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**Morphology of Sensual Algorithms: Interview with Leon Eckard**
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# MORPHOLOGY OF SENSUAL ALGORITHMS:
# Interview with Leon Eckard

By creating sensitive and interactive socio-cultural dialogues with and within technologies, media artist Leon Eckard reveals his understanding of technology as human extension and reflection of the self. While his artistic visions have already travelled the world (Kumasi, Barcelona, Dresden, Cologne, Paris, Teheran etc.), Leon is currently studying Art and Media at the University of the Arts (UdK) Berlin, where he also works as a tutor in class of Generative Arts. Through his works, Leon explores a multitude of virtual spaces, thoughts and relations by expanding our senses and cognitive functions onto machines and algorithms. Since he is coming from a jazz guitar background, he tries to connect intuitive musical sense within a self-developed audio processing system that evokes transformations of our (sonic) environment. Also, he designs interactive installations that make the line between natural and artificial surroundings blurred. Concerning my curiosity for combining acoustics and electronics, tradition and modification, contemplation and acceleration, our conversation revolved around Leon's perception of the focal point regarding contemporary art and critical discourse and also the ways of mutual interaction between human sensitivity and technology.

*Contemporary artworks being produced nowadays seems to fall between diverse media, that is, as Dick Higgins stated, no accident since we are approaching the dawn of a classless society to which separation into rigid categories is absolutely irrelevant. Regarding the critical destruction of medium as an ontological category of the most important art of the 1960s, what is your opinion on the meaning of an artwork categorization today?*

From my perspective, the categorization of art still makes sense, but mainly for the need of speaking about it. The concept of art and the artistic practice is constantly expanding. I also notice increasing collaborations between different branches of arts and sciences, which is not a surprise regarding overwhelming technological developments. However, it is almost impossible to grasp all aspects to work with a certain technology. My artistic practice is usually connected with fields of *generative art, media art, sound art* or *installation art,* and all these terms are correct and even necessary to intelligibly communicate ideas. In spite of that, an exact category for my work doesn't play an important role. My field of interest and personal artistic practice usually develop within a certain space, which then has intersections with several classifications, each emphasizing different aspects. One should just be aware of the assumption that each generalization is an abstraction that reduces the information and the fact that it is really important to occasionally question these categories. Therefore, it is better to form an autonomous, self-sufficient impression of an artist and his/her work because ultimately, it is not the category that defines the work, but the other way around.

*Since I find your artworks really diverse regarding the medium, idea and experience, I would like to know where does your initial creative energy come from?*

The process of creating an artwork, from my point of view, means boundless and continual exploration. It begins in a world of endless possibilities and an infinite amount of material and resources – my own imagination. This exploration is the exploration of the Self – for my part the only directly accessible entity in the universe, since it is the filter I perceive everything through. Regardless of the medium, technological aspects or the material I use to create an artwork, my work primarily guides me to understand myself and therefore others and the world around me – which in a certain way is the very same since everything is part of the same system. Sometimes, I like to think of my personal creative process as an *applied philosophy*, because what I mostly do is bring to life to my day-to-day little thought experiments.

*Your work Metamorphosen – Topology of the City, is a site-specific multimedia installation that is a really beautiful example of the use of sensual algorithms since it is based on sculptural objects, live performance and its modulation with several algorithms. Could you tell me what this work means to you and where do you see its importance regarding contemporary art practices nowadays?*

