

## Wild Aesthetics

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According to data from NASA (2016), June 2016 was the 14th month in a row that was the hottest since records began, in 1880.

Environmental change is not a single event but more like a multifaceted cluster of problems. According to Jared Diamond (2005), this may have contributed in the past to societal collapses. In his book *Collapse*, Diamond identified five sets of problems that can contribute to collapse. These are climate change, hostile neighbours, collapse of essential trading partners, environmental problems and, last but not most interestingly from today's perspective, the failure to adapt to environmental changes. One key reason why societies fail seems to be that elites are either isolated and blind to the negative impacts of their own actions or unable to detect changes, see the bigger picture and respond accordingly.

**Time is not on  
our side.**

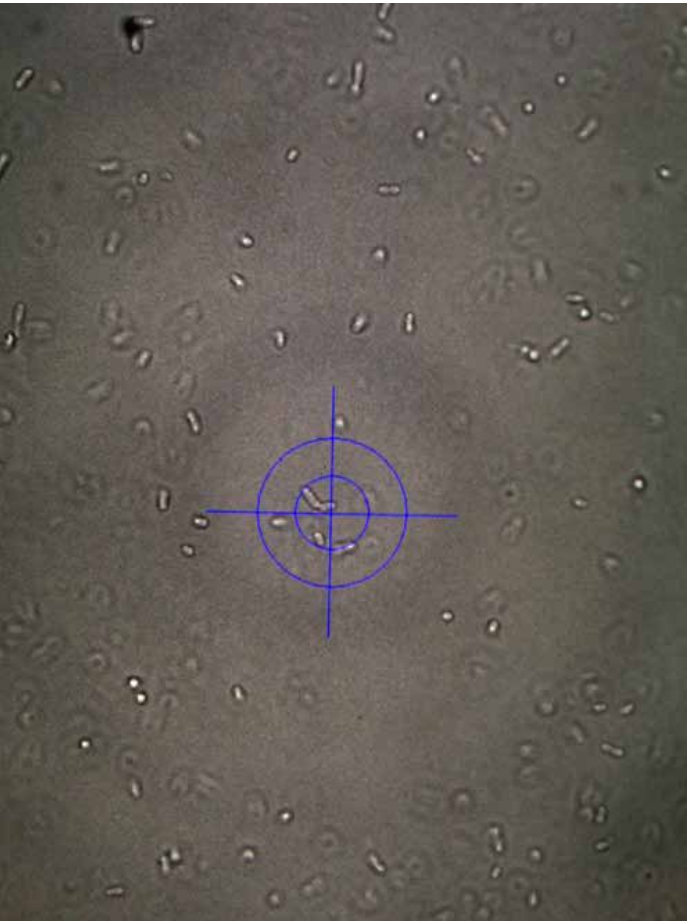


Melting Glacier in Central Iceland

The core idea of western science as the mediator of knowledge is crumbling. It seems that decision making in our societies nowadays leans for the most part on information coming from different lobbying parties and interest groups. In cases like environmental and climate change, these tend to focus, select and shape data towards their own aims rather than relying on commonly agreed, research-based facts and the rigour of sciences.

The problem this presents to artists and researchers is how to shape reality through visual language and how to communicate effectively about the environment and its changes through our craft and knowledge. Another problem regarding environmental change is whether, and how, as artists and researchers, we should mediate academic and other knowledges, such as traditional and indigenous knowledge, to the wider public.

Magnetotactic Bacteria navigating along earth's magnetic field with magnetised ferrite acting as biocompass between habitable and non habitable layers. Antti Tenetz, Biocenter Oulu 2015



There are different, intersecting fields orbiting the issue of change and how to express it. On the one hand, technology is enabling us to see, record and modify contents. On the other hand, we distribute and share the results and processes of seeing things. New technologies like drones, remote sensors and cameras have enabled us to step outside of the human sensorium, timeframe, location and scale. These changes affect how we see, sense and embody perceived reality and how we process it as a species. Technologies both enable and narrow these processes. This change in the use of technologies is both revolutionary and at the same time ancient. Don Ihde (1974, 15), an american philosopher of science and technology has written: "We live and move and have our being among machines. Clearly, the 'technosphere' contains presumption towards totality, towards technocracy." The technosphere we have created merges with the biosphere, the biologically habitable sphere consisting of all things, from the deep sea and bacterial activity in the bedrock to the upper layers of the atmosphere. As a result of the merging of these spheres, we as humans inhabit a partly man-made hybrid reality. In the hybrid sphere, messages are embedded in both digital and concrete, living or non-living media and back, allowing hybridity in matter and medium.

This is not new to us, however. Humans have built messages in selected locations like caves and cliffs, remote and sometimes almost non-accessible places, starting from the Palaeolithic through to the Holocene era after the previous Ice Age.



Reindeer roundup fence, Josif Soposhin, Suweskor, Autumn House at Moki rep jaun, High fox riverbank river, Surgut Rayon, Hanty-Mansiysk Autonomous Region, Siberia 2016.





