

Introduction

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The interdisciplinary perspective of a sovereign image science gets more and more influenced by the rise and power of digital images, and additionally by the circumstance, that digital images are very often moving, moved, arithmetic, interactive or simulative images. The *Yearbook of Moving Image Studies* (YoMIS) wants to provide an international forum for the complex range of images, media technology, media reception and visual culture.

The second issue of the double blind peer-reviewed Yearbook *Image Embodiment: New Perspectives of the Sensory Turn* explores the recent debates and interdisciplinary perspectives of the relation of images, moving images, embodiment and perception. Embodiment is closely connected with the research in the range of cognition, intelligence and theory of mind. Concepts like embodied, embedded, enactive or extended cognition have radically changed cognitive science and include in some aspects “the potential to reorient cultural studies as well” (Krois et al., XIII). In the perspective of an autonomous image science it seems to be necessary and fruitful to relate the research in the context of images with the findings and concepts of embodiment. But, this is an explorative approach with an interdisciplinary dynamic, which could only mark the initial point for further research, because “embodied cognition, at this stage in its brief history, is better considered a *research program* than a well- defined theory” (Shapiro 2011, 2). So, we think that the recent debates about multimodal media and image systems will be enriched by the different embodiment approaches, because media are always interfaces of materiality, technology and cognition: That means, that media have an efficient impact on perceptual dynamics and consciousness.

The famous debates concerning the embodiment of the human mind have emphasized the complex relation of human subjects and environ-

ment. In particular, approaches in philosophy and cognitive psychology have dealt with topics of embodied cognition (see Lakoff and Johnson 1980; Clark 1997; Gallagher 2005), extended or embedded mind (see Haugeland 1995/1998; Clark and Chalmers 1998), multimodality of perception (see Nanay 2013) and enactivism (see Varela, Thompson and Rosch 1991; Noë 2004). The recent evolution and development of media technologies, such as interactive and immersive media, VR displays, AR applications, natural interfaces or mechanisms for embodied interaction, are directly highlighting the specific position of the lived body in theoretical and applied areas. Various studies in the last years have implied that the analysis of the processing of mediated sensory data need to include the crucial functions of the lived body, interlinked with the structure of the human mind and the perceptual relation of the sensory and perceptual system.

Alongside general approaches to the topic of our publication, like media studies or cultural studies, there are also analyses of artistic strategies, which ask about the relation between body and intellect or between the senses as disposition for aesthetic reception. All of them need to be challenged under the new conditions of digital image production and visual culture. Especially the reference to immersive practices in VR shows that the critic on representation remains crucial even though these emerging image technologies are origins of upcoming unknown discourses (see Böhm 1985). The body, and with it an understanding of cognitive structures, like perception, still matters within this context.

Therefore, the second issue *Image Embodiment: New Perspectives of the Sensory Turn* addresses the broad field of perception and reception of image media and its somatic, neural and mental processes, which are embodied in the corporeal human dimension.

The participating authors in this issue are coming from very different approaches and perspectives, like the editors, and they are innovatively engaged with the broad field of embodiment theories and media as well as image science, and they are explicitly concentrating on images and visual artifacts as perceptual or cognitive extension or prostheses (in terms of extended or embedded cognition), they analyze pictorial (re)embodiment and avatarial embodiment (understanding the avatar as a pictorial and bodily representation), and the relation of perception, sen-

sorimotor interaction with graphic interfaces, and moving, moved, interactive, immersive, simulative and hyper-realistic images.

Jacobus Bracker (Germany) discusses in *Ancient Images and Contemporary Sensoria* the problem of a one-sided acceptance of the senses in disciplines like archaeology and art history, which traditionally operate with objects in the primary context of visual perception. In the perspective of a progressive *sensory turn* he argues for a multimodality of perception, which is also involved in visual media, like television, film, photography and painting. He investigates the change of meaning of images, which is not only supported by transformations in form, content, or iconography but also by changes in different senses, addressed by these images (embedded in different sensoria). Therefore, Bracker asks about the possibility of *scientific reconstruction* of historic forms of perception, using variations of an antic vases motif in regard to different multisensory conditions of their reconstruction. Analysing the popular continuities of this motif in fantasy movies, he also points out the reductionism of classic archaeological reconstructions, which disregard the specific multisensory context.

Cristóbal Escobar (Chile) addresses in *The Sensory Collide of Anthropology and Film-Ethnography: A Discussion on Animal Dwellings and Bodies' Potential to vary* the bodily turn in anthropology, film ethnography, and the humanities. He is interested in processes of desubjectification between human and nonhuman agencies and sensorial and embodied perceptions of the environment. This rejection of classical subject-object relations in traditional ethnography, or ethnographic film, finally leads to the suggestion of another, not logocentric, aesthetics.

Michael Funk Deckard and Cassie Overcash (USA) are investigating in *The (Bergsonian) Memory-Image in History and Film* the filmic potential of turning memory-images into embodied stimuli, presenting and proposing a philosophy of mind and perception that is captured in the *sensory turn* movement. With a reference to moving images as well as phenomenology, Deleuze's transcendental empiricism, and contemporary analytical authors such as Shaun Gallagher and Andy Clark they argue for a bridge between these fields as well as a defense of the Bergsonian memory-image.

