JOERG AUZINGER

Postsensation

A media art and research project investigating sensual perceptions through live-video expanded hybrid realities

How does a live visual presence in narrative hybrid realities (by using extended digital mirror environments) have an impact on the sensual perceptions and emotions of the viewer?

Does this live-video integrating hybrid reality method (where the viewer perceives himself as an observer of the second order) create an increased, intensified, or multiplied attention concerning the viewers perception of the narrative?

In what way do interpersonal interactions with additional protagonists in the virtual layer change the perceptions and the emotions of the participant?

Deep Depiction
Still from the video installation
Joerg Auzinger

I create and research new ways of exploring and inquiring self-perception and emotions under postdigital conditions. By using live-video mirror techniques in interactive video installations I aim to develop and refine my recently discovered methods of user integrated hybrid reality installations.

This project will take the form of developing new interactive live-video environments and reflective analyses of the creation and research process. There will be a final presentation in form of an interactive exhibition including a lectures performance. This proposal describes my approach concerning my planned interactive live-video hybrid realities installation, my targets, my open questions and the methodology that I have followed until now, and how I would aim to further develop it.

Through creating interactive installations, which integrate the viewer into the artwork by using live video technology, I explore constructions of reality and possible changes of our perception of reality and the perception of ourselves. A reflection of a digital mirror produces a confrontation with your own observation. The generated visual worlds led to altered possibilities of self-observation and self-expression and ultimately to a change in the perception of one's own actions, thoughts and emotions. This artistic research project can be seen as a tool to change our perspectives and allow ourselves to observe us as an observer and getting new insights about perception from this approach.

Abstract
Live-video expanded hybrid reflector realities

The basis of my interactive media art project is the setting of an installative environment, which I summarise with the term of „hybrid reflector reality". With this setting as a basis, I want to enrich, change and adapt the artistic method in process of my work.

The setup of this installation is in an empty room with a projection which fills the entire wall. The beholder is filmed unnoticed by a small camera inside this room. The individual is able to see him or herself in the projection as a „virtual" mirror image in real time. Therefore I use a method which separates the recording of the front and the background, whereat the front presents the person itself and the background consists of previously shot film plot. The projection of the beholder is displayed in a realistic proportion. Through the video camera the beholder is directly integrated in the projection and thereby in the storyline of the installation. The projection shows short and related narrative film sequences and actions with interpersonal communication. By integrating the audience into the installation, the beholder becomes thereby a protagonist, a leading actor of the film plot. Each viewer becomes the main character and at the same time a narrator of the story.

Both film layers, the previously shot film material and the live video material, merge to a uniform video. The live recordings of the camera will be cut into the film narrative, therefore the recorded video material from the beholder will be integrated accurately as a live-key in single scenes. The viewer is able to see him/herself in unusual places and sceneries. These are images of real places, but for the viewer they are only virtually available in this moment. The individual sees him or herself for instance standing in the rain, or in the desert. These situations are shown as short film sequences, which follow particular chapters of a higher narrative. In this case the viewer experiences him/herself in solitude or in crowds of people. The film scenes are emotionally charged and should trigger certain emotional movements and reactions in the beholder. It is important, that in these film scenes certain emotions are shown in an intensified way and originate in the basic emotions. Although the emotions shown in these scenes, become clear, it is possible that the viewer perceives his or her emotions in ambivalent mixed states. The film scenes can contradict each other as well.

The virtual reflection of the participant will not only be expanded by spaces and objects, but in particular by the appearance of additional protagonists in the film scenes, which will invite him/her to virtually interact with them, as well. The additional actors have different possibilities to step into action. Passive dialogues (beholder is in the role of the spectator) and active dialogues (protagonists are able to address the beholder) will emerge and therefore an interaction between the main character and the supporting actor are possible.

These additional protagonists are people, who are filmed in real life, and step into a dialogue with the participant and provoke emotionally charged situations for him/her (like conflict situations and situations where the basic human emotions of communication are addressed). It is clear that the stories, which cause emotional reactions in the participant, are more important that the sceneries they are in. The plot deals with interpersonal exchange and actions, verbal and non-verbal communication, body language and gestures. These storylines will be developed within my artistic research and in cooperation with cognitive scientists. The result is an artistic feature film in which the beholder is intensely integrated and the narrative and participating plot is synchronised with the user.

I aim to explore if perceptions can be altered, when you experience scenes, where you are the participant yourself and at the same time are able to observe the same scene from the outside as well. The change of the perspective from the first to the third person view has a central priority in my research. The issues of this video installation deals with perception, self-perception, emotions, and virtual communication. How does the viewer perceive himself as well as the whole situation he is situated in in a virtual context? It is important to find out, if there is a difference if the beholder watches a film (externaly/passive) or if the beholder appears as the main character of a film plot (internal/active) and to observe himself in this situation.

How does my sentiment change, if I observe myself watching a scene? These are no artificial realities, but two different realistic storylines, which are brought together. The difference is merely, that the real situations are virtually woven together to become a new narrative. How does this narrative react, if two different situations become a new one? Does one perceive oneself, one's sensations and one's body more intensively or differently, if one sees oneself additionally from the 3rd person view during an action?