Altering our human sensorium and the spectrum of perception happened in the European continent ever since the first signs of human presence, before historical, written time, through cave and cliff paintings. One can enter an underground cave complex and have a multisensory experience of the hunt through paintings in caves such as the Cueva Pileu in southern Spain. The experience goes beyond the range of the everyday. Spaces like caves and cliff walls partly muffle the senses of hearing, seeing and smelling, and yet at the same time heighten them by focusing the viewer's sensory system towards walls and places that for early humans were reachable by their physical capabilities or technological means, such as torchlight. The actual experience of being there, illuminated by flashlights and LED lanterns, give a glimpse of how it might have been in flickering torchlight. In the flickering electric light, stalagmites and columns start to look like animals, Mickey Mouse, demi-gods and chocolate puddings when our cognitive system and brain start to add the missing pieces and forms to the darkness and changing forms. Sonic experience adds to the multisensory immersion, transformed through the echoes and acoustics of the cave itself. If you stomp your feet in the cave, the 40-meter-high vault generates bass-like echoes that penetrate your body – an experience like being inside a massive, geologically formed, human-played subwoofer. The experience described above resembles storytelling, combined with audio and visuals, and comes close to the performative and narrative art forms of movie and the interactive arts. The moment in the cave becomes a multi-artistic experience, like Siberian bear rituals consisting of different facets of human artistic expression merged together. Rituals and spaces like these alter our vision and form unintentional results and errors, which influence our interpretations and experiences of the artworks themselves. The cave experience also comes close to the principles of New Aesthetics (Bridle 2016) in which works from the technosphere alter the vision through machines, algorithmic images and pixelated glitches in images, influenced sometimes by filters or bugs in a computer system. These motifs, paintings of flying and human-animal transformations, along with animal and abstract rhythmic stick figures, have similarities throughout the European continent and western Russia. In places of Palaeolithic and early Holocene art, one can see and be inside a holistic artwork, in an active role of viewer and experience, rather than as a passive consumer of the leisure industry.

These letruses and shamans flying on the walls of caves become flesh, in a manner of speaking, in our contemporary reality, when our visions and dreams of flying and seeing to the other side of reality merge with the concrete technosphere. Automated cameras and machines allow us to gaze into our future through an embodied out-of-body experience and telepresence. This technological leap allows us to accumulate knowledge and understanding of our surroundings beyond the conventional human sensorium.

We are part of 3.5 billion years of analogue knowledge of evolution, but we are not products of that process. Rather, we are a milestone between the first single-cell organisms and the species that we are becoming through natural and forced evolution. We are armed with machine vision and communication tools, like the microscope, drone cameras, satellites, mobile devices and networks, which enable us to be telepresent and to see and even influence the present in distant locations. Through biology, our presence and actions are part of nature and the body of the planet; we habit the biosphere like other species. We differ from other and previous life forms, however, in that even before written history we were able to generate compounds, materials and mediums beneficial to us, through biological processes such as fermentation and brewing. We have altered the speed and direction of evolution through various traditional technologies, like breeding methods, throughout history. As biology transforms into information sciences, and genetic information can be seen in light of communication theory and semiotics, it gives birth to the idea of biosemiotics (Kac 2005). Today, we can directly explore and modify genetic structures and organisms like us and with biotechnologies like CRISPR, it is possible to directly edit, research and develop life itself. Arguably, the change that is ahead of us exceeds the previous leap into the Information Age we have seen since the emergence of satellite imaging and the rise of the Internet over the past decades. Computational, technological and biotechnological solutions now allow the technosphere to merge into the biosphere with previously unseen depth and strength. This will shape our existence and surroundings as a species.





Top: Aerial topographic image of an explosion site at an Imperial Russia ammunition depot, Kipisistavi, 1916; image 2013.

Bottom and right page: Macro images of visible explosion debris consisting of ammunition, supplies and early stage military electronics on the ground.



Artists, researchers and artists/researchers should educate themselves about this change and adapt themselves to it in order to create, reflect and widen the scope of audiences from experts to the general public. The significance of a critical view and changing paradigm arises in photography, art-making processes and research during times when trust in knowledge and research-based decision making is crumbling and being corrected by emotionally driven, short-sighted policies and populist policy makers. New ways of seeing and imaging can be crucial to expressing resistance and influencing change in developing future systems.

Science and knowledge are built upon research and conclusions. Art can cross disciplines and reveal hidden structures and forms, both in natural and manmade processes. Art can also affect the outputs and mediate knowledge into meaningful messages and interventions for decision-making structures and policies, in order to shake them and wake them up to the changes ahead. Envisioning environmental change and solutions needs images and technology on an unseen level, where it has impact and goes to the bones, but is just as well based on facts derived from scientific research, commenting on science. There are meaningful differences. We have to make a difference through our work in order to hand this planet with its techno/biosphere to the coming generations in a shape that lasts and nourishes.

