and space, sound, expanded cinema, and found footage (reframing or reinterpreting the original footage). To these, the structural film should be added: the term is wide-encompassing (Gidal, 1979) but would include the analytical calculation and logic of a film's montage according to a set of rules, often mapped out in structural diagrams and 'scores'. Experimental animation could also be ventured as a separate category and indeed it is a form of practice that seems relevant to some of the AI-based films to be examined later.

The abstract form, certainly, can be considered as one of the direct links between new AI practices and previous movements in experimental film. GANs in general seem to follow an abstraction tendency when interpolation is made through their latent spaces even when using quite representational model imagery, and this is particularly apparent when a GAN has been trained on too wide a variety of data. The webpage *Generative Engine*, which responds to typed characters and words by generating images (using the text-to-image generator *AttnGAN*), attempts to visually represent the typed words but the results are rarely if ever representational and resemble a fusion of abstraction and Post-Impressionism—it could even be said that the *Generative Engine* has its own distinctive non-representational artistic style. AI imagery produced as abstraction seems successful because it is somewhat forgiving: exact representation is less important than the style. Additionally, in terms of the image generation process it is of note that much abstract film was historically made, like AI-generated imagery, without the use of a camera.

Considering digital ones and zeros as the essential raw material of films produced by AI, materiality—as a traditional experimental filmmaking categorisation—can also be directly mapped to machine learning outputs, particularly in the case of the well-known *DeepDream*-generated imagery. The originator of the process, Alex Mordvintsev, refers to its aesthetic qualities as being "similar to hallucinogenic experiences" (Mordvintsev, 2021). Infinite zoom films can be produced with *DeepDream* by moving further and further into the noise of the network without losing visual output quality. This method intentionally reveals the inner workings of the GAN's calculations, allowing users to examine specific layers and stages of the neural network process. *DeepDream* might be considered a continuation of 'glitch' in the sense that the imperfections in the machine are elevated to artistic status—certainly it is a process that focuses on the inner workings of the digital 'brain' and could be classified as an approach that foregrounds the digital materiality within a neural network.

The found footage film tradition is also highly relevant where AI is concerned, most evidently in the sense that GANs can be trained from datasets fed with images which may be user-supplied, taken from public-domain image datasets, or scraped from online sources such as *Google Images* or *Flickr*. Outputs generated by the model would inevitably reflect and reinterpret the originals, as shown in Figure 4, although in terms of copyright it is not possible to digitally deconstruct a trained model to reveal the original images on which it was trained. Found footage may play a different role when a video file is specified as an input to an existing model which responds by generating new or modified output. A simple example would be using the *Deoldify* model to artificially colour vintage black-and-white films. Anna Ridler's film *The House of Usher* (Ridler, 2017) illustrates a deeper and

more complex approach. Ridler takes as input the 1928 silent film *Fall of the House of Usher* and by an iterative process, samples of the original frames are manually redrawn in pen and ink, output is generated using the *Pix2Pix* model, and the process is repeated to distress and transform the original. The underlying process is reminiscent of Malcolm Le Grice's 16mm colour film *Berlin Horse* (1970) referred to earlier, which reinterprets original sequences (which include early newsreel footage) through refilming, multiple superimpositions and colour transformations.

Structuralism also has its relevance to the AI film. More often than not, however, it seems to be manifested as a stylistic secondary characteristic that is not necessarily inherent to the GAN-based process. For example, Derrick Schultz describes his original film *You Are Here* (2020) as structuralist seemingly because there is a continual transformation (interpolation) of forms obeying a set rhythm and timing. This structured steady pace is due to authorial choice rather than a pattern suggested by the AI which has functioned to provide the visual content. In a similar fashion, when imagery is generated in real time by *AttnGAN* in response to a user typing words as input, the responses (i.e. the resultant film sequences) follow the pace of the user's typing of letters and words rather than creating any montage patterns of their own. Undoubtedly trained models will become generally available that can produce their own temporal structures and a pointer in this direction might lie with a film by Damien Henry based on footage filmed looking out of moving train windows. Henry explains the function of his model thus:

"First, it learns how to predict the next frame of the videos, by analyzing examples. Then it produces a frame from a first picture, then another frame from the one just generated, etc. The output becomes the input of the next calculation step. So, excepting the first one that I chose, all the other frames were generated by the algorithm. … The results are low resolution, blurry, and not realistic most of the time. But it resonates with the feeling I have when I travel in a train. It means that the algorithm learned the patterns needed to create this feeling. Unlike classical computer generated content, these patterns are not chosen or written by a software engineer."

Damien Henry (2017)

Even though the process simply generates one frame after another without the complexity of montage patterns, there is a structural methodology exemplified by the procedure of feeding output frames back into the generator. A work such as this could convincingly be categorised as falling within the field of structural filmmaking: it also typifies the human and AI working together in a mutually creative partnership.

New Practices and Processes Using AI

Damien Henry's process gives a hint of a new type of film and the primacy of *the model* again becomes apparent, in particular the originality that can emerge from training one's own neural network on a personal dataset (such as scans of a sketchbook, a painting portfolio, selfies, a stamp collection, etc.) For the time being, however, this is still a step too far for many creatives who prefer off-the-shelf functionality. As suggested earlier, one of the most popular visual applications of AI in recent times has been the use of a style transfer technique to generate new imagery in the style of others. In this case the AI acts as a 'pastiche machine'. Although a new phenomenon, minimal creative effort is required to produce pastiched film sequences using this method and the results have limited artistic value, but there is potential for greater sophistication. Derrick Schultz has used *BigBiGAN* (which generates similar images based on an input image) to create films in the style of Stan Brakhage, Maya Deren, Mary Ellen Bute, Len Lye and Norman McLaren. The work of

Stan Brakhage, one of the most well-known of all experimental filmmakers, has also been the subject of two related pieces by Casey Reas entitled *Earthly Delight 1.1* and *Earthly Delight 2.1* (2019) in which new filmic imagery was generated from Reas' own ML models trained on scans of collaged vegetation. Here, Reas transcends style transfer by producing a contemporary technological interpretation of the core idea of Brakhage's film *The Garden of Earthly Delights* (1981). Reas investigates the filmmaking process rather than the resultant content and his generated images show similarity to the frames of the original but have a different visual quality which goes well beyond the trivial operation of a 'pastiche machine'.

One noticeable theme emerging from the current use of AI is what could be termed the 'face film'. This might be allied to the popular culture of taking and sharing 'selfie' photographs and might even be classed as a post-internet practice, but there is little or no precedent of a significant corpus of experimental films that explore the human face. The 'face film' has been popularised by the fun and familiarity of manipulating one's own facial representation or those of friends or celebrities in an uncomplicated manner using a variety of recent popular phone apps and webpages. In addition to the entertainment value, faces have gained their prominence due to the fact that they were amongst the first huge image datasets made available for models to be trained from, in addition to the fact that there are clear real-world applications. Undoubtedly this accounts for the square image format on which so many models have been trained, as a face fits conveniently into a square frame. Facial models and their neural networks are highly developed and progress has been rapid in face detection and alignment using a 68-facial-landmark model, leading to facial emotion recognition, face recognition, changing characteristics of a face such as expression or age, and animating a source face according to the motion of a driving video. NVIDIA's improved *StyleGAN2* face models, released in 2020 at 1024-pixel resolution, seem to have further encouraged the 'face film'. A key ingredient is manipulation of the latent space of the neural network to mould latent faces. Mario Klingemann has explored the potential of *StyleGAN2* latent faces in numerous works, some of which run as real-time generative installations such as *Memories of Passers-by* (2018) and *StyleGAN2 - mapping music to facial expressions in real time* (2020). His *Neural Face* and *Alternative Face* (both 2017) are based around a model trained on seven videos of the face of French singer Françoise Hardy. The novelty will probably soon wear off with regard to these face films, except perhaps in regard of the use of a so-called 'first order

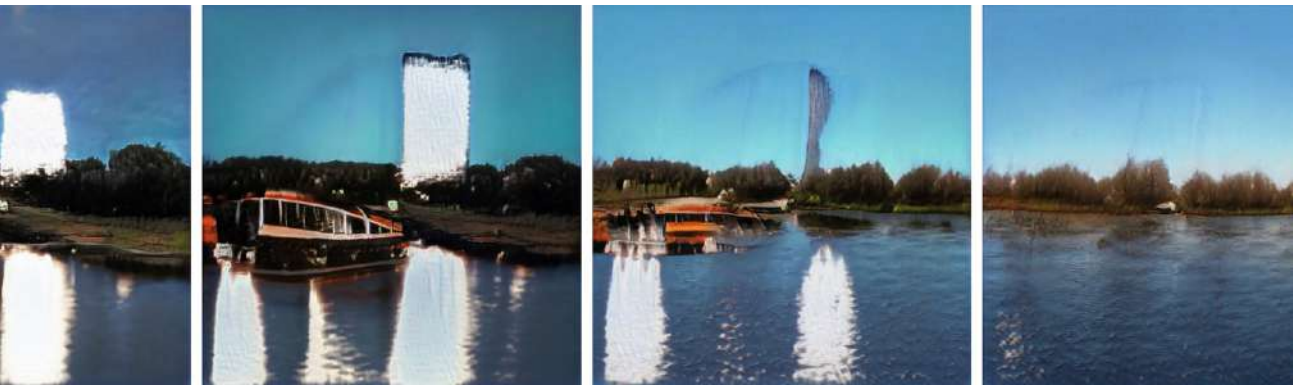

Figure 5. Frames extracted from a latent spacewalk sequence created by the author from his GAN model trained on images of the River Emajogi in Estonia (Riga: Chris Hale, 2021)

motion model' to combine a source face image with motion patterns from the video of a different face. These types of video, as explained earlier, entered mainstream culture around 2018 under the term 'deep fakes', and the moral implications they raise—in contrast to the trivial effort required to produce them—means they will undoubtedly remain prominent in the near future.

A second theme newly emerging from AI arises with the foregrounding of text. In regard of historical experimental films, those in which text plays a significant role represent a very minor aspect of the field of practice, although the identification of a genre of 'text film' has been suggested by MacDonald (1995) and Knowles (2015). Significant examples in which text takes prominence include Peter Rose's *Secondary Currents* (1982) and some of the early films of Peter Greenaway. Basing a film around AI-generated text has the potential to become a significant new methodology: the text could represent the first stage of the process from which the audiovisual aspects would provide an artistic response or, vice versa, the text could emerge as an accompanying response to visual input. In my own teaching experience, AI-generated text has been used surprisingly frequently by students as an approach to creating an experimental film, not necessarily as a means to create a lengthy script such as *Sunspring* but by using the AI as a creative partner that suggests resonant poetic phrases (or even just a title) which become an inspiration for imaginative visual responses from the filmmaker. These films might be considered hybrids that combine both new and old filmmaking processes and serve as a reminder that the AI need not necessarily dominate the final whole in order for it still to have played an integral part in its creation.

Above all else, the most paradigm-shifting aspect behind the architecture of a GAN and its potential use for creative purposes lies with the latent data manifold or latent space. Its novelty and significance have led to the term *Latent Revolution* being used in this article to describe the effect of AI on experimental filmmaking. As tentatively explained earlier, latent space is a somewhat conceptual and abstract data representation into which a GAN generator can map points using complex vector arithmetic. This offers much variety in the style and characteristics of the generated image and permits transitions (interpolations) by creating a linear path through the latent dimension between

the points that generated two images and then creating an animated sequence from all the images produced by the points along the path. This was demonstrated in the influential scientific paper by Radford et al. (2016) which discusses the concept of walking in the landscape of the latent space: the term 'latent spacewalk films' can be used to describe films produced by interpolation within the latent space of a neural network. The importance of the vector (which is typically 100-dimensional) to the generative process seems to connect directly to Sean Cubitt's assertion, made before the recent growth in creative AI, that the "vector aesthetic is our orientation to the future that already reads the present as sheer motion, sheer change, the fearful allure of the unknowable that cannot be eradicated by any machinery of governance" (Cubitt, 2014, p. 263). Figure 5 illustrates a traversal of latent space in a landscape model trained by the author: each individual frame of the interpolation is newly created by the GAN, which can autonomously create its own random sequences (noise loops) or can have sequences of keyframes specified by human selection.

The latent spacewalk film is essentially a completely new type of experimental animation and although traditional animators would recognise interpolation as being a synonym for the process of inbetweening between key frames, each spacewalk frame is a new creation in its own right and not a superficial compromise between the starting and ending key frames. If an image-based GAN has undergone significant training (this is currently measured in days or even weeks) with a homogeneous dataset, each generated frame can have a photorealistic quality, yet at the same time a model may be deliberately undertrained or mistrained to produce imagery with an unpredictable painterly quality. Artists have been quick to explore the creative potential this offers, for example Jake Elwes' 45-minute video *Latent Space* (2017) is a dreamlike exploration of the latent space of a model trained on the 14.2 million images of the *imageNET* dataset. Many 'face films' use the interpolation process and these could be considered a distinct subset in their own right—*StyleGAN2's* photorealistic latent face interpolations are a compelling example. An encouragement to the creative exploration of latent space lies with the fact that the spacewalking process itself has become simple to accomplish by non-programmers: *Runway ML* software, for example, can be used to configure and export these sequences, reducing the creation of a latent spacewalk film to a simple exercise that code-allergic art students have no difficulties in accomplishing, and it comes as no surprise that such films prove popular amongst students of my experimental AI-filmmaking workshops. Enhancements to the creative process of latent spacewalking continue apace through research such as *GANSpace* (2020), which aims to identify which layers and vectors in a GAN create specific change in the synthesised image, offering greater authorial control over characteristics such as viewpoint, aging, lighting, and time of day. Network blending, network bending, and GAN rewriting are amongst other current areas of interest that attempt to push the boundaries of GAN research.

Conclusion

Lev Manovich's *Velvet Revolution* was founded on newly developed moving image techniques of layering, transparency and compositing, and "software such as After Effects became a Petri dish where computer animation, live cinematography, graphic design, 2D animation, and typography started to interact, creating new hybrids" (Manovich, 2007, p. 70). These techniques became firmly established and emerging now is a Latent Revolution in which neural networks are teaming up with filmmakers and artists as their creative partners and GANs have become a new Petri dish where latent spaces are being explored to form new kinds of creative outcomes. Artificial intelligence is undoubtedly making a contribution to new

modes of experimental filmmaking, aided by recent software that is easy to use and offers access to powerful GPUs. Techniques such as the creation of 'deep fake' video sequences are already available to all and are used for malign purposes just as much as for creative ones, and ethical questions are being raised across the entire spectrum of AI which will require continued attention as new uses and misuses of the technology arise.