Technically, the keying method is a combination of chroma-keying technique and depth information using infrared pattern projection, as used in Kinect sensors, providing the best results so far. This method will be further developed and optimized in the course of the work.
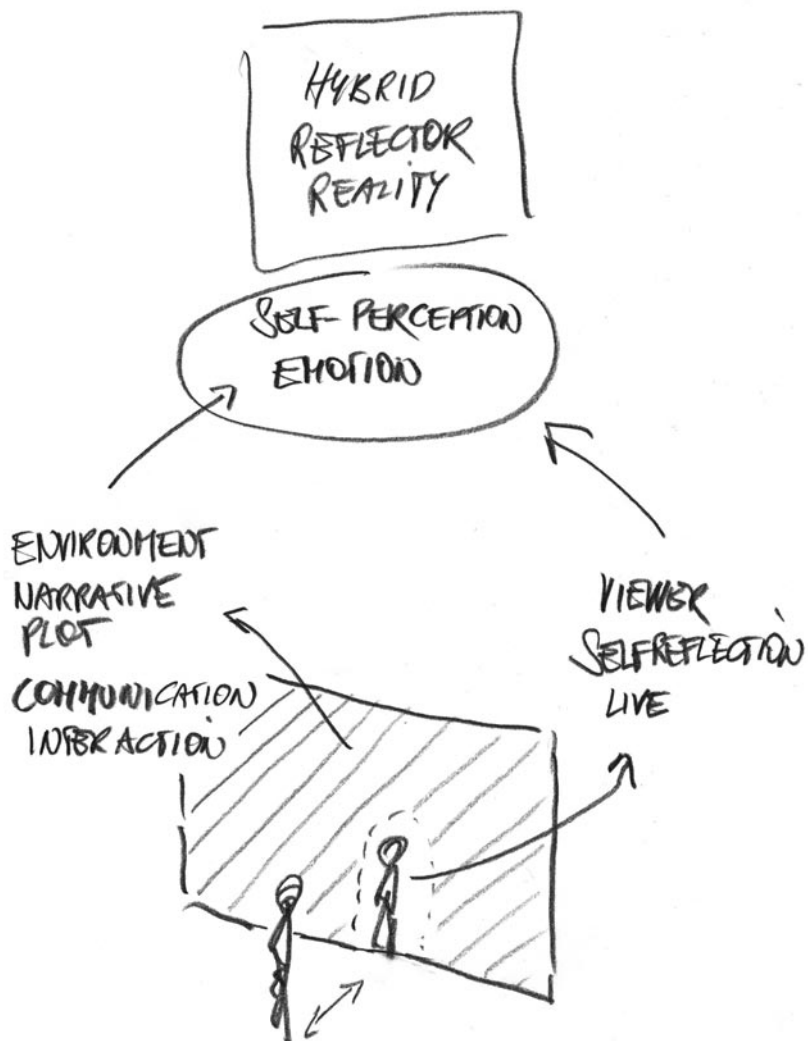
Experience levels in hybrid reflector realities

The setup of the installation can be divided into three layers with different levels of experience

- Unknown environment
- Observation of emotionally charged situations
- Virtual interpersonal interactions with additional participants

The layers are able to overlap and complete each other, alternate or base on each other.

Unknown environment:
These environments contrast with the actual environment (white cube) and are only virtually available for the beholder in moment the projection is in use. Some examples for these environments are being behind bars, standing on a stage, being in crowded places or standing in front of an abyss.

Observation of emotionally charged situations:
Additional protagonists join the scenery, who step into action in a nonverbal manner, without the assistance of the main character (the participant who is integrated into the plot by the live-key-method), and experience different situations. These situations can trigger emotions like fear, shame or sadness in the beholder. Therefore mixed states of ambivalent emotions are possible, because it seems difficult to separate these emotions from each other. The camera, which integrates the viewer live in the projection, is equipped with a face expression detection system. That is important to make the emotional reactions of the participant readable to subsequently provide this data for cognitive neuroscience.

Virtual interpersonal interactions with additional participants:
As another possibility the observer can be invited to interpersonal interactions in the virtual layer by the additional protagonists. These invitations are presented in variant emotional colourings (screaming, begging, asking or crying) and therefore can be used to change or intensify the emotions which are provoked in the participant. These dialogues have to work without the actual verbal answer or assistance by the user.

The previous designed film plot is a connected story which follows a script and tells a story and is a composition of all layers. The longer the participant exposes him/herself to this storyline in the projection, the more he/she is able to learn about oneself (self-perception, self-reflection). Example: The beholder finds himself on a stage in front of a cheering crowd with standing ovations. The longer the participant stays in this situation the jubilant crowd starts to shout cheering phrases.

Extended questioning:
Does the beholder feel him/herself still standing in the room, as well as his/her physical body, when keyed in an unknown virtual environment as well as in digital generated situations with unfamiliar protagonists by the live-key-method? How intense does the participant perceive his/her physical body and the space around it (white cube) as well as the relation to this space when he/she is a part of the projection (film plot) at the same time? How strong is the user absorbed by this artificial created „film world" (which is based on real life situations) and therefore experiences a loss of his body sensation, like for example while sitting in a movie theatre? Is it possible, that the boundaries of his/her internal and external world start to blur, and so he/she have troubles to distinct his/herself from this situation?

