

# REPOSITION

With contributions from Daniel Aschwanden<sup>1</sup>, Pamela Bartar, Barbara Graf, Tanja Kimmel, Barb Macek, Valerie Messini, Verena Miedl-Faißt, Vera Sebert, Lucie Strecker





„Wer auf dem Kopf geht, meine Damen und Herren, — wer auf dem  
Kopf geht, der hat den Himmel als Abgrund unter sich.“

“Whoever walks on their head, ladies and gentlemen —  
whoever walks on their head has the sky as an abyss underneath.”

Paul Celan, from the acceptance speech for the  
Georg Büchner Prize 1960 (transl. M.S.)







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DANIEL ASCHWANDEN<sup>†</sup>, PAMELA BARTAR, BARBARA GRAF, TANJA KIMMEL, BARB MACEK,  
VALERIE MESSINI, VERENA MIEDL-FAIßT, VERA SEBERT, LUCIE STRECKER

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(Center for Didactics of Art and  
Interdisciplinary Education)

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# Welcome Letter

BARBARA PUTZ-PLECKO  
VICE-RECTOR FOR RESEARCH

## Dear Readers,

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With this first issue of *reposition*, I am pleased to present to you a new publication that throws light on the wide range of research carried out at the University of Applied Arts Vienna – research that creates an investigative environment that is diverse, fascinating and fruitful. It is also hoped that this publication will enable you to appreciate the great and diverse potential this research has for advancing both internal and external discourse. Comparing one's own viewpoint with the viewpoints of others, questioning, examining and challenging it from various perspectives, constitutes an important, dynamic aspect of any kind of artistic or scholarly research.

At the Angewandte, research projects and cooperative undertakings with extremely different orientations all merge into a very interesting research landscape characterised by diversity and a topography that can be quite surprising, a landscape that at the same time serves as a solid foundation on which to build.

The present publication, beyond mapping this topography, aims to point out connections and differences

that exist between the various positions and to contribute to creating a space for shared discovery and feedback.

A central priority of our University is ensuring openness and fluidity among spaces created for experience and knowledge sharing, which arise during research projects, and guaranteeing that these spaces become accessible to interested members of the general public. We thereby seek to encourage fruitful exchange and a sense of social commitment in the discussion and debate of the various positions held.

My special thanks go to Alexander Damianisch and Wera Hipesroither for launching and developing the idea of *reposition* and for taking on the editorial supervision of the publication; to all colleagues contributing written material concerning their research; and, last but not least, to peers who, by offering feedback, ensure quality and provide useful input to the researchers.

I wish you all an enriching and inspiring reading experience!

JOURNAL OF REFLECTIVE POSITIONS IN ART AND RESEARCH

# Foreword

ALEXANDER DAMIANISCH  
DIRECTOR OF CENTER RESEARCH FOCUS

Welcome to the first issue of *reposition*, which invites you to reposition yourselves and encourages turns in action and reflection, of settings and their contexts. A warm welcome to our colleagues and, most importantly, to our readers! This publication deals with collaboration, accessibility, sustainability, the existential, emptiness, relations, performance and much more.

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Initiated by Alexander Damianisch, director of Center Research Focus, and supported by Wera HIPPESROITHER and relating to existing potentials at our institution, this endeavour embarks on bringing together the wide variety of research at the University of Applied Arts Vienna, and reflects on an ongoing culture of editorial structures for research in Arts and Sciences. Based on a call for papers, *reposition* collects positions from ongoing processes. It offers researchers of all disciplines and departments at the University of Applied Arts Vienna the opportunity to publish their work according to peer-review principles. Colleagues of any level and doctoral students in arts and sciences were invited to share their work. This series showcases their diverse approaches to project-oriented research work and presents current insights, captivating research processes, and ongoing projects from a deeply personal perspective that courageously unearth the work-in-progress.

With *reposition*, we aim to open conventional boundaries between subjects to emphasise potentials lying in the “in-between” and provide space for transdisciplinary dialogues. In a broad field of vivid, interrelated impulses, readers will find a colourful array of topics reflecting the many different personalities at our university. Topics covered by our authors range from Citizen Science tied to arts-based research, the democratisation of science, questions that arise in the context of collaborative knowledge production to searching for images and words for subjective experi-

ences of persons affected by auto-immunity. They also range from the challenge of sustainability in art collections and conservation to the fundamental human ambiguity and bio-philosophical dimensions of disease; from the phenomenon of emptiness and corporeality in digital spaces to existential-phenomenological approaches; from poetic strolls and longings, searching for ways to relate to each

other, to reflections about mimesis and hybridity; and lastly, from textual performances to traditional academic approaches and their critical reflection. *reposition* allows its readers to become an actively-engaged part of this diverse research environment, forge their own paths through it, and (re)position themselves in this vibrant space.

Following the research profile of the University of Applied Arts Vienna, *reposition* seeks positions that, as current evidence of an ongoing process, and in contrast to other disciplines, provide neither “true” nor “false” results, and whose qualities lie above all in the critical and subjective examination of a topic. Exchange and the enabling of relations are essential for the field of art and science, for which we want to provide space. Accordingly, we envision *reposition* as an offer to researchers to receive feedback from colleagues via peer-review. We now share with you the first step of this relational collective walk. This journey is an ongoing process, and we invite you, esteemed readers, to share your reading experience with the authors and us: send us your feedback! It enables us to continue following the basic idea of this axis of shared attention, reflection and sharing. The idea of *reposition* is to emphasise dynamic approaches that demonstrate the courage to adopt alternative perspectives and a focus that lies always on a dialogue in-between. In this sense, you are invited to relate and reposition yourself together with us.

# We are pleased to present the contributions of this first issue:

Pamela Bartar's (Center for Didactics of Art and Interdisciplinary Education) contribution *Citizen Science – a new field for the arts?* links Citizen Science with art-based research. Providing an overview of current approaches, Bartar illustrates how contemporary art can significantly contribute to the democratisation of science and the societal proximity of research, particularly focusing on socially engaged practices and collaborative knowledge production.

Barbara Graf (Center Research Focus, PhD candidate PhD in Art) takes Jacques Lacan's notions of the 'upholstery button' and the 'suture' as starting points to explore textile metaphors as methodological tools for her artistic practice, informed by her own bodily sensory experiences and experience of paresthesia as a person affected by MS. Graf's contribution *Stitches and Sutures* searches for images of the invisible and explores how deeply subjective experiences can be made accessible and adequately expressed.

Tanja Kimmel (Institute of Conservation and PhD candidate Doctoral Programme in Philosophy) addresses the question of how art collections and conservation can become sustainable in her contribution *Making museum repositories greener*. Sustainability poses a challenge for the art sector. While museums serve as role models for society and can thus contribute significantly to the discourse, they also have very high en-

ergy consumption and CO<sub>2</sub> emissions due to their complex climatic technology. Kimmel mentions current initiatives and sustainability concepts of museums in Austria and abroad and discusses a case study featured in her dissertation that conducts a CO<sub>2</sub> assessment of the central storage of the Kunsthistorisches Museum Wien in order to create the first profound data basis on climate-damaging emissions, which will then facilitate further action.

Barb Macek (PhD candidate and fellow (DOC) of the Austrian Academy of Sciences at the Institute of Fine Arts & Media Arts) takes as her starting point self-reflections and her own experiences with the autoimmune disease SLE and approaches the phenomenon of autoimmunity in relation to fundamental human ambiguity, following Helmuth Plessner. Macek's contribution, *Exercises in Existential Eccentricity*, explores the bio-philosophical dimension of the disease rather than its bio-medical dimension, showing how autoimmunity raises existential-phenomenological questions, regarding bodily ownership, the self, and the notion of the body as "one's own". From an assumed embodied diversity, she designs an artistic technique, EEE – Exercises in Existential Eccentricity, drawing on the technique of auto-interviewing, autoethnography and poetics to facilitate a dialogue between different inner voices.

Valerie Messini (Peter Weibel Research Institute for Digital Cultures) chooses the phenomenon of emptiness in art as a point of departure for her contribution *Nothingness in the digital Space* and presents her artistic projects operating with different technologies to approach the phenomenon of emptiness in connection with corporeality in digital space. *1-NOT-100.000* uses dance movement to explore emptiness in virtual space, and *Deep Emptiness–Wide Open* uses deep learning to question the extent to which horizon lines function as mental voids. Verena Miedl-Faißt (Center Research Focus, PhD candidate PhD in Art) invites us with *Await what the stars will bring* to walk through her artistic research trajectory. Her contribution poetically narrates on longings, and on beautiful and painful experiences in connection with her artistic practice and collaborative work with her nephew L. Based on Donna Haraway's concept of kinship, Miedl-Faißt searches for possibilities of relating to each other and seeks ways to make inner processes accessible. The contribution provides insights into her work with children and colleagues and how she creates "materialized relations, co-creations objecting time, space, and loneliness."

Lucie Strecker (Angewandte Performance Laboratory and Department of Art and Communication Practices) reveals the artistic working process preceding a production with the contribution *Rewritable Creatures*, reflecting on mimesis and hybridity in choreography through an exchange of letters with the late performer Daniel Aschwanden (Angewandte Performance Laboratory and Department of Art and Communication Practices) and the author Vera Sebert. As the three letter-writers search, speculate and ask each other questions, the text becomes a written performance, revealing an immediate, polyphonic approach to the subject that allows readers to become part of the performance. In this way, processes of hybridisation become manifest in writing. The performance, however, cannot be completed; Aschwanden's sudden death interrupts the text, turning the contribution, in a sense, into a memorial to an artist, friend, and colleague and the readers into witnesses.

We extend our gratitude to all researchers who provided insights into their work processes, to everyone involved in producing this volume – from graphic design to proofreading – and especially to the extensive and interdisciplinary scientific advisory board. In response to our call for reviewers, numerous experts from a wide variety of fields responded with insightful, critical, and concise comments that greatly enriched the entire process. This commitment and extraordinary dedication are no small feat for an entirely new publication that certainly challenges the conventional peer-review system through its interdisciplinary approaches. We would like to take this opportunity to express our sincere gratitude. Thank you for engaging in this experiment.

We hope you enjoy reading this first issue of *reposition* and that you will gain new impulses, dive deeply into your colleague's projects and encounter unexpected topics. We extend our invitation to reposition yourself with us: after all, research at the University of Applied Arts Vienna is unflinchingly personal, unpredictable, and as innovative as it is courageous.

Enjoy the walk and please get back to us. It is never too late to reconsider!





# Citizen Science— a new field for the arts?

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Pamela Bartar works in research & /social/ innovation (R&I) and science communication projects; she is a teacher at the Center for Didactics of Art and Interdisciplinary Education and a volunteer mentor for citizen science projects at the interface of art and design at the Austrian platform Österreich forscht.

Pamela  
(CENTER FOR DIDACTICS OF ART AND INTERDISCIPLINARY EDUCATION)  
Bartar



I remember it clearly: when I first presented my concept of Citizen Science at the interface of art, design and art-based research to a group of artist-researchers at the international INSEA conference 2018, “Art & Education in Times of Change”, I was met with puzzled faces that probably wanted to convey to me: What is the point of all this? We have been doing this for a long time – we question, intervene, experiment and research together with others. Why these somewhat mechanical criteria or the insistence on scientific quality in an academic-institutional manner? Why even bother to put natural processes into a theoretical framework and develop a linear guide for voluntary co-researchers that presumably bypasses a possible essence of art-based research?

Right at the beginning of the conference, it dawned on me that my planned input, “Artistic Research in Citizen Science,” would neither match the conventions nor the language of the attending researchers and educational experts. No wonder, I had already spent several years of socialisation in a completely different knowledge culture and worked mostly with social scientists and social innovators. I refrained from submitting the paper as a proceeding – too many question marks and doubts about the topic’s relevance had been present. Nevertheless, my intuition told me to keep working on the topic, to keep trying and to get feedback from representatives of different knowledge cultures. It turned out that this was not only a matter of further research but also of translational work between different mentalities.

# One, two and more... collaborative knowledge production with and through art

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In the course of my further theoretical and practical engagement with the research subject, my own concept of research with and through art and citizen science changed rapidly: from then on, I focused on the quality of the “in-between”, which encompasses more intermediate tones than the scientific-academic definition of “interdiscipline”, as well as experimental and transdisciplinary approaches that, in conjunction with the “in-between”, entail the potential to undertake research-guiding and strategic positions.

Contemporary art – with its visual, performative and design approaches – can contribute significantly to the democratisation of science and the societal proximity of research through its texture and its interplay between reflection, critique, experimentation and creation – according to my guiding thesis, which is influenced by the preceding discourse on artistic research. The art theorist Elke Bippus, for example, pointed to the “pluralisation of the knowledge dispositif” as a promising strategy a while ago. She emphasises the position of artistic research “in its current institutionalised form of the Bologna reform as part

of the dispositif of knowledge”. At the same time, the “methodological toolbox of artistic research contains those aesthetic practices that modern art has developed in its differentiation from science” (Bippus 2015, p. 67ff). An “aesthetic path of knowledge” has also materialised for the art theorist Anke Haarmann. She similarly locates an ongoing transition of the young discipline and brings a “thoughtfulness” into play. This is intended to secure the originality of approaches and preserve a scientific freedom of norms in the academic space of the institutionalisation of artistic research and does not envisage an adaptation to an institutionalised set of rules, including canonisation (Haarmann 2020, p. 283f). Has artistic research become self-confident enough to be not only an accessory or “adjunct” to academically shaped science but also to lead the way or to take on a “primary” role in research processes (McNiff 2013, p. 5)?

One special opportunity to take on a defining and guiding role in scientific or innovation projects arises from the cooperation of different social actors at the interface of theory and practice. This refers above all

to forms of knowledge production and design processes beyond the art market's logic, as well as to research with and through art geared towards transdisciplinarity. A related understanding of art goes beyond monodisciplinary attributions of what art contributes to the representation (or staging) and communication of content. In particular, a definition of research through and with art appropriate in the context of education and inquiry-based learning focuses on artistic knowledge production as both a process and an essential outcome. Art is then a "practice-based foundational research" (Peters 2013, p. 8f) that is "no longer exclusive as a privilege of science". Instead, it is "understood as a collective task of all members of society" (ibid., p. 12) and involves or brings artists, designers and art-based researchers into its centre.

Taking a further step toward transdisciplinarity, citizen science provides a bridge for arts-based research to collaborative or cooperative action, research, learning and creation. Collaboration and cooperation are not the same, however. A differentiation, based on a synopsis of perspectives from, for example, art education and organisational development, could work as follows: While cooperating in the context of an artistic research project means that all participants work in parallel on the investigation and in all research phases, collaboration can be understood as a sequential contribution to the project or investigation (Schmidt-Wetzel 2017, p. 20, p. 27; Ashkenas 2015). A cooperative approach to research and learning, understood in this sense, is the basis for participation. Enabling participation then creates personal affinity and social relevance in such research projects with and through art (Rumbold et al. 2012, p. 66).

Both approaches can be understood, albeit to varying degrees, as a sharing of resources and a negotiation of ideas, idiosyncrasies, conflicts or approaches to solutions. They are, at different levels, part of citizen science projects and certain formats in the arts, arts-based research and learning.

The discovery of transdisciplinary cooperation as a research mode in art is by no means new: Strategic collaborations between artists and researchers from technology and the natural sciences are prominently exemplified by the E.A.T. experiment series – beginning in 1967 with a collaboration between engineers Billy Klüver and Fred Waldhauer and artists Robert Rauschenberg and Robert Whitman. E.A.T. projects can be regarded as formative for the canon of performance

art, experimental music and theatre with an explicitly exploratory research goal, linking Dada, Fluxus and happenings/actions of the 1960s with today's generation of digital art. The impetus of E.A.T. experiments can be considered the origin for works of media art in the 1990s and further led to the ArtSci(ence) or, depending on the point of view, SciArt movement from 2000 onwards, focusing on the environmental/ecological movement and the growing ontological impact of scientific practice on society (E.A.T.: Experiments in Art & Technology, 1960–2001, Video 2013).

A local example of transdisciplinarity and cooperative projects in the context of the arts, science communication and art education is the platform project E.O.P (Emergence of Projects), which was particularly active in the 2000s and produced different forms and formats of cooperation between artists, researcher-experts and occasionally interested everyday experts (usually described as lay experts and volunteer researchers in the citizen science literature).

While both examples show working collaborations between artists, designers, mediators and academic researchers, the contribution opens the scope of possible participants and goes beyond artistic or activist projects. This scope incorporates art, design, art-based research, collaborative knowledge production and Citizen Science (Bartar 2016) and contours different thematic strands based on the following question: "Where do the arts or art-based research currently stand in relation to Citizen Science?" The following selection of examples is cursory and builds on a literature review and participant feedback from Citizen Science-specific events and workshops, for example, in the context of topic-specific conferences or events at the Center for Didactics of Art and Interdisciplinary Education. The article brings together theoretical inputs and practical interpretations. The analysis considers the connectivity of disciplines, research fields and

lifeworlds of Citizen Science and the artistic sphere. The article begins with an analysis of the relationship between Citizen Science and art or art-based research, which is partly comparative and partly oriented toward a possible user benefit. It captures the respective title and the associated approaches and fields of application. Examples from art and art-based research that can be classified as Citizen Science or collaborative knowledge production illustrate possible fields of experimentation and application – especially in the context of a socially innovative and sustainable future.<sup>1</sup>

<sup>01</sup>

About 35 percent of this article is based on the author's contribution to a Citizen Science manual.

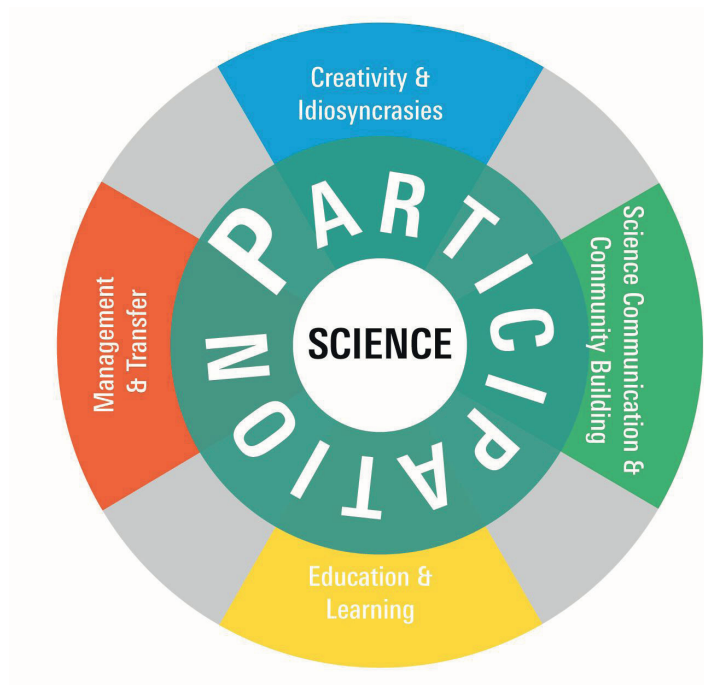


FIG. NR. 1  
Idiosyncrasies, Participation and Citizen  
Science. A visual definition

# Participation in Citizen Science and Art

Citizen Science is a research approach that has been contributing to research and science for several decades. Citizen Science can be defined as a kind of “flexible concept that can be applied in different situations and disciplines” (European Citizen Science Association 2015), moreover, “[...] is applicable across all scientific disciplines, alongside a variety of disciplinary traditions and research methods” (2020), which also includes participation as an important foundation.

Science’s openness to societal needs plays an essential role, as does the citizens’ ability to become active in science (Alain Irwin was a prominent thinker who introduced this argument in the context of Citizen Science; Irwin 1995, p. 79).

A common feature of this socio-political and science-political approach is that Citizen Science projects

focus on public participation in scientific research and alternative forms of cooperation in order to generate new scientific knowledge. This is usually facilitated by the participation of amateur volunteers (Lat. amator “lover”). In Citizen Science, for example, volunteers participate in monitoring and data collection projects – projects that

are often conducted in the natural sciences, such as zoology or biology. Mapping and evaluating data or phenomena is also traceable in social sciences and humanities projects. Citizen science can, however, be extended to the entire research process.

A comprehensive definition can be found, for example, in the Green Paper Citizen Science Strategy 2020 for Germany and

[...] encompasses the active participation by citizens in the various phases of the research process in the natural and social sciences

and in the humanities. Participation ranges from generating research questions and developing a research project, to the collection and scientific analysis of data, right through to communicating the research results. In the process, collaborative efforts between the research institutions and independent individuals who are not connected to those institutions can be structured in quite different ways. This can range from projects developed completely independently within individual volunteer initiatives, to collaborative transdisciplinary work, to formalised instructions and guidance provided by scientific facilities. Over all, the common aim of all Citizen Science projects is to generate new knowledge. Research projects result in knowledge gains for science and often answer questions of very practical or socio-political relevance. (...). (Bonn et al. 2016, p. 13)

Participation, which is prominently mentioned in this definition, is both a quality and a pivotal point in certain formats and fields of contemporary art: if the focus lies on participation and empowerment, works from the community and socially engaged art or art and social practices – where goals or problems are taken up together with “experts from everyday life” – are particularly interesting examples. Artists thereby take on different roles. These can be instructional or thematic (e.g. the artist Joseph Beuys and his social sculpture “7000 Eichen – Stadtverwaltung statt Stadtverwaltung” (7000 Oaks – Urban Forestation instead of City Administration) as part of the documenta 7 in 1982). Another nuance is added by approaches and formats in which artists work as facilitators supporting artistic processes between scientific research and political activism with different groups or organisations (e.g. the contemporary Austrian artist group Zobl & Schneider and their project “Company. Arbeiten in Berndorf” (Working in Berndorf, 2007–2009). A third nuance can be seen in projects in which artists become the executive entity on behalf of a community or group (e.g. the contemporary artist Jay Koh and the CERVANTES project, 2013–2015). The first two approaches can be categorised as conventional understandings of authorship in the arts, while the latter approach moves away from explicit authorship and foregrounds transdisciplinary work and collaboration with stakehold-

ers and volunteers on an equal footing. The artist-researcher and biologist Jay Koh calls this approach ALPP or art-led participatory processes. These evolve during his participatory performances, which are consciously set in everyday life and, in addition to aesthetic processes, can also create new meaning in transition and intersubjectivity (“transitional meaning and intersubjective bonding”) and a critical dialogue between participants. In the participatory, art-based performances that focus on a “level of micro-communication” it is also about a (re-)contextualisation of everyday life and critical appropriation or dialogue (Koh 2015, p. 31f). Knowledge is not only produced in these projects but existing knowledge is reevaluated and made applicable. In doing so, the researching artist develops a theoretical and value framework and reflects on situationally emerging themes and questions together with his or her co-researchers. Although Jay Koh himself classifies his work as participatory art projects, these and related theoretical reflections and scientific publications can be partially interpreted using the criteria developed by the working group of the citizen science platform “Österreich forscht” to ensure scientific quality (Heigl et al. 2018, p. 1ff). For example, criteria 14, “Citizen scientists receive feedback on the progress and the results of the project”, and 15, “The project results are published in

a generally comprehensible manner” (ibid., p. 5), clearly show overlaps with Citizen Science projects. The role of researching artists and designers can be understood in the sense of the US-American philosopher and expert on urban planning, Donald A. Schön, as that of reflective practitioners who use their ability to reflect on their own actions in order to embark on a continuous learning process. Schön distinguishes between three forms of action in this form of practice-oriented research, namely “knowing-in-action”, “reflection-in-action”, and “reflection-on-action” (Schön 1983, p. 49ff, p. 276) and places his dynamic approach and his interest in unearthing tacit knowledge in the vicinity of action research (Leitch & Day 2000, p. 179ff).

Art-based action research is a particular form that understands the arts as a fundamental basis for enquiry, knowledge production and information exchange and interweaves these with “traditional” qualitative methods of social research (Coghlan & Brydon-Miller 2014, p. 58ff). The focus here also lies in the respectful participation of those affected and other stakeholders in the research process.

# Research with and through art for a sustainable future

In addition to democratisation processes in science and research, a debate on sustainability currently takes place – on the 17 Sustainable Development Goals (United Nations, *Sustainable Development*), in which the arts also have a voice, for instance, under the headings of social practice or socially engaged art, and contribute to positive change by generating and communicating new spaces of knowledge. Social practice in the context of art projects is understood as a problem-solving approach that brings different interest groups or multi-stakeholders into dialogue (Lineberry & Wiek 2016, p. 316).

The so-called 'Eco-Actions' by the biologist, environmental activist and artist Brandon Ballengée are an example that could be assigned to the sustainability goals 13 – Climate action, 14 – Life below water and 4 – Quality education, and that stands in the context of artist-centred, transdisciplinary projects and through its explicit scientific knowledge gain in the tradition of action research. He describes and reflects on his Eco-Actions in his art catalogues, in selected articles and on his website – always referring to the challenges and opportunities of combining artistic and academic research with social practices.