Although structuralist and materialist influences are still apparent in certain AI-based films, as are connections to abstraction and found footage, new filmic characteristics have emerged and others will undoubtedly continue to develop—and like any mode of art practice, artists will constantly find ways to use techniques in unexpected and unusual ways. For the time being, creating an animation purely from the latent space still offers fascination; however, it will soon be considered one tool in a wider armoury. Self-trained models will become a commonplace medium of unique personal expression, and the technique of chaining models will offer greater originality and unexpected outcomes as machines pass ideas to each other. Applying multiple approaches and a variety of models within a single film also has much potential: Kira Bursky's experimental film *Lessons From My Nightmares* (2020) is an interesting example that uses numerous GAN models—several trained by Bursky on personal imagery such as selfies—to create latent spacewalks, to assist animated walk cycles, to create backgrounds and to aid 3D depth estimation. Manipulation in After Effects software makes a significant contribution to the final form of Bursky's film, a reminder perhaps that there should not be too much emphasis on the final film being entirely a product of AI. Hybrids composed of both traditional and AI processes will become the norm and in these cases the fruits of the Velvet and Latent Revolutions would meld together in a harmonious whole.

Modes of practice are also changed by the advent of AI. Future experimental filmmakers may need to exchange their traditional cinematographic skills for the curation and creation of datasets and the training of personalised models: ironically, the deployment of these models might in fact result in the creation of 'self-pastiche' films. Debates about the stage at which the creativity contributed by the machine enables it to be called an artist in its own right will continue for a while yet, but a stage of creative partnership has been reached already. With a few exceptions, experimental filmmakers have traditionally been solitary, working alone on all aspects of their productions. Now these filmmakers can escape their lonely existence and work in tandem with an ever-willing creative partner—in the form of their preferred GAN or neural network that will contribute its own ideas and imagery to the co-production of the whole.

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Call to Action and Rhizomatic Networked Perception in Cine-VR 3D

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Abstract

This article focuses on the embodied activity of perception and expression within 360° stereoscopic spherical film (3DSC), which, by being situated geographically in the centre of viewing experience, destroys any illusion of what the author of phenomenological spectatorship Vivian Sobchack calls a transcendent space: the black void as the distance between the screen plane in a movie theatre and the audience. Instead of being afforded a specific point of view, the VR viewer has specific mobile bodily engagements with subjects in film whose visible activity articulates a shifting field of vision, all in conflict with the community-mediated VR viewing platforms that, in turn, morph the current phenomenological cinematic experience into a rhizomatic networked spectatorship. Personal prototypes shot in 3DSC are used in support of the argument that the latter spectatorship form is both an alternative and optimal mode for film viewing in the new virtual space.

Keywords

focalization, 360° 3D, perception, virtual reality, Cine-VR

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Introduction

The role of a spectator in the construction of narratives shapes the core models of many film theorists, such as in David Bordwell's *Narration in the Fiction Film* (1985) and Edward Branigan's *Point of View in the Cinema* (1984), where the notion of a cinematic narrator is rejected as an 'anthropomorphic fiction' (Bordwell 1985:62; Gunning 1999:470, as cited in Faulkner, 2004:134). The former believes that narration is a dynamic process where the major reconstruction of stories is done by a viewer through various layers of visual and auditory information, where the viewer does not merely act as a passive object, "'positioned' by what happens on the screen, but as an active participant – indeed, an agent – who virtually creates the film's narration" (Chatman, 1990:125-126), whereas Branigan argues that film camera is a linguistic construct, whose meaning depends on the shared communal interpretation by the wider audience (Quendler, 2012:202). In this respect, Cine-VR (Williams *et al.*, 2021), particularly shot stereoscopically (termed as 3DSC), affords its audience a much more decisive role in shaping the flow of narrative transmission in a manner not even imagined by Bordwell or Chatman at the time their theories on the cinematic narrator were published. Moreover, in the 3DSC format, the viewer not only narrates but does so by means of his or her active bodily engagements with the objects and characters, distributed in 3D space, and bracketed within the framework of phenomenological spectatorship.

Vivian Sobchack's (1992) existential phenomenology of the cinema and its residual spectatorship formula are rooted in the work of Maurice Merleau-Ponty and pursue a different route than the transcendental phenomenology of Edmund Husserl, the "founding father" of phenomenology (Stadler, 1994). While adhering to Husserl's central claim, made by Stein, Merleau-Ponty, and other phenomenologists, that the lived

body (Husserl's *Leib* or *Leibkörper*) is inseparably linked with all the organs of sensation, perception, and voluntary movement, through the intimate encounter with objects in space, "in terms of their disclosed profiles, their resistance, visible and tactile surface character" (Dahlstrom et al., 2015:58), her deviating contention is that film is a "pure" cinematic vision with its own existence, as a "viewing-view/viewed-view" bodily organ, locked in a somatic and dynamic relationship with the body of a spectator (Sobchack, 1992:133). Such a cinematic vision is never monocular but doubled, hermeneutically negotiable of *two viewing subjects* by means of the embodied and enworlded "'address of the eye' that…expresses both the origin and destination of viewing as an existential and transcendent activity [across the dark space in a movie theatre], the transcendent space, that is, a space exceed-ing the individual body" (Sobchack, 1995:54). Yet, as authentic as the *transcendent* space might be in traditional film viewing, it is being destroyed by the new technological arm of virtual reality, where the viewer is no longer separated by the black void and becomes a part of the narrative fabric presented as well as the object of viewed-view. The question remains by what narrative dynamics and technical peculiarities he or she is the object of gaze and address.

My treatment of the audience's bodily engagements with the objects surrounding it in the 360° milieu stems from the fine-tuning of Sobchack's (1992) three metaphors – the *picture frame*, the *window*, and the *mirror* – which have been at the core of cinema: the frame and the window represent the opposing poles of classical film, while the third, the mirror, represents a synthetic conflation of one's perception and expression in contemporary film. I contend that only 360° stereoscopic spherical film offers its spectators a natural habitat for such a conflation, the parallel embodied activity of perception and expression, because of its use of the centrifugal anchoring, bodily situating of existence in relation to the objects of the outside world.

By being situated geographically in the centre of viewing experience in virtual reality (VR), any illusion is destroyed in what Vivian Sobchack calls a *transcendent space*, the black void in the distance between the screen plane in a movie theatre and the audience. What she means by a purely phenomenological filmic experience is that, instead of a specific point of view, the viewer has specific mobile bodily engagements with subjects whose visible activity articulates a *shifting field of vision* from a world that always exceeds it (Sobchack, 1992:62), that is, the perspective driving the oscillating process becomes an accurate description of Cine-VR experience with its twist-and-turn agency as its primary *modus operandi*. Moreover, such a *bodily centring*, a *shifting field of vision*, and *the intimate cinematic experience*, which is in conflict with community-mediated VR viewing platforms, triangulates the perception of the current communal experience in what I claim to be a *rhizomatic networked spectatorship*, albeit other markers to define such a form of spectatorship exist. Whether the platform is labeled as *Storyplex* (Riggs, 2019), or the 'rhizomatic networked spectatorship' platform, as I have proposed, their ontology is essentially the same: they explore the best psychosomatic immersive states in public space, within the framework of a communal spectatorship based on the network models, as framed by the *Deleuzoguattarian rhizome*, and in conjunction with Vivian Sobchack's spectatorship mode.

Embodied Activity

In order to explore various immersive states, a process needs to be carried out spatially; it defines a relationship between a place and the body by underscoring the fact that a physical environment cannot exist without humans who experience it in their daily lives through "larger political and economic contexts within which

these individuals operate in any specific location" (Sen and Silverman, 2014:3). Thus, *embodiment* is a precursor to *embodied activity*. Embodiment is also a psychosomatic act. In other words, the kind of body we possess affects the kind of behaviours, experiences, and meanings we have (Overton *et al.*, 2008:1; MacLachlan, 2004:4): some studies have shown that individuals primed with holding a hot or cold drink prior to meeting another person would later see that person in light of having a warm or cold personality, respectively (Ahn, 2011:6). The mental disposition we have towards ourselves can also affect the scale of embodiment, sliding between "secure embodiment, defined by wholeness and a feeling that that self is 'spatially co-extensive with the body' [and disembodiment] in which the body is often conceptually separated from the self in an attempt at self-preservation", such as in an internal torment (Ross, 2010:12).

In addition to possessing and acting through a physical manifestation in the world, embodiment, by its very nature, occurs in real time and real space (Dourish, 2004:100), which makes embodiment practically most effective only in the VR setting, and, more so, in 3DSC. Although traditional media such as television and film already extend the capacities of human sensory systems to some degree by means of shifting perspective and presenting fantastical characters in unnatural narratives, virtual environments keep coming up with unique agencies that take full advantage of the encounters with embodiment (Ahn, 2011:10), engaging "the body as kinaesthetic input via the specialized interface devices that... *require* bodily actions to be performed sensorially, kinaesthetically, proprioceptively – within a full 3D spatial, yet virtual construct" (Morie, 2014:126). In this regard, Jacquelyn Ford Morie, one of the most creative American artists, a scientist and educator in immersive technologies, is not the first who pointed to the surge of *embodied encounters* (Ahn, 2011:10) in *posthuman societies*. The most prophetic of them was actually Maurice Merleau-Ponty with his *Phenomenology of Perception* (1945), who saw "one's body [as] a 'potentiality of movement,'...a 'field of possibilities of interaction with the environment,'...[and] embodiment relations in which an artifact becomes part of the body schema by becoming a medium" through which *perceptual and motor skills* are expressed, namely, through telescopes, microscopes, hearing aids, stethoscopes, etc. (Brey, 2000:5).

Morie, however, takes a step further by delineating all the chief artifacts and affordances that make posthuman existence possible, according to which the embodiment is attained via virtual avatars (such as in video games): *the first-person avatar*, embodied with extended virtual prosthetics (generally arms); the *third-person/observed avatar*, where an avatar appears, at some distance, out in front of the player's visual locus; and *no avatar,* which provides the first-person point of view as if seen through one's own eyes "with the camera lenses situated at the approximate location of each eye [matching] the mental model we have of the self that inhabits the physical world" (Morie, 2014:131). The first-person, no-avatar angle is the default point of view, which Malcolm MacLachlan, a Professor of Global Health at Trinity College, and Raymond Gibbs Jr., a psychology professor at the University of California, believe an embodied person takes instead of the objectified third-person, because our experiences are channelled through the first-person perspective, at all times and regardless of what transpires in life (Taibbi, 2011:1): "Even if totally paralyzed, an individual has a first-person relation to his or her own body if the thought 'I wonder if I'll ever be able to move my legs again' can be entertained" (Fludernik, 1994:285). This latter, no-avatar model, albeit in the first-person perspective, which Morie refers to as the self-representation of a user in immersive environments and the primary mode of embodied expressions in contemporary VR (Fludernik, 1994:285), is the most appropriate one for 3DSC, defined as a *deputy avatar*, for it matches Marco

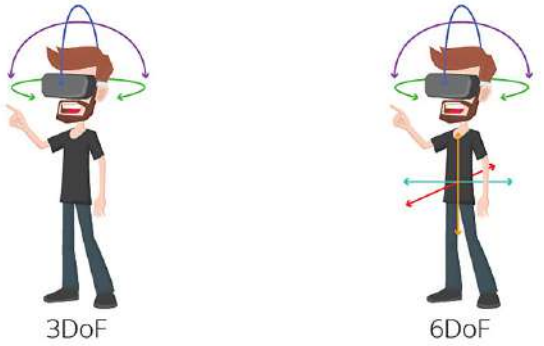

Figure 1. (Riga: Aigars Ceplītis, 2021)

Caracciolo's (2014) deputy focalization model, in which a viewer, an embodied self, fully present in the Cine-VR setting, has access to the fictional world without being a character in the story or having the ability to interact. In terms of its functions, such an avatar operates as a *Dualistic Body* or a so-called *Bifurcated Body*, since it, while being virtual, is still perceptually aware of being in the physical world (Fludernik, 1994:286-288).

Being perceptually aware of one's 'Bifurcated Body' in 3DSC is a cognitive act, where the *embodied activity* is framed as an active form embodiment and entails what Tan (2014:116) terms as an *emotional action readiness* in cinema. Because embodiment per se possesses a bona fide *phenomenal character* that transcends the kinaesthetic and proprioceptive properties beyond one's everyday consciousness of oneself as *embodied subject* situated and acting *in one's "surrounding world* insofar as 'I now here' see and act" (Dahlstrom *et al.*, 2015:30), at the root of such a consciousness are the emotions that prompt behavioural responses, thoughts, or attention. What distinguishes emotion from other states of mind is *readiness for action* (Tan, 2014:106). In cinema, we cannot act, particularly in 3DSC. But *even* if we cannot persuade the characters in a story to do what we want them to do, we can wish that they would virtually "amend" the situation; so, they are *called* to act. A *Call to Action* (CtA) in Cine-VR is a default embodied activity, constrained by the inability (3-DoF) to move in *X, Y, Z* space (6-DoF) (Figure 1), and, thus, compensated with an eager desire to act upon and move with characters in the unfolding process of a narrative, or to put it differently, CtA fosters oscillation between "*I can* and *I cannot*, an oscillation that propels [the audience] outward into the movement [it observes] and backward into [its] own capacity/ incapacity, [by] projecting [it] into a realm of movement possibility that frees...[the] body's limitations (its *I cannot*) by vicariously eclipsing [it]" (Tait, 2020:94).

The very attribute of '*I can* and *I cannot*' feeds the root of phenomenological states in 3DSC, the expression of CtA. The in-between immersion it fosters, neither entirely active nor passive, bears resemblance to live theatre, more so than to cinema, where the viewer *is* co-present with the actors and objects in 360° space, and where the position of the audience and the surrounding narrative is configured in multiple ways to evoke different experiences, using all possible technologies, up to light field and real-time volumetric film, in conjunction with 3DSC (Ko

et al., 2018, as cited in Pillai, 2019). In addition to a particular intermediate state, the limitation on movement sets parameters for the choice of perspective the audience can have in 360° narratives, where there is no such thing as 'helpless distance', the very peculiar stance shared by many computer-generated virtual reality professionals and gamers, who insist that the inability to move in *x-y-z* space or inability to haptically interact with a VR environment is non-immersive (Jahn, 2017:9). For one thing, such a stance is not supported by data from a number of neuroscientific studies that confirm that the neural activation paths in the hippocampus region, during whole-brain, high-resolution fMRI scans, are triggered by a mere planning of action or willingness to move or engage with a VR environment, irrespective of whether the environment is full VR or Cine-VR (Schmid, 2010:92; Schmid, 2010:93). Second, the viewer's pivotal vortex in the 360° sphere already predisposes one to "embodied activity of perception and expression – making sense and signifying it – as modalities of a single experience" (Sobchack, 1992:62) by means of three metaphors – the *picture frame*, the *window*, and the *mirror* – that are at the core of cinema: the frame and the window represent the opposing poles of classical film, while the third, the mirror, "represents the synthetic conflation of perception and expression that characterizes most contemporary film theory" (Sobchack, 1992:15). Such a conflation, the "embodied activity of perception and expression", uses "the *structures of direct experience* (the 'centering' and bodily situating of existence in relation to the world of objects and others)" as the foundation of its medium-specific cinematic language; the importance of the body here "as the agency and location of perception cannot be overemphasized [since] the body is the vehicle for perception and expression" (Dowbenko, 2003), contained in a default state of viewing views and being viewed, or to put it differently, *called to act* in the parameters of phenomenological spectatorship.

