

Andri Gerber,
Ulrich Götz (eds.)
Architectonics
of Game Spaces

The Spatial Logic of the Virtual
and Its Meaning for the Real



An electronic version of this book is freely available, thanks to the support of libraries working with Knowledge Unlatched. KU is a collaborative initiative designed to make high quality books Open Access for the public good. The Open Access ISBN for this book is 978-3-8394-4802-1. More information about the initiative and links to the Open Access version can be found at www.knowledgeunlatched.org.



Bibliographic information published by the Deutsche Nationalbibliothek

The Deutsche Nationalbibliothek lists this publication in the Deutsche Nationalbibliografie; detailed bibliographic data are available in the Internet at <http://dnb.d-nb.de>



This work is licensed under the Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 (BY-NC-ND) which means that the text may be used for non-commercial purposes, provided credit is given to the author. For details go to <http://creativecommons.org/licenses/by-nc-nd/4.0/>

To create an adaptation, translation, or derivative of the original work and for commercial use, further permission is required and can be obtained by contacting rights@transcript-verlag.de

Creative Commons license terms for re-use do not apply to any content (such as graphs, figures, photos, excerpts, etc.) not original to the Open Access publication and further permission may be required from the rights holder. The obligation to research and clear permission lies solely with the party re-using the material.

© 2019 transcript Verlag, Bielefeld

All rights reserved. No part of this book may be reprinted or reproduced or utilized in any form or by any electronic, mechanical, or other means, now known or hereafter invented, including photocopying and recording, or in any information storage or retrieval system, without permission in writing from the publisher.

Cover concept: Kordula Röckenhaus, Bielefeld

Cover illustration: Max Moswitzer Proofread by Lindsay Blair Howe

Printed by Majuskel Medienproduktion GmbH, Wetzlar

Print-ISBN 978-3-8376-4802-7

PDF-ISBN 978-3-8394-4802-1

<https://doi.org/10.14361/9783839448021>

PART 2, ESSAYS

A. TOWARDS A DEFINITION OF GAME SPACES

The Architectonics of Game Spaces

Or, why you should Play and Design Video Games to become a better Architect

Andri Gerber | 135

Virtual World Weariness

On Delaying the Experiential Erosion of Digital Environments

Stefano Gualeni | 153

The Lived Space of Computer Games

Stephan Günzel | 167

The Architectural Continuum

Choropoietic Media and Post-Physical-World Environments

Constantinos Miltiadis | 183

B. SPATIAL TRANSITIONS BETWEEN ARCHITECTURE AND GAMES

From Asteroids to Architectoids

Close Encounters between Architecture and Game Design

Ulrich Götz | 201

Piercing all Layers of the Anthroposphere

On Spatialization and Architectural Possibilism in *Hitman*

Marc Bonner | 215

Creating Fascinating Spaces

The Assignment for Designers of both Virtuality and Reality

Sinem Cukurulu | 233

Augmented Play, Art, and Space

The Cognitive Coupling of Avant-Garde Games with Unexpected Mental Spaces

Margarete Jahrman | 249

C. THE POTENTIAL OF GAME SPACES FOR A NEW ARCHITECTURE

Play the City

Dungeons and Dragons for Cities

Ekim Tan | 265

Democracy, Video Games, and Urban Design

Minecraft as a Public Participation Tool

James Delaney | 277

Video Game Urbanism

How we Design Virtual Game Spaces to Engage new Audiences with the Architecture of Tomorrow

Luke Caspar Pearson | 293

Bibliography/Ludography | 313

Image Copyrights | 331

Authors | 335

Free your Imagination!

Andri Gerber in Conversation with Philipp Schaerer,

March 26, 2019 (Skype)

Andri Gerber: Let's start *in medias res* with a *modus operandi* that you mention very frequently: composition. This is surprising, as in architecture, we normally associate composition with the venerable *École des Beaux Arts* in Paris—and consequently, with a boring and static design procedure based on symmetry, plans, and elevations.