Exposé
Perceptions, senses and emotions in hybrid reflector realities

As a media artist, I work on an interface between analog and digital and work out, by using artistic methods, the peculiarities of interpersonal communication and the role of the individual in a world shaped by postdigital phenomena. My work is located between art, natural sciences and technology and focuses on the relation between nature, man and machine, as well as sociopolitical aspects of a technology-based communication society.

I seek to explore and study the roles of the individuals in participatory and linked forms of society and want to amend these roles with additional material and visualise them with a new perspective. The aim is to develop video installations where you can see yourself as part of film plots that tells narrative stories. Small cameras installed in the room are filming the viewer. This material will be used to create a live video footage that will be integrated into the video installation material by using live key technology.

Through my installations I put the viewer virtually in different environments and in different plots and thereby he/she is able to observe him/herself. Live video material of the observer is going to be inserted in completed film scenes and plots in form of a hybrid mirror, so the layers will merge with each other and appear as a homogeneous cinematic creation. The live recordings, in which the viewer is incorporated as an active component in the film, lead through the observation of the observation over the self-perception into a self-reflection. In this way the observer receives a temporary view onto a system outside his own perception. The viewer becomes a first-person narrator, and apparently becomes a passive observer in the reflection on the digital screens as well. These reflections refer to the visual universes which are stuck in the minds of the viewer.

The installation should be recognised as a thought-provoking impulse to win a new form of self-perception and find a new insight about the context of humanity in its habitat, in which we are embedded, too. By constantly using and observing data and images on our omnipresent screens, the imaginary becomes more and more important to us and modifies our view of ourselves and on our perception and the world around us. We begin to perceive ourselves through others and experience others over (social) media. Perceptions and emotions evolve therefore progressively in medial and virtual spaces.

My interactive installations attempt to fathom and visualise this paradigm shift, in an artistic way, by filming and displaying the viewer and demonstrating this film material without any time delay. My work illustrates a new relation of observation and the things we see. The staging of the installation is in a way where the viewer becomes a part of the plot and part of conversations and dialogues.

Beyond technical devices, the digital as an idea alters our way of thinking and acting. It is therefore no longer a simply technical cause anymore, rather it is a way of living which affects the whole human race. Therefore my work is focused on the role humanity takes in a postdigital era, in which biological, cultural and digital systems collude. It broaches the influence of digital technologies onto the cultural transformations and the resultant self-perception of the human being. Therefore the consuming of the visual becomes the reflection of the individual.

Blind Spot:
The observation of the observer
Mirror Object I
Mirror with half closed blinds
Joerg Auzinger

The viewer enters into the sudden interaction with the things he/she sees on the screen and is caught by him/herself as a consumer, which has a passive observer role as well. Self-observation and the observation of others are leading, in a subtle way, to a resonant system between subject and object, which unveils that the observer becomes the observed. My installations represent the mode of process of the relationship between human beings and their environment.

How can live video integration of viewers, if you put them in virtually in variant contexts and start a virtual interpersonal conversation, change their emotions and their way of thinking or behaving? When one recognizes oneself as part of an action, does this live video mirror integration make a difference to awareness of oneself? How does communication over digital channels change our consciousness, our embeddedment in the world and the way we relate our perception to the world on the inside and the outside? What influence does digital technology have on the cultural transformations and on the human self-perception? How does it effect my self-awareness and the way I think, when my actions are displayed and recorded on a screen? How does the digital reflection of the observer change when filters, in form of different video material, are pushed in between, meaning virtual spaces and situations, which respectively change the context of the situation of the image? How does the audience evaluate their experience being faced by themselves? Do I feel under surveillance or maybe caught too?

Usually we perceive ourselves through others and we observe the others through media. Self-perception results therefore more and more in medial and virtual spaces. It is impossible that reality exists separately from humans, but rather requires human beings to take his/her part in the composition of reality. It is also a question of how to invent cultural concepts and confrontations with technological transformations, which leads us to the possibility of a different usage of media technologies.

Second View
C-Print
100 x 100 cm
Joerg Auzinger

Postopia
Installation view
including the viewer

My work concerns and influences the basics of human perception, our comprehension, and our relation to the world and the people in it, and therefore creates a space for the unthought beyond market-orientated art manufacturing. The idea of my art is to seek new insight and knowledge in a methodical and systematical way.

In my interactive installations, in which the observer is keyed in live via digital video technology, I explore the construction of reality and the inherent alterations of our conception of reality. Therefore I pursue interdisciplinary artistic approaches und realise my projects in an interactive and participatory way. My artistic work raises questions, these questions are asked in visual way.

About ten years ago I participated in a widely acclaimed exhibition, which generated great international interest, named „Postmediale Kondition" and was conceptualised by Peter Weibel. This exhibition took place at the Medialab Madrid, Centro Cultural Conde Duque as part of the ARCO 2006. In this exhibition I presented an interactive video installation called „Switch Enlightenment". The major question at that time was: „What impact do new and old media have on society and what correlation exists between them?". This question has been a very controversial issue in media art in those days and became a major question in my artistic work.