Phenomenological Spectatorship in 3DSC

Sobchack (1992) claims that cinema is not shaped by the viewer as much on his or her ideological grounds as on their embodied activities (Stadler, 1994:65). Because the film and a spectator produce the en¬gagement of two "viewing views" and "viewed views" (the spectator's and the film's), this makes a film intelligible and gives the film experience its meaning as such (Stadler, 1994:65). In her response to Harald Stadler (1994), where she illustrates a phenomenology of embodied vision in a human subject, she refers to Richard Zaner's description of four fundamental ways in which the human body perceptively engages us in the world. First, the perceptive body is the bearer of the orientational point with respect to which other objects are organized in the spatio-temporal surrounding; second, the perceptive body serves as an "organ of perception," that is, as a single technology with several sensory fields; third, the perceptive body is an organ of perception that synthesizes the aforementioned sensory fields into an identifiable place; and, fourth, the perceptive body is that "which actualizes volition and signifies through gesture and language the intentionality of consciousness" (Sobchack, 1994, as cited in Stadler, 1994:66). Whether she prophetically envisions the audience trapped in a 360° stereoscopic sphere – this can be left to anyone's imagination, but what is clear is that the four fundamental features Zaner talks about are all present in 3DSC, albeit it does not immediately follow that the four traits, by virtue of being present, make the spectatorship phenomenological. But Sobchack's (1992) insistence on the 'complete film experience' – "an experience that irreducibly links human intentionality through mediation (of one's own embodied activity and that of technological body (camera, projector))" (Stadler, 1994) – comes into collusion with Sobchack's own concept of the "*transcendent space*, that is, a space exceeding the individual body and its unique situation yet

concretely inhabited and *intersubjective*" (Sobchack, 1992:25).

Crux of the Conflict

The crux of the discord is that in 2D flat mode, the film experience is incomplete in terms of its phenomenological attributes. The most obvious one is this very presence of the dark. The abyss one stares into, the act of viewing in the dark becomes an increasingly solitary and superficial experience, to the point of signalling the dissolution of the cinematic itself (Casetti, 2015:205). In this context, Sobchack's (1992) modelled correlation, what she terms as the "engagement of two 'viewing views' and 'viewed views'" (the spectator's and the film's), is rather theoretical, because the audience is bound by the film's frame and window. The audience can surmise but cannot see what the camera sees. The two forms of embodiment, the spectator's and the film's, are loose and conditional. But if one eliminates the dark *transcendent* space, which locks the audience into being a passive observer endowed with the third-person perspective, and affords it a second-person narrative situation instead, via *shifting fields of vision* within the schemata of *rhizomatic spectatorship*, the phenomenological state that is triggered is the very embodied activity only 3DSC affords. To prove my point, let me decode *Public Enemies* (2009) and *Lady in the Lake* (1947), with the latter being a more extensive focus of Sobchack's illustration "of visually perceiving and visibly expressing the world through vision" (Sobchack, 1994, as cited in Stadler, 1994:65).

In *Public Enemies*, directed by Michael Mann and released to a wider audience in 2009, the crux is the final Biograph Theater scene where Dillinger is watching *Manhattan Melodrama* (1934), while the FBI assassins are waiting outside. In anticipation of his doom, having lost his girlfriend and allies, Dillinger makes a decision not to drag on any longer; in that, he has Mann's admiration and

Figure 2. Robert Montgomery, "Lady in the Lake" (USA: Metro-Goldwyn-Mayer, 1947)

suppressed desire to emulate Dillinger's "intense trajectory, this fascinating life filled with mystery", where "we're all doomed anyway" (Patterson, 2014:3). It is telling that the film was released amid the backdrop of the 2007-2008 financial crisis, which echoes the very causes and effects of the Great Depression and, thus, becomes a covert sociopolitical statement of Mann's in the words and attitude of John Dillinger, who regards banks, corporations, the FBI, and the ruling political elite as no more than a "band of thugs and even murderers, presided over by a quasi-fascist" state (Laurier, 2009:2-3) and, therefore, as fair game. Art critic Joan Laurier (2009) goes even further, claiming the director was blunt in advancing Dillinger's cause, as sociopathic as it may seem, as a national heroism of sorts, while linking the FBI's head in the thirties, Hoover, with Donald Rumsfeld, who perfected the modern justice system into a travesty at times, when bankers "weren't murderers or anything; they had merely stolen more money than most people can rationally conceive of...[and]...came to Washington, took an oath before Congress, and lied about it" (Taibbi, 2011:1). To argue that *Public Enemies*, as a filmic apparatus, guarantees the immediate kinship between a spectator (a male, at least) and the film is a stretch. When we talk about embodied activity in this film, its cinematic prowess depends on

the viewer's status in the "pecking order of the societal food chain", on *perceptual* spectatorship: someone who is well off might associate with or embody Johnny Depp's Dillinger less so than one living on the margins of society. Such instances where the embodiment of a spectator and that of a film apparatus (director, actor, ideological position, etc.) coexist and reinforce each other in a very convincing fashion are rare in 2D flat cinema; they are by no means certain, or even convincingly gaged.

Lady in the Lake, a 1947 murder mystery, directed by Robert Montgomery, who also plays the leading protagonist the film, is shot in the first-person perspective, a revolutionary cinematic technique at the time. With a few exceptions when Montgomery's character addresses the audience directly, the audience sees only what he does. According to a New York Times 1947 article, *this literary first-person-perspective-turned-into-movie* style is a flop [1], and it was hardly repeated in film production, at least not until the dawn of video game culture and VR. The first dilemma in Sobchack's analysis of *Lady in the Lake* is that the film is not really told in the first person, but rather in the second person, where the spectator is addressed as "you" in very general terms; after all, one is forced to be associated with Montgomery's character, who is the camera in this instance, and talked to directly (Figure 2). Second, Sobchack's model of cinema's *intelligibility* [2] does not apply; the addressee in a movie theatre separated by the 'transcendent' plane is not seen specifically enough to assure the interchange of two separate visions. But if the transcendent space is eliminated and *Lady in the Lake* was to be transplanted into stereoscopic Cine-VR, the dynamics of seeing and being seen would acquire a factual manifestation, and the two opposing visions would be in sync; in fact, second-person narration is the very engine that drives the embodied activity in 3DSC.

From Phenomenological to Rhizomatic Spectatorship

The curious case of *Lady in the Lake*, within the spectrum of narratological possibilities of 3DSC, suggests that the embodied activity is, first of all, driven by narrative situations where the audience is addressed as an active protagonist in the diegetic space. Second, I will add that this second-person frame necessitates the *shifting fields of vision* and *rhizomatic viewing platform* that cement Sobchack's (1992) claim to the engagement of two "viewing views" and "viewed views" in a more tactile and compelling manner.

In 2018, two published research papers clearly demonstrated that the second-person narrative situation is a *lingua franca* of 3DSC: *Virtual sidekick: Second-person POV in narrative VR* by Mads Larsen, at UCLA School of Theater, Film and Television, and *The Second-Person Narration as a Natural Habitat of 360° Stereoscopic Spherical Cinema*, which I had authored for the 2018 SGEM Social Sciences and Arts Conference. The former argued that a disembodied third-person objective camera view is unlikely to satisfy the audience, whereas the second-person perspective, where the viewer is the protagonist's sidekick, affords the audience with an ever-greater agency to take independent actions for the plot (Larsen, 2018). In arguing his case, Mads Larsen, however, conflates the two perspectives, the second and the third, in that he leaves no space for a distinction between the general 'you' and the specific 'you', when the audience is addressed directly. I root my arguments in Monika Fludernik's (1994) interpretation of Mary Frances Hopkins' and Leon Perkins' *Second Person Point of View in Narrative* (1981), where she rather convincingly opts for subjunctive, hypothetical, and "counterfactual" narrative scenarios where the audience embodies plural forms of address, as this accommodates "a variety of 'you's' and a variety of 'I's,' and a combination of these [moving] along

1

New York Times, 1947. *At the Capitol*. NYT Digital Archives.

2

"The result is that the cinema's vision cannot be seen visibly-materially-as human vision even though its essential structure and function (the intentional correlation of the visual and the visible that irreducibly links the seeing to the seen and implies a reciprocity between them) are enough like that of human vision to allow for the cinema's *intelligibility*" (Sobchack, 1994, as cited in Stadler, 1994:65).

and across another boundary line, that between the discourse and the story" (Fludernik, 1994:286-288). What was once a rather rare narrative device in *Peeping Tom* (1960) or *Dark Passage* (1947), albeit elegant and effective in their own way at the time, is now deployed with frequency; *Nowhere: A cinematic virtual reality experience* (2017), *Catatonic* (2016), and *First Impressions: a virtual experience of the first year of life* (2017) are just a few amidst the troves of VR titles where the protagonist, rather successfully, addresses the viewer directly.

The Second-Person Narration as a Natural Habitat of 360° Stereoscopic Spherical Cinema (2018) tracks the demarcation boundary between the discourse of virtual reality and the story, set against the backdrop of Gérard Genette's and Seymour Chatman's narrative theories as well as Marie-Laure Ryan's concepts of immersion. With the support of Constructivist Grounded Theory (CGT) methodology, semi-structured interviews, and field experiments, where my own VR prototypes were used, I compared and contrasted the expected residual data to come up with a unique narrative framework, geared specifically for 3DSC, that measures the various levels of embodied activity, depending on the optical perspective used. Amongst the two seemingly similar but ontologically different second-person perspectives, which I term as *Reverse External Locus* (REL), an exclusively Cine-VR device that addresses the audience with a "general 'you'", and *Reverse Internal Locus* (RIL), which addresses the viewer with a "specific 'you'", where a narrator or a character, while having no access to the viewer's thoughts, is fully aware of the audience being present in the 360° virtual space, the latter, RIL, is the most immersive of all (Ceplitis, 2018). The findings also show that the immersive properties of RIL, as a narrative technique, most effectively promote the breakdown of the barriers between the two intelligent bodies, if Sobchack's (1994) terms are used, "the seeing" and the reciprocal "seen", in a vision that belongs to the third, the 'Bifurcated Body'.

It is important to note that, in the spirit of Sobchack's articulation of "*a shifting field of vision* from a world that always exceeds it", where there is no such abstraction as *point of view* but rather "a specific and mobile engagement of embodied and enworlded subjects/objects" (Sobchack, 1992:62), the 'Bifurcated Body' engages with an oscillating reprise. A case in point is the triptych of *Taxi Driver* (2019), *Departure* (2018), and *Ascenseur Pour L'échafaud 2017* (2017), a part of the prototype series I have completed in 3DSC to examine the various narratological canons in order to finalize the narrative taxonomy deployed for stereoscopic 360° spherical cinema.

The premise of *Taxi Driver* is simple enough: the audience is a customer who has just taken a cab. In the course of the ride, the audience is forced to hear a lengthy charade on the wisdoms of life, and from none other than the cab driver himself. As is often the case in Latvia, where inhabitants are used to waiting, and are forced to wait, the cab driver gets out at some point to do his own business. Obviously, as is customary in the Baltics, where no one knows who does what and why, another guy whose face the audience barely sees suddenly gets snuffed; all the while, the radio host in the background discusses the inflated salaries and bonuses the public radio administrative staff receives. Upon committing the murder, the cab driver simply returns and continues to lecture his customer (the audience) on how to proceed in life. The interaction is optically anchored in a specific focus on the audience as if the underlying motto was "listen to what I say, and not to what I do!". The address is visually direct, leaving no doubt that the taxi driver *knows who* the viewer is and why she or he is *being taken for a ride* (Figure 3).

In a similar technique, *Departure* deploys a shifting perspective to address the neoliberal economic policies enacted in 2008 that are still taking

Figure 3. "*Taxi Driver*" (Riga: Aigars Ceplītis, 2019)

Figure 4. "*Departure*" (Riga: Aigars Ceplītis, 2018)

place and rapidly depopulating the already weak economic structures in Latvia. The whole film is shot through the perspective of a deputy focalizer, the presence of whom is only acknowledged in the shot when the family picks up its suitcases, to forebode the viewer to be the next departing candidate. The last shot accentuates the embodied activity of a spectator by means of an insect crawling onto the camera lens, into the very eyeball of the viewer (Figure 4).

Finally, *Ascenseur Pour L'échafaud 2017* echoes Louis Malle's 1958 original crime film about the murder of a wealthy arms dealer. However, the connection is loose, as its overall approach uses the lingua franca of Herluf Bidstrup's social satire, and, more appropriately, it is a dark noir spoof about the dire political corruption in Latvia.

The plot centres around a policeman who enters the second floor of a large business complex and hears a commotion; he proceeds to investigate the source of the sound. Then, a shot reveals a half-dead body being dragged through a hall. It is unclear whether the victim is male or female, but it is clear that the audience is led to believe that the events occur on the same floor. It is when the actual killing occurs, unseen by the audience, and the policeman is nowhere to be found; the panning of the view (if the audience chooses to shift the perspective) reveals the third floor, in fact, and, finally, the bloody torso dragged into the gallows. The choice of shifting fields of vision here is deliberate: in the 2014 parliamentary election, a leader of a major political party was elected through a backdoor channel. After she suffered a serious and embarrassing defeat in the polls, a fictitious narrative was concocted that allowed her to retain her seat. Furthermore, the continuation of her political career was assured with the appointment of ambassadorship upon completion of her final term in office in 2018, in spite of her overwhelming unpopularity. And, hence, this film is a reaction, a testament to the political hijacking.

Ascenseur Pour L'échafaud 2017 plays with perspective where the spectator, being a mere witness, a bystander to the crime, is an unwilling silent participant due to his or her inability to fully deploy the innate Call to Action (CtA) (Figure 5) with which some VR technologies, particularly those in video games, are naturally endowed: in this regard, a technological handicap of 3DSC becomes a serious narrative advantage.

The triptych, along with other VR prototypes, is splintered across multiple Cine-VR stations, in a rhizomatic pattern, that is, starting with one story, then, by "adding pieces on to it *ad infinitum*... 'greater than the sum of its parts' and 'a single cohesive story'...with the result ending in 'fragmentation – the story has been broken into pieces'" (Phillips, 2012:15) (Figure 6). The ambition is for the audience to fill in the gaps in this fragmentation by introducing potential extra details in a plot that is not based on itself, per se, but rather on "complex fictional worlds which can sustain multiple interrelated characters and their stories" (Jenkins, 2007:2-3), through digital technologies, such as VR, that are more democratic and participatory (Harvey, 2015:201). Thus, not only the Bifurcated Body possesses the intelligence but the *rhizomatic spectatorship*, as the viewing format, displays it as well, by being "the ideal aesthetic form for an era of collective intelligence... within a networked society" (Jenkins, 2007:4).