Through field trips and workshops, the artist tries to build a bridge between different communities and specific ecosystems. For this purpose, Ballengée develops transdisciplinary practices to improve the public's understanding of environmental phenomena by

integrating approaches from art and biology.

A salient objective of this research project is the development of time-limited laboratory and field studies. In collaboration with Citizen Scientists and other participating biologists, they provide scientific data on the relationship between amphibian deformities of frogs and toads and their possible causes.

Other accompanying specific questions in Ballengée's Eco-Actions include: How can certain transdisciplinary art/biology practices effectively improve public understanding of environmental phenomena? Are amphibian deformations symptomatic of the general decline of wetland ecosystems? What are the immediate causes of batrachian limb deformities in selected locations? What role can the public play in making new and important discoveries in the field of primary biological research, and how can the results be disseminated? How can the public be involved in Citizen Science through workshops, excursions and other activities and how does this practice become a form of social and ecological activism?

Against this backdrop, Eco-Actions aim to promote understanding and appreciation of nature and are open to the public and groups of students. The participants also collect important ecological data and thus become "citizen scientists". Brandon Ballengée thus promotes practice-based research and inquiry-based learning in the immediate environment of research volunteers (Ballengée 2009, p. 13).



# Potential and limits in the context of Citizen Science

While academic research (for example, empirical social research) applies quality and quality criteria such as validity, reliability, reproducibility and objectivity, transparency, range and intersubjectivity, the debate on art-based research often points to the field's still developing understanding and self-image (Biggs & Karlson 2011, p. 405ff), which adopts such schemes only to a limited extent. The development of criteria regarding the approaches of the different art disciplines is part of this ongoing debate. It raises questions as to whether this is fundamentally scientific research, i.e. also whether quality criteria can be defined, which cannot always be answered unambiguously due to the diversity of research projects at the interface of art, design and art-based research. Conversely, numerous approaches, project architectures, or research protocols exist that can be determined and classified based on the intensity of participation in collaborative knowledge production. Performative, conceptual, visual practices, as well as applied forms of art, play a role, which can contribute to research and creation in transdisciplinary projects. Albeit under the quotation marks of an otherness: an essential contribution of the arts is the creation of creative disorder, which can lead to new questions or approaches. Moreover, the arts can establish the framework for trial action in order to conduct practice-oriented research at group or individual level and – in the sense of inquiry-based learning – to learn experientially (Marizzi & Bartar 2021, p. 1ff).

Arts-based research offers particular potential and challenges, as it often remains open-ended and produces and utilises different forms of knowledge. Art practices such as performance and dance can also include improvisation, sensory perception and intuition. Art-based research is characterised by a specific interweaving of cognitive as well as bodily-habitual forms of knowledge. This includes not only academic knowledge as produced in the social or natural scienc-

es. Knowledge can, for example, be implicitly written (tacit knowledge) or non-text-based and stored in the body as memory (embodied knowledge). However, arts-based research and practices cannot only be understood as foundational research but can also be found in the context of practice-led research.

The European Citizen Science Association addresses the specificities of the arts (and the humanities) in a working paper (ESCA 2020) that remains topical. It indicates that approaches or the formulation of problems, data collection and interpretation can differ markedly from other disciplines.

Another example of possible obstacles is found in the already mentioned “quality criteria for citizen science projects” of the platform Österreich forscht (Heigl et al. 2018, p. 1ff), which provides a guideline for projects. This guide is designed to provide orientation and guidance for volunteer researchers to prepare their projects for listing on the platform's website: The first criterion in the guide requires a clearly defined research question or hypothesis that can be tested. This is not necessarily always the case at the interface with art and partly open-ended and multimodal projects that also or exclusively open up sensory spaces of cognition. Sometimes the processes are strongly bound to an artist's personality or are ephemeral and cannot be repeated and checked in the sense of an experimental set-up.

Nevertheless, art- as well as design-based approaches can contribute to collaborative knowledge production or citizen science, for example, by getting people interested in research who would otherwise have few points of contact or by giving groups and minorities a voice. Transdisciplinary and collaborative strategies provide impulses for negotiating new, different or marginalised perspectives in society. Sharpening or upending senses or meanings can illuminate new fundamental and critical questions of interest to both society and transformative science.

# Advances in the field “In-Between”

While art-associated fields such as art therapy or art education – at least in their discursive self-reflection – demand more self-awareness to take a primary and not only adjunctive role in academic-institutionalised or transdisciplinary research (McNiff 2013, p. 5), I have noticed little awareness in the context of Citizen Science since I started observing the field “In-Between” (Bartar 2016, p. 1ff). In my perspective, artists or artistic approaches in transdisciplinary research and education projects remain mostly supportive and rarely take on a strategic, guiding or definitional (defining) role. However, some individual exceptions do occur, in which work is done on an equal footing with other experts from the field and everyday life, such as on research theses, questions, design and evaluation. Exceptions such as the current research project ERINNERUNG UND IMAGINÄRES: Demokratische Bürger\*Innenschaft (2022–23) of the Akademie der Bildenden Künste (Academy of Fine Arts Vienna) in cooperation with schools and students aged 16 and older develop scenarios of social exclusion and their counter-designs in so-called memory labs and show new research designs and application possibilities.

Art and science education, in particular, could play a bridgehead function, for example, in school education but also in the context of lifelong learning or “civic education”, and open up complex and real-life topics with the help of research-based learning in the application fields of co-creation and innovation or reformation

of the existing. This could contribute to strengthening citizenship and agency in the sense of strengthening individual engagement and public participation of citizens, including vulnerable or “forgotten” groups in society.

Collaborative research approaches with or through art, conceived in this way, form good starting points for strengthening the spectrum of “21<sup>st</sup> Century Skills”, for example. The focus lies particularly on cross-cutting skills such as collaboration, flexibility, creativity and critical thinking. These can be tested in Citizen Science projects under the banner of self-efficacy, generating new knowledge and methods in the process. Apart from projects initiated by artist-researchers together with citizens (which have been addressed in this paper), art in Citizen Science is mostly understood in a mediating

or enabling way, such as projects in the field of SciArt at the interface with science communication, which, however, have not been further illustrated in this paper (for examples see also Marizzi & Bartar 2021, p. 1ff). Despite the fundamental openness and connectivity of arts-based research to the diverse research fields of Citizen Science – according to my assessment – white spots exist in the mutual understanding of knowledge and narrative forms as well as in the translation between disciplines, as already noted in 2018 during my conference input. Nevertheless, art-based methods have long been accepted and applied in other disciplines – such as ethnography or at the interface of innovation and education projects. An exchange has long begun.

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# List of Figures



# Stitches and Sutures Textile Metaphors and Graphio Topologies as Methodological Artistic Tools

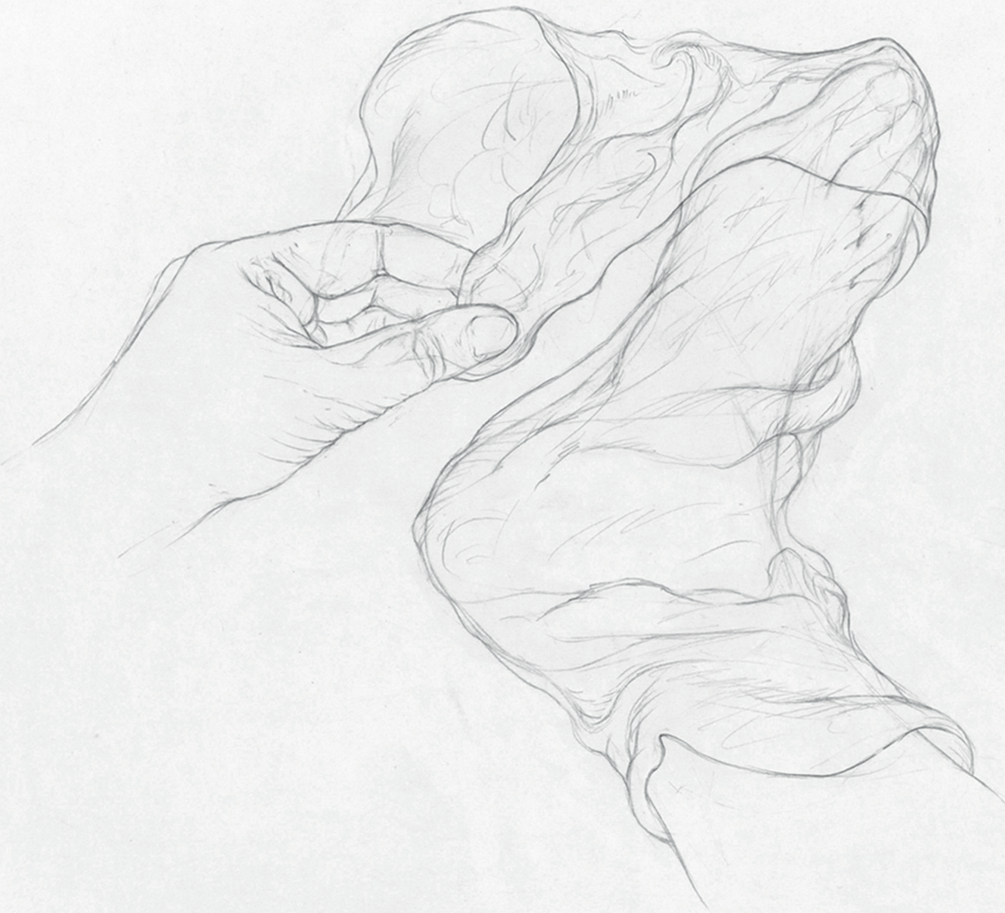
29

Barbara Graf is an artist and lecturer at the University of Applied Arts Vienna, Institute of Art Sciences and Art Education, Department of Textiles. Main area of work: body shells, flexible sculptures as a second skin and garments as living sculptures. Since 2018, Artistic Research PhD project titled "Stitches and Sutures" on the visualisation of bodily perception at the University of Applied Arts Vienna.

# Barbara (CENTER RESEARCH FOCUS, PHD CANDIDATE PHD IN ART) Graf



FIG. NR. 1  
Sensation of wearing a sock: Barbara Graf, Photograph from  
the Catalogue of Aliveness (biological  
membrane of a SCOBY), 2020. Drawing no. 193, 2018.<sup>64</sup>



Textile metaphors are often used in daily language, but they also play a role in the discourse of the various disciplines of the humanities. Inspired by Jacques Lacan's 'upholstery button' ('point de capiton'), (Lacan 1956, p. 377ff),<sup>02</sup> and by the notion of 'suture' (Lacan 1964, p. 228ff / Miller 1965, p. 37ff),<sup>03</sup> I ask the question: How can rhetorical figures and graphic topologies serve as a methodological resource or stimulus for an artistic process? Diagrams and topologies consist essentially of lines and help us to grasp certain facts or notions or to visualize various parameters and their interrelationships; and they can embody complex thought structures. Even a slight alteration of a component can generate new content. Can modifying a graphic representation generate new questions? What happens when I take a textile metaphor literally and give it a material form? Manipulated by my hands, the topological structure metamorphoses into an experimental tool for reflection. The project *Stitches and*

<sup>01</sup>  
It is the perception of a sock, but the sock is an illusion. The sensation is triggered by the damaged nerves in the central nervous system, which no longer transmit the information without disturbances.

<sup>02</sup>  
In English, Jacques Lacan's term 'point de capiton' is variously translated as 'quilting point', 'anchoring point' or 'upholstery button'.

<sup>03</sup>  
Suture is a term that was introduced by Jacques Lacan in *Seminar XI* as a pseudo-identification or as a connection between the imaginary and the symbolic. Subsequently, the term was shaped, essentially, by Jacques-Alain Miller ("La Suture: Éléments de la logique du signifiant", in Lacan's *Seminar XII*), who transcribed *Seminar XI* as well as other seminars by Lacan.

<sup>04</sup>  
The problem of corporeal sensation and transition to perception and how it comes to visual representation is an essential part of the project, but not the focus of this text. Nevertheless, it should be noted that it is about lived (past) experiences, everyday experiences and stored images. Described in: Barbara Graf, "Stitches and Sutures: From Physical Sensations to Forms of Perception, Imagination and Representation", in: *Envelope #4*, ed. by Alexander Damianisch et al, Research Catalogue 2021.

*Sutures* focuses on visually representing bodily sensations in the form of pencil drawings, textile structures and photographs of biological membranes.

Physical sensations, being personally experienced phenomena, are deeply subjective.<sup>04</sup> As a consequence, fundamental questions arise as to their ability to be represented. What language do I use and to what kind of imagery can I have recourse in order to make something invisible visible? Is a visual representation of a sensation something that can even be conveyed, and what responses might it trigger? These questions lead to an exploration of experiences of the past, memories and images that serve as a basis for formulating what we perceive. How can experiences we remember be linked to those of the present? An unconscious link is established quasi automatically; but how can aspects of an unconscious process be transformed into consciousness and an active practice?

The project concept stems from my personal experiences of paresthesia caused by what was diagnosed in 2017 as multiple sclerosis (MS). The project's title, *Stitches and Sutures*, expresses, on the one hand, my psychological coping with the illness as a metaphorical sewing up of a wound; on the other hand, it is a reference to notions and topological configurations put forth by Lacan.<sup>05</sup> Terms that he uses and that refer to textile structures seem to be metaphors at first. In fact, however, as graphic representations, they constitute topological configurations that indicate positions and movements (predominantly) of the unconscious. As structures in space, they are not metaphors; and both terminologically and with respect to structural formation they have a direct connection to textiles. For example, the Möbius strip or the Borromean knot. In Lacan's topology, this knot, according to how it is represented, can be seen rather as a chain showing how the symbolic, the real and the imaginary, although displaceable and deformable, are indissolubly interconnected (Evans 2017, p. 58f). The Möbius strip demonstrates the intertwining of contraries. Contradiction is on one side of the strip, while always being on the other side as well (Evans 2017, p. 176f).

A notion of particular importance concerning the Lacanian signifying chain is that of the point de capiton (Lacan 1986, p. 179ff),<sup>06</sup> a term that he borrowed from the upholstery craft. If this term is understood as indicating a textile structure, the word "point" might be misleading. It is not merely a question of an externally visible point or button on the upholstery. The idea is that of connections of points, of movements and relationships. In its literal sense, the French term point de capiton<sup>07</sup> refers to stitches in the upholstery that penetrate it and thereby give structure to the filling. This filling has sometimes consisted of silk waste; but, to this day, vegetable fibers and animal hair are also used as stuffing material.

In psychoanalytical terms, this stitching, linking movement describes the retrospective production of meaning. With an event in the present as a starting point and by means of a figurative needle and thread, a stitch is made into a seemingly insignificant past memory, which thus acquires significance retrospectively. The punctured point is only a more or less fixed link. This continuous process—the creation of a suture—constitutes the subject and connects the signifier to the signified.

If the suture is thought of as being a material structure in the uphol-

stery, the thread disappears completely in the mass of fibrous filling. If, however, one imagines the process in cross-section, the penetrated upholstery—or mattress filling—then it resembles the wave model put forth by Ferdinand de Saussure (de Saussure 1995, p. 155ff), a model to which Lacan refers in *Seminar III* (Lacan 1956, p. 377). In Saussure's linguistic diagram, the basic concept is also that of an amorphous mass that needs structuring, the vertical dashed lines indicating the relationship between the signifier and the signified. Both models involve flowing movements that need structuring (Lacan 1956, p. 378). In Lacan's model, the points de capiton regularly establish the fixed points. The signifier cannot be isolated here; it performs something of a loop; and it is only afterwards—at the end of the sentence, as it were—that the meaning emerges (Lacan 1956, p. 379). Unlike Saussure, Lacan does not see the signified as being directly assignable to the signifier; rather, the former finds itself constantly sliding underneath the latter.

Inspired by these topological structures,<sup>08</sup> I transform these models for use in my artistic context by means of a pencil and textile material.<sup>09</sup> I take the models into my hands and utilize the flexibility of textiles. By doing so, I am able to turn relationships inside out, shortcut them, knot them, crosslink, contort, intertwine and dissolve them. It is an attempt to create an artistic tool not

only for discovering relationships but also of reformulating questions in unexpected ways, breaking up familiar linkages and following the thread of surprising figurations. Transferring a model to a different context and then transforming it as well may seem to smack of faulty symmetry. What is more, it could appear presumptuous—a situation I could perhaps avoid only by describing the effort as fabulation that takes existing systems as its point of departure and remains underpinned by them. In addition, a new figuration can disengage from its point of departure or develop a momentum of its own. Taking the two extremely complex systems named above, both of which primarily describe movements of the unconscious, and transforming them into tools for conscious action may also seem to be an inadequate undertaking and raises the question as to whether a partially "misunderstood" thought structure can become artistically productive.

A seam or suture closes a breach or a wound; and as Manfred Pabst (Pabst 2004, p. 80) and Karl-Josef Pazzini (Pazzini 2015, p. 169) write in reference to the concept of

05

Lacan uses the term topology in reference to mathematics. In the text, I do not distinguish precisely that Lacan works with about at least three different categories of graphic representations: Topological surfaces, graphs (diagrams and schemas), and real knots (closed ones). What they have in common is that they are structures of the psyche and deal with its different fields and their relations to each other. See Jacques Lacan, "La Topologie et le temps" (Lacan 1978/79, séances I–X).

06

Graphs I–III (and the complete graph) can be found in Lacan's *Écrits II* (1960) in the chapter entitled: "The Subversion of the Subject and the Dialectic of Desire in the Freudian Unconscious" (Lacan 1986, p. 179ff). The point de capiton finds articulation in the topologies of these graphs.

07

The word 'capiton' is defined by the Larousse dictionary as being a masculine noun derived from Italian 'capitone' and meaning: "Silk stuffing; in a padded and quilted seat, each of the divisions formed by the quilting." Translated here from *Larousse Universel en 2 Volumes*, Librairie Larousse (1922, p. 351).

08

I refer to Lacan's 'Graph of Desire' ('Graphe I') and fade out the more complex further developments of this Graph in favor of the closeness to Saussure's diagram and Sigmund Freud's notion of 'Nachträglichkeit' ('afterwardsness').

Based on the essential aspects of the diachronic production of meaning through the retroactive stitching and its disposition to dissolve, I decide on a more ludic and free approach for my context, but still linked to the point of departure.

09

The drawn and photographic images in the article are to be distinguished into the images that embody physical sensations and the model-like ones that relate to the reflection process.



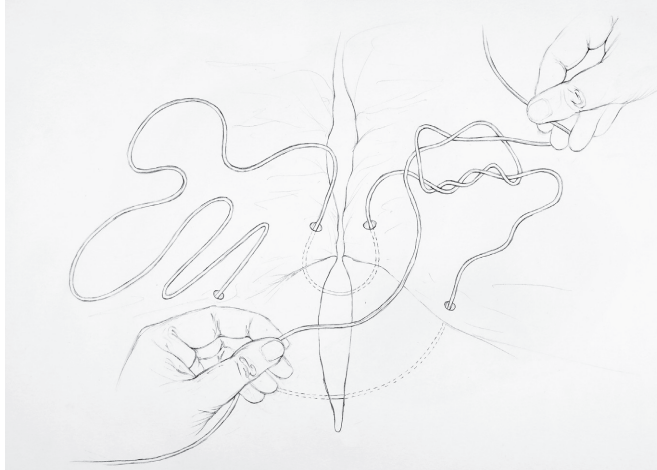


FIG. NR. 2  
Suture: Barbara Graf, *Drawing*  
no. 246, 2021.

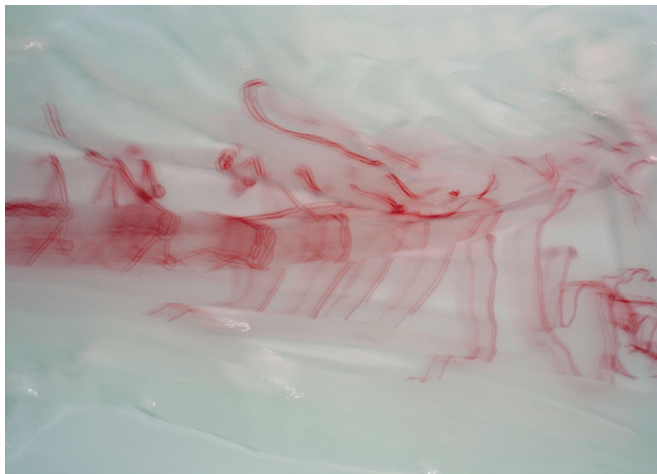


FIG. NR. 3  
Dissolving suture: Barbara Graf, *Photograph:*  
*Cloth 7-Suture*, 2014.

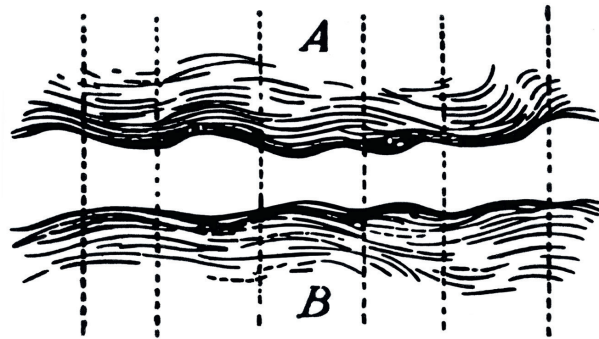
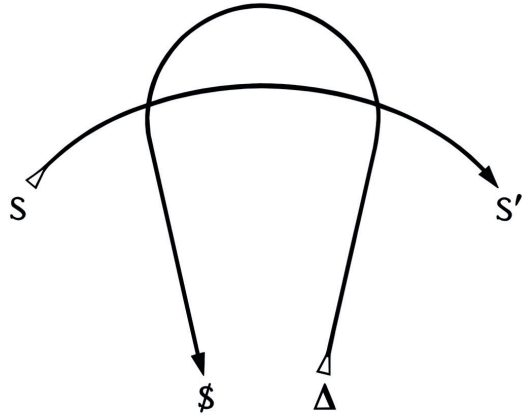


FIG. NR. 4  
 Saussure's linguistic diagram: A: signified (idées), B: signifier (sons).  
 Lacan's Graph I ('Graph du désir'), S-S': Signifying Chain  
 (series of signifiers), \$: split subject. Barbara Graf, Textile topology, 2021.

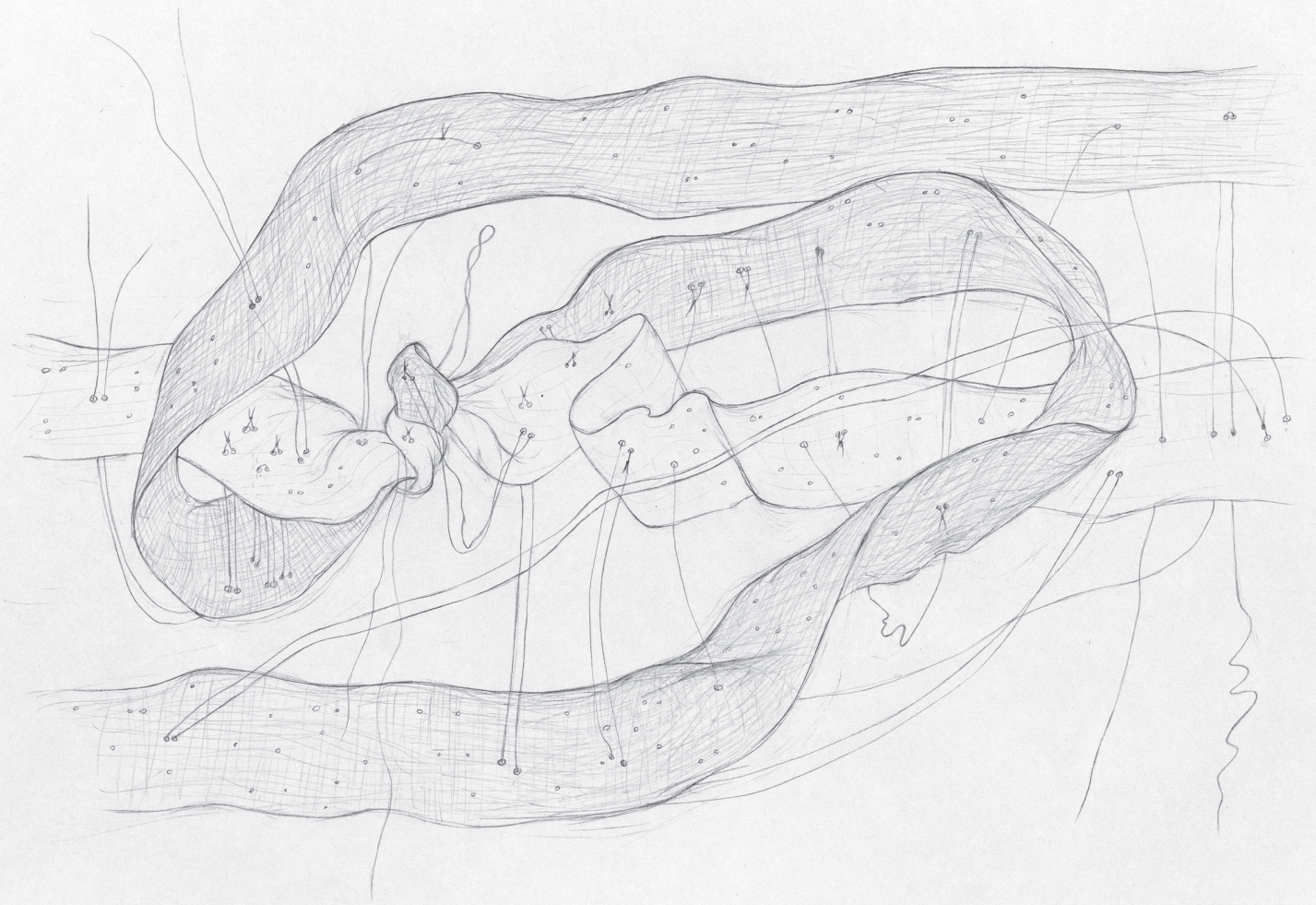


FIG. NR. 5  
Knot in the signified and the signifier: Barbara Graf,  
*Drawing no. 217, 2019.*



FIG. NR. 6  
Sensation of wearing a glove: Barbara Graf,  
Photograph, *Cloth 3 and glove*, 2012. *Drawing no. 218*, 2019.  
Photograph from the *Catalogue of  
Aliveness* (biological membrane of a SCOBY), 2019.