Philipp Schaerer: You are right: there is that tradition on one hand—think of Jean-Nicolas-Louis-Durand (1760-1834), with his building components and the way he would bring these together. It was a *leçon à faire*—principle of addition—in order to ensure order and proportionality in an overall structure. On the other hand, I understand “composition” in a much more liberated and less rigid way. In my work and in my teaching, composition is mostly used to rearrange supposedly incompatible pictorial elements. It's about experimental and visual compositional techniques. My primary interest lies in the optical connecting and rearranging of what are seemingly incompatible image constructions, which have very little to do with reality: utopian in terms of content and mostly composed, in terms of visual vocabulary, of photographs, thus apparently very plausible and realizable. For example, in the teaching module *Cut-Ups*, we created a series of perspective and illusory image compositions based on the rearrangement of found photographic fragments. These montages might still create the impression of a real setting in nature or the built environment, because they respect the laws of photographic representation in respect to its visual appearance. But, at the same time, the content shown by interweaving and stringing these elements together is highly fictitious. Or, instead of using image fragments as source material, we have also worked with found

3D-library components on the internet, in order to compose assemblages based on the free sampling of these individual elements (in modules entitled *Artifacts* and *Architectural Capriccios*).

However, we also compose with words, not just with images. For example, in the module *Compounds—Word and Image*, in which students were asked to make up a series of compound words. They did not correspond to any existing reality and had no fixed denotation (for example stair-bed; mobile-forest ...), and therefore had to be visually encapsulated and interpreted. Through this procedure, students have to begin with their own imagination and are unable to refer to already existing pictures examples. In architecture, more and more frequently, elements are available in databases and students tend to simply make “cocktails” out of these references, without reflecting on what they are doing. It can be nice to look at, but repetitive.

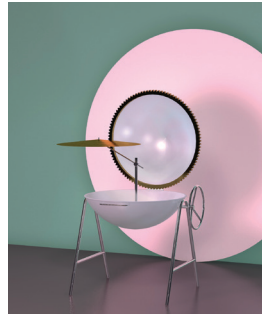
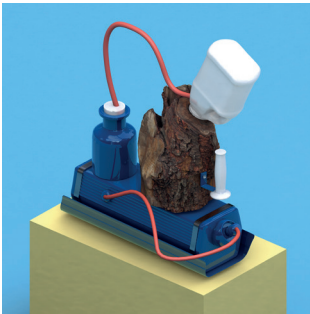
Fig. 29-32: Architectural Capriccio, 3D-Composite, Computer Rendering
 Course: UE-N, Constructing The View II, Spring 2016, ENAC, EPFL.
 Students: Laura Porta, Lina Vallander



Fig. 33-4: Cut-Up, Image Montage, Course: UE-L, Constructing The View I, Autumn 2017, ENAC, EPFL. Students: Olmo Viscardi, Cédric Wehrle, Thomas Lutz, Benjamin Bonnard



Fig. 35-6 Artifact, 3D-Composite, Computer Rendering, Course: UE-N, Constructing The View II, Spring 2017, ENAC, EPFL. Students: Marcelo Rovira Torres, Diane Stierli



Gerber: Besides composition, you often mention construction. While the first term, according to my understanding, implies a distance between subject and object—reminiscent of the level of abstraction in compositions such as those of École des Beaux Arts, which never considered the urban context—the second seems to imply a closer connection to material things. Things get physically manipulated and constructed.

Schaerer: Despite the fictional nature of my work, there is a strong sense of workmanship, which I associate with this construction of images. You join elements in a way that results in plausible visual arrangements and that has an aesthetic appeal.

Fig. 37-8: Seating-Dock (Word and Image), Axonometric Drawing/ Image Montage, Course: UE-L, Constructing The View I, Autumn 2016, ENAC, EPFL. Student: Dan Relecom

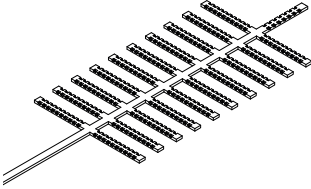


Fig. 39-40: Fluffy-Column (Word and Image), Sketch/ Image Montage, Course: UE-L, Constructing The View I, Autumn 2016, ENAC, EPFL. Student: Michael Casares

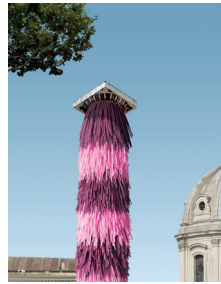
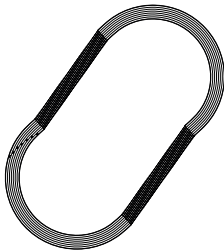


Fig. 41-2: Running-Stair (Word and Image), Axonometric Drawing/ Image Montage, Course: UE-L, Constructing The View I, Autumn 2016, ENAC, EPFL. Student: Eva Herunter



Obviously, I work with “flat” fragments rather than building components. Composition applied to images implies fewer constraints: you can disregard gravity and objects can be morphed, blended, or scaled without any problem. Images are the perfect testing ground, because so many constraints and rules are suspended, and you are not tied to these like you are in reality.