Originally, the concept of *rhizome* was proposed in "*A Thousand Plateaus: Capitalism and Schizophrenia*" by French philosopher Gilles Deleuze and psychoanalyst Félix Guattari, which established rhizome as a *modus operandi* of "an acentered, nonhierarchical, nonsignifying system", a mass of roots that "has no beginning or end; ...always in the middle, between things, interbeing, *intermezzo*" (Deleuze, 1987) (Figure 7), in opposition to object-oriented, cause-and-effect, hierarchal movement. It was then morphed into 'vizome' by Ann Cudworth, a VR designer from the Mixed Reality Division at

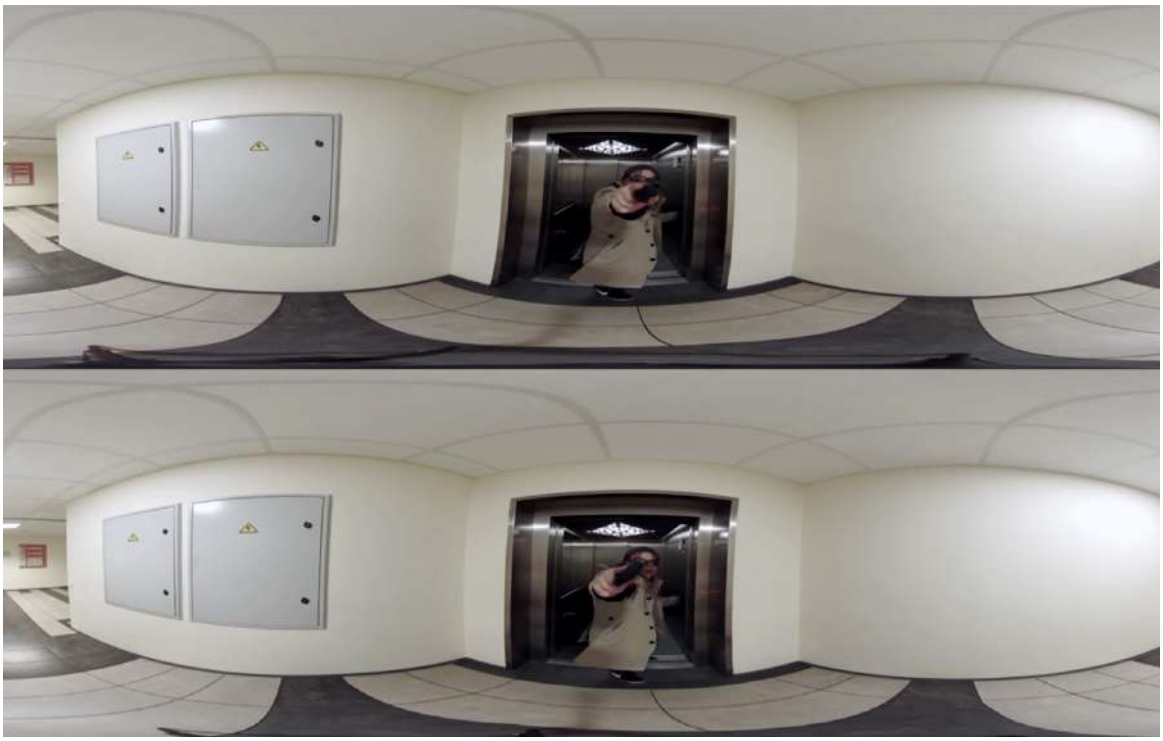

Figure 5. "*Ascenseur Pour L'échafaud 2017*"
(Riga: Aigars Ceplītis, 2017)

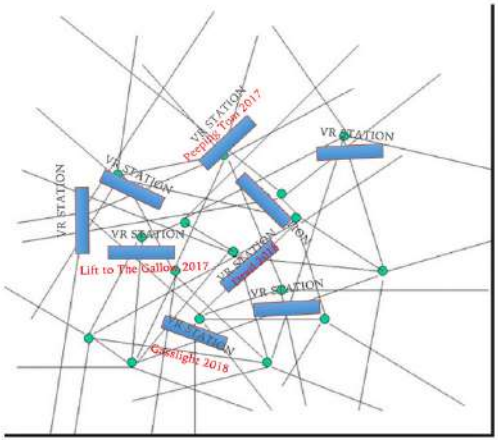

Figure 6. (Riga: Aigars Ceplītis, 2021)

Figure 7. (Riga: Aigars Ceplītis, 2021)

CBS, in her book *Extending Virtual Worlds* (2016), where she addresses the interconnections of virtual environments. On the surface, the interconnecting structures may seem to refer to mobile devices, software, the internet, and other portable digital media, yet what Cudworth means by "the vizome, the virtual rhizome", is "the viewer's experience in a virtual world, as well as the movement of objects, ideas, and memes in a virtual environment", unrestrained by a "traditional 'solve the problem with an answer' frame of mind" (Cudworth, 2016:36). These connections, the audience's ability to interact with the film's characters, comprise the very social element that enables a spectator to be a "part of, in connection to everyone else, as one navigates throughout the world" and to come to terms with "dialogue and fluidity in the narratives that comment on and connect to each other on multiple levels", while being "implicated in the rhizome and by extension...implicated in the dilemmas raised by each narrative", as echoed by Culler (2008:5), another scholar dissecting rhizomatic structures. What Culler (2008) omits, however, is the subjugation of the first-person narrative situation, the perspective that runs contrary to the nature of rhizome, to the second-person point of view.

Even if traditional virtual environments are inherently homodiegetic (Dow, 2008) and the narrator is not a part of the story, the viewer is, by sheer virtue of being present in a VR setting. Thus, 3DSC, where the second-person perspective is dominant, inverses the projection, bringing about a "*centred frame point of view* within a frame, and serves as an anchoring factor... [that]...reveals an inward movement [in] an effort to bring the subject inside" (Lee, 2015:1). By panning around in 360°, the audience is increasingly connected in virtual kinships via new technologies and media, rather than via physical interaction, and initiates "perceptual shifts and invokes an alternative mode of social engagement of the self with the other, and even with the others within the self" (Lee, 2015:2),

in other words, it becomes a rhizomatic expression of virtual technology-mediated multiplicities that "present not a single linear narrative, but rather a progression of multiple spatial, temporal, and diegetic…plurality" (Lee, 2015:6) along a three-dimensional *x, y, z* spatial axis. Whether such a communal spectatorship form is anything but *Storyplex*, which Stephanie Riggs, a video game software developer and an expert on location-based immersive technologies, identifies in order to signify a "dynamic network that balances the traditions of storytelling, human psychology, and the affordances of computational systems to create an immersive narrative" (Riggs, 2019:139), or 'vizome' (Cudworth, 2016), or *rhizomatic networked spectatorship*, as the article proposes, its chief function stays the same: to move away from the *tell-narrative* towards the *experiential* narrative, through frames and squares, in opposition to purely spherical environments: "the *Square* approach tells a story within a boundary; the *Sphere* approach creates an experience within an environment" (Riggs, 2019:140).

Conclusion

This paper remodifies the three phenomenological metaphors – the *picture frame*, the *window*, and the *mirror* – that have been at the core of traditional cinema: the frame and the window represent the opposing poles of classical film, while the third, the mirror, represents a synthetic conflation of one's perception and expression in contemporary film (Sobchack, 1992). The adjustment is necessary for understanding their role and function in the ever-evolving 360° 3D ecosphere, which offers us a natural habitat for such a conflation, the parallel embodied activity of perception and expression, because it uses "centring", bodily situating of existence, in relation to the objects of the outside world.

It is Vivian Sobchack's (1992) claim, rooted in Maurice Merleau-Ponty's phenomenological concept of embodiment, that makes a film intelligible and gives the film experience a meaning as such (Stadler, 1994:65) because film possesses its own being, in the sense that it behaves" (Sobchack, 1992:135), in that not only the spectator, but also the film is embodied (Stadler, 1994:65) through the engagement of two "viewing views" and "viewed views" (the spectator's and the film's). The phenomenological spectatorship model she offers is in juxtaposition with Judith Mayne's (1993), which associates cinematic spectatorship with terms and phrases like "apparatus," the "(male) gaze," and "suture". Of the three theoretical models of spectatorship Mayne expounds on – the *perceptual*, the *institutional* and the *historical* – the most important one is associated with the works of Michel Foucault: in this model, ideology is not imposed upon cinema, it is always implicated in it; that is, film is an institution which simultaneously acts upon the viewer and is shaped by the viewer (Mayne, 1993:25). The difference of Vivian Sobchack's core departure point from that of Mayne lies in the former's insistence that cinema is not shaped by the viewer as much on ideological grounds as through various embodied activities (Stadler, 1994). The problematic aspect of her model for such embodied activities in 3DSC, however, lies in her concept of *transcendent space*, the black void in the distance between the screen plane in a movie theatre and the audience, the purely phenomenological conduit where "all *viewers* [are] *viewing*, engaged as participants in dynamically and directionally reversible acts that reflexively and reflectively constitute the *perception of expression* and the *expression of perception*" (Williams, 1995:38). In demonstrating that her notion of the "engagement of two 'viewing views' and 'viewed views'" (the spectator's and the film's) is rather theoretical and conceptual because the audience is bound by the film's frame and window, I ascertain that the two forms of embodiment – the spectator's and the film's – are truly phenomenological only in stereoscopic spherical 360° space, and not in traditional cinema.

The proposition is supported by data from my own prototypes used in field experiments that measure various levels of embodied activity, depending on the optical and narrative perspective used, and distil three core prerequisites for embodied activity in 3DSC: the second-person narration, as a natural phenomenological habitat in Cine-VR; shifting fields of vision or oscillating perspective; and the rhizomatic spectatorship platform, providing the most optimal experiential narrative encounter.

To summarize, *the embodied activity* in 3DSC is an *expression of Call to Action*, by virtue of a dialectical nexus between the embodied spectator and the embodied film apparatus, both forming a third, the *Bifurcated Body*, with its own intelligence, vision, and expression of perception. The synthesis of the Bifurcated Body is never complete unless it functions in a narrative space in which cinematic prowess and effectiveness are dependent on the second-person *experiential* narrative configuration via *shifting fields of vision* under the public viewing scenario in what might be termed as *rhizomatic networked spectatorship*, where there is no macro or micro narrative structure, but rather principles of connection and heterogeneity with no beginning or end to a story – a story that can be started or entered at any point, in a dynamic network with desktop computers, head-mounted displays, and virtual social platforms interacting with others in multiple locations.

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Words Not Spoken: Digital humanities and the Future of Endangered Language

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Abstract

This article explores how digital humanities can enhance the process of documenting and revitalizing endangered Indigenous languages. To better understand why so many Indigenous languages are in decline, a brief overview of colonial assimilation practices is presented. Moving from the past into the present, this text briefly surveys how immersion methods on Indigenous-developed IT platforms use interactive media to promote language learning. Reflecting on personal experience and professional practice teaching documentary film methods in Indigenous communities, this text focuses on the importance of creating maker spaces and promoting a culture of experimentation and collaboration when communities begin using technology to document and revive their languages. The assertion is also made that ongoing efforts to expand digital humanities practices at the local level and in the local language are central to language revitalization and decolonization.

Keywords

digital humanities, endangered language, decolonization, language revitalization, language documentation, interactive media, new language immersion, Makerspace, experimentation

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"You who read me, are You sure of understanding my language?"

Jorge Luis Borges

Introduction

This article discusses how digital humanities tools can be utilized to enhance user experience and the efficacy of training exercises when teaching language and culture documentary methods. The first part of the text presents a brief explanation of why languages become endangered and the distinct types of language loss. The section that follows discusses the changing definition of digital humanities, as well as historical implications of Indigenous language archives and future possibilities for Indigenous archival ownership and management. The third section of the text focuses on makerspaces and the need for collaboration and experimentation when learning filmmaking for language and culture documentation purposes. Finally, the article contemplates ongoing efforts to expand digital humanities practices at the local level, as well as the need to advance ethnoprogramming efforts so members of Indigenous communities can access the same technology as everyone else, without having to sacrifice their cultural autonomy.

My contribution to this discussion of endangered language revitalization is from the perspective of a filmmaker. Insights gathered for this article are the result of leading a series of filmmaking workshops on the Saddle Lake Cree First Nation in northern Alberta (Canada) in 2010. The idea behind the workshops was to help Saddle Lake members tell their own stories through film and to encourage collaboration as a community building tool. Because filmmaking is inherently collaborative, the idea made sense. During the period I spent in Saddle Lake, I was able to guide workshop participants through basic narrative and documentary filmmaking processes and

through the creation of two short films, authored completely by the workshop participants.

A decade after my work in Saddle Lake, I was again invited to a remote community in British Columbia to teach students and staff at the Skatin Community School (SCS), to use film to document and preserve their endangered language, Ucwalmícwts. The administrator and principal of the school, Roberta Whiskeyjack, is an educator and innovator who has understood for some time that First Nations communities need to have the resources and the ability to control their own narratives, instead of relying on someone else doing it for them. She hoped that teaching members of her community to use video to record fluent speakers of Ucwalmícwts would empower the Skatin First Nation to begin the difficult work of language revitalization.

I travelled to Skatin in the spring of 2018, and again in the late fall of 2019, to train SCS staff and students. I originally taught ten SCS students and five staff members filmmaking fundamentals, techniques for clear voice and video recording and how to operate the cameras and audio recorders owned by the community. We also designed a workflow SCS staff found intuitive so they could efficiently download media from recording devices to hard drives, catalogue recently filmed video and audio files and begin editing what had been recorded.

The Skatin First Nation is comprised of 450 band members, of whom roughly 150 live on-site, on traditional lands. The remaining 300 members live elsewhere across Canada. There are only three remaining members of Skatin First Nation who are fluent speakers of Ucwalmícwts, all of whom are elders. Since October of 2019, when I last left SCS, a large part of the community, both on and off the Skatin reserve, has become engaged with the language revitalization process. One of the remaining fluent speakers, who is easily accessible

Figure 1. Saddle Lake First Nation film training (Riga: Voyce Sabrina Durling-Jones, 2010)

Figure 2. Skatin First Nation language and culture class, SCS (Riga: Voyce Sabrina Durling-Jones, 2018)

to the school, works regularly with the SCS language team and students. The group gathers to film language lessons and document vocabulary, usage, and pronunciation tutorials, as well as record traditional stories and instructions for cultural practices.

Using video documentation, in conjunction with digital humanities tools, is helping the community create language learning applications that are accessible to most of its members, both on and off-site. With the help of video conferencing platforms like *Zoom*, the community has also begun virtual language classes online twice a week, reuniting families and friends, virtually and in-person, around the common goal of reclaiming their identities by either re-learning their language, or learning to speak it for the first time. These practices are restoring a shared sense of value for the Ucwalmícwts language among its users, despite generations-long assimilation practices by the Canadian government that were meant to do the opposite.

Assimilation

When anthropologist Franz Boas travelled to the Pacific Northwest (not far from Skatin, actually) to study Native American cultures at the end of the nineteenth century, one of the first difficulties he confronted was language. Boas understood that having some knowledge of Indigenous languages was important to the process of studying them. He believed "a command of the language is an indispensable means of obtaining accurate and thorough knowledge, because much information can be gained by listening to conversations of the natives and by taking part in their daily life, which to the observer who has no command of the language, will remain entirely inaccessible" (Boas 2013:60). While he never mastered the languages in the Native American communities he studied, he did compile volumes of orthographies, dictated to him by heritage speakers. His goal was to create written records of dying languages so they would not disappear forever.