FIG. NR. 7  
Sensation of fibers in the feet: Barbara Graf, *Drawing no. 174*, 2009.  
Photograph, *Touching the Sole of the Foot*, 2017. *Drawing no. 196*, 2018.

suture,<sup>10</sup> along the edges of the hole that is to be sewn closed, new holes are pierced so that a linkage can be created that will (partially) close the breach. Over and over, the subject reconstitutes itself by piercing little holes along the edges of this gap. The psychoanalytical suture differs from that of surgery in that it is a never-ending process. In order to describe how an imminent disintegration of the subject can be avoided, Karl-Josef Pazzini draws on the notion of textile material and the technique of sewing and refers to Lacan's signifying chain (Pazzini 2015, p. 184):<sup>11</sup>

If there were no images/texts – inner or outer – subjects would fall apart. Images sew subjects together and are important for survival. Images are first and foremost models for self-images, orthopedic. Images function as sewing machines by virtue of their very occurrence, their role in projection, identification, gestures, *Pathosformeln* (Warburg). [...] Hence the fascination with image machines, furnishing, as they do, the material and the threads.

In the meshwork of these threads, tensions, knots, tangles and disentanglements, I create links among various visual representations. I go back to my earlier artistic work that I produced before I was diagnosed with MS; I compare them with recent drawings that represent forms of paresthesia caused by the chronic disease, looking for similarities and differences. In addition, I utilize images taken from extraneous contexts but that give a good idea of these physical sensations.

Many of the sensations have a textile character<sup>12</sup> evocative of material coverings and fibers. These sensations are, at times, deceptively real but also produce a sense of alienation. Whether these sensations produced by the nervous disorder belong to one's body or are foreign to it remains ambiguous. In order to understand my body in its transformation<sup>13</sup> again as my own and to make inner bodily sensation visible, I also refer to my earlier visual representations and found images as well, as a kind of stitching process. Further-

more, "the transfer of disturbing and painful sensations into the pencil line and onto the paper makes it possible, through this transfer, to look at the symptoms differently" (Graf, Altmann, Löffler-Stastka 2022, p. 107ff [transl. B.G.]) and, as a transition from introspection to externalization, signifies a coping process.

<sup>10</sup>

Both authors refer to the concept of suture by Lacan, advanced by Miller.

<sup>11</sup>

The quote is translated here from the German text.

<sup>12</sup>

This is a phenomenon that has also been reported by other persons affected by MS: the sensation of walking on cotton, for example, or that of wearing a glove. Described in: Barbara Graf, "Stitches and Sutures", in: *Envelope #3*, Alexander Damianisch et al. (Graf 2020, n.g.).

<sup>13</sup>

The perception of one's own body and why a phenomenological approach is relevant in chronic illness as life-altering conditions is described in detail by Havi Carel in *Phenomenology of Illness* (2016, p. 14ff, p. 40ff).

The use of textile material as a representation of a physical sensation is combined in the project with the textile structure of a methodological tool. Various seam or suture structures, shifts in relationships, entanglements and even “incorrect stitches” constitute the experimental framework within which questions and meanings are generated. Can a signifier be combined with a signifier, and how might this affect the signified? What does a quilting point (point de capiton) leave behind when it has been removed? What happens when the thread gets tangled or snarled during the sewing? This contribution shows only exemplary images from the phenomenological archive of bodily sensations, but punctures, so to speak, into the heart of the underlying reflections and procedures. The two terms of my project refer to structuring and reflective aspects of my approach. The *Suture* serves as a conceptual and methodological structure and the *Stitches* as a kind of tool. Here, I would like to explain the point of departure of this artistic exploration. When the strange physical sensations caused by MS appeared, it reminded me, with irritation, of the expressions of my earlier works. This might suggest the hasty conclusion that I had artistically anticipated my illness. Of course, as this can be neither proved nor disproved, the question of presence remains open. In order to avoid the short-circuit of anticipation, but nevertheless, to work with the already developed artistic resources, I introduced a structure of thought that connects experiences of the past with the present through similarity, but also in its difference and even contradiction.

To reflect on ways of visually representing physical sensations and from where the images retrieve their language, I draw models,<sup>14</sup> which I would like to describe as methodological artistic tools. The term “tool” may be misleading here since it has no direct application like a pencil and furthermore keeps changing itself through the working process. The drawn models do not ostensibly illustrate a proposition but support the process of reflection and evoke new questions and relationships through the quality of the ambiguous fixations. Reflecting something different from what seems plausible requires a kind of disruptive vehicle to think of relationships in a reversed, twisted, and ambiguous way. Therefore, structures that were initially considered linear rearrange themselves and alter temporal-spatial relationships. This is more in keeping with our process of perception, which is like an inextricable network of wires.

Drawing a bodily sensation can impact the sensation itself, as the process of drawing relates not only to the current physical experience but also to remembering experiences (conscious and unconscious memory),<sup>15</sup> and the affective response to the drawing interacts with the corporeal perception. The retroactivity of the suture changes the past and the present, but also influences future experiences. The ambiguity of a graphic scheme can be productive since it also allows seemingly contrary interpretations. For example, an informal laying thread (Fig. nr. 9) can be understood as one left from unstitching a seam (a context of meaning that has

lost the importance but still leaves traces) or not yet used (a potential intension). Or a thread that is not tightly knotted can be considered a knot that is loosening or still being tightened. The suturing of images can also proceed via visually similar phenomena, and the meaning is sliding underneath is generated differently and not via the same cause. For instance, the drape on the foot with the biological membrane (SCOBY)<sup>16</sup> (Fig. nr. 1) embodies the irritating feeling of whether a disturbing body sensation belongs to one’s own body or is alien to it. This foreign living skin has an appearance similar to human skin. The real sensation of touch of the slippery membrane has little in common with the sensation of touch caused by the nerve disorder, in contrast to the drawn foot envelope (Fig. nr. 1). Here, it embodies exactly the physical sensation of a covering layer, even if it is an illusion. Thus, the connection is not through the real or illusory sensation of touch but through the similarity of the images and through the inverted thematization of the body perceived as alien, but which is one’s own.

In search of images for the invisible, the focus is not only on the inner corporeal perception and its representation, but also in relation to its similarity in appearance with other images (e.g. in the comparison of a signifier with another signifier), a content can deepen or also be irritated in order to escape too firm fixations. Comparable to the game of string figures, in which the threads change sides and sometimes get knotted or unexpectedly loosen again. To be able to actively intervene in a drawn or textile topology supports the coping, opens up possibilities to understand the physical dilemma differently, but also generates new artistic possibilities and through the linking, merging and shifting of the present, past and future, it is also possible to think artistically what will have been.

14

Inspired by Lacan’s graphic representations, but essentially different: Lacan’s drawings are explicitly as abstract as possible. My models are connected with my own practice, are material related and have a metaphorical and a slightly narrative character.

15

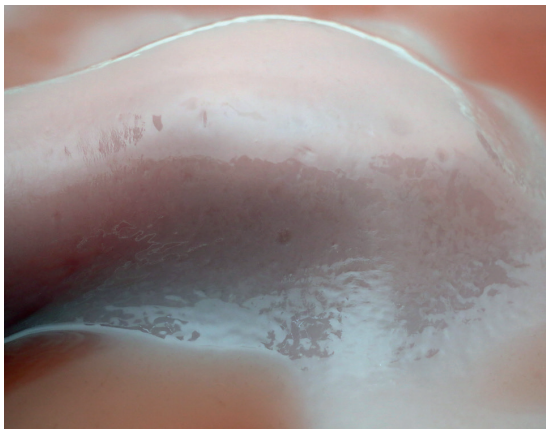
Maurice Merleau-Ponty elaborates in *The primacy of perception* (1946) on the structure of perception and the relevance of previous experiences for the processing of sensations in transition to perception and focuses on the ‘Leib’ (perceptual body, lived experiences) as a perceptual field (Merleau-Ponty 2003, p. 17ff, p. 33ff).

16

SCOBY: symbiotic culture of bacteria and yeast. The photographs are from the *Catalogue of Aliveness*, which is also part of my work in the artistic research project *Visceral Operations* (FWF-PEEK, 2019–2023, project leader: Christina Lammer).



FIG. NR. 8  
Sensation of an enlargement of the hand through an enveloping layer:  
Detail of the painting *Jupiter and Io* by Correggio (KHM).  
Barbara Graf: *Drawing no. 226*, 2020. Photograph from the *Catalogue  
of Aliveness* (biological membrane of a SCOPY), 2020.  
*Sculpture Hand Box no. 9*, 2005.



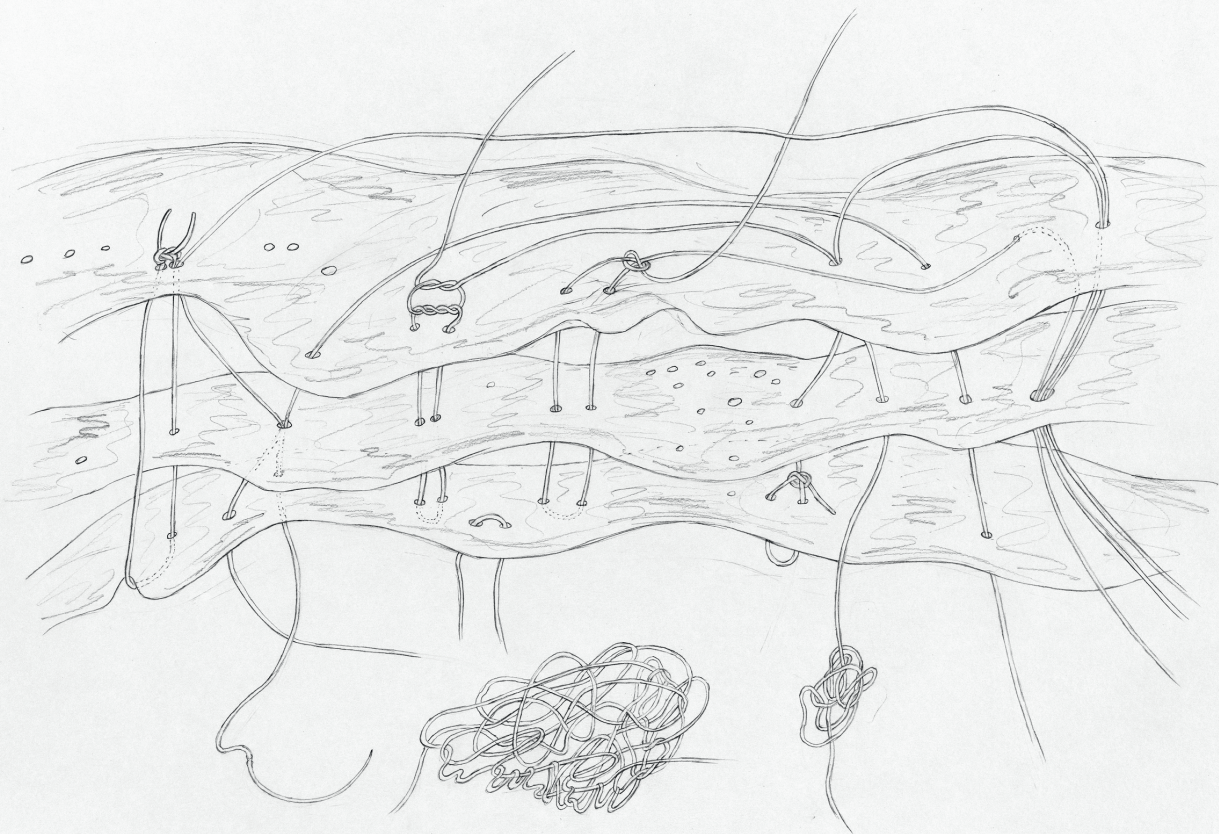
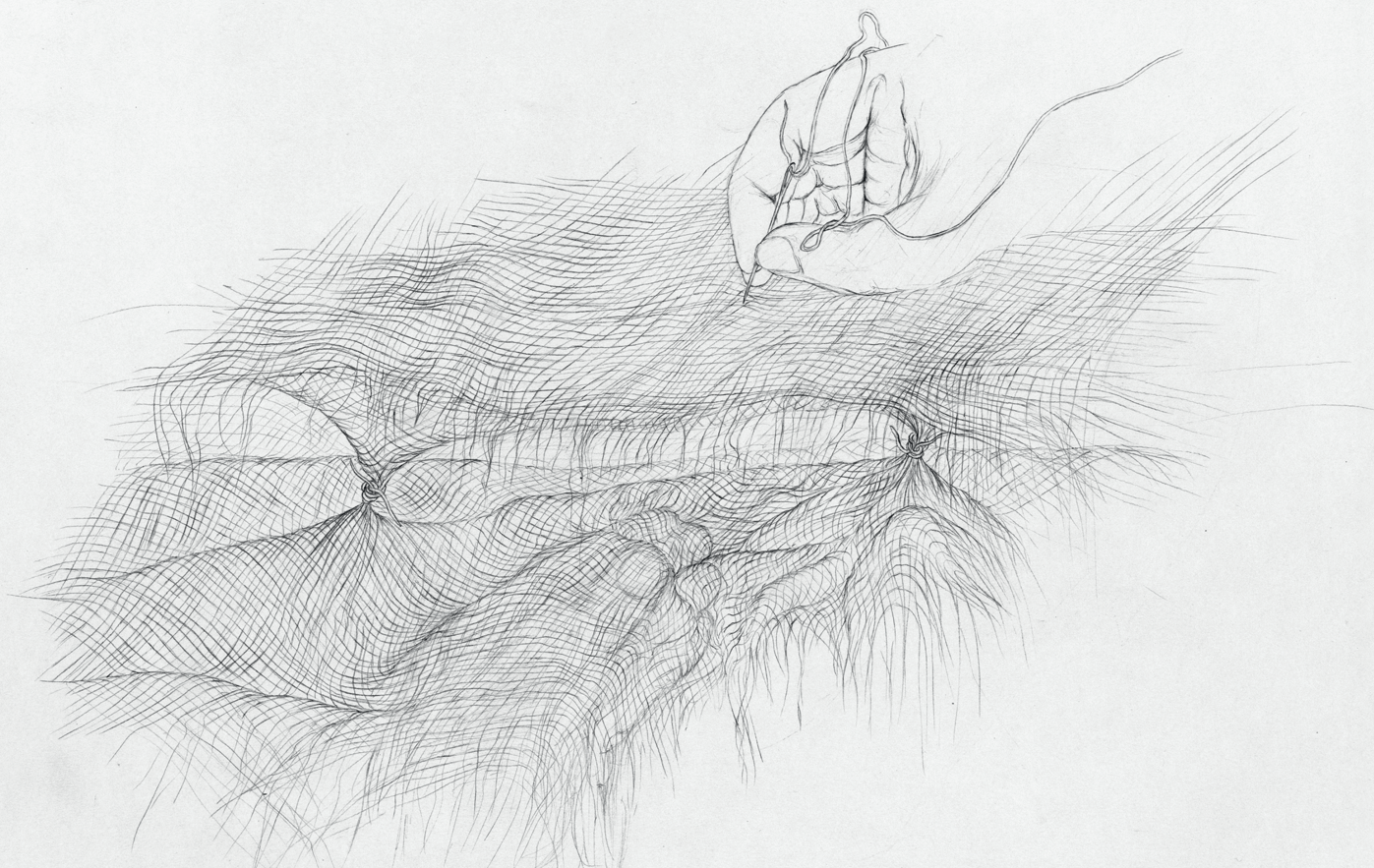


FIG. NR. 9  
 Topology inspired by Saussure and Lacan (instead of two, in three levels),  
 Barbara Graf, *Drawing no. 199*, 2019.

FIG. NR. 10  
 Topology inspired by Saussure and Lacan. The woven tissue with fringed  
 borders is drawn in two levels. The acting hands are an  
 active part of the drawing: Barbara Graf, *Drawing no. 204*, 2019.





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# Making museum repositories greener

45

Tanja Kimmel worked as textile conservator at Kunsthistorisches Museum Vienna from 2004 to 2015, responsible for all conservation matters of the museum's new central storage. Since 2015, Head of the University's Textile Conservation Department. Pursuing a doctoral programme in philosophy since October 2018. Committed to sustainability, actively works to implement this essential topic in university teaching and research.

## Tanja

(INSTITUTE OF CONSERVATION AND PHD  
CANDIDATE DOCTORAL PROGRAMME IN PHILOSOPHY)

## Kimmel



FIG. NR. 1  
Museums for Future at the  
Global Climate Strike  
on September 25 2020.



FIG. NR. 2  
The weighted three-pillar  
model of sustainability emphasizes that  
economy, culture, and  
social issues depend on natural  
resources.

The Fridays For Future (FFF) movement has ushered a new theme into the museum world – sustainability (Fig. nr. 1) – which gains increasing importance in times of climate change and dwindling financial resources. Yet what exactly does the term signify?

The UN World Commission on Environment and Development (WCED) definition in the 1987 Brundtland Report describes “sustainable development” as a principle of using resources “[...] to meet the needs of the present without compromising the ability of future generations to meet their own needs” (cf. United Nations, *Report of the World Commission on Environment and Development: Our Common Future*).

Following the conventional “three-pillar model”, the concept of sustainability encompasses a triad of social, economic and ecological aspects (cf. Lexikon der Nachhaltigkeit, *Drei Säulen Modell*). An advanced ver-

sion is the so-called weighted three-pillar model (Fig. nr. 2), which responds to current discussions on the special role of ecology. This model describes ecology as a foundation formed by two factors: natural resources and climate. The pillars economy, social affairs and – added newly – culture all rest on this foundation. Museums, as cultural institutions, are places of education and encounter. They bear a great responsibility in the field of sustainability because “they preserve essential parts of our cultural heritage, convey knowledge, stimulate social discourse and spark creative impulse,” the German Museums Association explains (Deutscher Museumsbund, *Nachhaltigkeit*). Consequently, museums can create an image of a better future, develop visions of how a climate-friendly society could develop, and assume a role model character in sustainability management.

# Museums and Sustainability: Networks, Initiatives & Professional Associations

45

Sustainability and climate protection pose key challenges for the arts sector: “Resource-intensive museum constructions, air-conditioned exhibition spaces, worldwide transport of artworks that are as famous as they are sensitive” demonstrate that museums are not necessarily sustainable in all places (Wenzel 2022). According to Christopher Garthe (Garthe 2020), creative director and consultant for sustainability in museums and exhibitions, numerous networks such as NEMO – Network of European Museum Organisations (NEMO, *Museums and Sustainability*) or We Are Museums (We Are Museums, *Our labs*) are essential for advancing sustainability in the museum sector.<sup>01</sup> Professional associations too are addressing this significant topic.

ICOM, the International Council of Museums, established a working group two years ago (ICOM, *Working Group on Sustainability*), for instance. Caitlin Southwick is a member of this working group and

also executive director and founder of the initiative “Sustainability in Conservation” (SiC, *Sustainable practice*) and the non-governmental organisation Ki Culture, which offers step-by-step instructions for specific sustainability topics on its homepage (Ki Culture, *Ki Books*). In addition, Ki Culture launched Ki Futures, a programme that supports museums, galleries and other cultural organisations in their efforts to become more sustainable by providing training, coaching, tools and resources. The complete list of the pilot project’s participants is available on the homepage (Ki Culture, *Ki Futures*), including institutions from Europe as well as North and South America.

One example of the growing movement for more sustainability in Austrian museums is called “Museums For Future (MFF)”. It follows the ideas of FFF and demands in its declaration to implement the 1.5°C target of the Paris

01

Other important networks are Green Art Lab Alliance, Art/Switch, Coalition of Museums for Climate Justice, Culture Declares, Reduce Art Flights, Acclimatize, Museums for Climate in Action or Partners for Arts Climate Targets (see CIMAM, Toolkit on Environmental Sustainability in the Museum Practice).

Climate Agreement (Museums For Future, *The Declaration of Museums For Future*). Founded in 2019 by science writer Florian Schlederer in Austria, it now operates worldwide (see Wach 2022). This alliance of museums,<sup>92</sup> cultural institutions and individuals engage in activism: MFF supports climate strikes (Museums For Future Facebook, *Worldwide Climate Strike 25 March*), communicates the consequences of the climate crisis, and seeks to implement measures for carbon neutrality. Even though many demands are generic (Museums for Future, *Take Action*), the idea seems to focus on trying to raise awareness and generate change. Depending on the resources available, this may occur at several levels. The Volkskundemuseum Wien (Austrian Museum of Folk Life and Folk Art), for instance, has redesigned its shop more sustainably (Austrian Museum of Folk Life and Folk Art, *Schönding Shop*) and the Museum Niederösterreich has organised an exhibition on the climate (Museum Niederösterreich, *Klima & Ich*). “Communication is deemed the most important tool in this debate – awareness is always the first step” (Rustler 2021).

To understand the German museum landscape’s current position in the fields of sustainability and climate protection, MFF Germany conducted an online survey early this year (Museums for Future Germany, #9 “*Temperaturfühler*”), which is currently undergoing evaluation. According to Anna Krez, initiator of MFF Germany, the first results will be published via social media platforms at the beginning of August and later summarised in a new climate column. Similarly, NEMO wants to know how museums are meeting the challenges of climate change and launched a survey on 22 April (Earth Day). The questionnaire was addressed to Europe’s museum community and covered a total of eight thematic areas.<sup>93</sup> The responses will be published in a report in autumn 2022 and will serve as the basis for policy recommendations to steer the museum sector towards a green and sustainable future (NEMO 2022). “Museums must become more sustainable in order to remain relevant”, demands the former director of the Kunst Haus Wien and president of ICOM Austria (International Council of Museums Austria), Bettina Leidl, in an interview (Kimmel/Biber 2021, p. 11). “Contemporary exhibitions on climate change are plentiful and well-attended.” (Wojcik 2019). This is not enough, how-

ever, to really make a difference in the world. For this reason, ICOM Austria developed the Austrian ECO-label for Museums with the corresponding catalogue of criteria on their own initiative (cf. BMNT/VKI 2018). This is a novelty in the industry because the ECO-label, designed by Friedensreich Hundertwasser (1928–2000) and awarded since 1990, previously only identified environmentally friendly products and services.

In 2015, when the cultural manager had taken charge of the Kunst Haus Wien, Leidl was still considered a pioneer in terms of sustainability: she began to implement the ECO idea both in the programme and in operations, and arranged for the exhibition house to be distinguished as the first “green museum” in Austria for its overall operational sustainability. It received the Austrian ECO-label in 2018. The initiative of Kunst Haus Wien and ICOM Austria to set standards in the museum sector has yielded positive results. Thirteen additional licensed institutions<sup>94</sup>

have since met the museum-specific requirements for the ECO-label (BMK, *Museen mit dem Österreichischen Umweltzeichen*).

These museums, which have received awards for their sustainable management and ecological positioning, are a signal that the cultural sector serves as an important partner in climate protection and can benefit from common national environmental standards. Sustainability concepts of certified museums and exhibition venues include the improvement of energy efficiency, the use of certified materials in terms of recyclability and environmental compatibility, the production of printed materials as well as a balanced product mix in the museum shops (regional and resource-efficient). Furthermore, a focus on ecology in art educational programmes, as well as further training measures for staff, play a role.

<sup>92</sup>

In the founding country of Austria, capital city museums such as the MAK – Museum of Applied Arts (Museum für angewandte Kunst), Dom Museum, Architekturzentrum, Austrian Museum of Folk Life and Folk Art (Volkskundemuseum) or Kunst Haus Wien have joined the network, alongside Kunsthaus Graz, Heimatmuseum Deutsch-Griffen and Museum Niederösterreich. In May 2021, the German chapter of Museums for Future Germany was launched, initiated by the paintings conservator in private practice Anna Krez. In the meantime, the network has grown into an international initiative with active members from Europe and North America.