Our analogue background merges into pixelated CCTV, satellite, AR solutions and computer-generated images. Drone technologies and augmented reality solutions like Pokémon GO enable us to dive concretely into the possibilities of our surroundings, in real time and space, changing our bodily perspective, being hidden and at the same time seeing, seeing in a more focused way and in ways that are not in our human sensorium, such as the infrared and ultraviolet ranges. Power relations – being the watched or the watcher – are present, but the act of watching is itself hidden. The objects of gaze partly underline

the change of role from an active participant to a subject of surveillance. Here, at the border of a totally seamless experience of cameras, machines and displays, some oddities happen; images pixelate because of algorithmic bugs; satellite images include unexpected elements. The seamless human sensorium experience is broken. Here, new aesthetics happen, as does the rise of resistance: new ways of seeing and interpreting the world in the wilderness and at the border zone from capitalised technologies and culture. We need new images, more powerful than polar bears on melting ice. Images and aesthetics should come closer to our local perspectives, which can then reveal and underpin change in the events at hand. It is crucial to point these developments out and to interpret them, through both the sciences and the arts, to the wider public, experts and decision makers. Breaking the norms opens up a view to a hidden dimension. This is an area in which new forms of seeing and understanding emerge. Glitches happen.

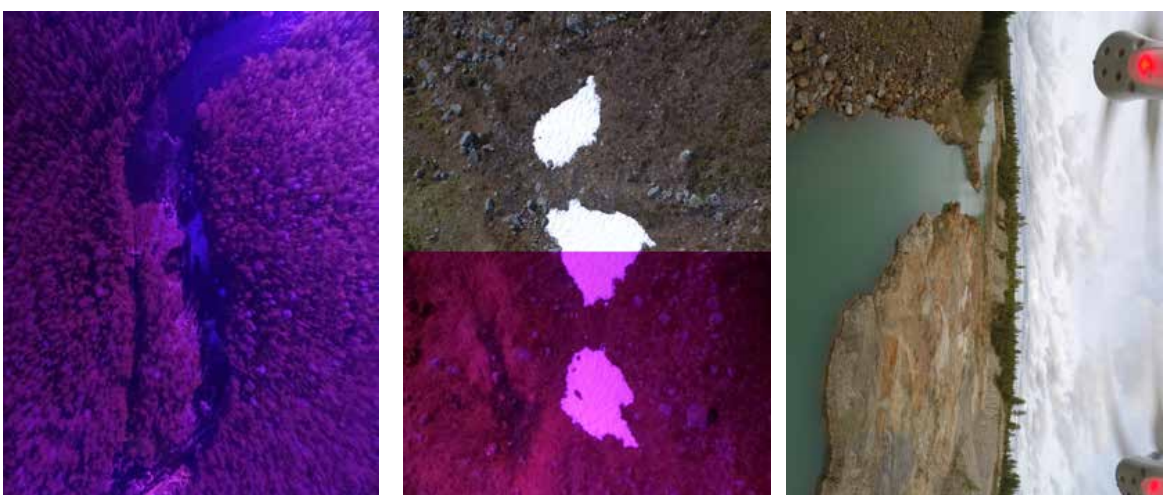


Microscopic image of leeches from painting site of Palokkari painting by Akseli Gallen-Kallela, Pääntjärvi National park, Russian Karelia.





Trout from Muoravarakka river



Top: Drone flying over test mining site

Middle: Snow patches, comparison of normal image and uV/IR image

Bottom: Kuatakonkas uV/IR image

Just as the cave or a cliff was a multisensory stage, a medium, for the Palaeolithic and Holocene people, technology is our media and bio-mediasphere our stage and medium. It is important to emphasise that we have an active role as makers and actors who can change the details and the system, rather than be mere consumers of content in a totalitarian system within that sphere. To be an agent, we have to understand the system and know how to use these channels and how media and mediums are produced. The merging of software, machine and biological components enables us to widen the scope on particular subjects, such as environmental change. The tactical use of media is a way to utilise common visual signs and language to widen the horizon of different publics and audiences through factual but also emotionally engaging content. Crowd-driven media applications allow users and makers of content to distribute with the means and tactics of mass media to the readers and wanderers of the plains of the Internet.

We should do what we are able and born to do, to adapt, be proactive and creative, applying a combination of knowledge and ways from both past to present to our current situation. We should try to see the animal within us, the non-human realm around us, of which we are an integral part. We live in a hybrid relationship with nature, simultaneously in the technosphere, among technologies and interpretations, and in the biosphere, which encapsulates us in nature. It is said that we live in the time of the Anthropocene, a time in which we humans have had undeniable permanent impacts on the environment, at the scale of the planet as whole, from the beginning of the industrial revolution in the early 1800s, through the atomic age, with the first atomic bombs in the 1940s, to the present day. There have been changes to the climate and geology caused by living matter, biological organisms, long before humans stepped onto the scene: for example, cyanobacteria oxygenated the atmosphere, changing the course of life two billion years ago. The difference is that we are aware of the impact we are having.



Volodja Sopotshin's family at his shobibis near Kuiep Jaun, Middle River, Surgut Rayon, Hanty-Mansiysk Autonomous Region, Siberia 2016.