While Boas' goal was valiant, it does beg the question of why? Why are there dying languages that may disappear forever? The reasons can be assembled from a list of humanity's most tragic realities. Languages die because of genocide or mass human loss; they slowly fade away when they are abandoned to use dominant languages like English, French or Spanish, usually for economic reasons; languages disappear when one culture exerts its power over another for centuries; and they cease being spoken and taught to children by their elders when Indigenous people are systematically stripped of their identities to be assimilated into colonial cultures.

Most endangered languages in the Americas fall into the last category, achieving their endangered status through assimilation. Between 1860 and 1950, Indigenous children were forcibly removed from their homes and sent to state boarding schools, where they were not allowed to speak their languages or observe their traditions and were obligated to adopt the language, religion, and cultural practices of the colonizers. (Smith, 2009). These acculturation efforts resulted in the dissolution of traditional family bonds, lifelong trauma for children and lifelong guilt for their parents, as well as the gradual discontinuation of language use in their native communities (Starblanket, 2018).

Boarding schools taught Indigenous children that their languages and cultures were of no value and that they should feel shame because they were native and not White (Starblanket, 2018). They were taught to adapt to White cultural norms so they would be accepted by society and have what the colonizers considered productive futures. As a result, many children would return home with no memory of their heritage language, or refusing to speak it, and parents began learning the dominant

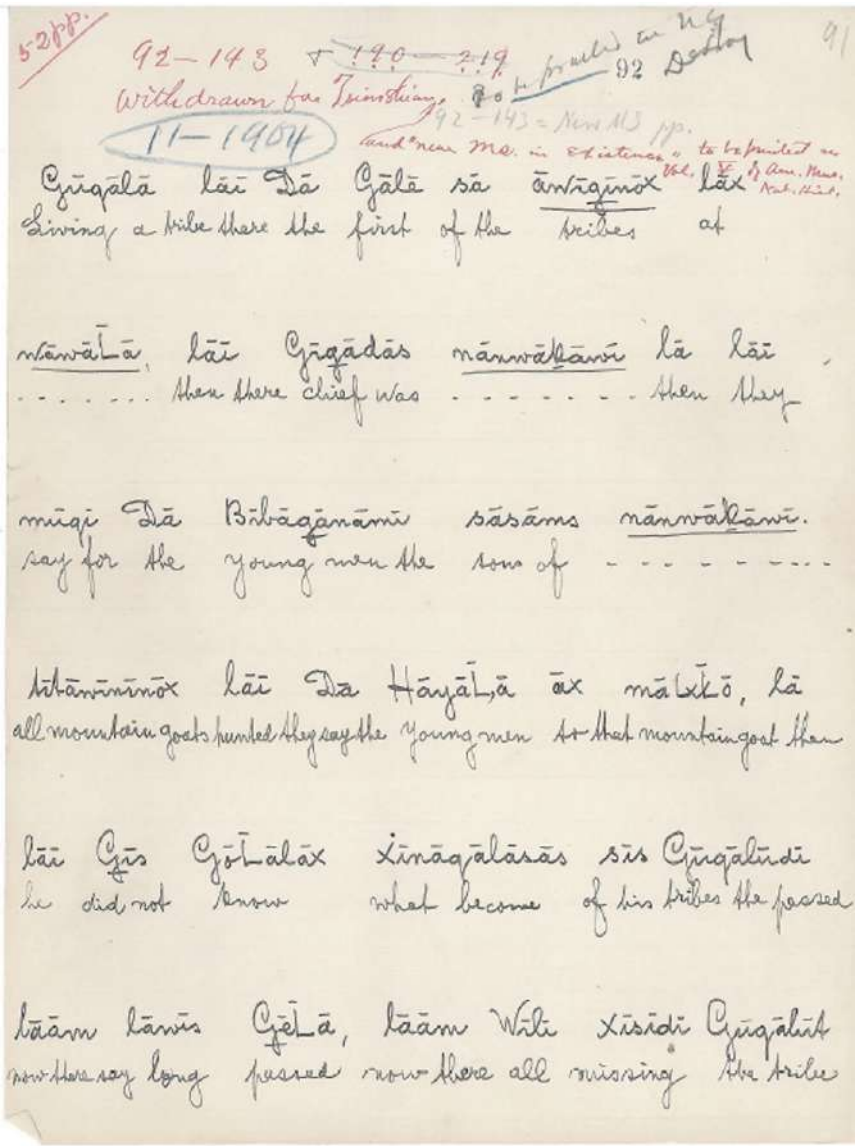
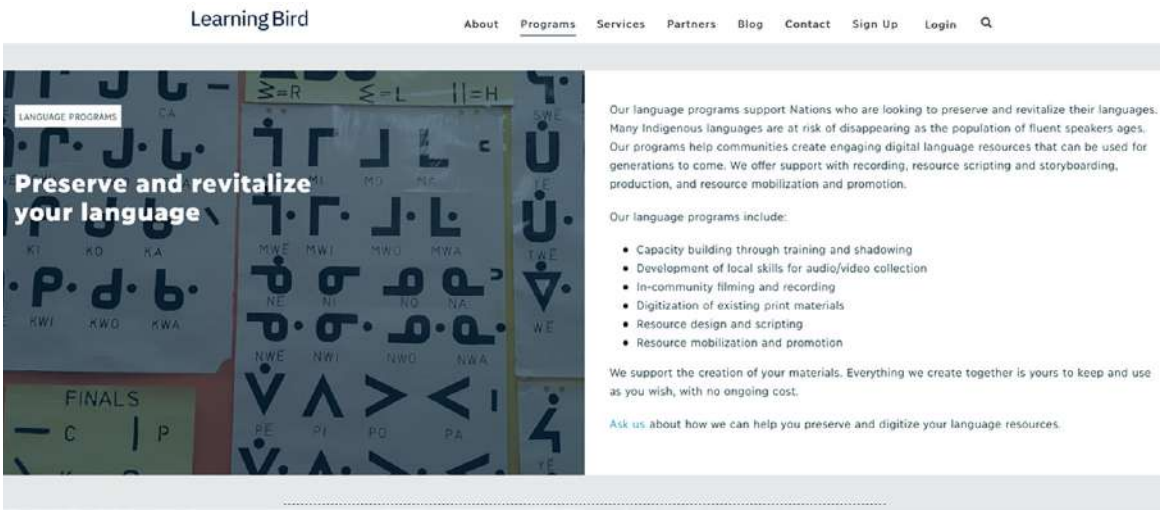


Figure 3. Franz Boas, Field Notes (Kwakiutl),
(USA: National Museum of Natural History, National
Anthropological Archives, 2021)



language to communicate with their children and to be able to operate within the larger society.

After several generations of gradually shifting the language of daily life from heritage dialects to dominant, many Indigenous languages in the Americas and across the planet, have become endangered, or "moribund", meaning no children in the new generations are learning the mother tongue as their first language. Others have become "sleeping languages" because they are written down but remain archived until someone from the current or a future generation decides to learn the language (Krauss 1992:6).

Figure 4. Learning Bird helps Indigenous communities incorporate language and culture learning in their classrooms (Riga: Voyce Sabrina Durling-Jones, 2021)

Digital Humanities and the New Archives

Digital humanities (DH) have had a close relationship with language and literature since its inception in 1946, when Roberto Busa attempted to encode all of Thomas Aquinas' writings on *IBM* punch cards (Sula and Hill, 2019). Busa's original definition of humanities computing, now referred to as digital humanities, is reiterated in the foreword he penned for Blackwell's *A Companion to Digital Humanities*:

> *"Humanities computing is precisely the automation of every possible analysis of human expression (therefore, it is exquisitely a 'humanistic' activity), in the widest sense of the word, from music to the theater, from design and painting to phonetics, but whose nucleus remains the discourse of written texts"*
>
> Susan Schreibman,
> Ray Siemens & John Unsworth (2004:i)

Like the technology used by Busa to encode Aquinas' writings on punch cards, the definition of digital humanities has changed and is in a constant state of evolution, but the relationship between the two has become increasingly intertwined. Today, most scholars would agree that at the very least, digital humanities are an interdisciplinary, lively, and continuously advancing area of investigation that provides a platform for exploring humanities using digital technologies and approaches.

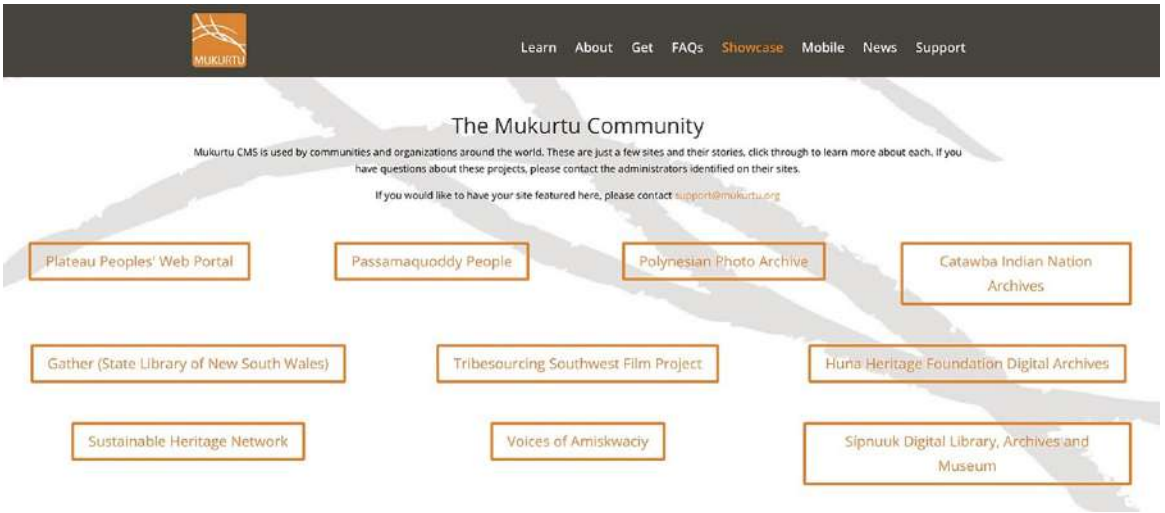


Figure 5. the Mukurtu open-source platform is built by Indigenous communities to preserve and share their cultural heritage (Riga: Voyce Sabrina Durling-Jones, 2021)

Twenty-five years ago, long before I began teaching filmmaking to help with language revitalization, accessing archives of documented endangered languages would have been a daunting task that took a lot of time and relied heavily on the ability to visit the various institutions where archives were held, or the patience to wait for copies of documents to arrive in the mail. Knowing these archives existed and what they contained, or how to access them, was even further removed from many isolated Indigenous communities. While anthropologists like Franz Boas had taken extensive orthographies of languages in case they ceased to be spoken, those records did not stay in the communities from which they were derived. Who was accessing them or using them? Were they used at all outside of academia or by their communities of origin? If a language has been "sleeping" and the community does not know there is a written record of it stored somewhere, then they have been deprived of the opportunity to revive it.

Viewing archival materials and researching the existence of documented endangered languages is much easier now that most records are digitized, or in the process of digitization, and available to access online. As a result, opportunities to repatriate records of documented languages to their cultures of origin are increasingly conceivable. For instance, searching *Google* for "images of Franz Boas' field notes" yields scanned pages of his handwritten records (circa 1897) of the Kwakiutl language on the *Smithsonian Institute* website that can be easily downloaded by anyone with a computer and internet access. Referencing Smithsonian archives, or the archives of any institution holding Indigenous records, is a complicated subject involving provenance and data sovereignty. Ownership of historical cultural archives is a complicated issue that will not be discussed here, but it is important to acknowledge the possibilities current DH tools can offer Indigenous cultures regarding data sovereignty and the ability to maintain control of their own cultural intellectual property, as well as manage how it is used.

Online data storage is easily accessible wherever there is connectivity and has made it possible for communities to imagine what was once considered a daunting task: building and maintaining their own cultural historical archives, without having to worry about how and where they will safely store items. The advent of online database platforms like *Mukurtu*, *First Voices* and *Learning Bird* has allowed communities, including Skatin, to use web-based tools to archive digital files of important language material (including audio and video files) and provide community-wide access to those records and learning resources, while also affording them the option to decide whether they would like to place them in the public domain, or keep them password protected with access granted only to community members. The ability to protect cultural heritage production and intellectual property and to make decisions regarding how these items are accessed, and by whom, has become fundamental to Indigenous self-determination.

A Makerspace for Language Documentation

One of the more versatile DH tools used to work on language revitalization in Skatin is the concept of a makerspace. Makerspaces have been used widely for the past decade in libraries and classrooms to support hands-on learning and problem-solving skills. The term makerspace has a wide range of connotations, but the interpretation in this case has been to create a supportive and creative learning environment where moving images, shot sequences and structured stories are filmed and edited. Furthermore, Skatin Community School promotes a culture of experimentation where there are no failures – just chances to learn from what did not work while using film to document language.

When I taught narrative and documentary filmmaking in Saddle Lake in 2010, I treated the process as a truncated film school experience for participants. Looking back, I understand that the approach was too rigid and did not allow for the level of experimentation that it should have. Learning to use film as a tool and edit what you film is a process that can at first be intimidating. If coupled with the pressure of trying to record as much of a language from elders as possible, while possible, it can get even more overwhelming. Documenting and revitalizing language is a marathon and not a sprint, so the process in Skatin was designed differently.

When planning the training sessions, we did our best to make learning interactive, engaging and not too serious. The staff at SCS all work very hard and wear many different hats throughout the school day, so it was especially important to create a space that was fun and where they would not feel burnt out from the added responsibility of learning filmmaking. Experimentation was continuously encouraged because there is no one way to document and revitalize a language. We would produce ideas and try them out. Sometimes they would work, and sometimes they would not, and that was okay. The important thing is that SCS has been able to keep everyone who was trained in filmmaking engaged in the process.

Decolonization, Ethnoprogramming and New Language Immersion

Addressing decolonization is a crucial step in revitalizing language because it focuses on undoing colonial power structures that promoted assimilation and cultural loss in the first place. Decolonization is unlearning the idea that Western thought and cultures are superior to those of the colonized. It requires that societies disassemble the established norms that promoted superiority of the colonial establishment over the colonized, while simultaneously placing value on and restoring importance to Indigenous knowledge. It is a process of dismantling prejudices and stereotypes and creating new frames of reference

by building relationships with Indigenous communities (Walia and Dilts, 2018).

Decolonization is a gradual process already underway, whether or not we are aware. However, there is one sector where considering the Indigenous perspective is imperative: computer programming. According to the *World Bank*, there are between 379 and 500 million Indigenous people worldwide. U.N. research indicates these communities comprise 5% of the global population and speak nearly 4,000 different languages, yet computer programming was never designed to accommodate the special characters and punctuation most Indigenous languages use. In fact, use of computer programming languages and keyboard formats are nearly exclusive to the world's dominant languages. In Skatin, a slowdown in progressing classroom Ucwalmícwts language learning and immersive language practices has been due, in part, to difficulties the community has had securing a keyboard blueprint for their language.

