

People live in a technotope. They depend on artefacts in order to survive in the world that surrounds them. Philosophical anthropologists have pointed out that human nature is not determined. Unlike animals, human beings are not geared to a biotope that is limited to their own species. They are helpless at birth and need at least one year outside the womb to become capable of surviving. Still, by deploying all kinds of resources, they can make any biotope accommodating. Technology is inavoidably a part of how we see the world. That is why the philosophical anthropologist Helmuth Plessner called human beings 'artificial by nature'.

In the wake of the Industrial Revolution, reflection on technology was put on the philosophical agenda in the twentieth century. The first great philosophers of technology were out of line with the insights that had been sketched by the philosophical anthropologists.

Technology was approached instrumentally, as though it concerned no more than external tools that people can pick up or lay aside without being changed in the process. Those philosophers who did conceive of technology existentially, such as Ellul and Heidegger, stressed its alienating character, as though technology inflicted violence on human nature.

The anthropological approach that takes technology to be a part of the condition humaine is steadily gaining ground today.

Technology is more than a collection of interchangeable resources.

The technological way of gaining access to the world is our way of life. We cannot manage without it. And if there is any alienation at all, then it is at most inasmuch as people are, according to Plessner, alienated by nature. There is no natural degree zero to which technology is added.

Technology always mediates our access to the world. But instead of talking about technology in general as if it were a single category, we need to differentiate the technological mediation of our experience in terms of kinds of technology, and to put it in context in terms of culture and period. What is the effect of a particular technology on us now and in the past, where and when? How has it contributed to the articulation of how people live in all its diversity? That is the theme of the conference on MEDIATED VISION that was held in the ArtEZ AKI (the Enschede Academy of Visual Arts, part of the ArtEZ Institutes of the Arts) in conjunction with the University of Twente in April 2004 for the annual meeting of the AIAS (Association of Independent Art Schools) hosted by the AKI.

Technology mediates how our senses perceive the world.

The French phenomenologist Merleau-Ponty was one of the first to investigate the technological mediation of perception. He began his analysis with the example of the blind person who feels his way in the world with the help of his white stick. We act in a similar way when we use a wooden spoon to see whether the soup is sticking to the bottom of the pan. The stick and the spoon are not external tools, according to Merleau-Ponty, but they are 'incorporated'. They become a part of our body and our sensorial perception. In that capacity

they do not attract attention to themselves, but we feel through them. Incorporation also takes place in the case of much more complex artefacts and technologies. Microscopes and telescopes have changed perception and scaled us in the world in a new way. The same is true of X-ray photography and echography. The latter has completely changed the relation of a mother to her unborn child.

An echograph places parents before unprecedented dilemmas when they suddenly receive information about possible malformations which sometimes require prenatal intervention.

Changes in perception were also caused by the development and introduction of rapid forms of transport, such as the train, the car, the airplane, and the satellite. They have not only enriched but also transformed the cultural visual idiom. Photographs taken from outer space have altered our relation with the planet earth. All these examples can no longer be written off in terms of instrumental expansion and/or alienation, but can only be understood as an incorporation of the technologies concerned. The study of the incorporation of technologies and the ensuing mediation of perception, together with all the cultural effects it brings, can be conducted in a variety of ways. We can talk about it in language, but we can also start with the inevitable changes in images. After all, mediation takes place at the level of the senses before it can be pinned down in a word or an image.

The conference on MEDIATED VISION was intended to respect both approaches. Philosophers, art historians and artists considered the relation between word and image, which is historically problematic because of the changing incorporation of technology and the related mediation of perception.

The relation between word and image has been expressed in a unilateral way in the Western practice of cultural history, where the word holds sway. Cultural history is taken to be propelled by great thinkers: scientists, politicians and philosophers. Technology is assigned a subsidiary role. For a long time technology was considered as no more than applied science, and engineers were taken to do nothing but implement abstract models and natural laws in resilient matter. Artists, in turn, were supposed to make use of new technologies to create individually coloured pictures as a counterpoint to the generally valid laws of science. From this perspective, culture filters down from the word via the application to the image.