Gerber: Reality is an important keyword. You often speak about utopia when describing your work. What is the relationship between reality and utopia? Would you agree that reality and utopia are always somehow related, and that reality itself is somehow always a construction?

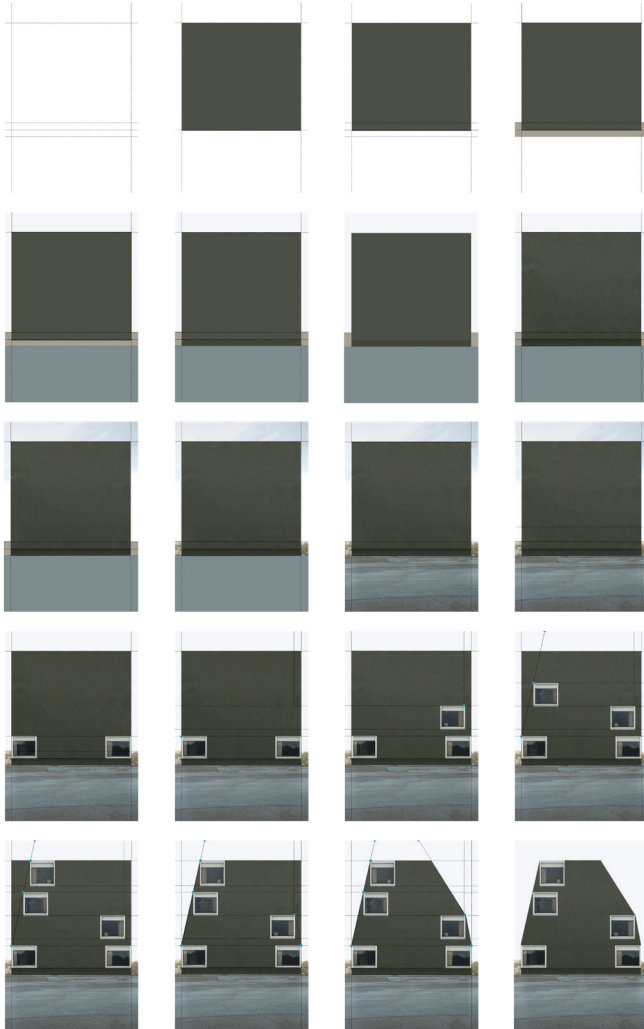
Schaerer: I think I must specify that I use the term utopia mostly in the context of images—without a political or social connotation. Probably this is not the most precise use of the term, but I like to apply it in describing a fictitious setting. If we couple reality and fiction, I think their boundaries will become more and more blurred in the future. For example, consider the fact that, when gaming, you have real outbursts of emotions: you are happy when you get to a next stage or you are frustrated when you constantly fail to overcome an obstacle. Just think about the social interactions that exist in games with multiple players. Emotionality is something that brings reality and fiction together.

Gerber: You talk about emotionality—what kind of emotions do your images trigger in the eye of the beholder? Is seduction a term that could explain this relationship?

Schaerer: The images from my personal work originate from a personal necessity, a desire of mine, and are therefore linked to my past. This began with my education as an architect at the ETH Lausanne (EPFL) in the 1990s, and then my employment at Herzog & de Meuron Architects. These images are not born of some kind of theory, but rather, they are the consequence of my history and the outcome of my practical work at Herzog & de Meuron. My first image series, *Bildbauten* (2007), is a good example for this. I was fed up with all of the overloaded architectural visualizations that I produced for their office between 2001 and 2006—project visualizations that operated on gimmickry and primarily used for competition entries. I felt the need to follow another path: to fundamentally question the fragile relationship between image and architecture, the visual structure of images, and the prevailing practices surrounding images in architecture offices at that time. The *Bildbauten* series deals with the impact and the claim to credibility regarding architectural images that appear to be photographs—yet they are not photographs. Instead, they are completely

designed and constructed from scratch. By means of their exaggerated and orchestrated way of representation, they modelled themselves on the object-like appearance and the formal language of contemporary architecture.