Introducing ethnoprogramming, or programming that increases cultural awareness among developers, has growing importance as our reliance on technology increases. If Indigenous people decide to adopt Western culture because it has superior technology, then that will inevitably lead to further cultural assimilation:

"Every program that is made from an ethnical point of view is ethnoprogramming and a part of a cultural heritage. At the moment computer science is causing problems in all the languages and cultures that are not based on the western way of thinking and writing. We are leaving out a large amount of traditional knowledge from our information society; it is a loss for the Indigenous cultures and the world"

Outi Laiti (2016:9)

As more and more organizations focus on preserving Indigenous heritage and valuing what Indigenous communities offer global narratives, especially where environmental stewardship is concerned, decolonizing widely held negative perceptions of Indigenous cultures will need to become a priority.

Conclusion

It took me fifteen years for the right combination of circumstances, accessibility to technology and community buy-in to earn the privilege of teaching filmmaking as a tool for language and culture revitalization. An element of this achievement is tied closely to DH applications easily accessed today that were not widely available a decade ago. The futures of DH and endangered languages are connected – filming and documenting language by itself is not enough to revitalize a language. Languages are only living if people speak them, and digital humanities help make that possible. The digital humanities make it possible for language documents to be adapted and used as learning tools in countless ways, some of which have been discussed in this text. DH also encourage an environment of collaboration and creative spaces for experimentation, consistently expanding their reach in synch with new technological developments that support language communication for the revitalization process.

Moving forward, DH and endangered dialects will coexist in tandem, with DH providing a platform where Indigenous people can learn and teach their own languages and cultures in the same privileged environment everyone else is able to access (Gaertner, 2018). For the process to be successful and have a lasting impact, two realities are important to establish and maintain: institutional decolonization and the ongoing ability to control how cultural intellectual property is accessed and disseminated. Just as the digital humanities provide tools to help document and

promote language use, they also play a role in self-determination and cultural preservation by providing platforms where both can be deliberated and discussed. Likewise, the future of ethnoprogramming will be indelibly linked to relationships and collaborations across cultures that are facilitated using DH tools.

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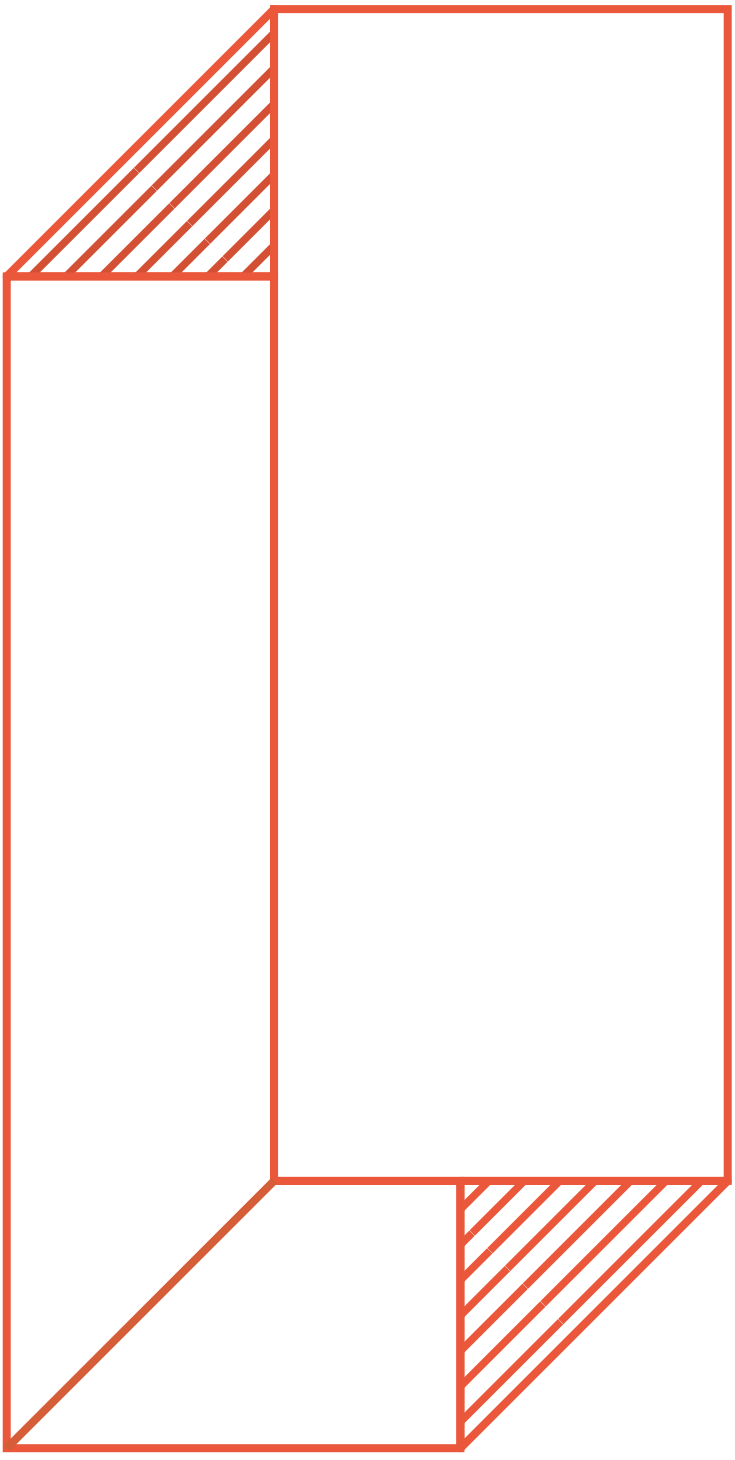

Reviews

Rudolfs Dainis Šmits

Supercritical Retrospective: Architecture, a Matter of Words

Book Review

Abstract

The purpose of this essay is to investigate the first of a series of texts examining the contemporary importance of architecture words juxtaposed to our visually saturated environment. This subject essay revisits and articulates the significance of words and their enduring relevance that differentiates architecture from empty form and meaningless fabrications.

Architecture isn't restricted solely to its visible form but extends beyond the physical building, participating in cultural production. Architecture creates a context for us to think. Architecture differentiates itself from construction through its ideas, not necessarily through constructed form. Architecture words are a matter of mind and meaning inherent to spatial significance, this differentiation being critical to the discipline of architecture and its discourse.

Architecture's semiosis, independent of any particular movement or style, communicates meaning and provides context for critical thought. The historic investigation of architectural thinking and cultural production of architecture and its discourse leads us back to a text, so that the language of architecture contains information and ideas caused and authored by an architect. An architecture void of meaning, an empty construct that fails to participate in cultural production, threatens random assemblies and meaningless forms. Architecture ideas and words remain relevant in the making of architecture. Architecture words form content and score a narrative for a meaningful architecture.

Keywords

architecture, architecture words, critical architecture, semiosis

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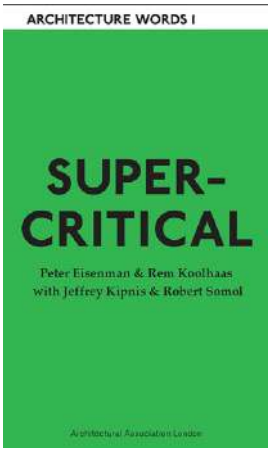

Figure 1. Architecture Words 1: Supercritical (London: Architectural Association, 2013)

"Project Architecture Words" is a series of texts and significant essays written by architects, critics and scholars. Our current culture and contemporary architecture is dominated by an overwhelming plethora of produced images, graphics and information consumption. *Supercritical* is one of a series of small books that attempts to deflect and respond to society's visual fetish by means of direct language, concise editing and laconic design. The purpose of this series is to promote architecture and present particular ideas (thoughts) about larger issues and communicate architectural ideas, demonstrating the resilient (sustainable) power of written ideas to promote architecture discourse, challenge and change the way architects think about the discipline. As Brett Steele, the editor, summarizes: "*Architecture Words....argues for something even greater: a realization that words don't just matter but are perhaps the ultimate form of architecture matter...*" (Eisenman and Koolhaas, 2010, p. 119).

Supercritical, published in 2008, is a rare record of an extraordinary 2006 public discussion between two architectural thinkers, Peter Eisenman and Rem Koolhaas, held at the Architectural Association (AA) in London and moderated by Brett Steele. Both architects came to the table

Figure 2. Peter Eisenman's proposal for the Max Reinhardt Haus, Berlin (USA: Eisenman Architects, 1992)

with their own theories and critical approach to architecture practise, which remain essential and urgent for the discourse. In addition to the subject debate, *Supercritical* includes two rare transcripts of talks given by Eisenman and Koolhaas, both articulating their ideas, which later served to influence their work and many other architects.

Following the discussion, Mark Cousins moderates Jeff Kipnis and Robert Somol, two of the world's leading theorists of contemporary architecture who skilfully unpack, scrutinize and interpret Eisenman's and Koolhaas's theory and practise. Jeff Kipnis is a professor at Ohio State University Faculty of Design and Robert Somol is the director of UIC School of Architecture in Chicago. In their critique, both focus on the disciplinary and cultural aspects of their work. Somol highlights the differences between the two and Eisenman investigates the "geometric protocol in architecture" (Eisenman and Koolhaas, 2010, p. 52), a sort of technological-geometric problem; for Koolhaas it is an "urban and metropolitan project and therefore the idea of the interior as a form of the city…", or a sort of social-statistical datascape problem (Eisenman and Koolhaas, 2010, p. 57).

Since the mid-1970s, both architects have repeatedly visited the AA. Rem Koolhaas is a student and teacher of 'radical pedagogy', an emerging architect, and Peter Eisenman is a prominent architect, theorist and guest lecturer.

Figure 3. CCTV headquarters by OMA, Rem Koolhaas, Beijing (Beijing: Getty Images (photo: Dukai photographer), 2012)

Both architects are like ships passing by in the sea, each set on different trajectories. Much earlier, Eisenman travelled to Cambridge to write his dissertation, *The Formal Basis for Modern Architecture* (1963). Koolhaas left continental Europe and travelled west to New York City to observe, study and write *Delirious New York* (1978). In his quest to formulate his personal "project", "Delirious N.Y.", this text instantly became a classic manifesto that has influenced a generation of architects. Along the way, both architects have continued their disparate discourse of the new avantgarde.

Eisenman and Koolhaas have very different views on architecture and openly oppose each other, which makes *Supercritical* a vibrant discourse. Koolhaas, before discovering architecture as a journalist, covered the excesses of 1960s counterculture and later applied his journalistic skill of observation to architecture. Eisenman did the very opposite, retreating to Cambridge at the beginning of his career, abandoning the city and submerging himself in the collegiate rooms and halls of medieval English architecture (Eisenman and Koolhaas, 2010, p. 106). They approach design with divergent theories and concepts about the city and other forms of critical and cultural practice. Both are very articulate and early on in their careers understood the importance of communicating their ideas through the spoken and written word, which are the means and foundation of their investigations, practise and work. Both architects have created their own context. Steele, the editor, appropriately cites Edwin Schlossberg: "The skill of writing and the difference between writers lies in the creation of a context where other people can think" (Eisenman and Koolhaas, 2010, p. 106). Eisenman and Koolhaas have created their own context for architecture with words.

Eisenman and Koolhaas are not the exception in terms of words. 20th-century history verifies that architects of influence have, through words, demonstrated the significance of architectural thought and its impact on the profession; among them are Le Corbusier, likely the most influential modernist architect; Mies van der Rohe, Venturi, Aldo Rossi, and John Hejduk; and critical theoretical thinkers like R. Banham, C. Rowe and Michael Hayes. In fact, the significance of Renaissance and modernist architects is attributed to their theoretical texts and prescribed ideas *a priori* to creating the architecture they wrote about. Investigating the history and theory of the discipline reveals that architecture words matter. "Eisenman and Koolhaas propel this further and grasp almost simultaneously the potential for language – the production of texts – as a model for architecture *as text*" (Eisenman and Koolhaas, 2010, p. 101).

Figure 4. CCTV headquarters by OMA, Rem Koolhaas, Beijing (Rotterdam: OMA, 2012)

Brett Steele, currently dean at UCLA, considers *the matter of words* possibly the ultimate form of architecture. Architecture, the discipline, differentiates itself from mere building by its ideas and meaning external to its objective presence. John Hejduk, former dean at Cooper Union, architect, theorist and educator, developed his own poetic language and believed that architecture resists its construction and its spirit and life exist beyond its physical presence. In an interview, Hejduk comments on Eisenman's criticism of Hejduk's Berlin Masques exhibition project: "They are not architecture because you can't get in them" (Maike, 2017). Hejduk dramatically asserts that Eisenman was not in a position to get into them because he did not understand them. The interiority of Hejduk's project is about understanding the object beyond its visual form. Hejduk's fundamental question projects architecture's impact beyond its physical form: "does it (architecture) affect the spirit, or doesn't it? If it doesn't affect the spirit, it's building. If it affects the spirit, it's architecture" (Maike, 2017).

Architecture isn't restricted solely to the visible process and extends beyond building, participating in cultural production. Architecture creates a context for us to think. Architecture differentiates itself from construction through its ideas, not in manufacturing forms, implementing new technologies, creating BIM models or by pitching the green agenda. Similarly, music affects us

externally to its structure and physical elements of notation, pitch and rhythm. A composed musical score contains sonic meaning to be read, performed and heard. Music is experienced externally to the physical score and can be appreciated whether it is performed or not. Architectural ideas in the form of drawings do not necessarily require physical construction to be read and understood. Architecture words are a matter of mind and meaning inherent to the spatial significance, and this differentiation is critical to the discipline of architecture and its discourse.

Architects clearly differ in their use of language; Hejduk, by the use of poetic language through signs, symbols and emblems, writes upon the city and Eisenman by index; his drawings are 'the red thread', a trace and record of what he was thinking, the experience and spatial geometric aspects of his architecture completely different from its conceptual intent (Maike, 2017). Peter Eisenman, considering Koolhaas's Seattle library project – an architecture that displays 'content as form' – argues that his own Hamburg library proposal is the inverse that renders 'form as content' (Eisenman and Koolhaas, 2010, p. 9). Both projects have content but the stories behind each particular form diametrically differ.

In *Dummy Text*, Robert Somol expounds on what differentiates these architects. Eisenman explores geometric form through an investigative process concerned with structuralist forms, textual grafts and folded singularities (Somol, 1999, p. 21). Eisenman's inquiry into these matters has developed a coherent methodology to pursue two primary projects. First, Eisenman, by dismantling the 'cube', the classical modernist object, has sought to displace the architect as authoring agent. Secondly, with the liberal-humanist project he attempts to redefine context and deconstructs the static identity of place (Somol, 1999, p. 22). The singularity of the Hamburg project or the folds of Santiago de Compostela trace their own process. The "fold is at once a thing and its process", exhibiting *form as content* (Somol, 1999, p. 21).

Victor Hugo wrote (to cite Ricardo Scofidio in *Education of an Architect*): "...dig into etymology, reach to the root of vocables, image and idea are the same word. What you call form and what you call substance are absolutely identical, one being the exterior of the other, form being substance rendered visible" (Hejduk, 1988, p. 41).

