Introduction

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The interdisciplinary perspective of an autonomous image science is not only influenced by the inflation and power of digital images, but also by the fact, that modern images are often moving images. The *Yearbook of Moving Image Studies (YoMIS)* wants to provide an international discussion forum for the representatives that are working on the topic of images and visual culture.

The basic idea of the *Yearbook* reaches back to 2011 and is closely connected with the founding of the *Research Group Moving Image Science (RGMIS)* in Kiel (Germany). Founded at the Christian-Albrechts-University as a doctoral seminar, the *RGMIS* worked on all topics of modern media theory, focussing on the essential role of the visual contents and structures of media in a multimodal context. The interdisciplinary research of the group includes media and film studies, image science, philosophy of media and mind, art history, aesthetics, game studies, theories of perception and psychology and other research areas related to the moving image. The academic engagement lead to a series of conferences termed "Moving Images," which intend to discuss the static concept of images used in traditional image sciences (in terms of static pictures or images), in a modern perspective according to new media technologies and their moving images. The fundamental consideration of founding *YoMIS* is the connection of German, European and international research to improve the academic exchange of ideas. Therefore *YoMIS* is conducted as electronic publication to enhance the range of impact and to facilitate the production process. The Yearbook is based on an extraordinary scientific cooperation of the University of Applied Sciences Kiel and the Muthesius Academy of Fine Arts and Design in Kiel and

is published by Dr. Lars C. Grabbe, Prof. Dr. Patrick Rupert-Kruse and Prof. Dr. Norbert M. Schmitz.

The first issue of the double-blind peer-reviewed Yearbook explores *Cyborgian Images: The Moving Image between Apparatus and Body.* The focus lies on modern and interdisciplinary perspectives on the structure of moving images. Modern images (movies, TV, displays etc.) are often depending on multifaceted media systems and poly-sensual apparatuses, which exemplify multimodal and intermodal mechanisms. These multimodal media systems interact in specific ways with the sensory system of the recipient and generate various levels of perceptual states with different intensities of comprehension and bodily experience. In this perspective neither media systems (systems of the moving image) nor the subjective states of reception are passive processes: it is instead a highly interactive and inter-systemic media relation.

Movement, temporal dynamics, spatiality and additional modalities (speech, sound, music, colour, font, scripture, texture etc.) interact with the sense modalities, memories and process of mental anticipation and create a complex and hybrid structure of medium, recipient and sensory stimulus processing. This refers to the fact, that on the one hand the technological structure of displays and interfaces are relevant, and that on the other hand the role of the lived-body and mind is crucial for an understanding of the effects of the moving image. It is the interaction of image, apparatus and recipient that activates the images and their specific pictorial (and often multi-modal) representation and unfolds its semantic and semiotic content. This remarks are clear in the context of proto-cinematographic art and cinematographic apparatuses but become more obvious in the context of recent evolution in media technologies and digital art: new displays, interfaces and poly-sensual media systems like Oculus Rift (OculusVR), Kinect (Microsoft), Second Life (Linden Lab) or Aireal and 3D Tactile Rendering (Disney) promote the progressive embodiment of the recipient or user, and, in doing so, they force the amalgamation of the recipient with the materiality and content of moving images.

Therefore *Cyborgian Images* addresses the broad field of the re-lationship between the technological dimension of the medium, its

aesthetic and structural impact on the representational or mental status of the moving image and the effect on the body of the recipient, including affective and somatic reactions. With the term Cyborg we want to address the feedback processes between the recipient and the medium as technology as well as content or image. Additionally we want to shine a light on the fusion of mind, body and media, on extension through and incorporation of images, and how this melting affects our bodily reactions and mental processes. So, the concept of the Cyborg in connection to the concept of modern images increases the range of analytical data and, hopefully, will compile a useful interdisciplinary focus of modern moving image studies.

Norbert M. Schmitz (Germany) understands perception as a bodily structure and result of the human evolution. Against the traditional concept of a body-mind-dichotomy he analyses the different forms of images with regards to its anthropologic precondition as a function of the human body. He argues against an ontological viewpoint of media and conceptualises the development of visual artefacts (between central perspective and cyberspace) as a capacity of adaption to nature by culture. In this media-anthropological perspective it is less about objectivity of representation, which still influences art- and media theory, but more about functional capacity of image media in the perspective of an image science. The history of art and media art is then a considerable special case of the common image culture and Schmitz methodically connects iconology with the biological constructivism.

Phillip McReynolds (USA) addresses the concept of a Cyborg approach to the moving image and tries to clarify the status of the phrase "between apparatus and body" of the subtitle of this volume. He argues, that the Cyborgian view suggests that images suture or stitch together apparatus and body into Cyborg, but this is different from traditional approaches to cinema where the image is viewed alternately as a window upon reality or a screen between the viewer and the world. Cyborgian images are active entities that functions as a field of production that forms a hybrid kind of creature: the Cyborg image is more a matter of *poiesis* (bringing forth) than one of *(an)alethia* (revealing/concealing).