Fig. 43: Steps of Development, Bildbau No 5, 2007, From the Bildbauten Series. Author: Philipp Schaerer



I think the interesting aspect of the *Bildbauten* series—especially in the context of architecture—is that these images bypass and disregard our traditional perception and understanding of graphic material. We still link abstract representation (sketches, schemes, illustrations, and so forth) to an idea. In the context of architecture, for example, this is a vehicle with which to anticipate a possibly built reality. In contrast, a photographic representation is generally still interpreted as proof, linked to a fragment of materialized reality. In the architects' experience, the photograph of a completed construction traditionally represents the culmination of a long process with a large number of different iterations—kind of a visual “trophy.” The *Bildbauten* images are now inverting those conditions; despite their highly photorealistic appearance, they are graphically built-up from scratch and do not have any connection to concrete planning and spatial ambition. In this series, a vertical canvas is the background, and two lines of delimitation (ground-façade and façade-sky) define three surfaces (ground, façade, and sky), which then are covered freely and decorated with image textures. There are no floor plans, elevations, or sections—in general, there is no elaborated spatial concept, on which the *Bildbauten* are based. They are like wallpaper with no context—a subtle criticism about the making of architecture in our digital-capitalist era.

I think that the fact that photography and computer image processing—two utterly different imaging methods—can result in images that are no longer visually distinguishable by means of optical features constitutes a milestone in the history of image production. This should not be underestimated: an image derived from a fictitious setting is now in competition with a photographic image taken from the built environment. Fiction mingles more and more with the distortion of our physical reality. Looking back to the first examples of computer renderings or analogue image montages, you still could see the technique, you still could see that the images were constructed.

In an analogue photomontage, individual image fragments are tied to their surface material—most commonly paper or sometimes photographic film—which makes weaving or blending them together difficult: unless the montage is carried out with great skill, it is almost always possible to discern a cut or tear line, and it takes a great deal of experience, time, and effort to eliminate all traces of where one fragment ends and another begins. Since digital images do not have any surface material, but consist purely of pixel-based data, seamlessly blending fragments of all types and

sizes is comparatively easy in a digital collage. The worst consequence of this process is that you don't even need all that laborious spatial planning anymore; you can skip that, and instead produce a series of photorealistic images, post it on the internet, and make people believe that they depict a completed construction.

Gerber: How would you describe the type of knowledge that you contribute to your images as a trained architect? Does it make sense to distinguish between pictorial and spatial knowledge in this context?

Schaerer: I think these two types of knowledge are completely different. When you are in a space, you are there with your body; you have a bodily experience based on all of your senses, and this experience is very hard to translate into a purely visual and two-dimensional language. Human beings are constantly moving, and experience their own presence in space; this intimate kind of spatial knowledge is built on these experiences, and is therefore extremely difficult to communicate and to someone else. You can develop a theory of space, of course, but it will always remain abstract and removed from spatial experience.

Pictorial knowledge, on the other hand, is something quite independent from your body and instead related to the medium of the image—which has doubtlessly become the most powerful medium for the distribution of visual content today, regardless of location. Unfettered by any particular carrier, it can be multiplied at will and transported anywhere. Images only function on a visual level, and we only require a limited set of sensory tools to perceive and judge them. This primarily occurs on two levels: on one hand, we can interpret an image in an iconographic way—evaluating the content, which elements are depicted—and on the other, we can look at an image and ask ourselves how it's made, what its visual language is, and consider its stylistic approach. With images, there are fewer perceptual stimuli, yet this creates many more possibilities than actually being in present in space, because you can project more into an image. If we take my *Bildbauten* series as an example, it is clear they only work as images. If built, they would not be nearly as interesting! Because they free your imagination!

Gerber: When I look at *Bildbauten*, I ask myself what these buildings look like beyond the front façade, when you turn a corner. So, I try to execute a change from image to space, which is of course frustrating because I cannot transport myself into the image—unless I suffered from the *Stendhal syndrome* depicted by director Dario Argento (*1940) in his eponymous movie from 1996.

Fig. 44-5: *Bildbau No 2/ Bildbau No 6, Image Montage, 2007, From the Bildbauten Series. Author: Philipp Schaerer*



I agree with you that it would probably be disappointing to see them in person; yet, at the same time, they probably would retain something mysterious and intriguing. This is the main difference between space and image, and the corresponding knowledge that they provide. It is all about retaining information, and the possibility to fill this gap with your curiosity and imagination.