Since then the postdigital discourse has shaped my visual research as a visual artist. In particular to that effect, what digital or postdigital leaves behind in the non-digital field, or rather how does digital beyond digital devices affects our modality to think and act in our daily routine? Terms like "post-internet" and „postdigital" are closely related to an artistic discussion with technology, which doesn't necessarily deal with the digital as such, but rather with life itself since the digital revolution beginning more than 40 years ago has become the digital age we live in nowadays. One decade after the issue corresponding to the „Postmedial Condition" we now face, with a temporal distance, a major evolution concerning this sociocultural phenomena through massive enhancement of the hybridisation of media. We become aware, that in the postdigital era, terms like analog or digital are irrelevant, because these terms turn out to merge and conquer all aspects of our life. Pre-digital conditions are not tangible and imaginable, by now.

If digital devices become smaller and more and more invisible and progressively incorporated in our daily life, the digital tends to become embedded in human perception and in our way of life as well. Therefore the digital is no longer simply a technological cause, but rather a form of life which affects the entire human race. Neither can the digital materiality be reduced on the screens, nor can the software be decreased on the hardware.
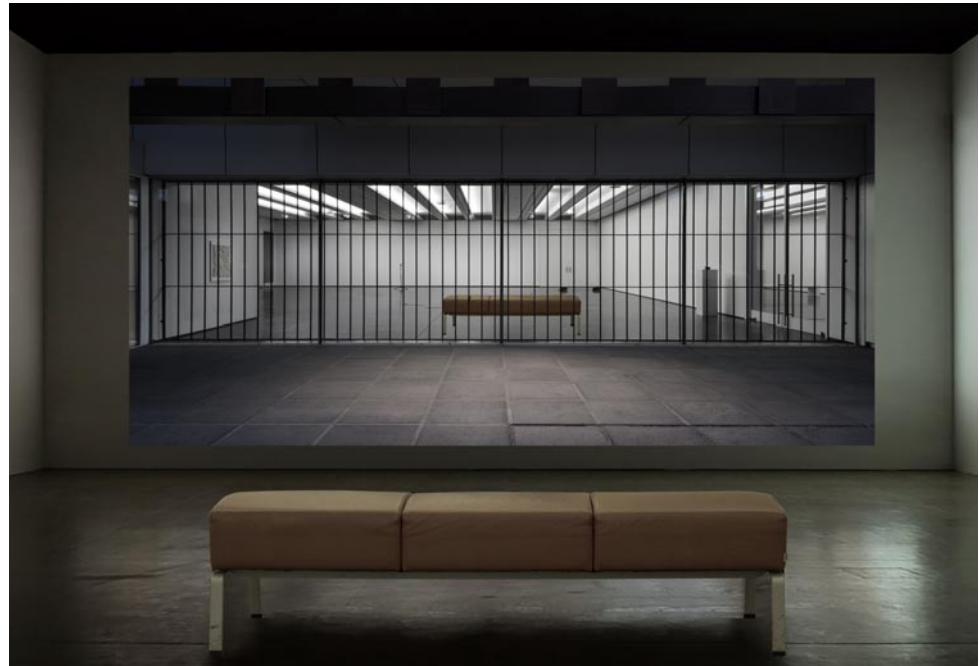

Postopia
Installation view
including the viewer

you can see yourself
in a stage situation
in front of an audiance

This involves an immensely spread out reality, which on the other hand prepares and requirers the reality that we perceive. By installing decisive concepts like the postdigital, we develop possibilities to include and intervene the infrastructural composition of reality. We constantly produce vast amounts of visual material, which is stored in social media memory, and can be provided to the user for prompt consumption.

The beholders immerses themselves unexpectedly in the events of the happenings and catch themselves becoming the consumer with a passive role as a spectator. Therefore self-observation and the observation of others lead, in a subtle way, to a resonant system between subject and object, which leaves the observer as the observed. The live performances in which the beholder is involved as an active part of the motion picture, leads through the observation of the observer into a self-perception and furthermore into a self-reflection, in which the viewer is able to achieve a temporary gaze onto a system outside his/her own perception. My installations make people aware of the mechanisms and the relationship between man and his environment.

Postopia
installation view
without a viewer

Electronic media seem to satisfy the needs for encounter and physical and emotional contact. But the desire for a collective experience in physical presence is left unsatisfied. The omnipresence of the internet, as a cultural mentality, has already left the net and has indeed conquered the physical world and has become the attitude of the whole society. As far as possible we live in a world, in which the contradictions between analog and digital are starting to dissolve. The current relation between analog and digital is a complex entanglement in this postdigital world. The multiplicity of data, which is sent via digital media, affects our way of thinking and our memory.

We constantly generate data (images and texts) and share loads of material in the social media channels. Do we always think of the target audience or even of a higher authority, as Robert Pfaller expresses? And are we aware of ourselves by doing so? While producing data, such as images and texts, we outsource our memories into a technical device, so we don't need to occupy ourselves with this information anymore. You don't have to remember anything anymore, but rather save and temporarily store this information in your smartphone. So, are these pictures which we generate really our own or do we generate collective material, which is relevant in the bubble of my social contacts? I try to explore these questions, by holding up a virtual mirror to the beholder. In my articstic research project I am exploring the question what impact medial presence has on the perception of the individual, and and how it affects the emotions of the user.