I like the term sensual algorithm, since it describes very well what I am doing. Algorithms are all around us. They are underlying logics and abstract truths about our environment. They describe invisible patterns and processes. The beauty of algorithms is their abstractness. I like to embed them in sonic but also visual contexts, so they become sensual, as in, for instance, the collaborative work *Metamorphosen – Topology of the City.* Initiated by visual artist Yoana Tuzharova, we wanted to translate the underlying structure of economic development in Germany into several media. Together, we closely worked on a sound sculpture that is connected to the DAX data – an algorithm calculating a number depending on the performance of the 40 biggest German companies. In other words, the algorithm tells us about the development of the German economy, though in a very abstract way. The flutist Francesco Marzano made an intuitive composition based on these data and I translated it into sine waves, which will vibrate a plate with charcoal on it. The plate generates different patterns, depending on the frequencies, which is not only a part of the exhibition but also serves as a model for tiles, which Yoana again used to build new sculptures. Through this whole process of translating we wanted to give a new understanding and sensual experience of this algorithm and eventually of an abstract phenomena – economic development.
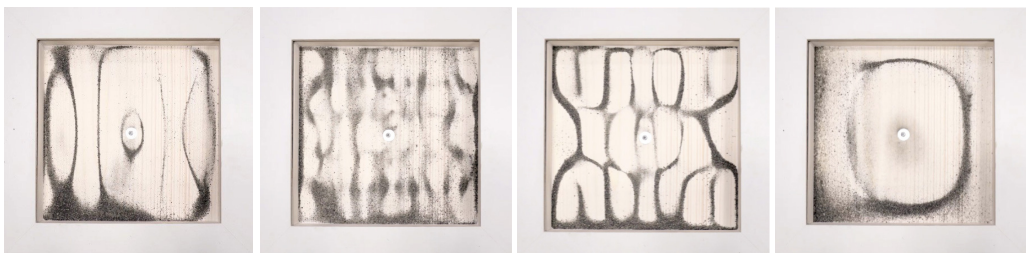
*Your latest works deal with subjects of authorship, technology and human–machine mutual exchange and evolutionary relation. You use technology as an extension and reflection of the self, where the line between an artist and a machine becomes blurred. Could you tell me more about your understanding and meaning of technological use within creative artistic practices?*

I have been in love with technology since forever and playing with it artistically opened up the space of limitless possibilities for me. In my opinion, this creative process that considers human–technology interaction is necessary to reflect upon and develop, and it is crucial to have space in society to explore these media in a non-profit orientated manner. In my latest work *Der Bewusstseinsautomat – ein Dialog zwischen Maschinen*, I explore the blurring line between artist and machine while asking myself how a collaboration and symbiosis could look like, to what dimension I extend myself onto them and, also, what differs us from these machines? The work consists of two chatbots talking with each other about the implication of their conversation, while the audience can also join their discussion. The whole work, including the concept, is developed together with a chatbot, which is also part of their discussion. An interesting philosopher and also inspiration for this work was Vilem Flusser. According to him, we are heading towards a telematic society, in which everyone is interconnected and ever-producing. The anyway irrelevant question of authorship finally loses its meaning and society is an interconnected whole that creates, exchanges and modifies. He believed in the potential of these technologies to create a utopia, though we must lead this technology in the right direction. Otherwise, we will end up in a world of complete overproduction of technical images, where meaning fades gradually and people get bored and uncreative. And even more

importantly, an asynchronous relation between sender and receiver, as is currently the case, creates fascistic structures. New media is a chance of democratization, but also contains the risk of totalitarianism. So, the role of the artist is not only to create interesting *technical images*, with these ungraspable apparatuses, but to question, understand and reinvent their use.
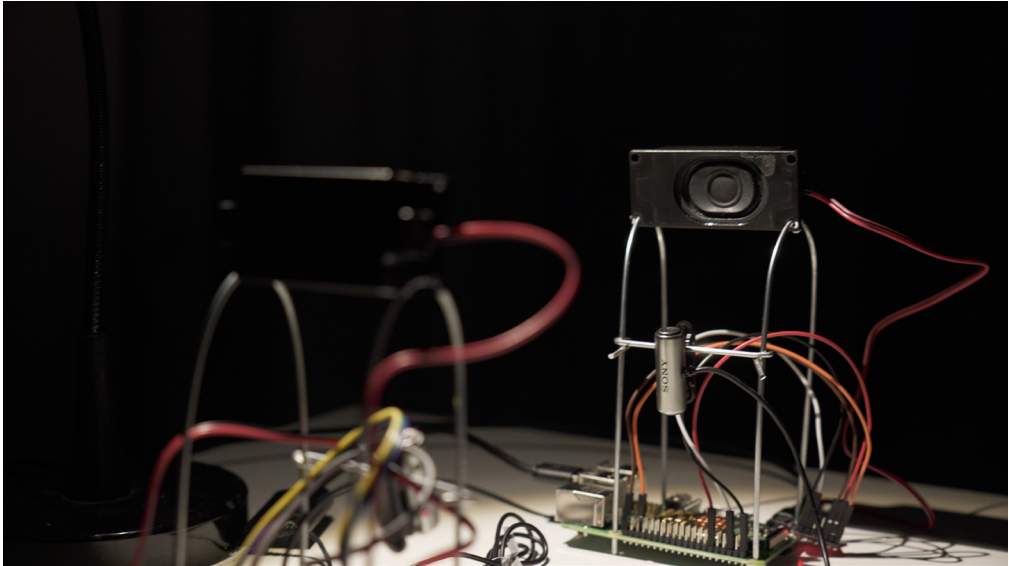