Schaerer: I totally agree with you. Despite their realistic style of visual representation, the *Bildbauten* images remain quite intangible and elusive, refusing to be embedded in a context, whether spatially or on in regard to their meaning. They are self-contained like satellites traveling around the world, the same way “normal” architectural images are exchanged through the Internet.

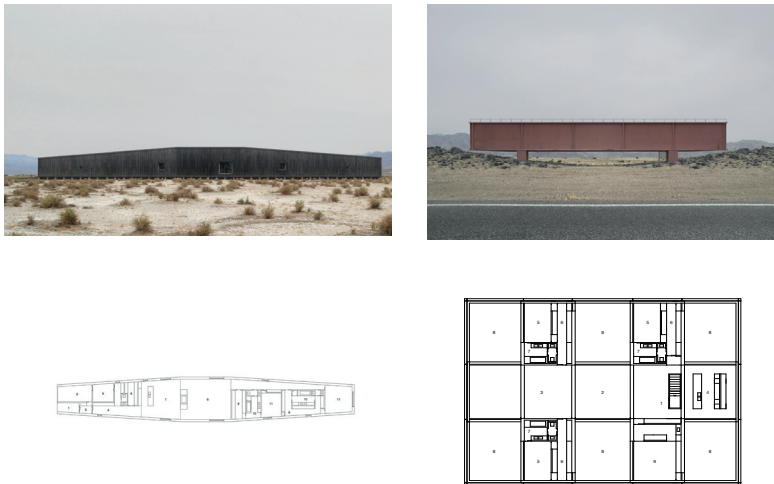
Gerber: You live in this world of images—but have you ever felt the desire to build?

Schaerer: Right after I finished my studies in 2000, I worked at Herzog & deMeuron Architects on the construction phase of a project extending the Aargauer Kunsthau (1996-2003). So, I do have an idea of what it means to be part of a project, with all the difficulties and problems that come along with it—in particular, the contact with so many different kinds of trades and people. After this experience, I knew that I was not interested in doing something similar on my own. I found all of the financial and organizational aspects of running an office quite unappealing.

Gerber: Would it then be accurate to say that your work is a kind of escape into the world of images?

Schaerer: Probably, yes. But they also tell that I'm still interested in architecture. In my leisure time, I regularly develop small projects, let's call them "paper architecture," or fictional buildings that exist only as a floor plan and an elevation. I do this primarily for my own satisfaction. Elaborating the projects on paper is enjoyment enough; I don't need to go one step further and jump into the fray construction and detailing, et cetera [laughs].

Fig: 46-7: Cigar House, 6-Courtyard House, fictional projects, 2012, Exterior Views and Floor Plans. Author: Philipp Schaerer



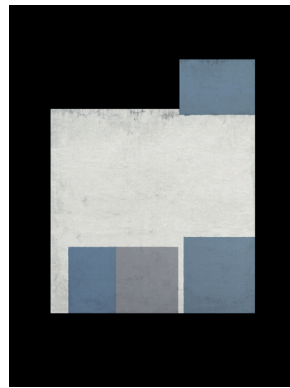
Gerber: When we look at your images, a paradox is evident: you criticize the availability of images, yet you also produce images. How do you resolve this dichotomy?

Schaerer: It's probably important to specify the type of images to which you refer. In my early work, between 2000 and 2010, I did quite a lot of commissioned images—architectural visualizations for offices—but I stopped as soon as I realized that this is nothing but a huge "image-washing" machine [laughs]. I was oversaturated with these exaggeratedly staged image-constructs. I had enough of the constant concern for the image's visual impact, the will to maximize the project's pictorial reso-

nance with ever-more spectacular renderings. To return to your question, I am not criticizing the availability of images in general, but rather, the stylistic means with which architectural visualizations are executed, the image strategies that strongly refer to the marketing and advertising industry. I didn't feel comfortable with that anymore.

That's why I've been concentrating on my own artistic work over the past ten years—without a client—working on series of images at the intersection of architecture, photography, and graphics, experimenting with the pictorial representation techniques of the built and natural environments. These images work with references and allusions and try to address the increasingly blurred boundary between the digital world of images and the material world of objects. They do not scream for attention, and do not feature spectacular perspectives—the *Chicago Series* (2017) serves as a good example. The project begins with aerial views of built architecture—the fifth façade, an architectural element so often neglected—and tries to poeticize and translate it into an independent and “refined” abstract pictorial figure. The work thus focuses on ordinary and common architecture, features the hidden, makes the invisible visible, and seeks the unobtrusive beauty in the banality of our built environment. The pictorial figures may undoubtedly recall the genre of abstract painting, although the work is exclusively based on photographic material.