<sup>93</sup>

Strategic Relevance; Infrastructure and Buildings; Funding; Risk Assessment, Adaptation and Agility; Expertise, Skills and Training; Work Methods and Guiding Principles; Public Action; Networking and Advocacy.

<sup>94</sup>

In addition to the six federal museums, including the MAK – Museum of Applied Arts (Museum für angewandte Kunst), the Natural History Museum Vienna (Naturhistorisches Museum Wien), the Museum moderner Kunst Stiftung Museum Ludwig Wien, the Belvedere, the Austrian National Library (Österreichische Nationalbibliothek), the Vienna Museum of Science and Technology (Technisches Museum Wien) with the Österreichische Mediathek – licensed institutions also include the inatura Erlebnis Naturschau, the Jewish Museum of the City of Vienna (Jüdisches Museum der Stadt Wien), the Kunsthaus Graz, the Museum Niederösterreich, the Roman City of Carnuntum (Römerstadt Carnuntum) and the Universalmuseum Joanneum. Currently, 10 other museums are applying for the Austrian ECO-label, including, for example, the KHM Museum Association (courtesy of Dr. Regina Preslmair, BMK, Dept. V7 – Integrierte Produktpolitik, Betrieblicher Umweltschutz und Technologie, email dated 6.4.2022)

# Museums and the UN Sustainable Development Goals (SDGs)

The diversity of more sustainable approaches in museum contexts is demonstrated by ICOM Austria's latest initiative in cooperation with the Federal Ministry of Arts, Culture, Public Service and Sport (BMKÖS). Titled "17 Museums x 17 SDGs", its content and strategy are based on the 17 developmental goals of the UN Action Plan "Agenda for Sustainable Development 2030" (Fig. nr. 3). For this purpose, ICOM Austria nominated 17 museums to serve as best practice examples and role models; the SDGs were assigned by lot (cf. ICOM Austria, *17 Museums x 17 SDGs – Sustainable Development Goals*). Selected museums presented their projects at the 17th International Lake Constance Symposium "Inspiration Museum: Strategies for a Sustainable Future" from 12 to 14 May 2022 in Bregenz (ICOM Austria, *17th Internationales Bodensee-Symposium*).<sup>05</sup> Earlier, the Vienna Museum of Science and Technology (Technisches Museum Wien) had reflected on the pandemic impact on the Sustainable Development Goals (SDGs) with a pop-up exhibition entitled "Corona Impact: Mementos in 17 Stations" (cf. Aufreiter et al. 2021).

The Sustainable Development Goals (SDGs) were endorsed by the international community in 2015 and serve as a common guide for companies to align their goals and activities with sustainable development (cf. United Nations, *Sustainable Development Goals*). Despite the Mechelen Declaration,<sup>06</sup> which clearly aims at supporting the UN SDGs and applies them to museums and

<sup>05</sup>  
The pilot project "17 Museums x 17 SDGs – Sustainable Development Goals" was also presented at the 32<sup>nd</sup> Austrian Museum Day (Österreichischer Museumstag) in Graz from 6 to 8 October 2021 (Museumstag 2021, *Museum: Nachhaltig!*).

<sup>06</sup>  
For the German translation of the English version, see Science Center World Summit 2017, *Die Mechelen Erklärung*.

<sup>07</sup>  
Other SDGs relevant to the arts and culture sector are SDG 3 (ensure healthy livelihoods and promote well-being for all people of all ages), SDG 5 (achieve gender equality and empower all women and girls), SDG 8 (promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all). See BMK, *17 Museen x 17 SDGs*.

science centres, the SDGs have not yet been given sufficient attention in the museum sector (Garthe 2017). The Institute for Museum Research in Berlin (IfM) presented the 2019 special question on Global Goals for Sustainable Development as part of its annual overall statistical survey of museums in the Federal Republic of Germany. The bottom line of the IfM press release reads: "Many actors in society, business and politics now use the Global Goals for Sustainable Development (SDGs) for the strategic orientation of their actions and planning. They played either no role or a marginal role for the majority of museums (55.5%) in 2019, or were not even known." (Stiftung

Preußischer Kulturbesitz 2021). Yet as cultural institutions, museums can contribute significantly to achieving the SDGs and become pioneers for societal change. For the German Museums Association, sustainability has been a priority topic since 2019. Based on the 17 SDGs, guidelines for different sustainability aspects are currently developed for museums (Deutscher Museumsbund, *Nachhaltigkeit*). SDG 13, on taking urgent action to combat climate change and its impacts, is particularly relevant in the arts and culture sector.<sup>07</sup> To make museums more climate-friendly in future, the association is developing practical measures together with experts from museums and business ecology until 2023 (Deutscher Museumsbund, *Klimaschutz und Nachhaltigkeit im Museum*).



FIG. NR. 3  
 Agenda 2030: The 17 United Nations  
 Sustainable Development Goals.



# Climate footprints in museums

As mentioned above, museums are cultural heritage institutions designed for the long term, but they do not necessarily act sustainably. Recording their own sustainability performance<sup>98</sup> provides a first step towards enabling more ecological, social and economic sustainability in their institutions (cf. Seiß 2021).

Many different methods and indicators exist for measuring the ecologically relevant impacts of our actions, including in the arts and cultural sectors (cf. Baumast et al. 2019). Knowledge of energy consumption and greenhouse gas emissions is a crucial factor in this respect. After all, CO<sub>2</sub> emissions are one of the central causes of anthropogenic climate change and reducing them is thus one of the most important challenges of the 21<sup>st</sup> century (Umweltbundesamt, *Treibhausgase*). Anthropogenic means “caused by humans”, i.e. the anthropogenic greenhouse effect is the effect of human behaviour on the natural greenhouse effect. Greenhouse gases are special trace gases that have a similar effect to a greenhouse’s glass roof: they allow solar radiation to pass through unhindered but absorb a large part of the heat radiation emitted by the earth and then send it back to earth. Since the start of the last century, the amount of climate-impacting gases has increased significantly. This results in an incremental heating of the Earth’s atmosphere with potentially catastrophic consequences (e.g. glacial melting, severe weather fluctuations or extreme weather events such as flood disasters).

Greenhouse gases regulated under the Kyoto Protocol include carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), also known by the trivial name laughing gas, and fluorinated gases (F-gases). F-gases include Hydrofluorocarbons (HFCs), perfluorinated carbons (PFCs), and sulphur hexafluoride (SF<sub>6</sub>). Carbon dioxide, produced by burning fossil fuels, affects the climate most, as it occurs in large concentrations in the atmos-

phere and lingers in the air for a long time. To calculate GHG emissions, the emission values of all gases are converted into a kg-CO<sub>2</sub> equivalent (CO<sub>2</sub>e), based on a period of 100 years.

With the 2015 adoption of the Paris Agreement on climate change, new international guidelines have emerged in the field of carbon footprinting (BMK, *The Paris Agreement*). Not only greenhouse gas footprints but also emission-reducing strategies and measures have found their way into numerous sectors. The overarching goal of these climate protection efforts is to limit average global warming to 1.5°C to a maximum of 2°C compared to pre-industrial levels.

The climatic impact of art was previously a blind spot but is increasingly being taken into account by a growing number of actors: After all, the Paris climate goals can only be achieved if they are understood as a society-wide responsibility (cf. Tate 2019). “Utilizing a carbon footprint, cultural institutions [such as museums] can respond to demands to act in a sustainable and environmentally friendly way and improve their credibility by working decisively on changing practices themselves.” (Aktionsnetzwerk Nachhaltigkeit, *Nachhaltigkeit und Zukunft*).

Stefan Simon, a sustainability expert at the Prussian Cultural Heritage Foundation and director of the Rathgen Research Laboratory at the Staatliche Museen zu Berlin, considers museums to be among the biggest “energy gobblers” in the cultural sector (Kuhn 2020; Wesener 2021). Their complex air-conditioning technology often causes high CO<sub>2</sub> emissions and hence

contributes to the climate crisis in no small measure. Other indirect emissions are caused by water use, waste, material procurement, business trips and art transport, for instance.

In the English-speaking world, initiatives to evaluate greenhouse gas emissions for cultur-

<sup>98</sup>

The terms environmental record, life cycle assessment and CO<sub>2</sub> footprint are often used synonymously in the literature and in practice. The focus lies on assessing ecological aspects, in particular, CO<sub>2</sub> and other greenhouse gas emissions. Sustainability performances, sustainability assessments or sustainability reporting, on the other hand, are more comprehensive and include the economic and social components to a greater extent. Cf. FIS, *Bilanzierung ökologischer Nachhaltigkeit*.



FIG. NR. 4  
 Exhibition view CLIMATE CARE. REIMAGINING SHARED PLANETARY FUTURES at MAK, 2021. Front: Xandra van der Eijk, installation with 3D-printed models of a receding glacier in Switzerland, 2018, bioplastic. Back: Thomas Wrede, Triptych Rhone Glacier Panorama II, 2018, pigment print on fine art paper.

FIG. NR. 5  
 Central Storage of the Kunsthistorisches Museum Vienna, exterior view.



al institutions have been underway since 2011. Especially in the UK, case studies of museums exist that are engaged in sustainability efforts for quite some time, especially in the field of climate protection and greenhouse gas reduction.<sup>09</sup> In its pioneering role, the National History Museum London (Natural History Museum, *Sustainable by Nature*) tries to incorporate internationally recognised standards such as the “Science-Based-Targets-Initiative” into its reporting (Mitchel 2022). According to Simon, not a single museum in Germany “[...] can retrieve a complete carbon footprint of its physical presence and operations [...]” (Wojcik 2019).

In late 2020, selected institutions in Germany joined forces nationwide to conduct a survey as a first step and to develop a uniform procedure for energy and climate footprinting in the museum sector from this experience (cf. KdB, *Klimabilanzen in Kulturinstitutionen*). At the invitation of the Federal Cultural Foundation, 19 museums,<sup>10</sup> libraries, theatres and concert halls from different regions of Germany used the winter months to determine their GHG emissions for 2019 – supervised by the Hamburg-based sustainability economist Annett Baumast. They examined their energy and heating costs, their levels of waste, paper consumption, and the mobility of employees and visitors (to name but a few areas). However, the brochure does not reveal the names of the biggest climate offenders. It lists only average values in order to take pressure of the matter. The second pilot project, “Klimabilanzen für NRW Kultur” (Climate Balances for NRW Culture), was conducted by the Action Network Sustainability in Culture and Media (see Aktionsnetzwerk Nachhaltigkeit, Pilotprojekt), a cross-sectoral contact point for all ques-

09

The carbon footprint of museum loans – National Museum Wales pilot study; Natural History Museum, London; National Gallery (UK).

10

The participating institutions include four museums: the Lenbachhaus in Munich, the Museum Folkwang in Essen, the Staatliche Kunstsammlungen in Dresden and the Center for Art and Media (ZKM) in Karlsruhe.

11

The Julie’s Bicycle CO<sub>2</sub> calculator is available at <https://juliesbicycle.com/our-ork/creative-green/creative-green-tools/>, accessed on July 14 2022.

12

The participating institutions include four museums: the Beethoven-Haus in Bonn, the Museum Folkwang in Essen, the LVR-Industriemuseum Textilfabrik Comford in Ratingen and the Museum Ludwig in Cologne.

tions of operational ecology. Funded by the Federal Ministry of Culture and Media, it acts as an impartial intermediary between politics, administration, science, companies and acting institutions. The aim is to support the achievement of the climate protection goals of the Paris Agreement and the 2030 Agenda in the cultural and media spheres. To determine the carbon footprint, the CO<sub>2</sub> calculator from Julie’s Bicycle<sup>11</sup> in the UK was translated to German and tested in a closed pilot phase by 18 cultural institutions from North Rhine-Westphalia (NRW) until March 2022. This tool will later be made available to the German cultural sector free of charge. Participating institutions, among them four museums,<sup>12</sup> were accompanied and advised by experts from the Action Network and Energy Agency. Andrea Joosten, a participant of the pilot project, reports in an article on first experiences and results from the perspective of the Emmerich public library (Joosten 2022).

Whilst Germany is developing its first methods of calculating museums’ carbon footprints, a carbon footprint has hardly been prepared anywhere in Austria to date. The MAK – Museum of Applied Arts (Museum für angewandte Kunst) – is the exception, being the first art museum in Austria to determine its CO<sub>2</sub> emissions in connection with the exhibition “Climate Care” (Fig. nr. 4; cf. Egghart 2021, pp. 40–43). If climate protection is to be implemented effectively in museums, however, one must examine the extensive repositories and archives (Garthe 2021, p. 53), where up to 90 % of museum collections are stored, according to ICCROM, the International Centre for the Study of the Preservation and Restoration of Cultural Property.

# Case study: CO<sub>2</sub> footprint of the KHM central storage

As part of her dissertation, the author has launched a pilot project with the Kunsthistorisches Museum in which a specific CO<sub>2</sub> emissions calculation will be undertaken for the central storage (Fig. nr. 5) during its ongoing operation. The BOKU Competence Center for Climate Change supports this initiative with its scientific expertise and accompanies the project partners on their “path to climate neutrality” (BOKU Competence Center for Climate Change, *Sustainability*).

Completed in 2011, the building on the outskirts of Vienna comprises around 14,000m<sup>2</sup> of floor space and houses a large part of the approximately four million works of art, which are housed according to state-of-the-art standards on four floors with room heights up to six metres (Fig. nr. 6). Optimised storage technology and well-designed climate control are just as much a part of the comprehensive conservation strategy as integrated pest management and housekeeping. However, the maintenance of the

building and the technical installations also contribute significantly to the long-term preservation of the collections (Haag 2013 and 2015; Kimmel et al. 2014).<sup>15</sup>

Almost ten years after the storage went into operation, a self-critical look at its carbon footprint aims to reveal the amount and distribution of greenhouse gases in certain operational areas. Once the CO<sub>2</sub> emissions situation

for a given year is known, it becomes possible to identify negative emissions drivers, formulate objectives, and develop effective measures to reduce CO<sub>2</sub> emissions.

In this way, the museum will obtain a sound data basis on its climate-damaging emissions in the storage for the very first time. The case study results are also highly relevant for the envisaged calculation of the museum’s total emissions. In addition, the experience gained from the pilot project can subsequently be used by all federal museums in Vienna for a common CO<sub>2</sub> calculator.

<sup>15</sup>

As part of the “relocation” project group, the author coordinated and accompanied the entire relocation of the Kunsthistorisches Museum Wien’s stored collections. Following this, she was responsible for the conservation of the new central storage across all collections. The author initiated the implementation of Integrated Pest Management, which she implemented together with the biologist Dr. Pascal Querner, and chaired the storage working group to clarify a wide range of issues regarding its ongoing operation. As a textile conservator, the author was actively involved in shaping the storage areas of the Imperial Carriage Museum (Wagenburg) and Court Wardrobe (Monturdepot) collections. In order to comprehensively document the construction and relocation project, Ms Kimmel suggested the special volume “Storage” in the KHM’s *Technological Studies*, a scientific publication series on conservation, restoration and research, to which she has contributed three articles (Haag 2013). She is also responsible for the subsequent translation into English, which is freely available for download and on which she worked editorially (Haag 2015).

# Determination of the footprinting framework

BOKU provided a generally applicable CO<sub>2</sub> calculation tool, called “ClimCalc 2.0”, for data collection, which shall be used in an adapted form in other museum greenhouse gas calculations in the future. In view of the pandemic-related years 2020 and 2021, the year 2019 was used as a representative benchmark year. After defining the footprinting framework, all relevant emission sources of the storage were identified. According to the three categories (scopes) of the Green House Gas Protocol (GHG), these sources originate in the organisation of the museum itself or through services provided. In addition, the availability and quality of the data were checked.

These scopes are used to allocate greenhouse gas emissions according to two principles. On the one hand, they distinguish emissions according to their place of origin. On the other hand, classifying emissions into scopes allows showing the organisation’s influence on its different emission items. In this way, the organisation can directly influence Scope 1 emissions. Scope 2 and 3 emissions, on the other hand, can only be controlled indirectly by including upstream and downstream processes (BOKU Kompetenzstelle für Klimaneutralität 2021, p. 1).

Organisational units often argue that it is impossible to calculate Scope 3 emissions due to the data situation or data collection. This includes, for example, the use of products and services sold or materials purchased. Scope 3 emissions in the museum sector include visitors’ travel to the museum, transport of artefacts and similar aspects. The scientific consensus in the field of CO<sub>2</sub> footprinting argues for the inclusion of Scope 3 emissions, referring to their relevance despite the difficulties of data collection (BOKU Competence Centre for Climate Neutrality 2021, p. 3).

According to defined systemic limits, the footprinting assessment comprises Scope 1 – direct greenhouse gas emissions, Scope 2 – energy-related indirect GHG emissions and Scope 3 – other indirect GHG emissions. In addition to the complete (mandatory) survey of Scope 1 and 2 emission items (such as vehicle pool, leakage of cooling agents, and electricity), the most relevant Scope 3 footprinting items were integrated into the analysis. In addition to staff travel and visitors’ travel, this includes waste generation and transport, purchased materials (for storage management), other consumables (e.g. paper, IT equipment), transport of art(works), and purchased services.

## Prospects

The plan is to collect all necessary data and complete the GHG emissions calculation by July 2022. The first results of the case study will be presented at the IIC Wellington Congress “Conservation & Change: Response, Adaptation and Leadership”<sup>14</sup> in the form of a poster. They will also be extensively discussed in the Journal of the American Institute for Conservation (AIC) – special issue “Sustainability within Conservation and Collections Care.”<sup>15</sup>

The detailed project documentation with evaluations, field reports, recommendations for action and working materials will be presented in the doctoral thesis. A factsheet will serve to explain the framework conditions of a CO<sub>2</sub> balance and to show the relevant emission items and short- and medium-term reduction measures. It will also include an assessment of the respective

CO<sub>2</sub> reduction potential and, as far as possible, a prospective estimate of the residual emissions after implementation of the proposed measures.

The overarching goal of this cumulative thesis is to raise awareness sustainability issues, anchor the principle of sustainability in museum practice and provide impulses for the sustainable handling of collections. It will also serve as a model for testing the process of

preparing a climate footprint report for museum repositories in order to provide museum staff with an instrument for gradually making the repositories “greener”.

After all, a well-functioning repository ready for future challenges is key to a museum’s success. At the heart of the collection, it not only facilitates museum operations but also enables targeted research and examination for exhibitions. “An archive is a depository for the future, a starting point, not an end point [...]” (Merano 2005, p. 18).

<sup>14</sup>  
For more information on the conference, see <https://www.iiconservation.org/congress/sites/iiconservation.org.congress/files/1086-819.pdf>, accessed on July 14 2022.

<sup>15</sup>  
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FIG. NR. 6  
Storage area for Greek and Roman Antiquities.

# List of References

The fact that the bibliography includes many internet sources reflects the relevance and novelty of the topic. The temporary closures of museums due to the pandemic and the economic consequences for many exhibition venues (visitor declines of up to 75%) have brought the importance of sustainability and climate protection to the fore. Up to this point, specialist literature in printed form was only available in sporadic cases. Relevant professional journals published corresponding thematic issues only with 2021.

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© Graphic: utopia.de

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# Acknowledgements

Kunsthistorisches Museum Association: Elisabeth B. Mittendorfer (Environmental and Sustainability Officer), Albert Badr (Head of Security and Buildings), Stefan Fleck (Head of Construction Projects and Procurement), Paul Frey (Managing Director), Sabine Haag (Director General).

BOKU Competence Center for Climate Change: Joachim Thaler, Sascha Mohnke, Sarah Siemers, Sigrid Karl (Project staff)

Thesis supervision: Martina Griesser-Stermscheg (Team Leader, Research Institute, Vienna Museum of Science and Technology), Gabriela Krist (Head, Institute of Conservation, University of Applied Arts Vienna).



# Exercises in Existential Booentrinity

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Conceptualising autoimmunity as a variation of the *conditio humana*

Barb Macek is a writer and artistic researcher, and studied psychology and Art & Science. She received the Award of Excellence of the Austrian Ministry of Science in 2018 and the annual prize of the Society for Artistic Research in 2019. Since 2021, she has been a research fellow of the Austrian Academy of Sciences and works on her PhD project on autoimmunity at the University of Applied Arts Vienna.

## Barb

(PHD CANDIDATE AND FELLOW (DOC) OF THE AUSTRIAN ACADEMY OF SCIENCES AT THE INSTITUTE OF FINE ARTS & MEDIA ARTS)

## Macek



# Abstract

While the numbers of persons affected by autoimmune diseases increase on a global scale, the cause and genesis of these diseases are still unresolved within the biomedical model. New ways of tackling the open questions are thus in demand. This article proposes an alternative approach, which conceptualise autoimmunity as a variation of the “*conditio humana*”, the human condition. The theoretical frame of the ongoing project is provided by speculative philosophy and the philosophical anthropology of Helmuth Plessner.

Starting with medical-historical aspects of immunology, the common imagery connected with autoimmune diseases is shown as counter-productive in regard to coping with such diseases. To find new images, the technique “EEE – Exercises in Existential Eccentricity” is introduced, based on the biophilosophical notion of “eccentric positionality” by Helmuth Plessner. The technique refers to autoethnography with its focus on the body of the researcher and draws on the notion of the “dialogical self” by cultural psychologist Hubert Hermans. The data resulting from applying the EEE are finally transformed into poetry via “poetic transcription”. The goal is to open the door for an expanded understanding of autoimmune dynamics and to provide supportive images for persons affected by autoimmune diseases.



# 1. Autoimmunity and the Immunological Discourse

The presented project aims to understand a strange phenomenon called autoimmunity. It is defined as a specific adaptive immune response against self-antigens, meaning that the immune cells of a body's defence system turn against its own tissue cells. The term 'autoimmune disease' is used in the case of tissue damage as a result of these processes. Examples of such diseases are rheumatoid arthritis, psoriasis, multiple sclerosis, Crohn's disease, and SLE (systemic lupus erythematosus).

Anderson and Mackay report in their *Short History of Autoimmunity* that five to ten per cent of the population face an autoimmune disease within their lifetime

and that the number of persons globally affected is constantly growing (Anderson/Mackay 2014, p. 2). The cause and genesis of these diseases are still unresolved within the biomedical model.

So, on the one hand, this work is about a crisis within, affecting the individual body, but at the same time, about dealing with a global crisis, a worldwide increasingly problematic situation aggravated by the long-term effects of the COVID-19 pandemic, and the long-haul COVID or post-COVID syndrome (PCS), showing many similarities to the clinical picture of autoimmune diseases.<sup>01</sup>

## A History of Horror

The history of autoimmunity is quite young. The term was coined in 1957, and the underlying concept had difficulties being accepted by doctors and immunologists. This is due to the "paradox" at the heart of the term (Anderson/Mackay 2014, p. 2), resulting from the classical understanding of the immune system and its functions. One of the pioneers of immunology, Paul Ehrlich, even assumed a natural "horror autotoxikus" (fear of self-poisoning) regarding the horror induced by the possibility of a body directing its immune reactions against its own tissue. He wrote:

[...] The organism possesses certain contrivances by means of which the immune reaction, so easily produced by all kinds of cells, is prevented from acting against the organism's own elements and so giving rise to autotoxins [...] so that we might be justified in speaking of a 'horror autotoxicus' of the organism. (Ehrlich 1957, p. 253)

Since then, the notion of the autoimmune body as a body that "fails to recognize itself" or "treats itself as foreign" (Anderson/Mackay 2014, p. 2–3) has been painted as a dark and threatening image. In patient advice books, this grim tone is still present, as the fre-

quent use of civil-war metaphors shows. In the lupus guidebook, "Rat und Hilfe bei Lupus", Ilona Hilliges not only speaks of a civil war taking place inside the body, but she explicitly compares autoimmune processes to the operations of a terrorist war waged by the immune system against the rest of the body (Hilliges 2001, p. 60).

These motives can be traced back to the biomedical immunological discourse of "self" vs "other", still fuelled by the model of "clonal deletion" that was drafted by another pioneer of immunology, Frank Burnet. Clonal deletion means the extermination of immune cells that have expressed receptors for "self". The principle behind it is based on "central and peripheral tolerance", control mechanisms that, according to Burnet's model, fail in the case of "auto-reactivity" – with the possible consequence of cell damage, the damage of whole organs and the emergence of diseases like rheumatoid arthritis, MS, SLE, etcetera (cf. Rink et al. 2012, p. 15).

The upholding relevance of this traditional understanding of the immune system can be seen in the way information about autoimmunity is communicated to patients and in how it is communicated via mass media.

<sup>01</sup> The terms "long-haul COVID" or PCS (post-COVID syndrome) are applied for conditions after recovery from an infection with COVID-19, characterised by symptoms like fatigue, pain, brain fog, and anxiety (cf. Winchester et al. 2021, p. 31–54). According to Rojas et al. (2022) autoimmunity has to be regarded as a main characteristic of these post-COVID syndromes.