*Most of your works consist of different technological uses, electronics and modifications combined with acoustic, pure perception and tradition. I find this approach very meaningful since in this way you are able to simultaneously create, innovate and make an intensive emotional impact. One example is your work The Belafon, but there are more. Could you tell me more about this approach to an artwork?*

Since technology is omnipresent in my work, there comes a time when I feel overwhelmed and need some distance from its complexity. In these moments, it helps me a lot to come back to basics and just improvise on my guitar for a while. It is an intuitive and natural process that can very quickly clear my mind. Also, while I am meditating, I can feel the impact technology use has on me. How often certain impressions pop up in my mind and how my concentration span is affected. This doesn't mean that technology is bad, it is more about how we use it. Since I was simultaneously exploring jazz guitar and media arts, it seemed to clash but eventually it all made sense to me and it was just a question of time until I combined both approaches. During a residency at pIAR (perfoCrazy International Artist Residency) in Kumasi, Ghana, I started to modify an instrument called Balafon. I attached several sensors and controllers and connected a

Bela microcomputer with SuperCollider running on it. Now I can play on it and the sound alters through my playing, but also through the controllers I attached. In this way I could finally play intuitively with an acoustic instrument and use that process as a basis for my algorithms to conquer. It is also in a way a sensual algorithm. This new instrument is now called *Belafon*.



*Also, your work Defragmentation is based on an expansion of our senses and cognitive functions onto machines and algorithms. I found it very interesting the way you fuse emotional and technological fragmentation to re-contextualize an artwork of post-humanity. Can you tell me more about this process from an intuitive musical fragment that is fed into the algorithm and finally altered into diverse polyphonic soundscapes?*

Since the *Belafon* I started to also modify my guitar and develop my own effect chains and use them in a performance series, which I initially called *Defragmentation*. The name described my own feeling of scatteredness into a multitude of virtual spaces, thoughts and relations. I played small musical fragments into the algorithms and then transformed them throughout the performance. Though I changed the name to *Cybernetic Reverie*, since I feel I slowly overcame the process of feeling scattered, but rather began to make sense of these fragments. I understand my performances and also some of my works as a cybernetic process, where I am combining organic and artificial systems. My improvised play with it creates a form of feedback and merges us into a bigger system, generating a dreamlike state and soundscape that is both organic and machine-driven. The telematic society will be a cybernetic one. We are already merging with machines and they merge with us.

*Passive enjoyment of traditional forms is exchanged by the participatory function of an interactive art that expands the range of art experiences available to the audience by offering levels of 'free choice'. What is your opinion of open-ended decision-making or free will in interactive and generative art?*

Free will or choice in interactive art is interesting to me, since it creates several layers to the experience. The moment where the visitor notices their effect on the artwork, they immediately become part of the whole and the artwork cannot be seen anymore as an independent system. Suddenly, you are part of the artwork. On the other hand, the interactivity adds a subjectivity to the experience, which can make the artwork more personal. The visitor can explore the artwork how they want. However, for my works, it depends on the concept, if I will add an interactive or generative layer. For example in my work *Toter Winkel*, which deals with illusionary perception, it is very important that the visitor can decide whether they go upwards or downwards. It is a reflection of our free choices, within our closed inner space.