Koolhaas, abandoning notions of form, type and space playing off statistical research, "attempts to supplant design with the diagram to deliver form without beauty and function and without efficiency" (Hejduk, 1988, p. 24). Koolhaas's illusive language of diagrams stages the possibilities of content and their arrangement, as opposed to a predetermined, "tectonic vision of architecture or legible sign of construction..." (Hejduk, 1988, p. 24); rather, Koolhaas channels information and cultural scripts in the production of architecture, staging *content as form*. As Rem explains, OMA is interested in people, not humanitarian, humanist or 'nice' architectural solutions but simply in how people exist in the flows and behaviours of global culture (Eisenman and Koolhaas, 2010, p. 16).

Returning to the text, Jeff Kipnis summarizes the issue concisely: the architect needs a polemic or language of its own to start a body of work. Koolhaas expostulates 400 years of precedence, proposing another kind of new text that would produce "an argument about the processional section, from the ground to the *piano nobile*, and how the elevator erased all of that history" (Eisenman and Koolhaas, 2010, p. 71). Architecture words matter because ideas about architecture are predicated on words and manifest themselves uniquely in the language of architecture.

"The critical and conceptual architecture of Eisenman and Koolhaas coincides with the 'linguistic turn' in contemporary culture: the arrival of language as a dominant model not only for the production of culture but also for describing its theories" (Eisenman and Koolhaas, 2010, p. 100). Words contain information and transmit meaning like DNA code, similar to machine code that communicates instructions at the molecular level that fold amino acids into three dimensional shapes, protein structures, and task-driven machines, enabling biological forms and life itself (Meyer, 2009, p. 92). DNA, the chemical language, instructs and produces 3D forms and generates life, as today's scientific evidence supports.

Architecture's semiosis, independent of genre, communicates meaning and provides context for critical thought. The historical investigation and cultural production of architecture and its discourse leads us back to *a text*, so that the language of architecture contains information and ideas caused and authored by an architect. An architecture void of meaning, an empty construct that fails to participate in cultural production, threatens random assemblies and meaningless forms.

Fourteen years have passed, the discourse continues, ideas and architecture words remain relevant in the making of architecture; to cite Steele: "a critical practise in architecture gives equivalence to these two things: activities associated with the making of projects and architecture's unique form of critique. The key relationship between these things is understood to be one of shared proximity, not apparent causality" (Eisenman and Koolhaas, 2010, p. 102). Theory, text and architecture discourse does not necessarily cause or result in the way we experience or understand architecture, though they inhabit the same space.

Words form content and score a narrative for a meaningful architecture. "Project Architecture Words", through a series of books, further promotes the discourse and investigations into the matter of words: "...architectural words, more than ever, retain the gravitational capacity to form, shape and bend architectural minds" (Eisenman and Koolhaas, 2010, p. i).

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Figure 5. Seattle Central Library by OMA and Rem Koolhaas, Seattle (Rotterdam: OMA (photo: Philippe Ruault), 2004)

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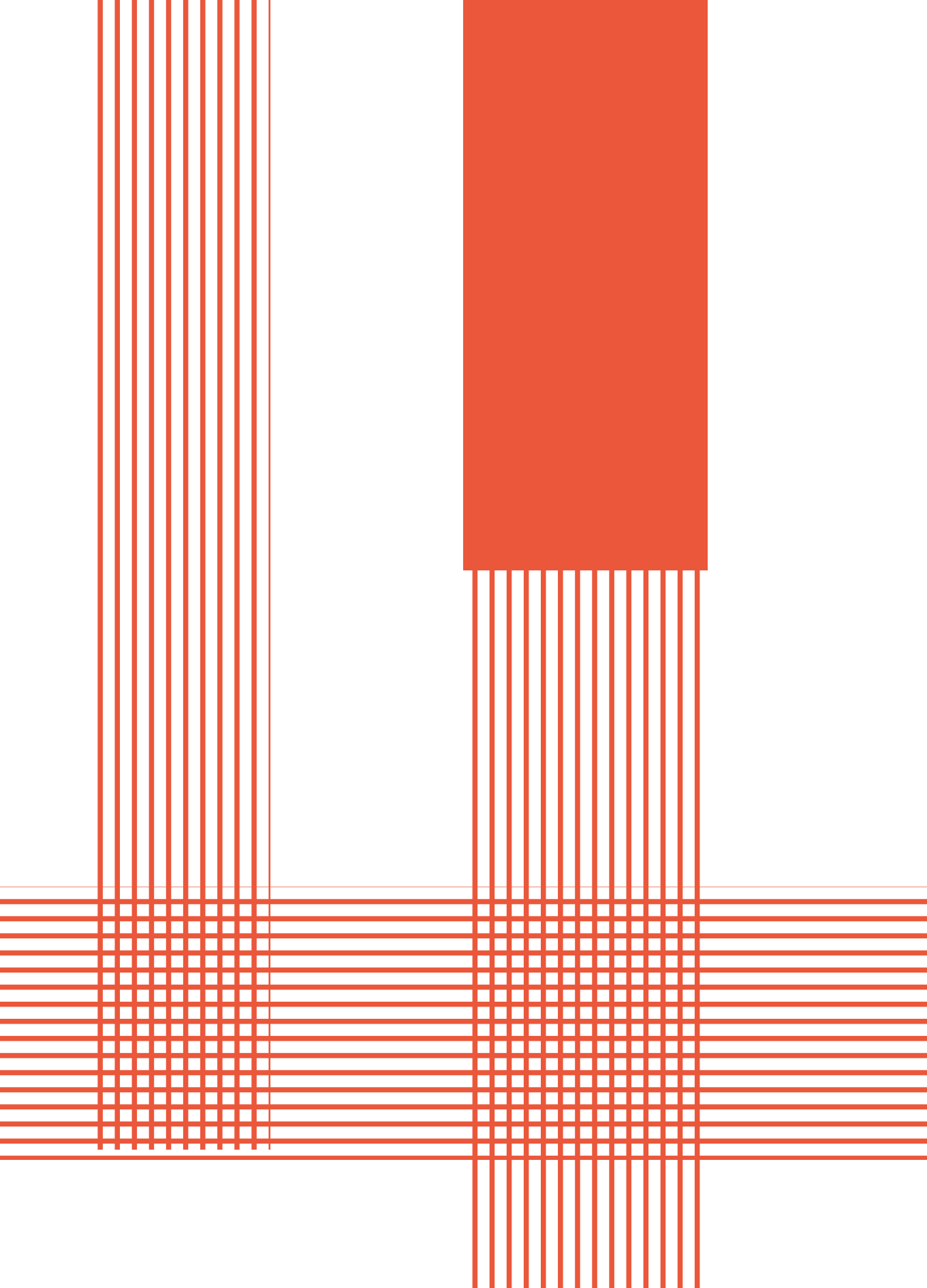

Chronicle

Faculty of Architecture and Design

September 2018 – September 2020

AUGMENTED URBANS

RISEBA Faculty of Architecture and Design students participated in the project "Augmented Urbans", organized by Cēsis Municipality.

Within the project, FAD BA 3rd-year and MA 1st-year students collaborated with a common goal: to study the spatial, programmatic, social and business dynamics of Cēsis – the Cīrulīšu and Gaujaslīču neighbourhoods – as a means of rejuvenating the city and creating sustainable economic growth.

Spatial prototypes of Cēsis city ecosystem services and visions for the development of public outdoor space are summarized in the booklet "Augmented Urbans"; the supervisors were Ilze Paklone and Viesturs Celmiņš.

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FESTIVAL'AND SUMMER SCHOOL

In the summer of 2018, the first RISEBA FAD International Summer School of Architecture and Urban Planning "FestivaL'and" was held in Valmiera (24.07-04.08). The project manager and curator of the summer school was Dina Suhanova. The summer school is held in cooperation with Valmiera municipality and the Valmiera Summer Theatre Festival.

Photo: Gatis Priednieks-Melnacis, Aigars Lauzis, and Dina Suhanova

Photo: Lite Millere

Overall concept: It is a design–build summer course that goes beyond academic knowledge, getting out of the classroom and into the physical world of design and construction for city users of all generations: theatre festival guests and locals of Valmiera. The festival is a place where temporary architecture in the urban environment and the role of temporary architectural structures in urban planning are studied.

In the first year, the summer school was devoted to the idea of contemporary ephemeral architecture and urban design elements as catalysts for important processes in urban environments, perception, and usability of the city.

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In 2019 (25.07-02.08), the second International Summer School "FestivaL'and 2.0" was dedicated to children's performances with their "living city"; a pop-up city was created with functional environmental objects and a changing scenography for families and children.

The theme for the year 2019 was **The Playful and Living City**. Social diversity and inclusivity are fundamental aspects of any thriving city. Architecture and urban design play key roles in nurturing these characteristics. The majority of urban spaces, however, are built on somewhat pragmatic principles and an outdated understanding of social structures and therefore often fail to efficiently address the needs of today's cities and their inhabitants. The summer school was led by mentors/tutors Kārlis Melzobs (*Gaiss Arhitekti*), Rudolf Bekic and Reinis Suhanovs.

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During summer 2020 (30.06-08.08), the 3rd Valmiera summer school "FestivaL'and 3.0" was held with the theme **Distance Disco**. This time, the summer school explored new preconditions for communication and remote cohabitation in the public space, looking for answers on how to

Photo: Dina Suhanova

create an urban environment for safe cohabitation in order to hold an event in these post-pandemic conditions. The participants, led by design professionals, generated ideas and mastered the basics of building wooden structures to create a temporary spatial installation for audiovisual adventures in the centre of the theatre festival. The students were led by an international team of lecturers and architects: Reinis Suhanovs, Rudolf Bekic (LV/AT), Kārlis Melzobs and Arnita Melzoba (Gaiss Arhitekti), Sille Pihlak (EE), and Aigars Lauzis.

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WORKSHOP IN AIZPUTE

In 2019, the third International Architectural Student Workshop in Aizpute "Wooden architecture heritage of Aizpute" (09.05-12.05) was organised by RISEBA FAD. The project manager and programme coordinator was Jānis Dripe. The workshop was also attended by students of the Klaipeda Faculty of the Vilnius Academy of Arts together with students of landscape architecture from RTU, RISEBA and the University of Latvia. The tutors were Jānis Dripe (LV), Jana Jākobsone (LV), Andrzej Klimek (PL), Isidoros Ziogou (CY), Apostolos Michopoulos (GR), Theodoros Zachariadis (CY), Sadiq Gulma (NG), Dina Suhanova (LV), and Sabine Jung-Waclik (PL).

In 2020 (29.05-31.05), the fourth workshop dedicated to the unique heritage of wooden architecture in Aizpute was organised. The focus was on the urban environment and object capture and project development using modern technology. Students together with the best specialists in Latvia participated in the photo fixation of the urban space of the Aizpute centre with the help of a drone, scanning individual wooden architectural objects, surveying and photographing details, and researching archives and museum materials. Experts together with students created a 3D model of a fragment of Aizpute city centre. RTU Associate Professor Māris Kaļinka, RISEBA and RTU lecturer Lauris Goldbergs, drone pilot expert Egīls Markus

and other specialists worked with students at the summer school.

The organizers of the summer school were RISEBA School of Architecture, Aizpute County Council and Residency Centre SERDE in cooperation with RTU.

Financial support came from the State Culture Capital Foundation, Aizpute County Council and RISEBA. RTU provided technological and intellectual support.

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SLICE OF ARCHITECTURE OPEN LECTURES HELD AT FAD (SEPTEMBER 2018 TO DECEMBER 2021)

Architect, PhD **Andrés Ros Campos** (ES)
Finnish Institute in Estonia representative **Kadri Kaljurand** (EE)
Architect **Francisco Martinez** (ES, FR)
Architect **Andres Alver** (EE)
Researcher, PhD candidate **Da Hyung Jeong** (US)
Architects, authors and editors **Ieva Zībārte**, **Jānis Lejnieks** and **Jānis Dripe** (LV)
Architect **Elēna Melzoba** (LV, FR)
Architect **Ole Wiig** (NO)
Architect **Ivar Krasinski** (AE)
Architect, urbanist **Aleksandrs Feļtins** (LV)
Architect, teacher and PhD candidate **Elena Maltceva** (RU)
LMA graduate **Karlīna Mežecka** (LV)
Architect **Ramón Córdova** (MX)
Architect and designer **Elīna Dobele** (LV)
Architect and lecturer, PhD **Efe Duyan** (TR)
Architect and lecturer, PhD **Susanne Brorson** (DE)

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STUDY TRIP TO THE VENICE ARCHITECTURE BIENNALE "FREESPACE"

In June 2018, 1st, 2nd and 3rd-year students accompanied by the Dean Jānis Dripe, Dina Suhanova and Ints Menģelis visited the opening ceremony of the Latvian Pavilion at the Venice Biennale of Architecture.

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ConnectA WORKSHOP DURING THE ANNUAL STUDY TRIP TO VALENCIA, SPAIN

In February 2019, FAD tutors Dina Suhanova, Ints Menģelis, and Francisco Martinez together with students participated in workshops organised by CEU Cardinal Herrera University.

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RISEBA FAD AND RTU AF TAKE PART IN THE LANDSCAPE DEVELOPMENT PROJECT "MULTIFUNCTIONAL PUBLIC OUTDOOR SPACES IN THE VICINITY OF RIGA CITY"

In 2019, the **Riga City Council Development Department** launched a new initiative, "Multifunctional public outdoor spaces in the vicinity of Riga city ", attracting university students from **RISEBA** and **Riga Technical University**, professional landscape architects from the **ALPS** landscape workshop (Ilze Rukšāne, Helēna Gūtmane, Marc Geldof, Signe Pērkone) and **local residents**. The aim of the project was to create a multifunctional public outdoor space in three administrative territories of the Riga Executive Directorate, contributing to a comfortable, safe and pleasant urban environment.

Based on the ideas of the students' projects, opinions expressed by the residents, and the assessment of the professional jury, the technical documentation of construction will be developed, and in 2020 the improvement of the three

Photo: Zane Vēja

territories will be implemented. A total of EUR 600,000 funding from the Riga City Infrastructure Fund is earmarked for the elaboration and implementation of development plans for all three territories.

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ARCHITECTURE OF MIGRATION INTERNATIONAL CONFERENCE

On November 7-8, 2019, the international conference "Architecture of Migration" took place in the RISEBA H2O 6 building, addressing whether architecture can accommodate current migration trends due to various political, social and economic forces and, if so, how. Lecturer and former bachelor programme director Dina Suhanova participated in the creation of content for the AOM conference organized by the Latvian Association of Architects. The conference was attended by architecture students and industry professionals.