By constantly using and observing data and images on our omnipresent screens the imaginative becomes more and more important and alters our view on ourselves and the world around us. We produce more photographs and selfies as we ever did before and immediately post them online in social media and wait for reactions from the community. How important is self-perception when it faces its' presentation and representation to the external world? Is it possible that self-awareness is affected by a gaze into the (post-)digital mirror?

The surrounding, in which the viewer is located in, is important. Through technical means I place the beholder in completely unfamiliar spaces and unexpected situations. To explore and filter out, how separate spaces and situations affect the observer is object of my research. It is important to me to fathom these studies of emotions within my installations by holding discussions with the beholders.

In the framework of a presentation or exhibition the possibility of feedback from both the visitors and users is planned. This includes the involvement of the exhibition visitor into the research process by questioning her/his perception. It will be part of my research project to work out how this process could ideally be designed. I would like to have conversations and discussions to talk about the experiences of the individual and would like then include these findings into my work. In cooperation with cognitive scientists the facial expressions of the filmed persons will be analized.

Whistleblower
C-Print
70 x 100 cm
Joerg Auzinger

Postopia
Installation view
including the viewer

you can see yourself
in a different context

The constant interaction possibilities are linked to a interpassive withdrawal in a social „let go" (the effect in to the opposite) and therefore the outsourcing of participation and pleasure. The concept of interpassivity, as described by Robert Pfaller, also plays an important role in my installations. Instead of enjoying yourself, the interpassive lets others enjoy themselves for you. My installations could also be called interpassive instead of interactive. You can only see, but you can not change anything as in the classic idea of interaction. You can not change, push or influence anything, except yourself. Basically, you can only watch yourself and the surrounding within the projection. Interpassivity is a reciprocal process that describes an interaction between the individual and society.

My working method generates a new perspective on media. Media is not simply a matter, but rather a process, which influences its conditions of existence by itself. This fact enables the rise of alternative media-cultural perspectives. The various temporalities and the spacial intersections, wich are occupied and produced by the analog in relation to the digital, contain techniques, wich are derived from the styles of a collage.

Postopia
Installation view

The beholder therefore becomes the narrator, as well as the apparent passive viewer in the mirror reflection of the digital screens, which refer on the visual universes of the memories in the minds of the observer. The installations can be seen as an impulse to gather new knowledge about oneself, as well as finding new methods of perception concerning human beings in context of our embedded world. Therefore the installations provide innovative possibilities visually to initiate an internal process, which may have an effect on the external and the ordinary.

I see my work as a further development of digital media art with a recollection to the beginnings of the media age, because just as the mass media had massively influenced our society at that time, we are now experiencing a similar phase of changes through the integration of digital and virtual everyday situations. There are artistic approaches that enable viewers to actively intervene in environments, by using virtual reality technology, augmented reality, audio control or gesture control systems. However, there are hardly any comparable works of art which deal with the integration of the viewer into the scenery the way my work aims to, most likely because they do not want to put the viewer into the center of attention so directly. I often miss a confrontation with present social phenomena in a lot of our contemporary artworks.

I consider my work to be an art-based research, artistic visualisation as a profit of insight through transdisciplinary working methods and an interdisciplinary cooperation in the tension between artistic practice and science. I pursue my artistic research in ways of a creative solution, whereby the findings of my research become both, artistic products and methods at the same time. I try to reflect, recording the present reception of my creative process and my artistic output and want to offer these reflections to an artistic discourse and to a scientific field of research. My work aims to relate to and influences the basics of our perception, our insight and our relationship with the world and therefore to create a space for the unthought beyond market-orientated art production. I consider my art to be a methodical and systematical retrieval of new cognition. I want to complement and expand my new discoveries and my level of knowledge with the findings of other disciplines by using a trans-disciplinary method.

Methods of integrating the viewer

I've worked on some different kind of interactive installations over the last few years. Mostly an interface is implemented that gives the viewer the opportunity to change the scenery. In my cases, these interfaces are often switches or sensors that respond to pressure, distance or sound. Motion detection or face detection systems can also be used to control a setting. In all these possibilities, a signal will always be generated, which affects the used image material and changes the visual substance and the result is usually displayed on a screen. Increasingly, I came up with the idea of involving the viewer directly without allowing him/her the possibility of any interaction, except the „interaction" of just beeing present.

Void Screens
Installation view
including a viewer

The first implementation of this idea is many years back. Years before my studies, i had one of my first exhibitions in 1994, where visitors were brought to the center of attention. In this exhibition project, called „Analog" which i realized together with my artist colleague Christian Bretter, a vienna-based concept artist, visitors were invited to came to an empty gallery. A video camera at the entrance area was filming every single person entering the exhibition space. Portraits of every visitor were made. These artworks were printed on canvas with a special printer in a short period of time and mounted on canvas frames. The artists became workers who only put the works into practice. Finally 100 portraits were created on which the first 100 visitors were to be seen. The finished portraits were hung up in the gallery room and so the final exhibition was created by the visitors.

The idea that the work was first created by the visitor or by the viewer made me so fascinated that I came up with the idea of trying live video.