*Do you create all sounds and sound effects by yourself or do you use pre-existing ones? Could you say more about tools and compositional techniques that you use for your creative process?*

*Sounds...dematerialize the substance of things they resounded and extend their own patterns...they drift off things and link up with one another (Alphonso Lingis).*

That is a beautiful quote. My approach to sound is to create everything myself. I love to work on little details and to have control over all parameters. The software I mainly work with is SuperCollider, an open-source programming language for generating sound. Though I also use Linux systems and processing – all open-source software. In my live performances, I use only acoustic sound generation with physical instruments and run them through a chain of algorithms I have wrote. In my installative works, I also use sound samples I have recorded, for example in *Invisible Habitats*. Compositionally I try to find a balance between aesthetics and concept. Though the compositional approach for each work is determined by the concept.



For example, the work *What is it (not) like to be a bat*, a sound generating headset equipped with ultrasonic sensors and a gyroscope demands a composition that reacts on the data of the sensors. So, I chose to work with repetitive patterns, which modulate the sound according to the input. First, I think of the concept and what the basic features for the musical composition are. Then, I

think of how to implement these features and where to modulate the sound to generate interesting results. During my live performances, I work more intuitively and improvised. I usually have an idea of where I start and where I end. It mostly correlates to emotional states or recent situations. I like to create setups and works which can surprise even myself – that is the beauty of generative art and algorithms for me. You create a system that is complex enough to not be understood anymore and maybe other people come and find a whole new way to interact with it. That connects also to the authorship topic, covered before.
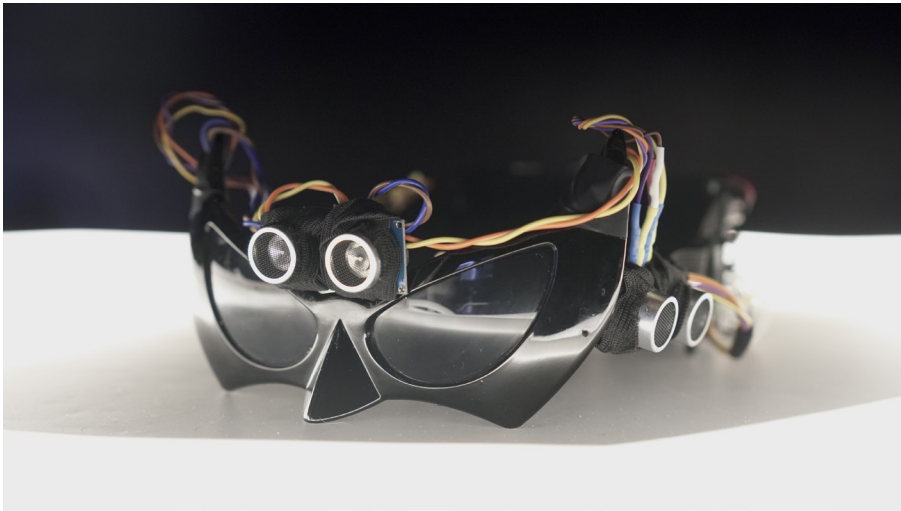


*What are your future challenges regarding the contemporary scene in Berlin? Will you keep exploring interaction between human sensitivity and technology or is your focal point changing? How do you see the path of the contemporary art scene? In which direction is it going?*

I am currently thinking about a new work that will be focused on exploring the idea of self-organization and emergence. It will definitely be an interactive artwork with sound as the sensual medium between the idea and the human. I don't think about where my focal point lies or if my artwork aligns with what I did before. My main drive is still the exploration of the self and the nature of reality, so I am sure that over time a general topic will extract even clearer. Generally, I can't say where the contemporary art scene is evolving to and it is also not so interesting to me. What interests me is more the scientific, philosophical and political discourse. Berlin is a great place for media art and all kinds of experimental works. Many people are open-minded and a lot of opportunities exist. But it is possible to gain access to information and discourses from everywhere

with the help of the Internet. I think art will be even more interdisciplinary in the future and open-source culture makes it more accessible. In collaboration with science and other branches, I hope that art can also impact more outside its circles and create discourse not only about itself, but about all of us.