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BAUA AWARDS FOR THE BEST WORK BY YOUNG ARCHITECTS FROM THE BALTIC STATES

On November 9, 2019, Ruta Rinkule, a graduate of RISEBA, was awarded the prize for young architects of the Baltic Architects' Unions' Association (BAUA) in the master's work category. In her project "Local plan of the Saulkrasti Silmala region area: changing the use of the territory from horticultural to residential", Ruta offered 19 criteria – properties and values – that distinguish cottage villages from residential areas. Through each of these criteria, she made proposals to transform the current summer cottage village Silmala in Saulkrasti County into a sustainable residential area with the potential to become an attractive mixed-use area. The students' performance was evaluated by a professional jury, including the secretary general of the International Union of Architects Serban Tiganas and representatives from each BAUA member state: architect Ilze Mekša, architect Ignas Uogintas (DO Architects) and Ivan Sergeev, chief architect of Narva city.

Photo: Andra Marta Babre
and Lauris Veļičko

On October 15, 2020, Ksenija Sapega, a graduate of RISEBA, was awarded the prize for young architects of the Baltic Architects' Unions' Association (BAUA) in the category of bachelor's work with the project "Cross-border urban synergy of Braslaw and Daugavpils: The Educational Port in Braslaw". The project of the Educational Port in Braslaw embodies the architectural solution of a Latvia-Belarus urban dialogue and international relationship development at multiple levels. The cross-border checkpoint solution reveals opportunities for the Latvian city of Daugavpils and the Belarusian city of Braslaw, solving problems of accessibility. The expansion of the existing exchange of experience in the field of education and tourism has been identified as a promising direction of development for the borderland region. The main challenge for urban synergy is the lack of developed infrastructure, as well as a political barrier in the form of a visa regime and insufficiently effective facilitation measures.

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***RISEBA MA STUDENTS CREATE A DEVELOPMENT CONCEPT FOR MŪKUSALA TERRITORY IN RIGA* (*BALTIC URBAN LAB*)**

In February 2018, students of the RISEBA Faculty of Architecture and Design Professional Master's Programme in Architecture developed a vision for the Mūkusala pilot area within the framework of the RDPAD international project *Baltic Urban Lab*. The degraded territory of Mūkusala is bounded by Mūkusalas, Bieķensalas and Jelgavas Streets and the railway; it is part of the neighbourhood of Torņakalns and is located in the protection zone of the UNESCO World Cultural and Natural Heritage object "Riga Historical Center". The jury recognized the FAD students' proposal as the best one, granting them an award. The tutors and project managers were Ilze Paklone and Viesturs Celmiņš.

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NEW DEAN AS OF OCTOBER 1, 2020

In October 2020, our standing dean Dr. Jānis Dripe passed on his responsibility to our new dean Rudolfs Dainis Šmits, MATS, Dipl. Arch, lecturer and internationally experienced architect.

Jānis Dripe has taken on new challenges as Chief Architect at the Latvian National Library and will maintain his position at FAD as lead researcher.

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MA students participate in the *Baltic Urban Lab* project, photo: Rīgas domes Pilsētas attīstības departaments

Biographies

SIGNE PĒRKONE

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Signe Pērkone received a Bachelor's degree in Architecture from the Manchester School of Architecture in the UK, and later gained a Master of Science in Architecture, Urbanism and Building Sciences from the Faculty of Architecture in TU-Delft, graduating from Design as Politics studio. She has practiced in the Netherlands, Mexico and Latvia, working in between the fields of architecture, urbanism and publishing. For several years she has been an active member the NGO Urban Institute Riga, taking part in different projects relating to urban issues and processes. She currently works in the Riga City Architect's Office.

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RAMÓN CORDÓVA GONZÁLEZ

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Ramón Córdova González is a Mexican architect and researcher graduated from the Faculty of Architecture of the TU-Delft in the Netherlands with a cum laude distinction. He has taught at the Architecture School of the Universidad Marista de Merida in Mexico and currently teaches at FAD. Parallel to work in different architectural practices, he has developed several architecture, research and art projects and has presented and published his work in different forums in Mexico, Greece, the Netherlands, United Kingdom and Latvia.

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EFE DUYAN

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Efe Duyan has been teaching at MSFAU Istanbul as Senior Lecturer Dr. since 2013 and affiliated with several universities for research or guest lectures, such as the Berlin Technical University, Ca' Foscari University, the University of Minnesota, Istanbul Technical University, Georgia State University in Atlanta, the University of Iowa, Washington University in St. Louis, George Washington University, and the University of Massachusetts Boston.

His fields of research are contemporary design, critical design perspectives, architectural theory, Early Modern history, and Eastern Mediterranean architecture. He is internationally recognized poet, culture promoter and working at RISEBA FAD since 2021.

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Reinis Saliņš and Igors Malovickis are a duo of architects operating between Basel and Riga and co-founders of studio substrata. Both have received Bachelor's degrees in Architecture from the Faculty of Architecture and Design (FAD) at RISEBA University. Reinis has previously co-founded architectural studio SPOT arhitekti and worked at KCAP Architects&Planners in Zürich while Igors leads urban data platform Citify Riga. Both are actively involved in ARHITEKSTI Foundation.

The artistic approach of studio substrata is based on surveying and building upon the ever-present sub-layer of knowledge. Both Reinis and Igors use it as a medium to investigate weak architecture, the possible coexistence of material and nonmaterial objects, spatial mathematics as well as industrial design and prefabricated houses. They have explored the nine-square grid composition in a family residence *house for a Pastor* and *house for a Builder I* and *II* as well as the four-square grid composition in *Viba's sauna*, *lost artefact* and a family residence *five atmospheres*.

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ZANE VĒJA

Master of Architecture
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Zane is a young architect who has started her career as a lecturer at RISEBA FAD, teaching urban design, architecture history and architectural design-related subjects; at the same time, she is the director of the bachelor's degree programme. She is a graduate of both the bachelor's and the master's programme in architecture of RISEBA FAD. Her undergraduate and postgraduate work focused on urban public space development proposals in historical environments: the Jēkabpils historical centre (BA) and Riga Central Market and Central Railway Station territory (MA). She gained international experience while studying at Istanbul Bahcesehir University in 2014-2015.

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RUDOLFS DAINIS ŠMITS

Professional Bachelor of Architecture
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Rudolfs Dainis Šmits, MATS, Dipl. Arch., currently serves as Dean of RISEBA Faculty of Architecture and Design (FAD), MA program director and lecturer. Rudolfs Dainis has over 30 years of international experience in architecture design and project delivery. He was the associate architect with Gunārs Birkerts (1925-2017) for the Latvian National Library (2014).

He leads design studio and research investigations where he attempts to distinguishing architecture from mere programmatic requirements to its affect qualities in cultural production. His parallel investigations delve into abstract painting that address the intangible horizon: considering spatial boundaries; limits and thresholds.

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CHRIS HALES

PhD in Arts
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Chris has exhibited a variety of interactive film installations dating back to ARTEC'95 in Japan via Future Cinema at ZKM in 2003 to the Glucksman Gallery in Cork in 2019. Part of his enquiry is the use of novel or unusual interface technology including A.I. techniques (such as facial emotion recognition) and brain-computer interfaces. He has investigated group interaction with the 'Cause & Effect' interactive filmshow (2003–2012), designed for audiences in cinemas. He has published numerous academic articles and carried out empirical research in Prague to discover the forgotten secrets of the world's first interactive film (1967), entitled Kinoautomat. Chris obtained his PhD with the dissertation "Rethinking the Interactive Movie" in 2006 and has held lecturing appointments at the University of the West of England (Bristol), the Slade School of Fine Art, Central Saint Martins and SMARTlab (University College Dublin), and he has run hundreds of workshops related to experimental filmmaking and interactivity as a freelance visiting lecturer. In 2020, he was appointed as Assistant Professor at RISEBA and is Creative Director of the practice-led PhD launched jointly in 2021 by RISEBA and Liepaja University.

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AIGARS CEPLĪTIS

Master of Arts
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Aigars Ceplitis is a lead researcher at the Faculty of Media and Creative Technologies, RISEBA, where he also teaches film editing and 360° 3D spherical cinema film narratology. A graduate of CalArts, he has formerly served as an editor and assistant to the established Hollywood director Randal Kleiser and has headed a programme of film and video for disadvantaged children of Los Angeles. Aigars holds an M.F.A. in film from California Institute of the Arts and a B.A. in art history from Lawrence University. He is also an artistic director of RISEBA Repertory Theater.

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VOYCE SABRINA DURLING-JONES

Bachelor of Art, Communications
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Voyce Sabrina Durling-Jones received her undergraduate degree in Communication from the University of New Orleans and has studied in graduate film and anthropology programs in Australia and Chile. She has spent over a decade teaching filmmaking to Canadian First Nations in Alberta and British Columbia, focusing specifically on using filmmaking to preserve language and culture. Sabrina is currently completing an MA in New Media and Audiovisual Art and will begin PhD studies at RISEBA in 2022.

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Photo: RISEBA FAD

About RISEBA University

RISEBA University of Business, Arts and Technology in Riga, Latvia, is a private university with almost 30 years of experience, offering its students contemporary and high-quality education. RISEBA is an interdisciplinary and multicultural private higher education institution fully accredited by the Ministry of Education and Science of the Republic of Latvia.

As one of the first private higher education institutions in Latvia, RISEBA is now among the 10 largest higher education institutions in Latvia (both public and private) with almost 3000 students, including 200 international students, who attend more than 20 study programmes of different levels and directions, and more than 9000 alumni. Since its foundation in 1992, the mission of RISEBA has been "to be a gateway to international careers".

The university facilitates the development of creative personalities, preparing students and graduates for entrepreneurial careers at the international level, offering a wide range of undergraduate and postgraduate business and creative programmes as well as doctoral studies. In the last decade RISEBA has opened studies in communication, audiovisual media arts and architecture, thus transforming the institution into a place where "business meets art".

RISEBA stands out with its clear international focus and is distinguished by the exclusivity of the study programmes offered and variety of languages of instruction. The programmes are taught in Latvian, English and Russian, with both full and part-time tracks.

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Photo: RISEBA FAD

About the Faculty of Architecture and Design

RISEBA University's Faculty of Architecture and Design was established in 2011 and offers architecture studies in international settings in Latvia in two successive cycles – the Bachelor's Programme in Architecture (3.5 years, 210 ECTS) and the Professional Master's Programme in Architecture (2 years, 120 ECTS). Since its foundation the faculty has combined the best architecture education standards and teaching experience in Europe in pursuit of academic excellence and international recognition. Both programmes are fully accredited by the Ministry of Education and Science of the Republic of Latvia.

The Bachelor's Degree of Engineering Sciences in Architecture is the first step in preparing students for further studies in the fields of architecture and urban planning and professional architectural practice.

In 2017 RISEBA University established the 2-year Professional Master's Programme in Architecture; thus, the total length of architecture studies at RISEBA comprises 330 ECTS or 5.5 full-time study years, meeting the general requirements of EU standards for practicing the architectural profession.

The aim of the programmes is to provide students with the theoretical knowledge, practical skills and necessary competences to work in the field of architecture, design and urban planning. During studies students advance their abilities in analytical thinking and problem solving and acquire the research skills to approach design tasks in a variety of contexts and to work out concepts while being socially responsible young professionals.

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Photo: RISEBA AVMM

About the Faculty of Media and Communications

The Faculty of Media and Communications offers bachelor's and master's programmes designed to produce highly qualified, competent and competitive audiovisual specialists and develop a new type of entrepreneur who can achieve a symbiosis of business and creative thinking.

The Bachelor's Programme in Audiovisual Media Arts is targeted at young people with comprehensive secondary education and those who want to attain a professional qualification in the field of audiovisual media arts related to television, Internet media, cinema and new media. The Bachelor's Programme offers a well-balanced mix of theory, methods and practice in the audiovisual field and is supported by the latest technology and advanced equipment. Study courses are taught in Latvian, Russian and English.

The Master's Programme offers in-depth training in new media and audiovisual arts. Alongside the traditional practices of directing and cinematography, students apply more innovative forms, such as arts research, interactive 2D and 3D production, sound design, experimental fine arts, performance studies, extended and virtual reality, 360° video production, culture analytics, and data visualization. The programme is implemented in collaboration with Liepaja University. The Master's Programme offers four majors: Audiovisual Media Arts, Multimedia Performance Art, Digital Art and Sound Art and Electronic Music.

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Photo: RISEBA FAD

About ADAMarts

ADAMarts is a double-blind peer-reviewed academic journal dedicated to architecture, design and audiovisual media arts from the Baltic Sea region, published once a year by RISEBA University, both in print and online. *ADAMarts* aims to bring together leading academic scientists, researchers, scholars and practitioners from around the world.

ADAMarts encourages a variety of approaches to the urban phenomenon – from urban planning to architecture, design and digital media. We are interested in papers reviewing the connections between various countries and cultures of the Baltic region. We invite submission of articles based on theoretical investigations, design research and alternative exploration on the following topics:

- Architecture and interior design – design theory research, education and practice, exhibition architecture, crowd management planning, design of the interior environment, design innovations for aging, coloured exterior and interior lighting, environmental psychology and other related topics;
- Planning – urban planning and development, urban affairs, planning education & research, innovative planning programmes and techniques, preserving large landscapes, planning & environmental law, public budgeting and finance and other related topics;
- Audiovisual media arts – digital media design, art practices in global digital culture, immersive experiences in virtual space, film, television, and new media in the post-digital era, audiovisual strategies on portable platforms and social media, 360° cinematography and production, 3D stereoscopic film production in community-mediated environments, producing in local and international markets, audiovisual media branding and niche marketing, animation and CG integration in audiovisual settings, multimedia performing arts, video installation and net art, game design and ludology theories, narratology in film and media and other related topics;
- Any topics from the related fields of design, production and consumption.

The first edition of *ADAMarts* was published in 2018. This is the second edition of ADAMarts, in which articles and events dated 2020/2021 are published. Further contributions and papers will be welcome from academicians, post-graduate students, architects, designers, planners, media artists, anthropologists, historians, psychologists, sociologists or others interested in the fields named above.

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ADAMarts Volume 2

ADAMarts is a collection of articles reviewing the connections between different countries and cultures, especially of the Baltic region. Texts included in *ADAMarts* are invited through a public call for papers. Only original papers that have not been previously published may be selected for publication.

Submission of articles:

Proposals are welcome from academicians, post-graduate students, architects, designers, planners, media artists, anthropologists, historians, psychologists, sociologists or others interested in interior design at any level in the fields named above.

The paper should not exceed 8000 characters and should include a title, an abstract and keywords in English. Illustrations (up to 10 for articles and up to 3 for reviews) should be submitted in TIFF, JPG or PDF format (resolution at least 300 dpi in the final size). Copyright of images should be cleared by the author of the article prior to submission.
A full list of captions should be given at the end of the article or review. For reference formatting, the Harvard system should be used.

If the paper fulfils the requirements, including those of the journal's editorial guidelines (provided in the respective call for papers), it is double-blind peer reviewed. All evaluators are external and anonymous.

Publication ethics:

The journal adheres to the guidelines stated in the 'Principles of Transparency and Best Practice in Scholarly Publishing' by COPE (Committee on Publication Ethics). It follows the spirit of the principles in all aspects of its publishing operation. We expect all authors to adhere to the ethical standards as prescribed by the Committee on Publication Ethics.

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