Some years later, the work **Void Screens** was created, in which the idea of live video integration was first implemented. In the installation Void Screens the viewer sees a showcase as it can be found in every museum. However, the content of the showcase is empty. If a person comes into the eye of the video camera, which is barely visible on the wall, the person sees him/herself and sees him/herself as a reflection on the surface of the glass box. The viewer finally becomes an exhibition piece in the museum. However, the visitor is not inside the glass, but outside as a subtle reflection. It seems that the viewing person is standing in the room where the glass box is standing. In fact, the viewer stands before the projection that represents the space. The viewer is only part of the installation until he/she leaves the area in front of the projection. Without a viewer, the showcase would be empty. With the observer, he/she is reflected by the glass, but is still separated from the inside of the box by the glass.

Blind Spot:
The observation of the observer
Arrangement of the two projections

Another work that picks up the method of the live image is my installation **Blind Spot: The observation of the observer**. In this installation will be a scene from alfred hitchcock's film classic rare window divided into two screens so that two opposite projections are created.

A spatial situation in the exhibition space is thus reconstructed, as is also the case in the film. So the linear structure of the medium film was transformed into a three-dimensional solution. On one side you can see a projection showing a window with the protagonist observing someone with his camera. Actually he is watching the alleged killer on the other side of the courtyard - opposite the house - which he suspects behind the window shutters in the opposite window. The two projections thus correspond to the two opposite windows. When the visitor enters the room, he/she stands exactly between the two projections and will be observed by the main actor's camera. The visitor is pushed between the two projections, and a further level of observation is created.The viewer is now in the middle between the two screens. He/she can only watch one screen at a time.

Postopia
Poster for the installation

The cameras are positioned in a way that the viewer just sees him/herself from behind. On the one hand, he/she sees him/herself in the mirroring of the lens of the camera and, on the other, he/she sees him/herself behind the blinds of the opposite window. If the viewer turns around, he/she sees him/herself from behind.

This creates a situation where you feel constantly watched. The observer takes several positions of the observation in this installation: On the one hand, he/she is watched by the protagonist with the camera, while at the same time he is standing in the other screen behind the blinds at the window. he/she becomes subject and object simultaneously. The visitor is an observer and will be observed at the same time. As a visitor to the exhibition, he/she realistically takes another viewing position. The person is a visitor and watches the artistic work. But also, he/she is being watched by two video cameras. This results leads to a nesting of observation perspectives that raise the familiar film scenes with the integrated viewer to a new meaning.

Currently I am working on the installation **Postopia**, which will be finished in Sommer 2019. Postopia is also an interactive video installation with viewer's live material integration, dealing with people and human habitat. The installation consists of a large-format video projection, as well as a bench that can accommodate up to four people. The footage shows vertical aerial videos of the undeveloped human space of action, the nature that surrounds us, such as our living environment, our habitat and our residues, the traces left by man in the landscape, a surface that is changed by humans. But these the traces of man are barely visible in the film.

These landscape shots, filmed with a camera drone, show only the "natural" habitat of humans and their effects on the earth's surface and represent thereby an as true as possible view of the natural environment. Based on the assumption that we are in the era of the Anthropocene, in which man acts as a formative force, these landscape shots are filmed in the form of a slow scanning of the surface. The quiet and slow camera flights are showing a neutral and equivalent image of the world from a sublime and almost superhuman perspective in which man takes a shaping but subordinate role. The drone videos consist of vertical aerial shots without camera pans or zooms and show the surface of the earth as highly aesthetic and contemplative imagery. Human interventions in nature and the aesthetics of cultivation are visualized in abstract images. The beauty and geometry of everyday life is made possible and made visible through the vertical aerial images.

These aesthetic visual world will be interrupted by "image interferences" in form of intermediate cuts and inclusion of live video material. You can see a short-term change in the scene and a change of perspective, which shows the viewer sitting on the bench but placed in a different room. This point of view shows the audience in the showroom as passive observers, who recognize themselves as part of the plot due to the camera change. A surprise effect arises, which confronts the audience with the video material shown and puts them in relation to it. The live video footage is keyed into the drone footage in a way that it merges and appears as a unified cinematic work. The live material as intermediate cuts are a counterpoint to the vertical landscape shots, since the human being is at the center of the action for short moments. The counter shots show the viewer embedded in stage-like arranged interiors, which can be read as a metaphor for postdigital living spaces. The viewers are separated by glass fronts or windows from the outside world.

Originally developed as a military surveillance instrument, the drone enables a "first person view" that was previously not possible in this manner. Postopia draws a contemporary image of man in her/his environment and shows natural-looking landscapes and people as an imprint of the digital living conditions. Analogous to the change in our planet by humans there are also changes in the communication and perception of images.

Selected examples
of my interactive installations using digital mirror techniques
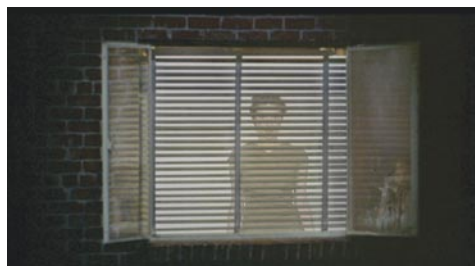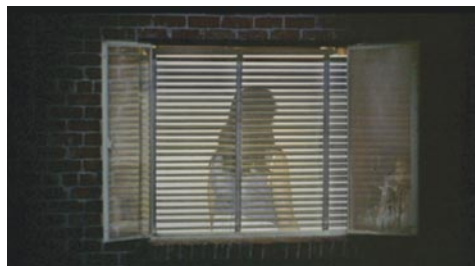
Blind Spot: The observation of the observer
Interactive Video Installation

The installation consists of two video projections showing shots from Alfred Hitchcock's movie *Rear Window*. The film sequences are split up, facing each other in endless loops at each end of the room.