Fig: 48-9: V19-01/V23-01, From the *Chicago Series*, 2017. Author: Philipp Schaerer



Gerber: Obviously your images are implicitly a critique of these phenomena. Being both affirmative and critical is probably something one can only do with images. In architecture, this is almost impossible, because you either build, or you are a critic. Was this one reason you turned to images rather than to built architecture?

Schaerer: One reason why I have turned more and more to pictures is certainly their dimension of time and their elasticity. In the production of architecture, it takes years from the first conceptual sketch to a finished construction. Images, in contrast, are more agile; they are fabricated faster and are rarely subject to external constraints for their completion. I do not need to build in order to test ideas and concepts, when I'm primarily interested in visual relationships. On the contrary, the medium of "image" gives me much greater freedom to experiment with visual configurations.

Gerber: What about the current uncontrolled growth of digital images in architecture, both in practice and in teaching?

Schaerer: It's obvious that today, at least on our latitude, architects are developing, visualizing, and communicating their designs by means of digital tools. This binds them to the functionality, the expressiveness, and the processing possibilities of the programs they operate. Of course, as in many other fields of activity, the use of the computer provides great convenience: the work becomes more efficient, and content can be handled more easily. However, I think we are also seeing a dissatisfactory side effect, mostly in design fields: stereotypical aesthetics have become practically interchangeable. We can observe the tendency of global architecture to become more and more similar in appearance.

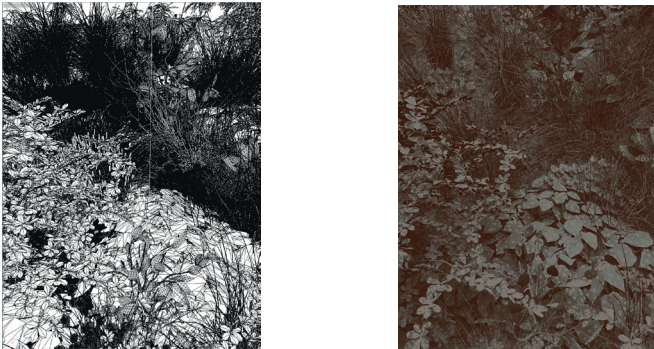
This is evident not only in built structures, but also in the imagery of the projected and digitally rendered design concepts. One of my central concerns in teaching is to convey an extended vocabulary of digital image techniques, developing more specific and individual forms of expression with computers, which involves a more creative approach to computer-based technologies. For example: In the architectural context, computer renderings are predominately used to emulate pseudo-photographs, but no one mandates that the rendering can only be used for producing photorealistic images. A tool does not do the work by itself; more decisive is the way in which a person uses it. A computer rendering can also be used for more abstract representation. For example, mapping 3D-models with non-photographic texture maps, as we did in the course module called *Virtual Reconstruction*, or in my work *Mines du Jardins*—a series of 3D-plant

arrangements—were one-hundred percent rendered, yet they do not follow a straightforward photographic representation technique, and do not use texture maps at all.

Fig. 50-1: Virtual Reconstruction, Screenshot 3D Scene/ Final Computer Rendering Course: UE-L, Constructing The View I, Autumn 2014, ENAC, EPFL. Student: Antonios Prokos



Fig. 52-3: Screenshot 3D Scene, (Mines du Jardin No 2)/ Computer Rendering, 2012. Author: Philipp Schaerer



Gerber: Did it affect you that your images have been transported onto the Internet, and are suddenly available anytime? This implies a commercialization of your subversive stance ...

Schaerer: Yes, the *Bildbauten* images travel the internet with particular frequency, and are still regularly re-linked and posted on virtu-

al pinnwalls. Two Ph.D. students who also run an architectural office also reused a *Bildbau* image, proposing it as their own contribution to the exhibition *Ways of Life, Experimenta Urbana in Kassel*—a complementary event to the *Documenta* exhibition in 2017. Stefan Ku-rath intervened by writing a letter of protest to the organizers, and the participants ended up having to withdraw their contribution.