# Imagining the Autoimmune

Examples of such medial figurations of autoimmunity include the documentary by Binsack und Fräntzel (2016) titled *Mein Körper – mein Feind. Autoimmunerkrankungen auf der Spur* (My Body – My Enemy. Tracking Autoimmune Diseases); the news article: *Autoimmunerkrankungen: 'Unser Körper ist unser größter Feind'* (Perrevoort et al. 2012; Autoimmune Diseases: 'Our Body is Our Biggest Enemy'), or the special issue on autoimmunity featured by an online knowledge zine titled: *Krieg im Körper – Das Rätsel der Autoimmunerkrankheiten* (Lorenz 2014; War within the Body: the Mystery of Autoimmune Diseases).

Such pictures and wordings create imagery prone to causing irritation and even helplessness in affected persons, instead of providing constructive approaches for coping with a life crisis as is frequently caused by an autoimmune disease. In her renowned essay *Illness as Metaphor* Susan Sontag already warned about these modern disease metaphors, especially in the context of cancerous diseases where war imagery is dominant as well, ascribing them a demoralising effect on patients (Sontag 1978, p. 85).

The fact that figures of speech affect our thoughts and feelings had already been established by Lakoff and Johnson in 1980, starting with the book *Metaphors We Live By*. Following their argumentation, metaphors are 'cognitive maps', organising our thoughts and allowing us to reconstruct our patterns of thought, speech, and action. In *Philosophy in the Flesh*, Lakoff and Johnson show that metaphors play an important role in structur-

ing our experiences. They have the potential to create new perceptions, motivate actions and organise previous experiences in new relations and contexts (cf. Lakoff/Johnson 1999, p. 72).

Consequently, one of the main intentions of this project is to find new images as cognitive maps to help patients cope with autoimmune diseases.

The American Lupus Foundation speaks of a "cruel mystery" in regard to the autoimmune disease lupus (SLE – systemic lupus erythematosus) because its pathogenesis (cause and development of the disease) is still in the dark of the biomedical model. These yet unresolved mechanisms behind autoimmunity call for new perspectives on the subject.

The transdisciplinary researcher Ed Cohen, who has a long personal history as a patient with Crohn's disease (an autoimmune condition), therefore suggests approaching this mystery by understanding it as a bi-philosophical and not as a biomedical problem in the first place:

I feel more and more certain that the challenge which autoimmunity poses may be more one of natural philosophy than bioscience. That is to say, the problem that autoimmunity represents for certain knowledge may indicate that there is a problem with what we take to be most certain about ourselves ontologically, epistemologically, and biochemically. (Cohen 2004, p. 11)



# 2. Hypothesis & Research Questions

Taking up Cohen's proposition, this project aims at creating scope for new meanings within the traditional concepts of autoimmunity and its associated diseases. The objective is to produce individually as well as socioculturally relevant knowledge about the phenomenon through a politically emancipatory science practice based on a biophilosophical research approach.

The motive behind is to provide new, supportive images to help people cope with autoimmune diseases. The jump necessary to open up these new perspectives was executed by adopting a 'situated speculation' according to Halewood (2017). Based on A. N. Whitehead's speculative philosophy, he proposes a conditioned speculation that takes place "under restrictions". These restrictions are defined by the – cultural, sociopolitical, philosophical, etc. – ground that forms the basis for the speculative jump, and the quality of the jump is determined by the faith in a world that Halewood describes as a "world-in-the-making" (Halewood 2017, p. 62).

The execution of the speculative jump in the course of this project opened up the perspective on autoimmunity as a variation of the 'conditio humana', the human condition, as addressed in the philosophical anthropology by German philosopher and biologist Helmuth Plessner. The basis for the hypothetical jump was provided on the one hand by the immunological discourse on autoimmunity and on the other hand by Plessner's concept of 'existential positionality'.

This central notion of his biophilosophical analysis conceives of all living beings as characterised by their positionality. This feature is determined by the way a living thing is organised, and by its relation to its borders. For humans, Plessner identifies a positionality he describes as 'eccentric' – 'exzentrische Positionalität' (cf. Plessner 1981). Humans, like animals, are centrally organised, via the central nervous system, which differentiates both from plants and their decentralised and open form of organisation. But humans, in contrast to animals, exist in eccentric positionality because of their ability to refer to themselves.

## Human Eccentricity

In Helmuth Plessner's philosophical anthropology, the anthropological difference is marked by this eccentric positionality of man – resulting in a reflexive distance that separates us from ourselves. Plessner describes it as a rupture, defining us as living beings who are not identical to ourselves (cf. Plessner 1983, p. 200). The particular eccentric being is never entirely who he/she is. This explains what Plessner calls "Doppelcharakter", or respectively "Doppelaspekt" (Plessner 1981, p. 365) – double character, double aspect – of human nature, referring to the gap inside humans as a mark of this quality.

Giorgio Agamben also addresses this gap in his book *The Open* when he talks about a blank space, a breach inside us, separating man from animal (cf. Agamben 2003, p. 100).

So within Plessner's concept, our self-reflexivity is distancing us from ourselves; it is this distance, the paradox of human existence, that causes a rupture within us and makes our lives determined by ambiguity.

In reference to this concept of Plessner, I speculate on autoimmunity as being related to this fundamental human ambiguity. I postulate that the rupture within us, marking the anthropological difference, or, in Plessner's words, our eccentric positionality caused by our self distance, plays a role in autoimmune dynamics. Based on this hypothesis, my research questions are:

- a) What is the meaning of autoimmune phenomena in the context of the reflexive self distance of a being existing in ambiguity because of its eccentricity?
- b) Can autoimmune diseases be conceptualised as realisations of the rupture, the self-distance, the ambivalence of a life form in eccentric positionality – and what are the specifics of such a concept?

# 3. Practice

The method developed to investigate the research questions are located in the periphery of autoethnography as applied in cultural sciences, where sociocultural phenomena are explored on the basis of personal experience:

Autoethnography is an approach to research and writing that seeks to describe and systematically analyse personal experience in order to understand cultural experience; it challenges canonical ways of doing research and representing others and treats research as a political, socially-just, socially-conscious act. (Ellis, Adams & Bochner, 2010)

This can be seen in close relation to Plessner's biophilosophical method and his demand for 'sehendes Verstehen' (i. e. sighted or seeing understanding) which is also based on personal experience: "Von der Lebenserfahrung hat es [das Verstehen] auszugehen, zu ihr kehrt es zurück" (Plessner 1982, p. 179) – understanding begins with life experience and returns to it.

Autoethnography was explicitly developed as a critique of Western research traditions – and, very importantly, it stands for the emancipation of the body by moving it to the centre of the academic stage, with all included risks:

Coaxing the body from the shadows of academe and consciously integrating it into the process and production of knowledge requires that we view knowledge in the context of the body from which it is generated. I must be ready to walk the talk of my scholarship by putting my politically marked body on the lines of the printed text. This kind of embodied methodology is [...] risky. (Spry 2001, p. 725)

The autoethnographic text emanates from the researcher's bodily standpoint, a perspective formed by the permanent process of recognition and interpretation of the cultural inscriptions upon the researcher's body (cf. Spry 2001, p. 711).

# The EEE-Technique

The bodily standpoint is also central to the technique developed for this project, titled *EEE – Exercises in Existential Eccentricity*. It engages the autoimmune body of the investigator within the framework of Plessner's concept of positionality and draws on the technique of 'auto-interviewing' as described by Boufoy-Bastick (2004). Furthermore, it integrates the technique of systematic introspection (as, e.g. described by Wilhelm Wundt 1888) and the idea of the 'dialogical self' by cultural psychologist Hubert Hermans (Hermans 2001).

In his same-named theory, Hermans considers "both self and culture as dynamic systems located in a field of tension between unity and multiplicity." He dismisses the idea of an "essential core self" as well as an "essential core culture" (Hermans 2001, p. 275) and follows a decentralised view of both. To explain his theory in a nutshell, he quotes Montaigne:

We are all framed of flaps and patches, and of so shapeless and diverse contexture, that every piece, and every moment plays its part. And there is as much difference found between us and ourselves, as there is between ourselves and others. (Montaigne 1603, pp. 196–197)

As the technique in its application has performative qualities there is also a connection to Plessner's first anthropological rule<sup>92</sup> of 'natural artificiality': Man has to do something to realise (or actualise) a life according to his eccentric existential position. This something is a complement of a not-natural, not-grown kind (ein "Komplement nichtnatürlicher, nichtgewachsener Art", Plessner 1981, p. 384) that is necessary to create himself. That is why man by nature, because of his form of existence, is artificial ("von Natur, aus Gründen seiner Existenzform künstlich", *ibid.*).

This something is crucial in my eyes; it not only covers acts and products of art and culture, it may also be something that is realised physically, by the body itself, as in the case of autoimmunity – something that finally not only affects the body but the entire person, their surroundings, and their existential state.

The EEE-technique is designed as a self-inquiry, a dialogue between different inner voices, as the voice of

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According to Plessner's three anthropological laws the human condition is characterised by natural artificiality, mediated immediacy and a utopian standpoint (cf. Plessner 1981). From the autoimmune viewpoint the paradoxical formulations of these laws are also interesting and indicate another parallel.

the distant self (referring to the rupture within us, described by Plessner), expressing an external, historical, socially, politically and/or culturally (in)formed standpoint, and the voice of the ill body, the body affected by the autoimmune disease SLE. Any disease can be seen as a confrontation, a conscious encounter with our eccentric positionality. Tolone describes this relation of eccentricity and illness in his contribution on the significance of Plessner's theory for a philosophy of medicine as the experience of separation

of the two poles 'Körper' and 'Leib', causing a "disruption of 'spontaneous' identity, the disappearance of balance", and leading to a fragmentation of the person (Tolone 2014, p. 167).

To preclude possible misunderstandings that might easily emerge at this point, it has to be stressed that the EEE-technique is not an enactment of the Cartesian mind-body gap; it is not about a situation with the body – the 'animal body' – on one side, and the mind/spirit/soul on the other side. On the contrary, it is all about shifting perspectives expressed by switches between different inner voices, between gut feelings and rationalisations, speculation and fact listing, critical comments and poetical expressions, etc. In a nutshell, the whole process can be described as an exercise in embodied diversity within oneself.

The structure of the technique is provided by a set of questions, organised along thematically relevant categories that were derived from existing materials (diary notes, photographs, objects connected to the illness narrative), and summarised with keywords like 'symptom description', 'emotional resonance', 'cognitive evaluation', and 'meaning ascription'.

An important aspect of the EEE is the involvement of objects (medical aids, masks, souvenirs) and images (photographs, drawings) linked to the personal history of illness. These artefacts (see Fig. 1) are not only used to instigate and guide the narrative along certain motives but also to elicit different self aspects and voices: Grabbing the notebook (i.e., the diary) reinforces the aspect of self-reflexivity, putting on the wolf mask stresses the transformative aspect of the illness; the pill box produces the voice of the patient, the chew bone the animal voice within, and so forth.

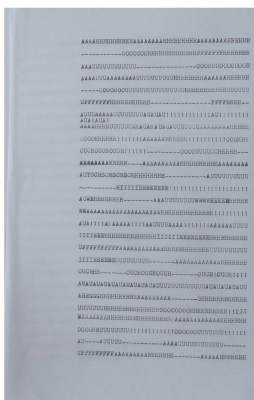
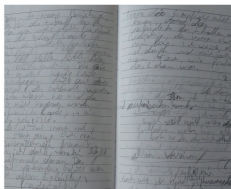


FIG. NR. 1  
 Barb Macek., *Collage of Artefacts*. From the series:  
*Souvenirs of my Illness Journey*, 2020.

# Repositioning Positionality

To activate the aspect of positionality within the exercises, the first approach was to perform actual transitions, i.e. changes of position in space, by movements from the centre of a marked circle to its periphery and vice versa, and by ascents/descents and jumps to realise vertical transitions.<sup>03</sup> But in practice, it soon became clear that this part of the EEE requires a reconsideration, a new approach.

This repositioning process revolved around the question of how to grasp the practical and bodily quality of the theoretical-philosophical characteristic 'existential positionality'.

As a result of this process, the idea emerged to variegate psychophysical parameters instead of translating Plessner's category into space; to identify parameters, based on experience, that directly affect the

variable self-reflexivity and, subsequently, the variable self distance. Examples of such empiric parameters are states of acute pain and the state of semi-sleep (the phase between sleeping and awakening).

First experiences showed that the variation of these parameters effectively changed the quality and extent of self-reflexivity. Conducting the EEE-technique under the condition of acute pain leads to results that indicate the possibility of an altered existential positionality. Further trials have to be conducted, allowing for a

comparison of the inquiry processes' outcome under different conditions/settings regarding the mentioned psychophysical parameters. The results of these comparisons will provide further insights and determine the ongoing development of the method.

03

A documentation of these first trials has been shown at the 12<sup>th</sup> SAR Conference in 2021, the video *EEE – Exercises in Existential Eccentricity. Movements, Artefacts, Transitions* was published in: "1. SAR conference – presentation archive. Presentations from the SAR 2021 conference", URL: <https://www.researchcatalogue.net/view/1567054/1567037>, accessed on August 31 2022.

# Poetic Transcription

Finally, the protocols of the EEE-performances, including remarks on the respective settings and descriptions of the involved materials (images, objects), are transferred into a lyrical form by means of 'poetic transcription'.<sup>04</sup>

This method was introduced by Glesne in 1997, who suggested extracting certain words or parts of sentences from an interview transcript, following thematic or formal criteria, and finally arranging the words in a way that a poem, a poetic form, emerges (Glesne 1997, p. 202). Poetic transcription, as an experimental and creative form, has the goal of contributing to a more open way of research and broadening the horizon of science (Glesne 1997, p. 219). Falkner resumes in regard to poetry as an integral part of scientific work:

04

An example for the result of a poetic transcription can be found in Supplement 1: the poem *Selbst in Formation / Self in Formation* reflects inflammation as a means to detect pathogenic patterns, the human animal, and the formation of the autoimmune self as a (self-)revolutionary process.

When using poetry as/in/for research à la poetic inquiry, I searched at the intersection between scientific and artistic criteria to offer considerations in that shaded middle space: Poetic inquiry may be evaluated on the demonstration of artistic concentration, embodied experience, discovery/surprise, conditionality, narrative truth, and transformation. (Falkner 2019, p. 663)

Accordingly, the poetic form as a result of this part of the project is intended to enable and foster the perspective on autoimmunity as a variation of the *conditio humana*, and the specific bodily state related to it as a possible realisation of Plessner's eccentric positionality. It searches for new approaches to open the door for an expanded understanding of autoimmune dynamics and to provide productive answers to the progressing autoimmune crisis we are facing today.

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# List of Figures

Fig. nr. 1: Barb Macek, *Collage of Artefacts*. From the series: *Souvenirs of my Illness Journey*, 2020

# Supplement

Suppl. 1: Barb Macek, *Selbst in Formation/Self in Formation* (excerpt from the poem), 2022.



a)

LICHTE WOLKENRÄNDER  
DIE SICH IN MEINE NETZHAUT EINBRENNEN  
SICH SELBST ENTZÜNDEN UND DAUERHAFT  
BRENNEN, GLOSEN  
MANCHMAL FISCHTRÄNEN WEINEN  
UM DIE ENTZÜNDUNGSREAKTION ABZUMILDERN  
PATHOGENE MUSTER AUFSPÜREN  
SCHMERZEN VON DEN  
SCHARFEN KANTEN DER REALITÄT.

b)

DER AKT DER VERSETZUNG  
ZERSCHLAGUNG EINES HAUPTWORTS IN SEINE TEILE  
ES SUMMT UND LICHTFLOCKEN, UND DAZWISCHEN  
FALTET SICH DIE LUFT.  
GEDANKEN FASSEN  
GEFÜHL FASSEN  
DIE ERINNERUNG AN TIERE NICHT ALS  
SYMBOLISCHE SONDERN  
KONKRET  
FELLHAAR FÜR FELLHAAR  
AUGE FÜR AUGE  
OHR FÜR OHR  
TIER UNTER TIEREN:  
MIT MENSCHEN-DISTANZ  
MIT MENSCHEN-MASKIERUNG.

c)

(IM)PERFEKTER KÖRPER  
MEDITATION, FÜTTERUNGEN  
UND DIE BESTIMMUNG ÜBER SICH SELBST  
ALS – ABWECHSELND – OBJEKT / SUBJEKT  
ALS GANZE (SELBST-)VERSUCHSREIHE  
UMSTÄNDE, AUSSENSTÄNDE, AUFSTÄNDISCHE  
KRÄFTE JETZT  
DIE MEIN GEHIRN DURCHDRINGEN  
DIE DAS SELBST IN FORMATION  
IN AUFSTELLUNG BRINGEN  
ALS (SELBST-)REVOLUTIONÄRES  
INDIVIDUUM.

[...]



a)

CLOUDS WITH LUMINOUS RIMS  
 THAT BURN THEIR WAY INTO MY RETINA  
 IGNITING THEMSELVES AND LASTING  
 BURNING, SMOULDERING  
 CRYING FISH TEARS AT TIMES  
 TO SOFTEN THE INFLAMMATORY RESPONSE  
 TRACING PATHOGENIC PATTERNS  
 PAIN OF REALITY'S  
 SHARP EDGES.

b)

THE ACT OF DISLOCATION  
 BREAKING A NOUN INTO ITS PARTS  
 IT HUMS, AND LIGHT FLAKES, AND BETWEEN THEM  
 THE AIR FOLDS.  
 SEIZING THOUGHT  
 SEIZING FEELING  
 REMEMBERING ANIMALS NOT AS  
 SYMBOLICAL BUT  
 TANGIBLE  
 FUR HAIR BY FUR HAIR  
 EYE BY EYE  
 EAR BY EAR  
 ANIMAL AMONG ANIMALS:  
 WITH HUMAN-DISTANCING  
 WITH HUMAN-MASKING.

c)

(IM)PERFECT BODY  
 MEDITATION, FEEDINGS  
 AND SELF DETERMINATION  
 AS – ALTERNATING – OBJECT / SUBJECT  
 AS ENTIRE SERIES OF (SELF-)EXPERIMENTATION  
 CIRCUMSTANCES, OUTER STANCES, INSURGENT  
 FORCES NOW  
 THAT PERMEATE MY BRAIN  
 THAT SET THE SELF  
 INTO FORMATION  
 AS A (SELF-)REVOLUTIONARY  
 INDIVIDUAL.  
 [...]

English translation by Melanie Sindelar.



# Nothing- ness in the digital space

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Valerie Messini is a writer and artistic researcher, and studied psychology and Art & Science. She received the Award of Excellence of the Austrian Ministry of Science in 2018 and the annual prize of the Society for Artistic Research in 2019. Since 2021, she has been a research fellow of the Austrian Academy of Sciences and works on her PhD project on autoimmunity at the University of Applied Arts Vienna.

Valerie  
(PETER WEIBEL RESEARCH INSTITUTE FOR DIGITAL CULTURES)  
Messini

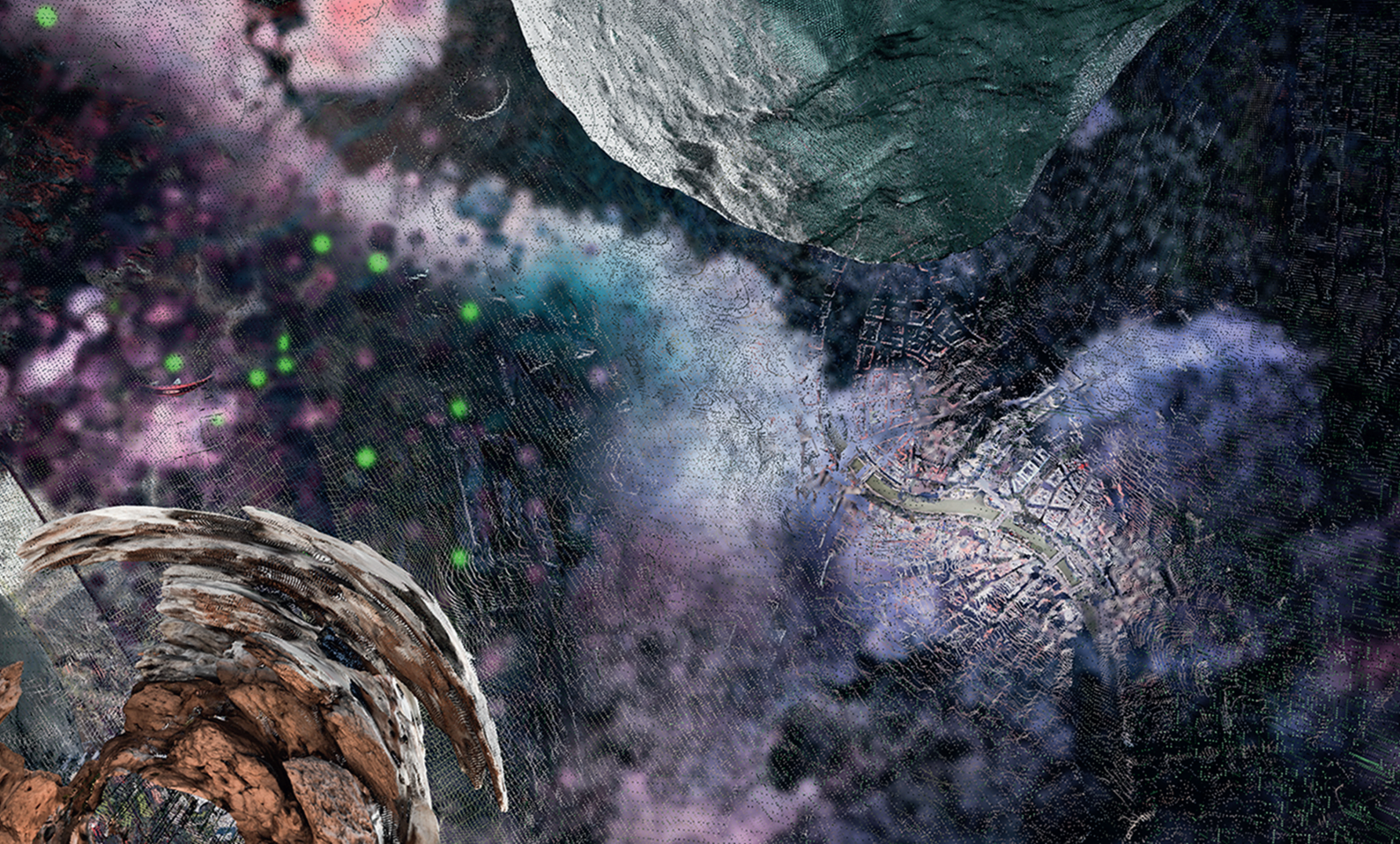


FIG. NR. 1  
screenshot of *head in a cloud*.

What is nothingness? Where is nothing? And where does nothingness come from? Nothing will come of nothing (Shakespeare, 1606, Act 1, Scene 1, line 99). The famous quote from King Lear<sup>01</sup> seems disproved by physics: Everything comes from nothing and ends in nothing, at least according to our present state of knowledge. If one follows the Big Bang theory, i.e. the sudden and common emergence of matter, space and time before the great explosion, there was nothing: no space, no time, and no matter. The universe has been expanding progressively since the Big Bang until the expansion is halted by the great gravitation of black matter. The process then reverses: the 'Big Crunch', the great collapse, will be the end of the universe (Shrietar 2018, p. 573).<sup>02</sup> In a sense, nothingness is paradoxically everything: "Nothingness is not [...] absence but an infinitive plenitude of openness" (Barad 2012, p. 16). If space, time and matter emerged together, has there ever been an empty space? Answering this question seems equally impossible as the exercise of imagining nothingness. Nevertheless, I have been trying to create empty spaces since my early days of study. To me, emptiness arises when spac-

<sup>01</sup> Ancient Greek: οὐδὲν ἔξ οὐδενός; Latin: ex nihilo nihil fit. The origin of this philosophical proposition lies in ancient Greek cosmology and was first mentioned by Parmenides of Elea and then by Aristotle and Homer, among others. ([https://en.wikipedia.org/wiki/Nothing\\_comes\\_from\\_nothing](https://en.wikipedia.org/wiki/Nothing_comes_from_nothing)), accessed on August 23 2022.

<sup>02</sup> A more advanced model is the 'oscillating universe': the Big Crunch leads directly into the Big Bounce, the emergence of a new universe (Shrietar 2018, p. 576).

es are freed from everything superfluous or even disruptive to a pure experience of space. This includes decorations, fences, norms, compulsive consumerism or a fixed programmatic corset, as in the case of my diploma thesis "The inexhaustible Space". My dissertation with the working title "Void Set – about Emptiness in Virtual Space" deals with empty spaces in art and architecture and interrogates various concepts and definitions of nothingness from physics and philosophy, focusing on quantum mechanics and quantum field theory, as well as eco-feminist texts and theories of New Materialism. I am pursuing a PhD in philosophy but am leaving behind a purely philosophical and media-theoretical discourse to expand my research through my artistic practice. Employing digital technologies, virtual reality and artificial intelligence, the thesis will empirically test theoretical findings and find new forms of artistic expression. The two projects presented here investigate digital body and space perception from a neo-materialist point of view, whereby artistic agency is attributed to both virtual space and digital technologies and tools applied. The first project observes dance movement or, more generally, bodily

behaviour in an empty virtual space. The second project deals with synthetically generated sea horizons. The horizon line is characterised by its vast distance and the expanse created for the viewer, filled seemingly only with air: a symbol of emptiness. By juxtaposing these two projects, I aim to reveal the connections between bodily behaviour in virtual space and the fathoming of digital nothingness.