A philosophy of technological mediation reverses the conventional sequence. Cultural change begins with the incorporation of experimentally developed technologies, which mediate perception from then on. In this way, every culture develops its own type of embodiedness.

New technologies consequently disturb the existing cultural balance. New sensorial orientations call for new, appropriate visual idioms. Each time, philosophers try to introduce human beings into an expanding sensorial world, often using metaphors derived from the underlying technologies. This view of the relation between technology, word and image sets out from the material world of changing sensorial perceptions, and only afterwards considers the

historical images and words that provide an account of it.

MEDIATED VISION gave the floor to philosophers and art historians: the pioneer in the field of the contemporary (post-)phenomenology of technological mediation Don Ihde, Peter Paul Verbeek (with a critique of Ihde's position), Robert Zwijnenberg, Young June Lee, Peter Sonderen, and myself. At the same time artists were invited as equals to present visual essays that approached the same themes from the other side: represented in this volume (after my introductory essay on them) are Wouter Hooijmans (night photography with exposures lasting hours), Gerco de Ruijter (panoramic photography from a kite), The Realists (Jan Wierda and Carel Lanter with stereophotography), Felix Hess (mediated audio perception), Annie Cattrell (perception using medical and meteorological instruments), Esther Polak (GPS tracking), and Jeroen van Westen and Frank Sciarone (mediated orientation in public space).

In his essay *Art precedes science, or did the camera obscura invent modern science?*, Don Ihde traces the emergence of the modern subject.

The conventional history assumes that scientists and philosophers like René Descartes defined the detached, objectifying subject who passes judgement on sensorial knowledge, thereby opening the way to practical science.

Don Ihde reverses this sequence. The camera obscura defined the viewpoint of the spectator and anticipated the Cartesian philosophy in the process. This point of view was first introduced to art history by Erwin Panofsky in 1927.

Don Ihde takes this argument a stage further by asking whether this modern subject has not been totally transformed by now as a result of new technological mediations that go beyond the camera obscura. He takes the example of the audio art of Felix Hess to show how it creates a subject who listens and looks far beyond biologically defined limits.

Peter Paul Verbeek presents a critique of Don Ihde's premises. Ihde's authoritative (post-)phenomenology of technological mediation, *Technology and the Lifeworld* (1990), distinguishes between technologies of incorporation and hermeneutic technologies. In the case of the technology of incorporation, the instrument or device unobtrusively effaces itself in the act of perceiving: you look through a lens or microscope, not at it. Hermeneutic technologies, on the other hand, have to be read: you look at the thermometer to find out how hot it is, you do not feel the heat through the thermometer.

A spectrogram of a star shows a bar code containing information about the material composition of the celestial body, but it does not look like a star. In the case of hermeneutic technologies, there is no isomorphism or similarity of form between what is perceived and its representation. In his article, Don Ihde tries to bring the hermeneutic technologies within reach of incorporation by postulating the possibility of a double mediation. In that case, what has to be read is given a certain isomorphism with the human senses. For instance, we only know a remote nebula through the collection of digital data, but we can cast that information in the form of a photograph.

The colour spectrum of such a photograph is chosen to provide scientific

information: the red parts are moving towards us, the blue ones are moving away from us. The photograph shows, among other things, how far that system is from the assumed point of the Big Bang. But the photograph is not a 'real' photograph; it is a forced visualisation in the form of a photograph. It is debatable to what extent Don Ihde's categories are indebted to the benchmark of the 'natural' human being. The Australian media artist Stelarc challenges the idea that medical prostheses should necessarily remain within the contours of the biologically given human body. He has incorporated a third artificial arm, which is driven by impulses from electrodes attached to his stomach muscles in such a way that the third arm can move independently of the other two arms. He also experiments with a third ear and with an exoskeleton. According to Stelarc, the human body is outdated. It is an evolutionary form that we can leave behind us today thanks to the progressive incorporations of technology. Isomorphism of technological perception and biological perception through the senses is no longer necessary once you abandon the body as a norm. Peter Paul Verbeek scrutinises Don Ihde's categories and considers how they might be modified in order to cover possible post-human forms of the subject as well.