Blind Spot:
The observation of the observer
Installation view

One projection shows the observer with a camera angled out the open window. The opposing projection displays a window, the direct view of the observer in the opposite projection. The subject and object of observation face each other. Video cameras within the exhibition space film the visitor and feed these live video streams into the two movie sequences being projected. The viewer becomes part of the video projection. One sees one's very own reflection in the lens of the camera, meaning that the camera is observing the viewer in the space between projections. The visitor then sees him/her or herself again, in the room behind the window on the opposite side.

Blind Spot:
The observation of the observer
Projections showing the live-video inserts of the visitors

Blind Spot:
The observation of the observer
Installation view at Pixxelpoint -
International New Media Art Festival,
Nova Gorica, Slovenia

Blind Spot:
The observation of the observer
Green colored areas
showing the parts
which will be exchanged
with live video material
by using an
so-called alpha channel

Void Screens
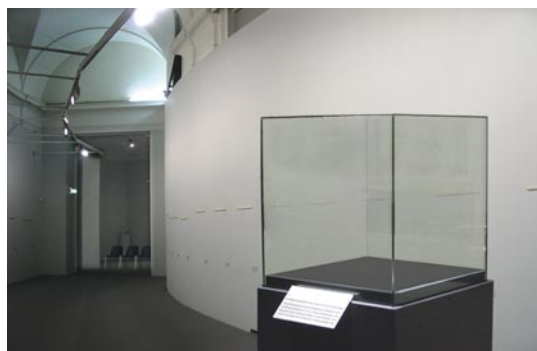*Interactive Video Installation*

Void Screens is a thematic series consisting of an interactive, closed circuit video installation, photographic works, and a video. In this interactive installation Void Screens, the viewer stands in front of a projection showing an empty showcase in an empty exhibition room. On close examination of the showcase, a transparent, moving reflection becomes apparent on the glass surface: a video. A video camera installed in the room films the viewer and these live images are immediately fed into the projection. The viewer experiences his/herself as a museum visitor and replaces the missing object in the showcase as the subject. The person's reflection becomes part of the installation, but in reality he/she remains outside of the field of action.
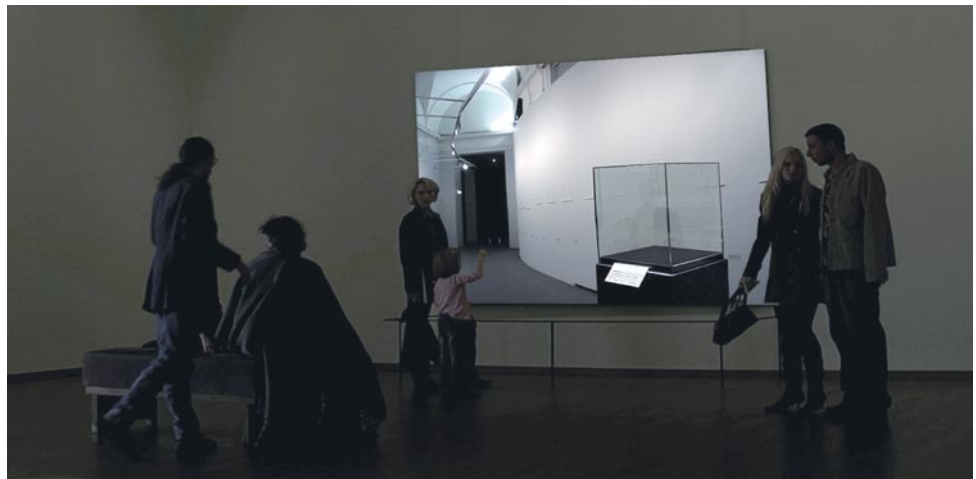
Void Screens
installation view

Void Screens
installation view with visitor
Kulturzentrum bei den Minoriten,
Graz, Austria

Void Screens
Projektion without visitor

Exit

Interactive Video Installation

Exit is also an interactive video installation including the visitor. The projection shows a closed glass sliding door. A video camera, barely visible above the projection, films the viewer in front of the projection and feeds these live video images of the exhibition area into the glass panes of the projection as a virtual mirror image. Simoultaneously the observer approaches the projection, the glass sliding door within the video opens and allows a view of the other side of the passageway. The viewer becomes part of the video and sees him/herself in projection. He/she can physically open the sliding door through a motion detection sensor in the exhibition room. The viewer sees him or herself as a silhouette on the reflective surface of the glass panes. A passage through the virtual glass-passage is not possible. The viewer remains on the surface and the door closes automatically after a few moments and the passage is denied. The observer just remains as a reflection on the glass. Viewers in front of the projection thus become the central element of this artistic work and the actual object and subject of the projection.