Since the work of Vitruvius, Da Vinci, Alberti, Semper and Le Corbusier, references to body-centred experiences of space have existed historically. The human being, or more precisely the human body, was regarded as the unchallenged standard and benchmark. In the age of digitalisation, virtual reality and all its associated interface technologies allow for new media-centred spatial experiences (cf. Weibel 2015, p. 31). Computer-based spatial experience and design play a central part in particular. Space has always been a central research focus in my practice. Beyond mere design problems of space, the conventional occupation of architecture, I am primarily concerned with questions of human behaviour in space, i.e. how spaces and their design influence the activities, the perception and, in a broader sense, the lives of their users. Following the development of tele-technologies and especially the massive expansion and almost ubiquitous presence of the internet – and the related observation that we reside almost permanently (or at least several times a day) in virtual data spaces – made my interest shift from physical, structural space to dematerialised, de-localised, digital data spaces in recent years. Via the internet and telephone, people not present in the same room can communicate with each other. Radio technology, which orbits around absence and empty space, poses a challenge to architecture, then. The discipline of architecture is called upon to shift its fundamental concepts such as materiality, gravity and volume into the realm of the virtual. In art, this shift took place back in the 20<sup>th</sup> century, and the theoretical theme of virtuality was addressed in numerous works

and thought models. Peter Weibel's theoretical and artistic work plays a central role in this discourse. In the context of my PhD, I question how we interact in these data spaces, whom we interact with, the nature of these digital and virtual spaces, and their potential direction. In doing so, I adopt a critical stance towards existing data spaces, including social media spaces, which are mostly designed in a merely two-dimensional way and are characterised by constant overstimulation. I am searching for a digital space that is decelerating, soothing and improving the present situation. Moreover, I am highly critical of a rigorous separation of the material and the virtual. To think in terms of such a duality is simply misguided, in my view, as one space does not exist without the other, and this goes way back before the dawn of digitalisation. Virtuality, emotions, stories, memories, and legends have always been driving and articulating culture, similar to architecture. Consider, for example, cave paintings, among the earliest evidence of human culture: the paintings need virtuality, stories that are told and depicted, and memories and accumulated knowledge, equally as much as they need the material, caves and colours. Unlike virtuality, digitality is technology-bound and represents a quite recent phenomenon. Previously, a disembodied and non-corporeal spatial experience was reserved for the select few, shamans, for instance. Now, digitalisation has opened the gates to a non-corporeal spatial experience for anyone with access to the internet. The following question hence occurs to me: How can space be made for emptiness in the age of digitalisation with its frequently overstimulated data spaces? To what extent is the concept of emptiness applicable to digital and virtual space? How can synthetically generated sensory perceptions give rise to a notion of emptiness? How can digital/virtual space extend physical space?

# Head in a Cloud

In 2017, I encountered the medium of VR goggles for the first time. In cooperation with Damjan Minovski, the first prototype of the project *head in a cloud* was created within the framework of “kopf-head-glava”, a Carinthia-wide and interdisciplinary art project initiated by the Kunstverein Kärnten. We were invited by Architekturhaus Kärnten to contribute a piece that would deal with the theme of the head. Both of us being architects, we wanted to explore the space in our heads and therefore decided to use the medium of virtual reality. The aim was to expand visual sensory impressions through the means of virtual reality in order to gain a new perspective on built space. Memories, dreams or other virtual imagery are often more noticeable on an emotive level than a real material space that casually flows past our consciousness. We were intrigued by and wanted to investigate this discrepancy.

Günther Domenig’s *Steinhaus* (Domenig Steinhaus) served us as a stage and inspiration at the same time. Using a digital 3D model of the house, we were able to superimpose, merge and juxtapose the built with the virtual. Wearing virtual reality glasses, visitors can submerge their heads in the digital version of the space they just physically experienced (kopf-head-glava, head in the cloud).

Over the next two years, we further developed this first prototype. Several video installations accompanied the VR work.<sup>03</sup> The project has been presented to the public several times, in-



FIG. NR. 2  
QR code for the  
video trailer of *head in  
a cloud* on Vimeo.



FIG. NR. 3  
QR code for the  
video *chalkroom &  
head in a cloud*.

cluding at GIFF – Geneva International Film Festival in 2019 and at the Virtual Reality Hub at the Transart Festival Bolzano in 2021 (Schwarzer 2021). We have used 3D glasses and expansive projections to make the synthetically generated spatial structure perceptible through the body. The virtual spaces were designed exclusively using digital design tools. Various scales of objects and rooms, to vast landscapes and planet-like celestial bodies, are embedded in each other to create a virtual world. *Head in the cloud* wants to use immersive technologies to enable people to physically experience space that is not physically present. Although the perceived content was largely a product of our imagination, it resulted in a strong and believable physical perception of the visual and auditory stimuli. Within seconds, visitors became part of or even protagonists of this virtual fantasy world.

The project, and above all, the realisation that you indeed can experience physically non-existent space spatially, stayed with me and became the cornerstone of my PhD project.

03

More information on the various exhibitions and video installations is available at [www.2mvd.at](http://www.2mvd.at), accessed last on August 31 2022.

# The [tehnological] origin of nothingness

The invention of various telecommunication technologies made it possible for people to communicate with each other without being physically nearby anymore since more than a hundred years. The “separation of messenger and message” (Weibel 2015, p. 30), facilitated first through the telegram, enables data to travel through space without the body of the messenger. If space was dissolved by the railway in the 19<sup>th</sup> century, and the resulting eradication of distance dissolved space, then the development of telecommunications eradicated time. Unlike a telegraph, which still had a mechanical component and hence had to stay in motion to deliver a message, a computer or television remains completely motionless. The only thing that moves is the data sent and received. This ultimately also dissolves the body (cf. Weibel 2015, p. 33). The development of tele-technologies thus inhabits a tendency toward immaterialism, which we can clearly observe in 20<sup>th</sup>-century art and culture. Exploring this concept of nothingness, especially through the form of sculpture, painting, and installations, marks the leap into modernity. Throughout the 20<sup>th</sup> century, numerous artists and thinkers of all disciplines have dismantled the existing convention of reality and its perception through acts of emptying: The silence, the void, the depth, the pause, the gap, the interstice, the free space – all these (visual) moments of stillness are gaining importance in Western art and culture. According to Copeland, the dismantling of conventions through acts of emptying, removing, destroying or emphasising nothingness is numerous, as his extensive survey *Voids: A Retrospective* can attest. This publication outlines the concept of emptiness in art, aesthetics, philosophy, religion, science, popular culture, architecture and music and addresses nothingness, emptiness, the invisible and ineffable, rejection and destruction (cf. Copeland 2009).

In his article “Virus, Viralität, Virtualität” (“Virus, Virality, Virtuality”), published 2020 on the pandemic, the artist and theorist Peter Weibel makes clear that we no longer live in a local society, but in a ‘Fern-Gesellschaft’

(remote society) based on digital technology (Weibel 2020). Mass media has become an omnipresent and transformative part of our everyday lives. In Baudrillard’s words: “What the most radical critical critique, the most subversive delirious imagination, what no situationist drift could have done [...] television has done” (Baudrillard 2011, p. 28).

The 1920s saw the arrival of television, in its first experimental form, and the radio onto the market. Suddenly, it became possible to

perceive wireless voices and images informing about world events but also providing entertainment. On 29 October 1923, entertainment broadcasting began in Germany with music performances (SWR2 Archivradio). This enabled people of different locations to experience a performance jointly and simultaneously and thus to be brought together without being in the same room. The effects of mass media have been further exacerbated by social media and the vast expansion of the digital data space. Melissa Gronlund notes that digitality and the internet have become an integral part of our everyday lives and have thus also found their way into art. She draws a distinction, however, between the internet of the 1990s and the revolutionary developments of the mid-2000s, which led to the massive spread of social media: Facebook, Youtube, Twitter and the iPhone (cf. Gronlund 2017, p. 2). Since then, we have been morphing into a ‘metaverse’, a term first coined in 1992 by Neal Stephenson in his novel *Snowcrash*, which described a collective and communal virtual space. This positivist utopian notion of a transnational, global, digital collective, however, also reveals its flip side in the reality of the 2010s: abundance and sensory overload, constant hyper-efficiency, chronic simultaneity and equanimity are counteracted, for example, by the emergence of ‘cocooning’ (Popcorn 1991, p. 27) – an act of isolation from one’s social environment perceived as disruptive, unfriendly or even dangerous. In South Korea, experts who observed the rise of ‘digital cocooning’ in 2006 found that some people, thanks to wireless devices, lead a nomadic life outdoors, while others prefer to nestle at home (cf. Fien 2008, p. 13). Moreover, a connection seems to arise with the psy-



chopathology of our time: the state of being constantly online and the associated sensory overload cause syndromes such as burnout, depression and ADHD. Byung-Chul Han speaks of “neuronal power” and points out that for the first time in human history, an excess of positivity and not the absence of a protective authority seems to threaten people (cf. Han 2015, pp. 1–7). John Kenneth Galbraith’s postulation of half a century ago has now come true: We live in the age of abundance – according to Galbraith, we are “the affluent society” (Galbraith 1958). As early as 1989, Jean Baudrillard wrote on the “obesity of all current sys-

tems” (Baudrillard 1989, p. 30), which increasingly lose their functionality due to the abundance of information. Abundance also causes overconsumption, and obesity is the result. “It is the demonstrative obesity of a system which thereby also communicates that it is so engineered, so technologically superior, that it no longer needs the strength and abilities of a more or less healthy body at all” (Holzwarth 2018, p. 118).

The pursuit of the immaterial seems to have missed the mark after all: The longing for depletion has led to absolute satiation and is thus more topical than ever.

# 1-NO1- 100.000

81

The title *1-NO1-100,000* was inspired by *One, No One and One Hundred Thousand* (*Uno, nessuno e centomila*), a humorous, tragic and philosophical novel about the complex multiplicity of the body, the soul and the self written by the Italian dramatist Luigi Pirandello. The novel was first published in 1926. Again we find ourselves in the 1920s, the same decade that brought forth the television and quantum mechanics. This is also the decade in which Malevich and Rodchenko declared the death of figurative painting with their abstract, monochrome paintings, thus removing any referentiality. In other words, the decade in which bodily perception was replaced by a new, then unknown perception. Now, a hundred years later, we know that we are dealing with ‘media centred perception’ (cf. Weibel 2015, pp. 31–51).

Through this artistic experiment, I want to investigate computer-based experiences of the body and space and thereby approach the digital concept of the body. I want to learn more about how the human body behaves in and towards the virtual, digital space in order to find new ways of bodily perception and performance that oscillate between the physical and the virtual. Time-based body interfaces extend the physical capacities of the hu-

man body to include the digital dimension. Virtual spaces allow empathy, mirroring, proprioception and interoception to be explored in new ways. Sensor technology allows precise detection and reproducibility of the most complicated movement sequences. Above all, reproducibility implies a paradigmatic shift, as previously featured in the performing arts: movements can be repeated, but the exact movement exists only once and is perceived singularly by each viewing subject.

The main research focus is the dancing body in virtual space: a dancer who dances with their digital self – as if in a mirror-game.

The *1-NO1-100.000* project began with a workshop in collaboration with Cenk Güzelis, Anna Rita Cedroni, and Juan Jesús Guiraldi.

Cenk is an architect, a PhD candidate and a university assistant at /studio3 – Institut für Experimentelle Architektur (Institute for Experimental Architecture) at the University of Innsbruck. Based on his personal PTSD<sup>04</sup> experience, his dissertation explores Serious Games, Avatars, Companionship, Social VR & LARP<sup>05</sup> (Live Action Role Playing) and explores new social norms between humans and non-human bodies. By incorporating a theoretical-speculative approach into a series of

<sup>04</sup>  
post-traumatic-stress-disorder  
<sup>05</sup>

LARP combines elements of improvisational acting, costume play and role play, extending the gaming experience into the physical world. LARP thus involves more physical movement and social interaction than conventional computer games and includes, to some extent, the medium of augmented reality (AR) and virtual reality (VR).



FIG. NR. 4  
screenshots from the VR work *1-NO 1-100.000*.

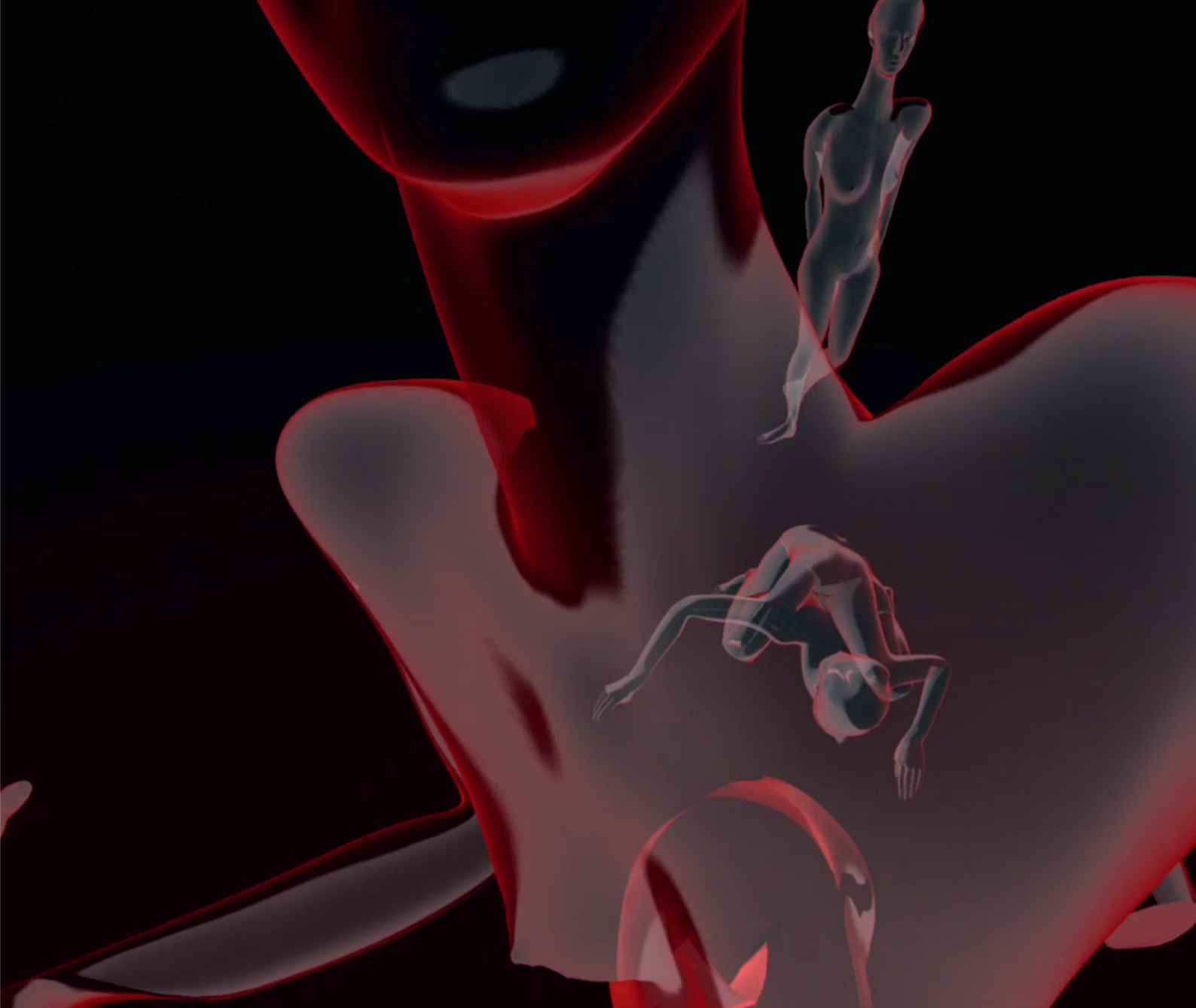


FIG. NR. 5  
screenshots from the VR work *1-NO 1-100.000.*

embodied XR projects, Cenk similarly explores new, technologically mediated corporealities (cf. Güzelis). An example of this is *Artificial Awakening*, a 60-minute non-verbal, three-stage, rotating ceremonial journey. The collective live VR performance for which Güzelis designed the virtual spaces is a collaboration between performing artists, virtual reality developers, AI experts, and machine learning engineers. *Artificial Awakening* is a groundbreaking format using VR technology that allows the audience to watch the ceremony via remote satellites in other locations (Cenk Güzelis, “artificial awakening”).

Anna Rita Cedroni is an Italian architect with extensive experience in the design of theatres and other cultural buildings. She has devoted herself to dance since childhood and is professionally trained in Axis Syllabus, Butoh and contemporary dance. Juan Jesús Guiraldi is an Argentine dancer, choreographer, teacher, and director of the dance company *Una Constante*, which he founded. He is the artistic director of *Movimiento Constante*, a platform for researching bodily movement in Buenos Aires, as well as the director of the post-graduate school EME (Especialización, Movimiento, Experimentación).

With the help of a motion capture suit, a full-body suit equipped with sensors at the joints, physical movement data is recorded and transferred to virtual space, where it can be replayed and experienced again through VR glasses.

The VR goggles are wireless to ensure freedom of movement as much as possible. For Guiraldi, this was the first exposure to such technology. We gave him some time to get used to the suit. He put on the suit and started to warm up. Meanwhile, we were able to make some adjustments to the software that received the recorded movement data wirelessly. During the transmission, interference signals or small glitches occurred, and some information was lost. This was caused by the reflective metal shelves in my studio, which also reflected some of the signals. The software, however, offers different types of noise reduction. After a while, the settings were optimised. Guiraldi meanwhile observed the digital avatars’ movements on a screen, somewhat similar to observing oneself in the mirror of a dance studio. He reported that he had to express certain movements much more strongly and extravagantly in order to give his digital avatar’s movements the desired expressions. After this period of adjustment, Guiraldi began to dance in the physical space.

He danced alone for about five minutes. The recorded movement data was saved and exported so that it could be loaded onto the VR glasses. That required a detour via the

gaming software Unity, from which we exported an app to be loaded onto the goggles. During this phase we also designed the avatar. To increase an alienating effect, we decided to work with a digital female body. The body is naked, yet not depicted realistically, but rather in the shape of a data cloud. After all, we were concerned with encountering an alien, digital body, not with accurately reproducing a human body. Accordingly, the 3D model used was merely an empty shell, a surface, the skin, i.e. the dividing layer between the inner and outer worlds. We chose a translucent, red-glowing material that surrounds the digital body like an aura: a reference to the first layer<sup>06</sup> of the subtle body, which is neither exclusively physical nor exclusively spiritual and goes beyond the Western dualism between body and soul (Wikipedia “Subtle body”).

Guiraldi was now able to put on the VR goggles and meet the generated avatar of red light, endowed with his previously captured motion sequences. Juan danced again, though no longer alone and no longer only in physical space. Using the glasses, he danced with his digital avatar in a completely empty and virtual space. His movements were recorded again. This experiment was repeated a third time, with Juan now encountering and interacting with both avatars: By superimposing time-based 3D movement data, the artist’s presence in the space was condensed.

Juan was interviewed after each of these experiences. First of all, he reported that the VR glasses had an extremely beneficial effect on him. Usually, he has to spend great energy and concentration to block out the surrounding room, the light, the different materials, the noises and other disturbing factors in order to fully concentrate on his body. Being able to dance in a completely empty space allowed him to feel proprioception and interoception to a much higher degree than he, the accomplished professional dancer who danced several hours a day, is usually able to perceive. During the first overlay, the first encounter with his virtual self, he felt a high degree of identification and empathy, “almost love”, as Juan described, being clearly emotionally touched.

The movements that had been performed shortly before still lingered in his muscle memory. Encountering these familiar movements and recognising his own physicality and emotionality, though captured in and expressed through a virtual female body completely unknown to him, made him understand that he was meeting and dancing with himself. He felt the need to catch and embrace himself. Bernard Stiegler calls this effect ‘tertiary memories’: according to him, humans and technology are inseparable.

<sup>06</sup>

The concept of the subtle body originates from Chinese Taoism and the Dharmic religions and was adopted by Theosophy. The energy body is shown in seven layers. The first layer is red and describes the so-called etheric or vital body (<https://beyogi.com/inside-the-world-of-auras/>). Accessed on August 23 2022.

It is also a reference (meant somewhat humorously) to Rudolf Steiner, Austrian architect and founder of Anthroposophy, who has written extensively on the Etheric Body ([https://en.wikipedia.org/wiki/Etheric\\_body](https://en.wikipedia.org/wiki/Etheric_body)), accessed on August 23 2022.

Technology precedes the individual insofar as they are thrown into a technological world that always already contains memories inscribed from the outside that shape the individual as such (Stiegler 1998, p. 246). Juan emphasised how interesting it was to him since, already knowing the next movement, he tried to be one step ahead of the virtual body, to surprise the avatar, in a sense. On a temporal level, a paradigmatic shift occurs from a purely physical improvisation, which always lags slightly behind and constantly tries to minimise its response time to make the performance as fluid as possible. Nevertheless, it remains a back and forth, action and reaction, a kind of repartee. It is a temporal consecution. The past became the future in this experiment. Temporal linearity, a principle of the performing arts, was broken. Juan and Jesus were dancing together.

After Juan met and interacted with the two avatars, he was filled with excitement. Love no longer played a role, “it was pure passion”, he reported. This was a seductive play of sorts, a ménage à trois, competing with his previous avatar in the same way the two avatars courted his attention. He also perceived a clear spatial difference. Only the field of tension between him and the avatar was perceptible in the first experiment, an intermediate space into which he could never step into, delimited by his body and a sense of absolute orientation which became completely void of meaning. In the second experiment, Juan was in the very centre of the space. The spatial perception and the spatial relationships of the three bodies became prominent, even though the scene was completely empty besides these bodies. Juan reported that no matter where he was going, he was always “between” the bodies and could only perceive his body in relation to others. Juan couldn’t help but mentally triangulate, that is, measure the space.

The workshop resulted in videos and pictures of all three digital dances as well as a virtual reality app. The app allows visitors to experience these dancing bodies spatially. On entering the virtual room, visitors see their own hands. That way, they can relate their body to the dancers. The work was shown at the Angewandte Festival 2021 at the Postspar-kasse. A text and some pictures were displayed on the walls, and the glasses were attached to a pole so they would not be stolen. The same wireless glasses were available that Juan used. On the last day of the festival, I took the glasses to the inner courtyard of the main building at Oskar-Kokoschka-Platz. Children are always the most curious. And this held true for the festival as well. My six-year-old friend Luka was so enthusiastic



FIG. NR. 6  
QR code for the video  
1-NO 1-100.000



FIG. NR. 7  
Download link for the  
APK to install on your  
Oculus Quest 20<sup>97</sup>

07

Use SIDEQUEST (side-questvr.com) to install the APK on your Oculus Quest 2. Once installed it will appear under “Unknown Sources”.

about the work that she immediately asked her father whether she had enough money in her piggy bank to buy a pair of such glasses. Luka danced enthusiastically with the digital bodies and caught the attention of many adult visitors.

Not for the first time did I observe that children are much more curious and open to technology. Children can deal with it naturally and playfully and thus also convince adult sceptics of the physicality and spatiality of digital and virtual media. As an architect, the most amazing aspect of the experiment was the spatiality of this absolutely empty scene. The app is open source. Anyone who owns an Oculus Quest can download it and use it freely.

If two visitors enter the room at the same time, they can see each other’s hands, no matter how many thousands of kilometres separate them.

I certainly wish to continue the investigations described above, ideally in the framework of a research project. I would like to repeat the experiment several times with other dancers or possibly even more dancers. Additionally, I would be interested in designing different VR environments to investigate the effect of space on dancers even more intensively and precisely. In a further iteration, the virtually experienceable or danceable places could be designed to be modifiable through the body and its movement through gesture control. In this way, the reciprocal effect of the dancer and space can be investigated. In my opinion, this field of research is important and relevant to developing methods for re-evaluating the concept of the body and further exploring questions of physical expression and the coexistence of virtual and physical space.

# Virtuality as an opportunity— Nothingness in the digital space

Stephan Doesinger's 'bastard space' (Doesinger 2008, p. 17), as well as Weibel's writings on 'disappearing architecture' (Flachbart 2005), and 'machine-based spatial experience' (Weibel 2015), reveal theoretical approaches in which materiality or physicality and digitality are not understood as separate instances, but merge into one another. This is epitomised, among others, by the work of Rafaël Rozendaal, a visual artist who uses the World Wide Web as a canvas (Jordan 2017). Back in 2010, Rozendaal brought the internet and its inclusive character into real, physical space with *BYOB (Bring your own beamer)*. BYOB is a series of one-night-exhibitions, inviting various artists to bring projectors. *BYOB* is open source and can be organised by interested parties all over the world. "The more the better" (Rozendaal 2017).