Fátima Chinita (Portugal) exemplifies in *I Sing the Body Synaesthetic: Cinema Embodiment in Peter Greenaway's Goltzius and the Pelican Company* the

cinematic relation of corporeality and sensuality. Additionally, she claims two types of immersion in the viewer of Greenaway's film: artistic appreciation derived from coenasthesia and film textures; and a narrative appreciation caused by alignment with the characters notwithstanding their non-psychological nature. Chinita carves out Greenaway's artistic procedure, through which the diegesis with all its complex formal layers becomes an instrument of reflexion about the relation between body and representation. Unlike other interpretations of Greenaway's work, she understands his procedure as a successful combination of spectatorial detachment and immersion in the same work.

Maarten Coëgnarts and Peter Kravanja (Belgium) observe in *From Language to Film Style: Reassessing the Role of Conceptual Metaphor in Cognitive Film Studies* the relation of Cognitive Metaphor Theory (CMT) and two kinds of language about film. Furthermore, they investigate the embodiment of perception, time and emotions through cinematic devices such as camera movement, editing and framing. The intention is to highlight the academic value of CMT for Film Studies and to inspire avenues for further research.

Kathrin Fahlenbrach (Germany) is presenting in *Audiovisual Metaphors and Embodiment in Film, Television, and Video Games: A Comparative Discussion* a cognitive media studies approach to audiovisual metaphors in moving images, based on cognitive metaphor theory. She discusses styles and strategies for condensing embodied metaphors and the reference to bodily and mental responses within reception. Therefore she describes the possibilities to naturalization of embodied metaphoric meanings through digital technologies, analyzing different genres and media from science fiction movie to video games. Beside the framework of the global structure of film, television, and video games the author discusses video games use of such dense metaphorical compositions.

Jeanine Reutemann (Switzerland) discusses in *Too Close to be True: VR Images bring the Visible Speaker into your Face (literally)* the closeness of virtual faces and its micro movements, which come much closer into the experiences and private sphere than in accustomed interactions. VR images are more immersive than moving images and the author argues, that a reduced distance affects how vision and sensorimotor interaction are anchored into somatic, mental and neural processes – into an embodied perception. Therefore, VR adds a new dimension to cognitive

processes by enabling extreme close-ups impossible on a common screen. She links to classical positions of film studies, like Béla Balázs, which emphasized the role of the close-up new cinematographic experience in the context of anthropological conditions of perception, and she shows that this paradigm will be altered by virtual reality. Consequently, it is not about assessing a simple reinforcement of immersive experiences, but about the ambivalent experience of immediacy between intimacy and fear.

Patrick Rupert-Kruse (Germany) is focusing on *Avatarial (Re-)Embodiment: Immersive Interfaces and the Phenomenology of the User/Avatar-Relationship*. He exemplifies avatarial (re-)embodiment as a bodily representation of the user within the artificial environment, which constitutes the intensified VR users position through multimodal feedback. The author understands the sensory turn as a specific haptic turn, through linking immersive interfaces to the perception and experience of the self in the virtual reality, and discusses phenomena like full-body ownership illusion and heautoscopy to analyze the mental and bodily dimensions of avatarial (re-)embodiment. By means of advanced current technologies, Rupert-Kruse also asks about the effects of this technologies on our understanding of the term image in the discourse of image studies.

Helen Jackson (Northern Ireland) investigates in *Embodiment, Meaning, and the Augmented Reality Image* the augmented reality (AR) image as an embodied and interactive experience of image in location. The argument is focused on the *rediscOver* iPhone app developed by the author, which is operating to support a technologically mediated locative-based experience of the Titanic Quarter in Belfast. The author resolves a language of embodiment by which to assess the *rediscOver* AR images, in terms of how the images create a distinct model of the world, and one that requires an embodied presence in it. Jackson argues in analyzing precursors from early media art the changing relation between locality and temporality. Through the superposition of the present by dissolving old media, in this case historic photographs in an iPhone app, different modes of time like presence and absence are synthesized into a new kind of experience. Maybe this practice can be understood as a genuine artistic quality of augmented reality.

The different theories that are constantly evolving in the context of the *sensory turn* are effectively highlighting a whole variety of innovative approaches for image science and media theory. It seems to be possible to fully integrate and rehabilitate the role of the human body in a sensory and perceptual dimension. Therefore, to think about visual culture necessarily implies the thinking of the specific role of media technology, which itself has the embodied potential for addressing the different sense modalities of the recipient or user. Thereby, the research affiliates to the old debate within the arts about the hierarchy of senses, which nowadays is built on a broader and more profound basis, and which can cause major innovations in the field of media, arts, and aesthetics. *Image Embodiment* could be one part of the discourse to synchronize the concepts of image and body, which is then able to connect the perspectives of media theory, philosophy of mind, perceptual theory, and film studies as well as the complex range of image science.

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