Exit
installation view

Exit
projection without viewer

Exit
projection
showing the reflecting of the viewers

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Prospect: Time Smoking a Picture

Interactive Video Installation

In the interactive video installation **Prospect: Time Smoking a Picture**, the observer stands in front of the projection of William Hogarth's 1762 painting „The Time Smoking a Picture", which portrays Chronos, the incarnation of time, blackening the painting with his pipe. He has swathed a gash in the picture with his scythe. As soon as the viewer stands in front of the projection, a video camera begins filming. The resulting live images are reduced to linear contours and fed into areas of the projection left blank. This digital "mirror image" of the viewer becomes part of the projected graphic, melding uniformly into a single image.

Prospect: Time Smoking a Picture
Installation view with visitor
at Kulturzentrum bei den Minoriten,
Graz, Austria

Prospect: Time Smoking a Picture
Projection without viewer

Comparable approaches

My artistic approach also overlaps with performative works of art and also intersects with the idea of Expanded Cinema. But most of all my work can be compared with works of early video art works using closed circuit techniques. At the very beginning of video art towards the end of the sixties the new technical possibilities made it possible for the very first time to simultaneously display the video image of a camera on a screen in real-time. This method was frequently used in the so-called closed circuit intstallations. Some of the most relevant media artists were using such techniques.

Installations and arranged situations emerge especially in the seventies that included the viewer in the representative situation. The special relationship of the simultaenity of reality and depiction forms a basis for so-called closed-circuit situations. Such an arrangement refers to a closed situation of representation in which the recording medium is linked directly with the medium of representation.

Live-Taped Video Corridor
Bruce Nauman
1970

An early and important work in which the visitor is integrated into the installation is „Wipe Cycle" by Frank Gillette and Ira Schneider from 1969. In addition to its role as a mirror, video is also used in its function as an instrument of surveillance. Self-perception was also mediated through a camera eye that can change the perspective in an irritating way, as in a lot of Peter Weibels installations, for example „Kruzifikation der Identität" from 1973 or Bruce Naumans, „Live-Taped Video Corridor" from 1970.

In his installation „Live-Taped Video Corridor" Nauman set two monitors above one another at the end of a corridor almost ten meters long and only 50 cm wide. The lower monitor features a videotape of the corridor. The uppermost monitor shows a closed-circuit tape recording of a camera at the entrance to the corridor, positioned at a height of about three meters. On entering the corridor and approaching the monitors, you quickly come under the area surveyed by the camera. But the closer you get to the monitor, the further you are from the camera, with the result that your image on the monitor becomes increasingly smaller. Another cause of irritation: you see yourself only from behind.

In the early phase of the medium, the confrontation with individual experiences of perception was less prominent than the interest in the general possibilities video offered for aesthetics and communication technology. Many artists were more interested in an approach that focused on media analysis. Due to its technological proximity to television, video art was often seen as an intersection between art and commercial mass communication. Particularly in the beginning, the ambivalent relationship between video and television was explored by many artists.

Meanwhile almost 50 years after the development of closed circuit installations the approach with live-video techniques seems more relevant to me than ever before, especially by using this method with regard to our postdigital age, where the social and cultural prerequisites have changed enormously. My work differs from these media art classics especially in the way that the camera image is not just connected to a monitor, but that the image will be enhanced with additionally created or generated material which leads to a new context. The technical possibility of masking and replacing picture elements or areas of the video by using luminance key or alpha-channel techniques offers new solutions that are far from artistically exhausted.

Summary

Artistic research questions

How does a live visual presence in narrative hybrid realities (by using extended digital mirror environments) have an impact on the sensual perceptions and emotions of the viewer?

Does this live-video integrating hybrid reality method (where the viewer perceives himself as an observer of the second order) create an increased, intensified, or multiplied attention concerning the viewers perception of the narrative?

In what way do interpersonal interactions with additional protagonists in the virtual layer change the perceptions and the emotions of the participant?

Methodology

By using and refining my discovered methods of live-video techniques under a changed spatial situation, I want to develop new user integrated installations accompanied by seeking new insight and knowledge via the method including effective analyses of the research process. This includes involvement by the exhibition visitor into the research process by questioning his/her perception in form of semantic differential analyses. The camera, which integrates the viewer live into the projection, will be equipped with a face expression detection system which will be evaluated by the Austrian Research Institute of Artificial Intelligence and the Department of Cybernetic Studies. That is important to make the emotional reactions of the participant readable to subsequently provide this data for further research. This artistic research project can be seen as a tool to change our perspectives and allows ourselves to observe ourselves as an observer to get new insights about emotions and sensual perceptions from this approach.

Project goal

Veriyfing a sustainable change in self-perception through everyday use of digital networks and devices by using my methods of live video technology under changing spatial conditions. To seek experience and exchange to develop and adapt the work and to expand my own research status through other areas of knowledge in order to integrate them into my work, such as other sciences and there will be a close cooperation with scientists from the fields of cognitive science and cognitive neuroscience. Finding ways to create an installative situation that allows a shared experience of physical presence, including personal encounters and reflections on oneself.

Form of reflexive documentation and time schedule

The research and developing process will continue simultaneously over the next two years. Research will equally consist of theory and practice. The last year of the research will be spent articulating a written thesis. The results will feed into new artistic work. There will be a final presentation in form of an interactive exhibition including lectures in cooperation with the Austrian Research Institute of Artificial Intelligence and the Department of Cybernetic Studies.

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