One of the greatest potentials that I believe digitalisation offers is the contribution to enabling and building a posthumanist, postcolonial societal structure and thus dissolving the dualisms and binaries responsible for the historical injustices in our society: discrimination against women, the oppression of colonised peoples and the exploitation of nature, to name three examples among many more.

Gender, age, race, and ethnicity pose problems that do not seem surmountable in maintaining a humanistic view. Also troubling to theorists is the way in which the separation between humans and the world—between subject and object—has the ominous result of driving the destruction of the (ecological) world. The subject—meaning the human—has apparently been too concerned with itself and has neglected its environment, animated and inanimate, to such an extent that we are now confronting massive environmental catastrophes that require us to rethink in a radical way (cf. Poe 2011, p. 154).

In *New Materialisms: Ontology, Agency, and Politics*, Coole, Frost and a number of well-known voices from the New Materialism movement establish the foundations for a materialism that takes seriously the idea that

things, like people, are actors (cf. Coole 2010). Karen Barad's 'Agential Realism' proposes that meaning does not exist a priori, but only emerges through viewing, measuring or other forms of interaction. As proof, she draws on the historical, scientific double-slit experiment, one of the most famous experiments in physics. It shows that small particles of matter are somewhat akin to waves and suggests that the very act of observing a particle, or the choice of measuring instrument, has a dramatic effect on its behaviour. In Brand's reasoning, precisely these interactions, or rather 'intra-actions'—a term coined by Brand—dissolve the hierarchy between active (human) subject and inanimate object, in contrast to conventional interaction. These are ontological machines; object and subject thus become equal actors (cf. Barad 2007, pp. 97–132).

The intra-action between humans and machines plays a particularly important role in my work and my understanding of digital art. My project *1-NO1-100.000* was created with this mindset as well. The purpose of this experiment was to enable interaction with a digital self through the use of digital media to research self-perception. In this process, the term 'self-empathy' emerged. Is there such a thing? What would access to such a self-reflection tool enable? What would it imply for the individual and what consequences would it have for our society? It seems more appropriate to use Haraway's concept of 'diffraction' here. Diffraction is contrasted with reflection, the traditional way of thinking and producing knowledge. According to Haraway, reflection is "the same displaced elsewhere", whereas diffractive seeing and thinking create something different, something new, by focusing on the "interference patterns on the recording films of our lives and bodies" (Haraway 1997, p. 15). Seeing and thinking diffractively implies, for Haraway, a self-responsible, critical and accountable engagement with the world, as it enables us to be more attuned to how differences are created in the world and the particular effects they have on subjects and their bodies (Haraway 1997, p. 273)

# Deep Empty— Wide Open

In the project *deep empty-wide open* I investigate the visual perception of empty images and their affective potential. Investigations into visual tranquillity and spaciousness are important for me to develop artistic proposals for digital-virtual empty spaces by using digital media to contribute to reducing the omnipresent and constant sensorial overload. Affectivity is a psychiatric term coined by Eugen Bleuler at the beginning of the 20<sup>th</sup> century to describe the totality of emotional and mental life. Bleuler also developed what he termed ‘udenotherapy’, from the ancient Greek οὐδέν – ouden – “nothing” (cf. Peters 2007, p. 679).

“Doing nothing”, in Latin otium,<sup>08</sup> already had a meaning more than 2000 years ago. The Epicurean idea of otium favours contemplation, compassion, gratitude and friendship (cf. Dillon 2006, p. 48). Two things give me access to such a state of mind: nature and art. It should not surprise, then, that the notion of ‘digital nature’ plays a major role in my work. The digital data space and digital design tools enable the discovery of unknown forms, dysfunctional, evolved, liberated and empty spaces, such as the structures of the *machine hallucination* project: Refik Anadol uses enormous data sets and machine learning algorithms to generate simulations of abstract data landscapes reminiscent of natural topographies, which have a similarly calming effect on the viewer as real nature (Anadol 2021).

This focus on the visual, among all possibilities of perception, is owed to the human preoccupation with seeing as the main sensory perception, in contrast to other living beings who perceive their environment rather through the sense of smell or touch, for example, or through pressure waves in water or air. In Western culture, seeing is not just relegated to perception but also closely linked to cognition. This is equally evident in language, as “to see” can also be used in the sense of grasping an idea: seeing is understanding. “The importance of the visual system in humans is evident since one-third of the human cerebral cortex is devoted to

<sup>08</sup>  
The negation of otium  
is negotium: work,  
business, occupation.

processing visual information. [...] perception is based on an internal reconstruction of the external world. One’s own experience in particular plays an important role here” (Max Planck Institute for Biological Cybernetics 2018). According to studies by the Max Planck Institute for Biological Cybernetics, perception is based on an internal reconstruction of the external world. In particular, one’s own personal experience plays an important role.

To empty the picture, I chose the horizon as a theme. The horizon has always symbolised emptiness and spaciousness for me. It suggests a yearning to me and thus has affective potential. Yet the formal and technical character is also important to me, as the image of a horizon has also been emptied out in terms of representation. All that remains is the horizon line, a borderline between the texture of the earth and the sky. All further steps of a perspectival visual composition disappear. The contradiction between the two-dimensionality created in this way and the endless depth of the image fascinates me. The borderline is reminiscent of Barnett Newman’s paintings, though in his case, the line is usually a vertical one. Newman’s paintings are concerned with perception as well, specifically with self-perception. He wanted viewers to establish a relationship to their own scale through his paintings and thereby to the viewing self and the place from which the viewing took place. To him, the feeling of this space held something mysterious but also metaphysical, as it allowed him to access his own totality. This individuality is characterised by being separate and yet connected with others at the same time (cf. Sylvester 1998, p. 537).

The separation, to feel or discern this difference, corresponds to Haraway’s diffractive seeing and thinking mentioned above. The simultaneity of separateness and connectedness reminds me strongly of Barad’s Intra-actions: “Intra-actions are practices of making a difference, of cutting together-apart, entangling-differentiating (one move) in the making of phenomena” (Barad 2012, p. 7f).

Using deep learning, I wanted to examine how much I could lend artistic agency to an algorithm so that it would produce images that hold precisely this affective potential and function as a mental blank space for me. In the lecture and tutorial “Machine Learning in Practice”, led by Martin Gasser and Nariddh Khean, which I attended in the summer semester of 2021 at the Institute of Arts and Society, Cross-Disciplinary Strategies, I became familiar with the principles of machine and deep learning, a simple form of artificial intelligence. During the tutorial in the group, guided by Nariddh Khean, I learned to train a so-called “pix2pix GAN model” using the Python programming language. In simple terms, pix2pix means comparing one image with another. Such an algorithm can transform a line drawing, for example, into a photorealistic image. You simply have to feed the algorithm with enough matching image pairs: a line drawing and the corresponding photorealistic image. GAN means Generative Adversarial Networks and refers to algorithms that learn unsupervised. This means that the target value is unknown in advance, and the machine tries to recognise patterns starting from a featureless noise. This traverses through several hundred generations and is achieved by two mutually interacting neural networks, a so-called generator and a discriminator. The generator produces new images, and the discriminator checks them by comparing

them to a test set of proved data. Through this feedback loop, the photorealistic image finally crystallises from the noise.

My intention was to establish a correlation between the horizons – defined by their imaging components such as colour tonality, frequency of waves and clouds – and myself.

I trained the (pix2pix)GAN model to generate synthetic horizons that correspond with my perception.

I trained the model. I needed two data sets for the time being: Horizons and portraits. On the one hand, I used photographs of horizons that I collected on journeys in the period before COVID19: They were experienced and taken by myself and are thus connected with my memories. The second set of data comprised my reactions when perceiving each image, measured by my facial expressions. By using a small script that showed me the horizons in a slideshow while snapping a picture with my laptop’s camera, I was able to photographically document my facial expression while looking at each horizon. These two data sets were used to train the model.

The fully trained model could then be fed with new profile images of mine to generate the synthetic horizons independently. This dataset consisted of the still images of a zoom lecture I gave during the second lockdown in the seminar “Matter and Meaning: Why we know what we know in Physics” (Tanja Traxler,



Cross-Disciplinary Strategies, summer semester 2021) on Karen Barad's text *What is the Measure of Nothingness? Infinity; Virtuality; Justice* (Barad 2012).

I call the resulting images 'digital paintings', whereby it becomes impossible to discern whether I or the machine painted them. To me, this is a legitimate proof of concept that digital technologies can achieve artistic agency and that a clear separation between object and subject has been abolished.

The resulting pictures are reminiscent of impressionist paintings. According to Weibel, Impressionism was the only movement among historical, artistic genres that reacted to the shift from body-centred to the machine-centred experience of space and time, not through the choice of subjects but through its style of representation (cf. Weibel 2015, p. 31f). The same applies to *deep empty-wide open*. The unusually small size of the images is caused by the algorithm used. They are 256 square pixels in size, which would correspond to 0.2 k. It would be easy to enlarge the images later, but I consciously refrain from doing so and thus position myself in opposition to the "obesity" of the ever larger and higher resolving image overload. The texture of images also indicates the technology. The clearly recognisable pixels appear interwoven, and the overall appearance is blurry. This indicates the homogeneous noise the algorithm proceeds from and tries to structure. Adding more feedback loops would have reduced it completely, as

explained above, and would have allowed an exact imitation, a photorealistic photograph, to be obtained. As I have repeatedly mentioned, however, I am interested in diffractive seeing and thinking, that is, not in imitating my own visual and photographic abilities, but in observing how the algorithm sees and thinks. Now and then, my profile is discernible in a cloudlike shape, which testifies to the inseparability of subject and object.

I would like to develop the project further to an interactive installation, whereby live horizons are generated that continuously morph in response to alien viewers. To ensure responsiveness, viewers must also share data analogous to the third data set. In a feedback loop, the recorded user data and the generated image shall continuously influence each other. The viewer can control the images generated by their facial expressions. At the same time, their data is influenced by the images they generate but also by the images they perceive once again. Thus, the viewer slips into my skin on an abstract, emotional-visual level. The installation would thus attempt to record my emotions: It shows how I perceive my environment – a digital self-portrait of my affective being. In Barnett Newman's words: "The painting should give man a sense of place: that he knows he's there, so he's aware of himself. In that sense he relates to me when I made the painting because in that sense I was there..." (Sylvester 1998, p. 537).

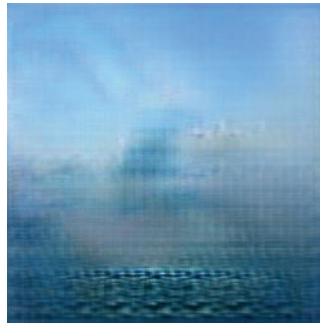


FIG. NR. 8  
*ocean 60 from the series deep empty-wide open.*



FIG. NR. 9  
*ocean 58 from the series deep empty-wide open.*

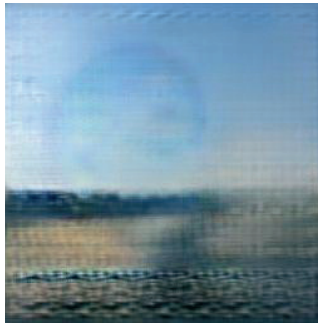


FIG. NR. 10  
*ocean 30 from the series deep empty-wide open.*



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# Await what the stars will bring or moulding the gap

Verena Miedl-Faißt is an artistic researcher, writer, friend, art educator and photographer based in Vienna and its neighbouring woods. Currently, she is a PhD in Art candidate at Center Research Focus at the University of Applied Arts Vienna. Her projects have been hosted and screened by museums and cinemas and exhibited in various group shows in Vienna and abroad.

Verena  
(CENTER RESEARCH FOCUS, PHD CANDIDATE PHD IN ART)  
Miedl-  
Faißt

TRYING TO TRANSLATE L.'S NEOLOGISM 'VERSEHNT' (ADJ.), I LOOKED UP THE ETYMOLOGY OF THE PROBABLY RELATED NOUN 'SEHNSUCHT' AND ITS ENGLISH TRANSLATION 'DESIRE'. SEHNSUCHT COMES FROM MHG 'SENEN' – SOMETHING LIKE 'PAINFULLY LONGING FOR'. DESIRE SEEMS TO COME FROM THE LATIN PHRASE 'DE SIDERE' – 'AWAIT WHAT THE STARS WILL BRING'. IT APPARENTLY DOESN'T HAVE MUCH TO DO WITH THE GERMAN WORD 'SEHNE' FOR 'SINEW', BUT VERSEHNT SOUNDS LIKE A PARTICIPLE DERIVED FROM A VERBAL FORM OF SEHNE, WITH THE PREFIX 'VER-' LIKE IN 'VERBUNDEN' (BOUND) OR 'VERLOREN' (LOST). REBUILT IN ENGLISH, IT WOULD BE SOMETHING LIKE 'FOR-SINEWED' 'ICH BIN VERSEHNT' COULD BE TAKEN LITERAL AS: LONGING HAS STRAINED CRISS-CROSSING SINEWS TEARING AND HOLDING MY CHEST TOGETHER AND APART.



# Disclaimer

I would like to invite you to a walk through my artistic research. I'm indwelling the field of the betwixt, the not-yet or the long-gone. Knowledge can assume unusual shapes. Questions can remain a longing. Findings can be ephemeral relations. The projected outcome is situated in the realm of the ungraspable, where 'aesthetic thinking' fosters agency:

In opposition to causal verification, to deduction or generalization, it behaves in a tangible, touching way towards its objects. It accords and considers, not to ambush these objects but to acknowledge and accept them, and thus to show their incomparability and vulnerability, and to show what remains unsatisfied by art. (Henke et al. 2020, p. 62)

With this following text, I built a path for us, tracing back my longing. Please do not expect me to tell you exactly what you will see on the way. Feel free to choose your gaze's direction. It might be helpful to activate your mesopic vision; to consider what the words do show, if you make them shiver, if you see through or only remember them in your back. Convoy me to my findings' habitat; let's await what the stars will bring.

# 1 What I want

One has to be oneself all alone – I've always found that hard to accept. Researching how many people we are currently living on this planet, the internet spits out the number 7.918.159.736. Asking for a number of how many creatures we are in total, including all animals and plants, not even the internet dares to predicate a number. But obviously, "alone" does not exist.

Donna Haraway says:

The task is to make kin in lines of inventive connection as a practice of learning to live and die well with each other in a thick present (Haraway 2016, p. 18).

I am doing art in order to relate – and to this mission statement, I could relate very well. Although trying to act accordingly, I became doubtful about how one can be 'made kin' to another. Would this not always be intrusive and presumptuous? Having been raised in a capitalistic, post-modern society, I have learned to praise "individual freedom" based on the autonomy of the subject for as long as I can remember as the most precious good I was given; a privilege that I must savour and never compromise. Trying to create relations while upholding my own as well as the others' autonomy, my aim slowly shifted to finding already existing, ubiquitous entanglements shine, more and more understanding and cherishing my interdependency:

There are 'ties that free': the more the individual depends, the less free [she] is; the more the person depends, the more scope [she] has for action. When [she] seeks to spread [her] wings, the individual constantly comes up against [her] limits, moans and groans, overwhelmed by forlorn passions, there's scarcely anything left for [her] to do but feel indignation and resentment; when the person stretches out, repopulates [herself], gets some distance, [she] *scatters*, in the strict sense of the word, [she] shares [herself], mixes, and step by step recovers powers to act that [she] never imagined. (Latour 2021, p. 88)

Maybe I should clarify: This is not a literature review about, i.e. Donna Haraway and Bruno Latour. But I find a longing akin to mine glimmering through their words; they help to trace and phrase what it makes me do: I try to be present – because if we all are, the present becomes "thick" (cf. Haraway 2016, p.18); I try



to “stretch out“ (cf. Latour 2021, p. 88) – to look, listen, sense considerably, and offer some fringes to hold on. I actively, attentively wait, sometimes longer than the moment we share. I let myself be carried along. I try to adopt or at least imagine other perspectives, share choices, find language to express experience. I try to co-create – whether ‘you’ are very young, an old soul, or maybe not even human. I use the term co-creation instead of collaboration or cooperation because it emphasises the co-active making or tending of common world-bits, of meaning and therewith of relations. I presume one always cares for what one is related to; thus, co-creation supports careful handling of the world and all its critters.

Relationship among all things appears to be complex and reciprocal – always at least two-way, back and forth. It seems that nothing is single in this universe, and nothing goes one way. In this view, we humans appear as particularly lively, intense, aware nodes of relation in an infinite network of connections, simple or complicated, direct or hidden, strong or delicate, temporary or very long-lasting. A web of connections, infinite but locally fragile, with and among everything – all beings – including what we generally class as things, objects. [...] Poetry is the human language that can try to say what a tree or a rock or a river is, that is, to speak humanly for it, in both senses of the word “for.” A poem can do so by relating the quality of an individual human relationship to a thing, a rock or river or tree, or simply by describing the thing as truthfully as possible.

Science describes accurately from outside; poetry describes accurately from inside. Science explicates; poetry implicates. Both celebrate what they describe. We need the languages of both science and poetry to save us from merely stockpiling endless ‘information’ that fails to inform our ignorance or our irresponsibility. (Le Guin 2017, p. 15f)

If science helps to understand what things are, poetry helps to understand how to relate to them. The insight one can gain through artistic or poetic research is always intersubjective. Thus, if a poem is “relating the quality of an individual human relationship to a thing, a rock or river or tree“ (Le Guin 2017, p. 16), I would suggest that poetry always is co-creation.

“Poetry” in that sense, can imply all sorts of means, tools and media – it is not bound to words. A melody, an image, a conversation, a moment can be poetic as well. Therefore, the term “poiesis” (in the simplified sense of “making something” as opposed to “doing something”) might seem more appropriate for my purposes. But something “poietic”, creative and formative, is not necessarily poetic. A poem, whatever it consists of, actively relates different actors to each other. It be-

comes an actor itself, continuously transforming and being transformed. Poetry makes humankind a little bit more like the “Oankali” in Octavia Butler’s science fiction trilogy “Xenogenesis”: The Oankali dispose of sensory tentacles, through which they can connect to each other as well as to any other living being and can communicate and perceive directly without the need of signs or translations. They just become one nervous system sharing pleasure and pain. (cf. e.g. Butler 1987) As long as we don’t develop such organs, we need poetry<sup>01</sup> to be able to understand all our complex interdependencies.

But coping with such entanglement is quite challenging:

No, really, he [the hero in a novel] can only ease his anxieties by resting his eyes on the moon: for its circling, for its phases, at least, he in no way feels responsible; it’s the last spectacle he has left. If its brightness moves you (*tu*) so much, that’s because, well, you know you’re innocent of its movement. As you once were when you looked at the fields, lakes, trees, rivers and mountains, the scenery, without giving a thought to the effect your every move might have, however slight.

(Latour 2021, p. 12)

It is a paradox: Realising how dependent we are and how responsible we are for everything that goes wrong on this planet makes being alone even harder to take.

Losing our (illusory) independence does precisely not mean getting rid of inconvenient responsibilities:

And yet, what an evasion it would be to abandon anthropocentrism at the very moment when modernised humans, in their number, in their injustices, in their well and truly universal expansion, are starting to weigh up the fate of other lifeforms – to the point of being seen, in certain calculations, as the agents of a sixth extinction. (Latour 2021, p. 106 f)

We must remain capable of acting and consciously responsible instead of feeling tangled up in self-pity. But

I think experts can help us to work out new ways to relate to the world, and all there is day by day: Children are used to be depending, fearlessly loving and fragile, constantly on the heels of terms and consciousness, yet courageous and almighty. Adults know they are not almighty and have never been, so they hide their fragility, focus on the unambiguous, try to show endurance and resilience.

Obviously, it is beneficial if adults secure daily survival through being adult and caring for the fragile ones. And they can do some things that children can’t do yet. But – and this is the hypothesis my work is based on – it can be agency-expanding to understand children not only as the ones to be taught, educated, and tamed – but as co-creators of present realities. Answering Donna Haraway’s prompt “Make kin, not babies!“, I’d say: “More ooze, less order!”<sup>02</sup>

<sup>01</sup> “Art” of course could be used instead of “poetry” here, but this term seems just too worn out by the cult of the genius-artist. The delicate meaning I’m looking for gets lost in its folds.

<sup>02</sup> Recipe for grass-soup by Nirual and Rapsak Kenabru: Use 25% grass and 75% water. Purée thoroughly. For primordial ooze, add some sugar and yeast. Wait.



# How I try

The Books (prequel to my  
current endeavours)

Ten years ago, I spent one year in Iceland. After six rather dark and lonesome months, I moved into an Artist Residency in Reykjavik. The days became longer, and I was blessed with some very particular encounters. Among those were Abdolreeza Aminlari and Nico Economidis, an artist couple from the U.S. We spent most of the four weeks together. Walking along the seaside through ever-changing snow and sun, I photographed the two of them countless times while Abdi was taking pictures of Nico. It hurt incredibly when they left. I had been sipping some of their overflowing gracious love, but they took it all back to New York and left me alone again in the northern cold. To milden my heartache, I made two copies of a booklet with the pictures I had taken, titled *so good to see you*. I sent one to New York, and kept the other one. It was a gift to them as well as to myself; and a tribute to photography performing a tender gaze.

Following this, I produced a rather extensive series of such two-copied little books. All of them “for” (that is “through” and “to”) other artists, for short-term encounters, for places, for a dead whale, for other versions of myself. They all were materialised relations, co-creations objecting to time, space, and loneliness.

## Invisible Elephants

I have always earned my living by doing animated film- and sound workshops and working in art education as a museum guide.

This is part of my artistic practice, but I also perform a service. People pay to be entertained, educated, occupied. Many of my amazingly talented and inspirational colleagues are seen as and understand themselves as student-workers (no matter what age) – actually pursuing a different career.

That got me frustrated. I am bored being asked, after having held a workshop and leaving a group of people, including myself, glowing, inspired, thrilled: So – what do you *actually* do? Or: What is your own artistic practice? I decided to search for or create spaces where workshop situations and collaborations with kids and artists would realise the potential I presumed was left unseized. I aimed to stage the sometimes mesmerising collective artistic emanations; and to understand and grasp my role in the process more and more – not least

in order to make its quality be seen and appreciated. The Austrian school system is not particularly known for being an institutionalised cradle of artistic freedom, but I decided to occupy as much space as possible and use infrastructure that often lay fallow. The idea was to produce video experiments with school classes that would be radical co-creations, thoroughly woven and coherent but without a script or given topic. Movies like birch tree forests with one big, invisible root system of a collective process, giving as much agency to each individual as possible.

I realised eight such projects. In each case, the starting point was a collectively produced sound piece, afterwards becoming the film’s audio. Every kid would add at least some rustle or knock or bumble or buzz. The sound-artist Werner Möbius and the musician Oliver Stotz helped to make these sound-pieces enthralling and therewith abiding the rest of the process. The visual part then offered almost unlimited possibilities to get involved – which is inherent in the medium of video: Everything visual can become part of the collective piece; even the void, be it resulting from individual opposition and withdrawal or consciously applied as black gaps on the video timeline. Rooted in the sound and supported by me and sometimes other artists involved, the kids developed pictures, performances, choreographies, texts, stage- and light designs, costumes, scouted locations and so on and so forth. All fell into place, as the editing was defined by the previously produced soundtrack.

The projects went incredibly well. The films grew organically and became traces of particular constellations of people, space and time. Everybody involved was amazed seeing the videos on the big cinema screen in the end.

But the birch trees grew so well that I got lost in the woods: More than 125 students, around ten other artists, even more teachers – but I felt lonesome. The videos became quite eerie, featuring often violent pictures the adolescents found foreign and uncanny, although they had made them up themselves. Was it good to stage these films publicly? Would anybody not involved recognise the traces of relation that I saw? Would even the kids perceive the films as glowing collective emanation? Or rather as something merely unsettling? Was it ok to leave them alone with what they/we had done after the end of the project? By being willing to stage and appraise the kids, wasn’t I hiding behind them, pushing them on stage while patronising them? Whatever you do will eventually circle back to yourself – thus choosing to act means accepting to be vulnerable in a certain way. By trying to “give agency”, didn’t I coerce the adolescents to act in systems unfamiliar and conceivably upsetting to them?

If someone gave me money, time, and space, I would (still) love to continue doing and developing similar projects forever because it was so inspiring and exciting to me, and I hope for most of the participants involved. But things did not clarify, rather revealed their twisted and twirled complexity.

I had planned to build my PhD endeavour on those video projects, but I realised that just going on doing video projects with school classes wouldn't help to proceed. I decided to take a step back and sort things out. The little books I had made in Iceland had proven helpful to find hold through relating to moments, encounters, glimpses of insight. So, I tried to use a similar procedure, sleuthing red lines to find my way through my dizzying woods: Following resonating moments or terms or references, I produced such booklets again, each dedicated to singular threads of thought, not yet arranged or ranked; incomplete.

