

RESPONSIVE ENVIRONMENTS: A PANEL ON THE INTERRELATION BETWEEN LOCATION, ATMOSPHERE AND DIGITAL MEDIA

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ABSTRACT

Since the emergence of computer technologies the notion of “location” has been expanded. From the beginning, digital media were seen as world-generating technologies able to create alternative forms of “locations,” e.g. virtual environments. Currently, tendencies like ubiquitous computing and wearable computing point to a further dimension of “location:” hybrid spaces in which moving, multi-sensing and interacting may reach new levels of intensity. This causes a paradigm shift in digital technologies, because the simulation of virtual spaces is substituted by experiments with interaction and digitally expanded perception in physical space. Thus, mobile and pervasive technologies will change the future design and artistic opportunities of Human-Computer-Interfaces. Furthermore, their extended responsiveness will modify the individual’s perception and notion of the self.

The panel discussed different artistic approaches to hybrid spaces and the notion of “location.” Central for this range of topics dealing with the implications of technology driven spaces is the notion of “atmosphere” in its threefold sense: as physical atmosphere (the air we breathe), as social atmosphere (the way we interact) and as media-generated atmosphere resulting from an intended design of environments.

THEORETICAL STARTING POINT: THE THREE DIMENSIONS OF ATMOSPHERE

The theoretical starting point of the panel was the idea to investigate a phenomenon that has a decisive impact on our lives, but that cannot be described with the traditional analytical instruments: ‘atmosphere.’ ‘Atmosphere’ comprises three different dimensions: a) the geophysical atmosphere that is crucial for our survival on Earth; b) the social atmosphere between people in different contexts (e.g. groups organizations, nations and global communities). And finally, there are c) media atmospheres that are willingly produced – in art, through mass media, but also in urban planning and daily consumption-oriented surroundings (shopping malls, wellness environments, etc.). In most cases, social and media atmospheres will be deeply intertwined, because there is no interaction without media and vice versa.

Apart from geophysical atmosphere, atmospheres have never been subject to scientific research because they transcend the traditional categorizations that social sciences and humanities work with: First of all, they lie between subject and object, because in the social context everyone is simultaneously producer of an atmosphere (subject) and perceiver of it (object) – thus experiencing atmospheres also transcends the traditional observation role of the researcher. Furthermore, atmospheres are ‘sensed’ – they are perceivable, but in a way that lies beyond traditional epistemological

models of intellectual insight. To sense atmospheres implies intersensorial perception in oscillation with intellectual insight, with pre- and unconscious processes, which are closely related to emotion – this complexity needs to be investigated. Finally, atmospheres affect modes of activity, as can be observed in such different fields as economy and politics alike. Therefore, action theory also needs to consider such diffuse phenomena as atmospheres to be able to explain complex activities, not only of people, but also of institutions and even governments.

These fields where ‘atmosphere’ is of relevance are also concerned with the fact that all three types of ‘atmosphere’ are not static objects that only react when being acted upon, but all of them have a unpredictable potential to change and to develop significant influence on the way people, societies and (globalized) communities act. Thus, atmospheres develop operation modes that have to be investigated from the different angles of the fields just mentioned.

TECHNOLOGY, LOCATION AND ATMOSPHERE

The theoretical notion of atmosphere, which is shaped by philosophers mainly coming from phenomenology (like Hermann Schmitz und Gernot Böhme in Germany, Brian Massumi and Mark B. N. Hansen in the US), is inherently bound to physical space and presence. It relies on a sort of “immediate” sensing that obviously changes according to the specific mediality of the environments in question, which can be concrete physical locations or virtual spaces being formed by processes of interaction and interactivity or by hybrid constructions of both. The panel therefore intended to broaden the perspectives on atmosphere and location in considering the impact of technologies like ubiquitous computing and sensor technologies (e.g. biofeedback) on our notion of location and on the consequences for emerging atmospheres which are technologically driven but nevertheless are experienced in an ‘immediate’ way.

The presentations given in this panel address different aspects of the experience of technical environments and discussed especially the following questions:

- What are the characteristics of hybrid spaces and how can they intuitively be experienced despite the use of high tech applications? And what kind of technologies, artistic expressions, design principles and dramaturgic strategies are adequate to reach this level of intuitive and immediate experience in concrete locations?
- What is the role of multisensory design in this context? Do we need to transcend the audiovisual sphere and include kinesthetic, olfactory and tactile experiences to create an

immediate atmospheric experience? And what are the consequences for human proprioception when sensor-based technologies like biofeedback establish an 'immediate' relation of the human to the environment, which is mainly based on somatic processes (like heartbeat and breath) and which can only partly be intentionally influenced?

