Emotive Spaces

Spatial interpretations based on the book “Der Ohrenzeuge” by Elias Canetti

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Abstract. Focusing on a design methodology that is inspired by emotional conditions rather than rational specifications the paper describes the translation of literature into virtual spaces. In his book “Der Ohrenzeuge” Elias Canetti describes 50 surreal characters, which were analyzed in the first step due to their anthropological features. The following interpretation of these features into spatial qualities, using visualization software as an expressive medium, was realized by the definition of parameters for geometry, light, material and camera settings to achieve a spatial analogy of the given characters. The experimental approach led to a deeper understanding of spatial qualities in respect to atmospheric impressions and triggered at the same time the application of digital tools for an intuitive design process.

Keywords. Character; atmosphere; anthropological spaces; visualization; literature.

Introduction

Nobel Prize winner Canetti describes in his book from 1974 fifty human characters – each by exaggerating one single characteristic at a time. In short, concise sentences he creates images of prominent, sometimes surreal figures about which he says: “At first glance you discover friends and people you know, at second glance you find yourself” (Elias Canetti liest Canetti; Canetti 2001). This declaration indicates the complexity of Canetti’s sublime characters, which are never as simple as they appear at first sight and which evoke strong emotions in the reader.

Canetti’s texts can be understood as a kind of typological theater between scientific and artistic interest. Scientifically because of his exact observation and documentation of human characters, whose qualities are described attentively, implacably and additively: behavior, actions, habits, etc. The characters are extremely exaggerated and are presented in their essential characteristics: crassly, impressively, sometimes like their own caricature. Artistically because of Canetti’s passionate pleasure to montage and to present those examples. Each demonstration is based on experiences known by everyone; yet it stresses the puppet-like impression. Those descriptions of human characteristics served as starting point for the interior design project.
“Emotive Spaces”: In this project 50 students designed “anthropological” spaces using visualization-software based on the characteristics described by Canetti as parameters for their spatial design. The atmosphere of those spaces should mirror the emotion evoked by Canetti’s description.

Analyzing Atmosphere – The Perception Lab

The project “Emotive Spaces” is related to the research platform PerceptionLab at the University of Applied Sciences in Detmold, which focuses on the atmospheric impact of space in real and virtual environments.

The creation of atmospheric spaces is one of the major tasks for interior designers. Since there are so many parameters to describe atmosphere – such as proportions, material, light ... – and so many different ways to perceive such a complex subject, atmospheric design derives generally by subjective intuition and experience – rarely based on objective parameters and scientific knowledge.

The PerceptionLab tries to fill this gap between subjectivity and objectivity by measuring and evaluating impacts of spaces on well-being and quality of life. The purpose of this laboratory for the observation, analysis and assessment of human perception in the spatial and medial context is to develop empirically ascertained knowledge in connection with concrete experiences from planning practice into an application-oriented toolkit for design and planning.

The impact of geometry, material, light, movement, etc. on spatial perception is researched by significant, clear questions, which focus on one aspect of perception at a time. Since the PerceptionLab is a cooperative platform of the two departments Architecture/Interior Design and Media Production a wide range of human perceptions levels – visual, auditory, kinesthetic, olfactory, gustatory – can be examined. The research in this field is conducted by using the following tools and instruments to measure the impact of space based on various case studies.

- The Space Lab: Realization of design concepts as a physical Mock-Up in scale 1:1
- Powerwall: virtual three-dimensional scenarios, based on stereoscopic projections
- Eye Tracking System: analysis and evaluation of the visual perception
- Biofeedback-System: survey of physiological data
- Handhelds and Questionnaires: analysis and testing of conditions
- Light Laboratory: analysis and evaluation of lightning-concepts
- Motion Capture and Green Screen: through which medial environments are created

Case Study: Emotive Spaces

Starting point, methodology and goal

The academic project began more abstract, in contrast to the – for interior design – typically spatial, functional or pictographic starting points, i.e. anthropological and based on the description of human characters by Elias Canetti.

Canetti stretched one characteristic into a whole human character with its different facets and sometimes two or more faces. The students were asked to translate the characteristics they discovered in analyzing the text into different spatial parameters (geometry, material, light, perspective), which bear one certain atmosphere consistent with the emotion evoked by the description of the chosen character.

The main goal was to convey specific knowledge in the experimental use of computer and software as digital design tools – and not only as illustration tool for the finished design – while generating atmospheric spaces, which focus on emotional characteristics rather than on functional or programmatic parameters. In this respect the case study was meant to trigger the generation of virtual emotive spaces in
Process

The students were asked to create an individual, “characteristic” spatial design out of the description of one of Canetti’s 50 characters. The design-process was pre-determined by the following definition of specific steps for the translation of literature into virtual spaces.

- Dissecting the text and extracting keywords [Figure 1].
- Linking the keywords to typography and reference-images that amplify the meaning of the words [Figure 2].
- Analyzing the images by filtering aspects of geometry, material appearance, light ambience and perspective/point of view [Figure 3].
- Translating these aspects – using the visualization-software Cinema 4D – into digital parameters to create a holistic, emotive, virtual space [Figure 4, 5, 6].