While Don Ihde and Peter Paul Verbeek reflect on the limits of the incorporation of technology, Robert Zwijnenberg and Young June Lee concentrate on the technologically mediated presence and representation of the human body. Insight into mediation has rendered representation a difficult concept. The camera obscura has been the model for the concept of representation in Western philosophy. The camera obscura provides a representation of the outside world that is 'true to nature'. The photograph initially did the same. In that tradition, the image is a one-to-one representation of reality. The word was also taken to represent reality. Word and image were combined under the name of representation. The word has been freed from that regime by pragmatists like Wittgenstein and Peirce. The word does not represent something distant, but stands for a programme of action. According to Wittgenstein, when you hear the word 'ball' you should not stare at that motionless spherical shape on the table, but should realise that it is an invitation to roll, bounce or dribble the ball. The word only takes on meaning in interaction with the world. The image has also been freed from the regime of representation through a growing awareness of its mediatory power. Images too 'do' something with our access to the world and to ourselves. Zwijnenberg and Lee investigate the impact of the mediated image on our sense of our own bodies.

Robert Zwijnenberg compares the mirror chamber of Leonardo da Vinci (1452-1519) with the video installation *Corps étranger* (1994) by Mona Hatoum. Da Vinci's room consists of eight full-length mirrors arranged to form an octagonal chamber. If you enter it, you see your own body endlessly multiplied in all directions, so that it even becomes difficult to separate your inner awareness of your body – your bodiliness – from this external, multiple body. The mirror chamber causes a crisis in the demarcation between inside and

outside the body.

The representation of the body invades its bodilyness and wipes out its border. Mona Hatoum does something similar with her installation. She too takes the spectator into a chamber to be confronted there with projections of the innermost regions of the body, obtained by a variety of technologies: X-ray photography, echoscopy, CT scanning, MRI scanning and PET scanning. The distinction between inside and outside, between being and having a body, between presence and representation, is equally blurred, but in a form mediated by state-of-the-art technology.

Young June Lee describes the effects of the regime of security cameras in Korea. On the one hand, people feel that they are being watched, on the other hand that gives a heightened sense of presence because people act themselves towards the omnipresent cameras. The self-confrontation in the mirror and video chambers is given a social twist through the security cameras. The interaction between being and having a body spirals and escalates in our contemporary self-awareness that depends on technological mediations.

Human perception is always mediated by language, image/sound, and technology. All the same, people feel a deep-felt longing for home, for 'authentic', first-hand, immediate experience beyond all mediation. In art and philosophy such an experience was considered to be a confrontation with the 'sublime'. Peter Sonderen was asked whether the desire to escape from mediation, as reflected in the category of the sublime, is not itself based on a specific historical form of mediation. Peter Sonderen shows that art is not just a response to technological mediations — in the sense of making them manageable by giving them a new, appropriate visual idiom — but that art itself is a mediating factor par excellence in its own right.

Art exists by virtue of admiration and respect, and the images that artists present to us lead us to the edge of our conditionings, perhaps not over the edge, but to the point where we look back and are confronted by our own cultural mediatedness. The Romantics used images of ravines and volcanoes to produce that effect; today the confrontation with the colossal monochrome surface that Barnett Newman presents to us makes us profoundly aware of our rootedness in a body.

The final essay, by myself, is a call for Artistic Research. In 1936 Walter Benjamin published his influential essay *The Work of Art in the Age of Mechanical Reproduction*, in which he argued that the rise of new mass media such as photography and film rendered obsolete the language that was used in the past to talk about art and artists. The 'eternal value' of the work of art and the 'genius' of the artist are no longer appropriate. Instead, the artist is given a political task. From now on he should conduct research on the cultural history of the ways in which sensorial perception changes under the influence of changed material conditions. The mediatory capacity of the media is what

requires investigation. Benjamin paved the way by carrying out an inquiry of that kind on photography and film. He did so in writing, but the artists I present to you conduct their inquiry in sound and image. I assume the role of guide by referring to their work as Artistic Research, but the artists in question present their own visual essays. At last, Benjamin's call for a new form of artistry has not fallen on deaf ears.

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