- How can scientific qualitative and quantitative data be interpreted and designed aesthetically without being treated in a complete arbitrary way? This question leads directly into the center of the discussion on the relation between art and scientific research and the ways of data design (data visualization, data sonification etc.).

THE CONTRIBUTIONS

Scott Hessels introduced a special educational program of the Hong Kong based School of Creative Media. The Extreme Environments program explores how student artists, researchers and scientists working together can collect and interpret environmental data using new forms of creativity and visualization. The students do 'on-site-research' in special locations and have to develop creative ways of multimedia presentations of their research results. By this the physical atmosphere as 'object' of data collection becomes a topic, the media-driven interpretation and presentation of data furthermore creates specific spatial and atmospheric experiences which become part of the student's artistic research process.

Ilze Black investigates a second dimension of atmosphere: the specific social processes that emerge from networked cooperation and considers methods and approaches used during de-located, distributed design processes. She introduces among others the development of *The Breather*, an interactive system based on sensor technologies, air quality data and networked real-time data sharing which again leads to the physical atmosphere as topic of current media technology developments.

Gwenn-Aël Lynn's work deals with another aspect of atmospheric sensing and location: The implications of olfactory sensations for the evocation of specific emotions linked to the question of how cultural identities are created. In two art installations, one of them exhibited at ISEA2014, open source computer vision provides the visitor, whose body is the interface, with an aural and olfactory experience. The fragrances are created on the basis of interviews with expatriates whose identities are manifested through the olfactory and aural associations. Both installations contribute to building a critique of the politics of representation that are rooted in ocular hegemony and emphasize the deep connection between location, multisensory (atmospheric) experience and identity.

Jan Torpus introduced the media art project *Affective Environments*, which intimately involves exhibition visitors by connecting their heartbeat, respiration and skin conductance to three installations. The work explores possibilities of interacting with artificial environments excluding decision-making, thus

establishing an intuitive interconnection. He compared the artwork to the artistic research project the panel chairs currently work on: *Designed immediacy: Atmospheric experience in an affective-responsive environment*. Both works connect biofeedback signals to artistic settings but apply different concepts, strategies and methods. The tension between perception of intrinsic processes and encounters with something unfamiliar gives rise to interesting questions regarding peoples' awareness of their own impact on the respective surroundings and their personal identity.

And finally **James Partaik** introduces Insertio, an artistic initiative, which creates art interventions that actuate urban space and its infrastructures, revealing issues implicit to the site, the technologies themselves in a specific cultural context and the creative actions used to transform public space in a tangible way. The paper presents tactics of occupation and imbrications of urban infrastructures exemplifying Insertio's use of site, devices and art actions that coalesce with the emerging discourses surrounding the issues of art, architecture and urban spaces in the age of the networked landscape.

PANEL DISCUSSION

The discussion which followed the panel contributions made clear that the topic of atmosphere is in all its dimensions extremely relevant for media theory and artistic practice. Under the premises of an increasing attention for environmental topics, projects like the Extreme Environment program in education and the development of applications like *The Breather* which combine art, design and ecology point to the cultural implications of the physical dimension of 'atmosphere.' But the social and medial dimensions are equally relevant and need further attention. This counts for new structures of open-source-production in networked communities as well as for the investigation of atmospheres which emerge from 'interfaceless' technologies and the agencies which evolve in these responsive environments. It was one of the main results of the discussion that further theoretical and methodological work will be necessary. Firstly, scientifically and artistically dealing with atmospheres causes a paradox, as the modes of experience are willingly influenced: The intentional creation of atmospheric spaces might minimize the intuitive and subconscious parts of experience for the humans involved because they know that their perception modes are investigated.

Secondly, dealing with a concept of agencies which includes human and non-human agents demands a methodological approach that transcends the anthropocentric view of qualitative social sciences. This might shed a new light on the search for specific methods of artistic research. How such problems can be adequately approached and investigated in order to grasp their consequences for our concepts of identity and self-perception, will be one of the core questions for art and media studies in the future.