Lars C. Grabbe (Germany) argues that modern media systems are increasingly addressing the senses, they maintain a high degree of immersion and finally induce a complex order of codes directly influenced by bodily experience. He states that we have already become Cyborgs and that these hybrid mechanisms of modern media systems are based on the mode of phenosemiotics: the interactive processing of sensory inputs and perceptual conceptualisation (body-mind dynamic). The phenosemiotic sign system offers the potential to integrate sensory and bodily experience with the system of external signs. With the use of the phenosemiotic schema $ps = r_1$ [rep Λ o = int (r_2 (sp, ra, ma)) Λ i = r_2 (s, p) = v (r_2 (b, d))] he is able to localize the different levels and sub-levels of impact within a media system. This improves the understanding of media and media evolution and helps to understand the complex network of mediatised artefacts that are parts of media systems.

Marco Cesario (France) and Lena Hopsch (Sweden) are investigating the perception of space in the context of digital architecture. Within a phenomenological perspective they argue with the French philosopher Maurice Merleau-Ponty's concept of *flesh* which is the common background of the dialogue between the body and the world and the bodily intertwining of perception and the perceived world. They contrast architectural and urban structures that are designed for the experience of the body's motor faculties, with the potential of digital design. They try to answer the question if the modification of space-time categories the body and brain's treatment of spatial perceptions open new ways of experience.

Katharina Gsöllpointner (Austria) introduces the arts-based-research project *Digital Synesthesia* that gives evidence for providing synesthetic experiences for non-synesthetes. In this perspective synesthesia is a special case of perception and can serve as an evident example for the research of perception in general. She explains, that digital art can serve as an aesthetic analogy to synesthesia and is therefore useful to explore its aesthetic components. Furthermore she argues, that research findings indicate that perception is not only a process of mere sensory-based stimuli but also influenced by semantic and conceptual inducers. With two exemplary digital artworks

she describes structural (syn)aesthetic correlations between synesthesia and digital art.

Phylis Johnson (USA) examines the process of identity construction within the virtual world Second Life. She focuses on the visually embodied avatar as a participant in the virtual community amidst technological convergence. The avatar cannot be defined in isolation and is perceived as a real world extension, reflecting the human form and/or spirit at least partially; either consciously or subconsciously, in attempts to create (or escape) meaning in both reality and virtuality. The author creates a model for understanding how virtual worlds might be conceptualized as authentic transformative agents during identity construction. The author has been a long time active member of Second Life as an educator, content creator, and journalist, and that offers her a unique perspective and perhaps bias toward new technologies and online communication and interaction.

Gregory Minissale (New Zealand) examines a perspective on the topic of understanding movies by a clarification of the relationship of technology and psychology. In this process of film experience the author finds evidence for a so-called process of *becoming-cyborg*. Herein lies not the rationale of order, but a-semiotic, chaotic and contingent exchange between matter and mind. It is Tarkovsky's Stalker (1979) that is useful for exemplify the details of how multisensory, kinaesthetic, abstract, conceptual, technological, material and neurological entanglements sustain *becoming-cyborg*.

Jacobus Bracker (Germany) argues for an embodied view on the understanding of the moving image. In combination with the theory of transmedia storytelling he develops a concept of double-dynamic images in the context of the television series *Game of Thrones* (2011–), which can be described as a mode of cyborgian images: by the dynamic material moving image and the images embodied through perception of other media. The cyborgian image is therefore composed of fragments of the material image and of images and knowledge stored in the living body.

Robert Belton (British Columbia) refers to the importance to use a cognitive approach towards understanding the moving image. His arguments integrate cognitive science and psychologically inspired approaches to the analysis of Alfred Hitchcock's *Vertigo*. Of particu-

lar importance are the concepts of the hermeneutic spiral, priming and confirmation bias, which together explain why reinterpretation happens as often as it does. The role of the recipient is being transformed into a metaphorical or critical Cyborg, which is actively participating and interacting with the moving image.

The Cyborg metaphor has its own history and impact but it seems still important to (re)think it under the condition of moving images or poly-sensual media systems, because it is a concept to refocus the problem of the interface and the connectivity of medium, body and mind. Probably the term Cyborg refers to a kind of apocalyptic Science Fiction scenario, but on the other hand, it denotes explicitly the potential of extensions of the human body and new dimension of the intertwining of body and mind. In this perspective *Cyborgian Images* could only be the starting point of a new range of interdisciplinary media theory in which all aspects of the body-mind dynamic will play a very important role in the future.