Fig. 54-7: Morten Rockford Ravn, From the Fear and Loathing in GTA V Series, In-game photographs, 2017



Gerber: Let's address another important topic: Do you yourself enjoy gaming?

Schaerer: I am not really a video-game maniac. But I do remember that I played *Winter Games* (1985) and *Summer Games* (1984) with great fervor, which ran on my 8-bit Commodore 64 computer in the early 1990s. Maybe I played too much at the time. I just came back to video games upon acquiring a Playstation in 2015—a completely different world in regard to performance, graphics, and interactivity. Today, I am most interested in the types of video games that provide a territory to explore, with different types of natural landscapes and built environments. I have to confess that I'm most attracted to game environments in which the graphics are highly photorealistic, with a high degree of detail, and supported by an accurate simulation of weather and different qualities of light. An example of such a game, is *World of Tanks* (2010). It's a free multiplayer online game featuring mid-twentieth century tank battles. The gameplay is secondary to me, but the pictorial representation of the various landscapes is amazing and

very rich in detail. For example, there are dancing butterflies between the leaves in the air, or you can watch the grass swaying in the wind. Therefore, it's not surprising that several contemporary artists have begun to use these virtual playgrounds as their sets for taking photographs: exploring different environments, waiting for a particular moment, and shooting a still of the real-time rendering by means of the in-game camera. An example of this is the Danish artist Morten Rockford Ravn (*1987). His in-game photography project, called *Fear and Loathing in GTA V* (2017), uses the video game scenery of the fifth edition of Grand Theft Auto.

Gerber: What about virtual reality (VR) devices? Is this something that interests you as well?

Schaerer: I think it's important to watch the development. Think about the first cellphones on the market—they were massive devices which only bankers could afford [laughs]! We have all experienced how these devices have become smaller over time. Although it would be possible to shrink the components of the mobile phone further and further, after a certain point it wouldn't make sense anymore; as long as we use our fingers to operate the cell, it will remain more or less the current size. Now, turning to VR-devices, especially the headset: they are still large and cumbersome, similar to the first cell phones. But I'm sure that these VR components will undergo an intensive "miniaturization" process in the future. The relevant organ to record visual information is the eye, and there are already transparent membranes able to display visual information. It is not a big step to develop VR-contact lenses, which could be worn at any time. I'm quite sure nearly everyone will wear them in the future, and probably sooner than we expect, comparable to the impressive spread of mobile phones throughout our societies. Of course, this will have significant ramifications in the way we perceive and shape our environment. We can't ignore that.

If we assume everyone will wear VR-lenses in thirty years, any physical object that can be experienced solely by the eye—with no impact on our body—could become obsolete, simulated perfectly with VR-lenses. For example, all flat, ornamental architectural elements would no longer need to be materialized. This is also true for the color tones of façades and interiors, which could be replaced by a customizable color setting for each individual lens projection. Even the existing traffic signs and billboards could completely disappear physically. Signs and advertising would, instead, be

projected onto your lenses, tied to your precise geographical position—and so on.

Gerber: Do you think this would result in a loss of reality, or that “reality” will be exchanged for another type of “reality?”

Schaerer: First of all, I think the term “reality” needs to be refined, particularly in our era, in which we are confronted with an ever-increasing amount of digital content. We still link the term to something with a physical presence, something that we can touch and experience with our body—we still primarily associate the term with the material environment. Being increasingly confronted with intangible digital content, our understanding of “reality” becomes troubled. As mentioned before, when you play a video game and have real outbursts of emotions, it’s absolutely real—proven by the intensity of your emotional reaction—despite the fact that the game is a pure intangible, virtual simulation of action. I’m deeply convinced that we will not “lose” reality, but that the term and his significance will change, blurring the boundaries between the physical and the virtual more and more.

Gerber: You frequently refer to bodily experience. In architecture, this topic is definitely underrated, even though there are some scholars who have discussed the topic extensively, such as Herman Sörgel (1885-1952).¹

Schaerer: I love Camillo Sitte (1843-1903) and his book *Der Städtebau nach seinen künstlerischen Grundsätzen* (1889)! The whole notion of urban space one has to “unravel” through the movement of the body is simply fantastic, and greatly impressed me during my architectural studies. I think all architects should read his book!

1 | Rainer Schützeichel, *Die „Theorie der Baukunst“ von Herman Sörgel: Entwürfe einer Architekturwissenschaft* (Berlin: Reimer, 2019).