Digital Parameters

Cinema 4D provides a wide range of spatial, atmospheric parameters, still the introduction into this visualization-software is quite intuitive, so that the students could start easily and design the parameters for …

1. Geometry
2. Light
3. Material
4. Camera

Geometry
The most basic shapes are provided as parametric primitives, whose parameters like size, filling and orientation are easily adjustable. Parametric objects could be used as they are or they could be converted into polygons to create more complex objects – either out of manipulation of single points, edges and plains or out of division, linking and combination of simple or already manipulated objects [Figure 7]. Visualization-software like Cinema 4D also offers the possibility for manipulating objects through dynamic changes of the geometry by drag-and-drop, which is more intuitively and resembles the work of a sculptor more than that of a sketcher.

Light
As in the real world light produces ambience in virtual spaces while shadows reveal the spatial relations in between various objects.

Each visualization-software features different types of light [Figure 8, 9] and shadow calculations. Additional parameters allow adjusting colour, brightness, fall-off and other properties of each light individually and offering the possibility to edit the density and color of the light's shadows and create visible or volumetric lights with noise patterns that appear in the light cone. Lights offer settings such as

Figure 5 (left) process: first visualizations manipulated with Photoshop

Figure 6 (right) "Der Gottprotz" final visualization.

Figure 7 polygon-objects, manipulated at point, edge or plain and manipulation through deformation of simple objects.
contrast, lens reflexes, shadow colour, and volumetric light and noise, among others.

Material
Virtual material can simulate natural or artificial material properties. Those can be reduced on optical qualities like colour, transparency, reflection and luminance or enriched by texture mapping, bump, displacement, alpha, etc. [Figure 10, 11]. Most visualization-tools provide material systems to create new materials and control their various parameters.

Camera
In a visualization-software the camera simulates the observer’s point of view. It determines the caption of the virtual scene. Cameras are set up by angle, distance and focal width [Figure 12]. Additionally the depth of field brings objects into focus [Figure 13].

Discussion of the results
Within the project the students produced 50 virtual spaces, which resemble long views into sometimes endlessly deep, sometimes strictly limited spaces – definitely virtual although in most cases with almost realistic light ambience and material appearance. The fascination of this project lies in the translation of Canetti’s well-spotted, social reality – where the ethical characters (for example “Die Schuldige” – the culprit) are attached to aesthetic forms (like location,
Figure 12 (left)
camera: focal width: 16 mm

Figure 13 (right)
camera: depth of field in the foreground

Figure 14
“Der Gottprotz” by Leif Linhoff.
gesture, etc.) – into interior design.

Interior architecture allocates functions like shelter, presentation, etc. to certain aesthetic forms. So both, Canetti and the interior architect use a certain equipment of words and collocation or rather of form, light and depth. They act playfully – Canetti’s texts are not truly, the emotive spaces are not suitably – by evoking strong emotions in the reader or rather in the observer.

**Example: “Der Gottprotz” by Leif Linhoff**

The result of Leif Linhoff [Figure 14] is very amorphous, a space without limitation. He himself described the following aspects of his work:

The most important elements are the octopus-like metallic-green-blue tentacles which form a helix, and which are very prominently in the foreground, reduced in the background and without any visible beginning. The orange ball symbolizes a positive origin where orange, transparent stripes have its source.

Three spots at the end of the helix create the great depth of the visualization through a bright-dark gradient. In the foreground occurs a corona effect. Main colours are blue (metallic, cool, denying), green (toxic, false, menacing) and orange (warm, pure, ripe).

The mirror- and glass-like material stands for coolness and false gloss and for hidden fragility at the same time.

The vanishing point at the edge of the visualization means that the main characteristic of “Der

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**Figure 15**

“Der Nimmermuss” by Nina Rothschild.
Gottprotz” is falsity not authenticity.

Example: “Der Nimmermuss” by Nina Rothschild
The visualization of Nina Rothschild shows an antithetic space: orthogonal, closed, black and white …

The description of “Der Nimmermuss” says that he is moving in chess-moves. For this reason walls, basement and ceiling of the room are dissected in black and white squares. Those approach and depart alternately, because “Der Nimmermuss” is directionless and doesn’t define himself. There are types and signs on the squares, because words impose pressure upon him.

Light and material seem to be quite simple – black and white colour, gloss, punctual, directionless light with hard shadows – but they are very effective and fit to “Der Nimmermuss”.

The central perspective also mocks “Der Nimmermuss” to be a simple character, which becomes more and more ephemerally the longer you deal with him.

Conclusion

In the context of this project, the use of the computer as an experimental, digital design tool worked well. The students created “real” virtual, atmospheric, never seen before spaces without any functional or programmatic requirements.

Especially *Cinema 4D* as visualization-software turned out to be a good choice, because the students could look at one tool at a time, while all tools had interdependencies between them. All in all the process proved to be a good way to achieve emotive spaces without the usual conflict between computer generated images and atmospherically representation.

Outlook

Future projects and research in this field involves …

- The analysis of the generated virtual spaces regarding their components (camera, light, material …) and their interdependencies.
- The comparison of real spaces with the virtual emotive spaces.
- The perception of static and dynamic spaces or rather motionless perception of spaces and perception in motion.
- The extension of the design methodology to other starting points, i.e. music. To happen in the following project *Camera Musica*, in which the students are asked to translate musical characteristics like volume, tone pitch, instrumentation, etc. into spatial – and chronological – parameters (camera movement, screen sequences, etc.).

References