On my desktop, I organise files (texts, sounds, pictures, videos) of yet nondirectional interest in folders I call 'Voliere' – the French/German word for 'aviary'. I imagine them flying around in there, and each time I pry inside, another snippet will flit by and whisper something new. Therefrom, presenting my new series of booklets in our group of PhD candidates, I titled this loose collection *Welcome to my aviary*. I was hoping to enable the others to peer through some window into my fluttering space of thoughts, grasp some thread and relate. To enable this, I dedicated one book to each of my colleagues, taking up some image or idea I had grasped from their presentations. I thought of them as little gifts that would give an idea of how I try to relate. But unasked gifts aren't always happily received.

Within my short presentation, I had to pull all my yet unsorted red lines together, creating a rather unresolvable knot. And my colleagues found themselves more or less successfully knotted within, caged in my aviary. One of them said – at least – she was touched by my courage to show where I found myself trapped. That was not exactly what I had imagined.

### Creeping With

I was puzzled. I liked sitting in my aviary. I liked what I did with the kids, and I knew I did a good job, but the how, the what, and the why were so hard to explain and seemed hardly comprehensible.

For quite a while, I had been looking for references in the work of nature writers and scientists, for example, in the work of Jean Henri Fabre. Fabre spent most of his 19<sup>th</sup>-century-life crawling through his rocky fallow land, following beetles, bees, bugs and everything creeping and crawling around him – instead of spiking them on needles. His extensive *Souvenirs Entomologiques* became very influential for the development of behavioural science, although during his lifetime, Fabre was struggling with the reproach of being a writer rather than a scientist (cf. Auer 1995, p. 99f). Instead of taxonomising, he anthropomorphised the insects; not to abuse them as metaphors but to be able to relate to them as a condition to perception and understanding. Despite my admiration for Fabre – explaining what my work with children has to do with his research could seem a bit farfetched. But:

Aesthetic practices map out non-scientific epistemologies by drawing their form of knowledge not from syntheses but rather from the sensuous relations of non-predicative conjunctions in which their insights merge and coincide. [...] Compositions are combinations, montages, or "splices" without specific rules, not focused on identities but instead co-presenting the incompatibility of the elements, their nonsense.

(Henke et al. 2020, p. 39)

Jointing Fabre's commonality with the insects and my take on co-creation, I realise that Fabre, to me, is an exemplary artistic researcher of co-creation ("avant la lettre", of course). He sincerely tried to picture being the other – while always being conscious of necessarily failing, as in his case, the Other was not even human. Still, he invested inconceivable amounts of time, close attention, and effort to converge to other perspectives (even in a bodily manner by crawling with the bugs and beetles he observed) and of imagination, working unremittingly on conveying his insights through his writing. I feel very drawn to his way of working, with his effort to go where the beetles are instead of collecting them in his drawer, waiting hours for some critter's decision to show up and interact. But working as a teacher or educator, just waiting for kids to show up and interact is a bit difficult. However open and dialogical my concept is, I remain responsible for the bigger scope, for clarifying what can be expected and, at least to some







extent, for making things work out. The children's personal development, their learning, and their agency are what I feel obliged to aim for, regardless of who they are. My personal learnings and insights, if relevant at all, are always related to this prior aim of supporting the ones entrusted to my care.

I must admit, though, that I am constantly looking for moments when my young partners nor I need to fulfil such a given role or task; when I don't need to define any goal and we can roam side by side through unforeseen places, enabling insights none of us could gain alone. Artistic research, therefore, appeared as a luxurious space: "The potential of artistic research consists in asserting undisciplinarity, allowing for uncertainty, integrating negativity, and searching for clarity" (Henke et al. 2020, p. 18).

But artistic research as fundamental research is risky: You cannot know if all endeavours will yield something useful, insightful, enchanting, or maybe even something disorienting, shattering and dangerous.

Of course, I do not want to lure children or any other collaborator into possibly harmful situations. Therefore, I try to create something like a mobile safe space, which as a professional artist, I can carry, while together advancing to unpredictable grounds. The farther we get, the more we move into unknown fields and the more power it needs to hold such a trustful space lively and open. I anticipate what could possibly happen next, afterwards and in between and offer protection or guidance in time, if necessary, in a well-dosed manner, without demolishing what has already been achieved. The most vigorous resource to endure such tension is unconditioned and undetermined relatedness, love. Such bias should be avoided under most circumstances in other sciences and possibly endangers equal treatment in educational contexts. But it constitutes my artistic research superpower.

I find such an approach resonating in Olga Tokarczuk's acceptance speech for the Nobel prize in literature:

[...] Tenderness personalizes everything to which it relates, making it possible to give it a voice, to give it the space and the time to come into existence, and to be expressed. It is thanks to tenderness that the teapot starts to talk. Tenderness is spontaneous and disinterested; it goes far beyond empathetic fellow feeling. Instead it is the conscious, though perhaps slightly melancholy, common sharing of fate. Tenderness is deep emotional concern about another being, its fragility, its unique nature, and its lack of immunity to suffering and the effects of time. [...] It appears wherever we take a close and careful look at another being, at something that is not our 'self'. (Tokarczuk 2018, p. 392)

### Being a friend

I find it helpful to talk to myself as a child when trying to grasp and make understandable what I am seeking in co-creation with children. I was not a particularly lonesome child. I've had a loving mother, an absent father, caring grandparents, my dear sister, some peers and many trees around.

But I always longed for an adult friend of a different kind. I got furious when I realised that some adults were only pretending to be interested in my endeavours. I was longing for some sort of Peter Pan, joining my childhood adventures, taking them as seriously as I did, but being capable of doing things a child cannot do. Helping to realise fantastic plans, building stuff, or just assisting with endurance if I lost track.

When my first nephew L. was born eight years ago, I decided to try the best I could to be such a friend to him. But I did not expect what a close friend and artistic companion he would become to me.

When he was three,  
he sent this poem to me:

**Ich wünsche Dir schöne  
Geschenke im Winter.**

I wish you beautiful gifts in winter.

**Und schöne  
Schmetterlinge und  
Hasen in tot, die man  
anlangen kann.**

And beautiful butterflies  
and rabbits in dead, which one  
can touch.

**Sonst die ganze Welt in  
ganz ganz schön blau.**

Else all the world in all  
all-beautiful blue.

I was moved to tears. Since then, we have written a book about a sea-sick pirate, a knight who specialised in spinning fabric for tunics with a curly-haired horse, a lonesome pink dragon, a wolf that longs to be a dragon and miniature omniscient mole-dwarfs digging themselves from story to story. All of them fragile heroines, overcoming what Ursula K. Le Guin named the "killer story" (Le Guin 1986/1996, p. 152) and finding affirmation of different kinds.

We made audio pieces about the jungle-sea and its dwellers, with oceans walking over shady grounds and crabs becoming secret letters when they die; about wobbling, spinning, hovering, floating creatures and

critters from other galaxies; bacteria as big as a blue whale, monsters hollowing out the sun, fire dogs dying paw on paw; there were trees full of honey and water grounds gloopy like ice; dancing houses with secret mechanics, always close but never touching and a moon made of stardust.

We made animated films that took us to outer space in rockets made of wizened leaves. We've been turning L.'s room into the sparkling kingdom of a jellyfish. We read *The sea around us* by Rachel Carson, examined the sun's surface, recorded mud puddle music and spoke to a fish. Dear L., you gave treasures to me no kingdom could pay, and I tried to find things as precious to give them back to you.

Implying our relation, what we did together, the gifts I made for L. and even more what he gave to me, to my artistic research, to my PhD endeavour, at first seemed to yield clarification: It was just the two of us – not 125 foreign kids, no institution intercalated, no labour contract, no debts and duties.

But I soon realised my dilemmas followed wherever I went: L. and I were just two, but what we did was never clearly framed as a workshop, as something partly public. It had no defined beginning and will – hopefully – have no end. It is always intimate, private, and surprising. Plus, I am not only his aunt, his co-artist, and his friend, but also the sister of his mother, the daughter of his grandmother, the aunt of his younger brother, the sister-in-law of his father and so on and so forth. With all those people and, of course, many more, we both have relations that couldn't be more differing.

If I try to reflect on what L. and I do, the relations to all those people play immense roles. How did I communicate with and involve my sister, making it possible she would trustfully let her young one join me, going to places that she wouldn't? How do I not lose sight of my dear other nephew, whom I want to be a good aunt for just as well? How do I, often inexplicitly and from afar, anticipate the familiar situation L. finds himself in? Is it helpful for the whole family if L. is occupied for a while or is it rather stressful to set up a skype call for us?

These are rather truisms, but I realised that if I wanted to go deeper reflecting on what I do with L., what we do together, I find myself lost again in birch wood forests of relations even vaster than before. And: There is hardly any thought worse than the apprehension that L. could one day resent me for having published or "used" what we've had together.

Thus firstly, I am working on finding artistic forms with L. that we both agree on and want to share. But it is rather absurd to ask L. for such decisions, so in the end, deciding on what to publish in what way is part of my risk and responsibility. I have to approach imagining L.'s present and future perspectives as well as I can. Secondly, as a researcher, I am trying to find language and form to make my/our birch tree forest accessible, offering walkable paths, observation decks, ways in and ways out – keeping some areas restricted for privacy reasons or for the danger of getting irredeemably lost.

Sitting in my woods again, I tend to still feel lonesome. I am L.'s adult friend, but adult friends joining my adventures are still rare. There is hardly anyone stumbling over the same roots and trunks, having the same boles blocking sight, hardly anyone limping with me. Relating being my foremost aim, I'm struggling with the fact that seldomly within academic contexts, someone seems to be willing to relate. Or is it me, in fact, who can't relate? When getting lost, lifting one's gaze can help. The stars are far away – and pulling them too close would even be counterproductive because only in constellation with others can they offer orientation.

At ZOOM Children's Museum in Vienna, where I have been working for more than 12 years, dozens of inspiring artists have worked with children, mostly throughout their professional biographies. Unimaginable, they wouldn't know at least parts of my woods.

Hence, I now started a book project. My aim is to provide a stage for the amazing artists who have shaped the Children's Museum. I did interviews with 12 colleagues so far, but we did not primarily speak about the museum. To start with, I asked them: What would you do if you would get to spend time with yourself as a child for one afternoon? Where would you take yourself? What would you ask or tell or show yourself? In all the conversations, we got to some sort of initial art moment in childhood that, in diverse manners, related to what my colleagues pursued as professionals and what they thought and sought. For example, one would build spaces to hide and protect his peers, another collaborates with the sea by drawing in the sand, another was thrilled by a painting of flowers that flies mistook for real, yet another would build little bombs in order to create holes.

I am fascinated by how a person becomes visible through its individual and gradual creation of thoughts while speaking (thinking of "Über die allmähliche Verfertigung der Gedanken beim Reden", the famous essay by Heinrich von Kleist). Thus, I would like to just publish those conversations in full length. But of course, no one would ever read, and my colleagues wouldn't be very pleased either.

Instead, I need to find a narrating voice, retelling those stories, that will grasp the particular voices of my colleagues and open up this sparkling spectrum of kinship between art making and relating to the world as a child or with a child. As I am also rather an amateur in writing, I might do what amateurs (people who love) can do best: I want to write letters to my colleagues, mirroring the spaces our talks opened up for me.



## Misleading list of learnings:

<sup>1</sup>  
Misunderstanding  
something means  
understanding  
something else.

<sup>2</sup>  
Co-creation means  
standing next to each  
other, not one behind  
the other.

<sup>3</sup>  
Be vulnerable and  
confident.

<sup>4</sup>  
Wisdom is not bound to  
age or species.

<sup>5</sup>  
The good ones have  
stone collections  
(but know, one can  
never own a stone).

<sup>6</sup>  
Love is my superpower.

<sup>7</sup>  
If you cannot see,  
listen and hum.

<sup>8</sup>  
If you cannot hear,  
borrow someone's ear.

<sup>9</sup>  
Always finish your fear  
up to the last drop as  
long as it is liquid.

<sup>10</sup>  
The gap between you and  
me is the reason why  
we're not alone.

I am convinced that the knowledge gained in artistic research cannot be named and listed. It lies in the process, its fluid methodologies, and in the making that can obtain and provide agency. Its strength is rather showing than telling. But if I tell, maybe some will look, so I can show, and what is seen might be handled with care. So here is my doubtful list of certain learnings:



## Post Scriptum

Publishing a text is like writing a letter into the blue, leaving me waiting for your answer. Unfortunately, I don't even know your mailing address, but I hope my words will still be well received.

reposition is an anonymously peer-reviewed publication – so to my great delight, I have already been provided with two densely filled pages of review text, one in German, the other in English. The idea of a peer review is to consider the reviewer's critique to improve the text before publishing. I am very thankful for the considerate feedback and would like to answer those letters. But I am not allowed to get in touch.

Therefore, I couldn't resist starting imagining the persons behind the text. Please excuse my wild attributions in the following – any resemblance to persons living or dead is purely coincidental:

In my mind, the German reviewer is a woman working as a philosopher in an academic context. She is a very considerate and empathetic person, with a cabin on some ocean's shore, who, in between reading and writing, likes going for long walks, incorporating the ever-changing colour of the sky into her thinking. Somehow, I imagine she could have written those lines by

Rachel Carson:





One stormy autumn night when my nephew Roger was about twenty months old I wrapped him in a blanket and carried him down to the beach in the rainy darkness. Out there, just at the edge of where-we-couldn't-see, big waves were thundering in, dimly seen white shapes that boomed and shouted and threw great handfuls of froth at us. Together we laughed for pure joy – he a baby meeting for the first time the wild tumult Oceanus, I with salt of half a lifetime of sea love in me. But I think we felt the same spine-tingling response to the vast, roaring ocean and the wild night around us. (Carson 2017, p. 15)

Obviously, I feel very kin to her and also well received when she writes:

Bearing on life and revealing of realities through 'making art' positions the world of aesthetics at the right point: Inside of the art-creating human entity, within social encounter, intersubjective spaces... instead of within art 'itself'. A beautiful project. [thank you!, note VMF]. The project's premise lies in the tension between experiencing contingency ('One has to be oneself all alone') and an articulatory interpretation of the animal social, which is to be resolved through active making kin (Haraway). The focus lies on infantine competences, that refer in a fully positive way to the Anthropinon, namely the human capability to actively create one's relation to reality – in the scope of the presented project, the author is looking for means and ways to uncover and maieuticly foster such abilities. (Excerpt from review, translation, E. & O.E.)

I would also like to thank her for suggesting the reference to Nietzsches 'Holy Yea!' as an existentialist-anthropological grounding for my appraisal of working with children:

Innocence is the child, and forgetfulness, a new beginning, a game, a self-rolling wheel, a first movement, a holy Yea. Aye, for the game of creating, my brethren, there is needed a holy Yea unto life: ITS OWN will, willeth now the spirit; HIS OWN world winneth the world's outcast. (Nietzsche 1999/1883–1885)

I am no philosopher, and for the time being, I can just use this as a beautiful poetic reference. But going further, I think I would tackle "Innocence is the child, and forgetfulness" (ibid.). In my experience, adults still tend to deny that children's souls can be abyssal – and to abuse them as a screen for their lost and romanticised insouciance. I try not to do so.

As she suggested, I also peeked into Helmuth Plessner's *Levels of Organic Life* and his *Law of Mediated Immediacy*. I totally agree that I am struggling with shifting from the individual observation to the general and with the question of how my insights can and why they should be made accessible for anyone out of

reach. Akin to this, the question is whether any structured way of finding new young co-creators exists, not only relying on serendipity and young wise souls appearing in my life. Plessner's thinking is therefore added to my shelf of yet unread but already inspiring books. The English reviewer feels a bit more distant. I imagine him to be a city dweller, either baldheaded or, if available, wearing a curly and well-trimmed crown of hair. He is very established and cross-linked within academia. He has an artistic background but is very sceptical if the term 'artistic' is used as an excuse for not meeting scientific criteria. He is very good at writing proposals. Summarising my approach, he endowed me with the term 'methodical vulnerability/uncertainty'. This sounds good, although 'vulnerability' by itself is not what I aspire to. But I am convinced that the admittance of being fallible, doubting and courageously in love is the necessary condition for methodically finding ways to relate.

## ◆ Post Post Scriptum

I must admit, meanwhile, I have learned that the excerpts I received had been written by *three* reviewers – two male, one female. But I have become so fond of my imaginary responders that I decided to keep hold of them for the time being.

Right before giving this text out of hand, I have been talking it all through with L.; fortunately, he is no imaginary nephew but a very focused and thoughtful reviewer as well. He said this is now ready to be published.

Thank you for reading, and all the best to you!

Verena

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# List of Figures





# Re- writable Creatures

Correspondence  
between

Daniel

Ashwanden,

Vera

Sebert

and

Lucie

Strecker

on Mimesis

and

Hybridity

in Choreography



# Daniel

(ANGEWANDTE PERFORMANCE LABORATORY AND DEPARTMENT OF ART  
AND COMMUNICATION PRACTICES)

# Aschwanden- dent,

Daniel Aschwanden† was a Swiss performer, choreographer, director and curator who lived and worked in Vienna. Winner of the Austrian State Prize for Art and teacher of Art and Communication Practice, he shaped the field of study of performance art at the University of Applied Arts Vienna and its Angewandte Performance Lab (APL). Posthumously, he received the City of Vienna's Medal of Honour.

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# Vera

(AUTHOR AND ARTIST)

# Sebert,

Vera Sebert is a media artist and writer. Her works embrace visual media, language, film, and computer programs. A computer code allows the adaptation of all other media. The hybrid exposes the categorical separation between artistic image and text production and creates a space for experiments that explore the mesh of code, image, sound and language in a digital environment.

Lucie Strecker is an artist and performer who works internationally across various media, exploring experimental systems in art and science. She is a Fellow of the Berlin University of the Arts, was appointed at the Angewandte Performance Lab (APL) and is currently lecturer for Art and Communication Practices at the University of Applied Arts Vienna.

# Lucie

(ANGEWANDTE PERFORMANCE LABORATORY AND DEPARTMENT OF ART  
AND COMMUNICATION PRACTICES)

# Strecker



The correspondence presented to you here emerged during the rehearsals for the performance *Rewritable Creatures*.<sup>01</sup> Originally, it was meant to be a testimony to different conceptual approaches. Later on, parts of this document became part of the production. Its publication now becomes an act of recalling, of remembering and rewriting the irreplaceable: life.

The performer, choreographer, director and curator Daniel Aschwenden died before he could go public with the results of the project presented here. *Rewritable Creatures* was performed in its unfinished form, posthumously and in his memory, in October 2021. The project addressed transitions where human and non-human bodies and aspects—animal, plant and machine—encounter and reconstitute each other by mimicking or “rewriting” each other. We explored the activities of these different categories of beingness: “building a shelter”, “living in a pack”, “growing”, “photosynthesising”, “performing”, “calculating”, “sounding”, and “becoming and perishing”. We also tried to understand whether hybridisation between beings of different species presupposes their mutual ability to describe each other in different media while themselves remaining rewritable as bearers of new qualities. The title emerged late in the process. “Rewrite” describes an algorithmic procedure: A standard sequence of several symbolic links is newly or differently replaced following fixed rules so that a dynamically changing, self-rewriting structure emerges.

This principle also applied to the operating modes of neuronal networks that we employed. Measured data of visual events and choreographic or textual nota-

01

Artistic Direction, Concept and Performance: Daniel Aschwenden, Concept and Performance: Lucie Strecker, Dramaturgy and Choreographic Coaching: Philippe Riéra, Text and Media Design: Vera Sebert, Programming and AI Concept: mlaxr, Installation: Lukas Allner and Daniela Kröhnert, Sound and Media Technology: Stefano D'Alesio, Media Theory: Jens Hauser Systems Biology Consulting: David Berry, Partner in Dialogue: Genoël von Liliestern

A co-production of association CHIMERA for Cybertanz and Performance and brut Wien. With kind support of the Cultural Department of the City of Vienna, the Federal Ministry of Art, Culture, Public Service and Sport and the University of Applied Arts Vienna, as well as the FWF-PEEK project Conceptual Joining.

tions were recognised and remembered by an AI. This allowed deriving a network of probabilities. Once this network of probabilities began to generate data in the live performances on its own, the diversions were partly identical but also different from the original choreography. Some sequences were related, but no longer identical. ‘Rewrite’ in the sense of technological terminology, therefore, denotes actively writing anew or rewriting, which is concerned with a transformation of medial (data) bodies.

Today, on 18 August 2022, briefly before the publication of this text, the title implies something else. Rewriting is an attempt to approach our lost friend by transcending the realm of this world, to accompany his crossing over to the very threshold at which we encounter ourselves, our own mortality and the mortality of all beings. In this assemblage of letters, much remains unsaid, breaks off or stays incomplete. The same way our collaborative work on this project finds no end but takes its course in the incomprehensible and the unavailable.

WAS PASSIERT BEIM LESEN DES  
VORRÜBERGEHENDEN?

WHAT HAPPENS WHILE READING THE  
EVER-SO-PASSING?

we met a few years ago back then, you were conducting choreographic research on the behaviour and movement repertoire of dogs and the dynamics of packs. A dog trainer even trained you together with other dogs. For this purpose, you approached the animals mimetically, on all fours, barking, and growling. Together with Klaus Spiess, we later explored biotechnical and hybridising interventions in organisms as part of the performance *The Hour of the Analyst Dog* (Spiess/Strecker 2016, p. 78f.). The transformations were no longer visible to the naked eye here, and they were not mimetic either. Other actors were performing. Cells, molecules, apparatuses. A gene sequence from Sigmund Freud's dog was cloned in vitro into the blood cell of a Lacanian psychoanalyst. The

02.02.2021  
Dear Daniel,

three of us indeed found this genetic material in the Sigmund Freud Archive in London – hairs of the dog 'Jofi', woven into a rug by his daughter Anna. "Nothing is more amazing than the simple truth, nothing more exotic than the world around us, nothing more fantastic than actuality." (Segel 1997, p. 79; german original in Kisch 1924, p. 659). The activation of this bio-designed cell by the audience's body heat then became a 'molecular timer' that later clocked the rhythm of the choreography. Jens Hauser called invisible processes of this kind 'microperformative' (Hauser 2021, p. 12ff.). Are any of those represented in our new project?

The agenda of Cynic transformation has indeed been with me since as a process in different contexts – the perspectives on it are evolving. It has definitely been expanded in our project through new ways of thinking, such as those negotiated under the term "microperformativity" or also in the article by Brian Stross *The Hybrid Metaphor: From Biology to Culture* (Stross 1999, p. 254ff.). The focus here lies on the relativity and cyclicity of hybridisation processes. Consequently, the hybrid is also always a culturally prescribed intermediate state, a strongly socially defined construction that soon changes into a new "normal state", which is then, in turn, open to new hybridisations. We can interpret these hybridisation cycles and their narratives as social developmental processes. Our project *Rewritable Creatures* is, among other things, a movement experiment based on machine learning. A neuronal network is trained in how organisms transform themselves into hybrids through the mimicking of movement sequences. For this purpose, we use video material of hybridisation processes from biology, architecture and robotics, as well as Vera Sebert's literary text fragments that describe

27.02.2021  
Dear Luois,

such processes. A depth-sensing camera is employed to record how we interpret the textual description of hybridisations through movement. 50 sequences of these motions are then digitally coupled with 50 video sequences. An algorithm thereby learns how we derive our movement repertoire from hybrid formations between biology, robotics and architecture. Later on, the algorithm will be able to make suggestions for new movement sequences that lead to unknown mimetic hybridisations. They become visible through surprising links between the video sources in interaction with our movements. We would like to expand the choreographic material through a live improvisation with AI. We understand our bodies as *Rewritable Creatures* and (model) organisms of this experiment. In this experimental set-up, we try to approach processes of transformation through embodiment and imitation – a procedure that contrasts strongly with "pure" scientific approaches, although they should be seen relationally. Until recently, you pursued foundational research and artistically sought solutions that invasively engage the body, that draw their radicality from penetrating the body, from permeating physical boundaries, a momentum that has acquired a strong dominance in the history of performance. How do you now assess the procedures that we are trying to establish?

20.03.2021  
Dear Daniel,

I am concerned with the bodily boundaries of the performer. I am concerned with how technologies, social norms, scientific narratives or even art become invasive and change what we understand as a human entity. Biology is not to be taken for granted – neither is culture. Both terms are vague and can only be apprehended in relation to each other. What we constantly encounter, however, are zones of transition, overlap and transformation.

DAS BEWEGTE BILD KRÜMMT SICH UND EIN  
VIELGLIEDRIGES SUBJEKT QUILLT  
HERVOR – SEINE FLÜSSIGEN WESENSZÜGE SICKERN  
IN DIE HOHLRÄUME ZWISCHEN DEN BEGRIFFEN.

THE MOVING IMAGE BENDS AND A POLYNOMIAL  
SUBJECT SPILLS FORTH – ITS LIQUID  
TRAITS SEEP INTO THE HOLLOWES BETWEEN CONCEPTS.

What happens to us in spaces that we, as artists, design so that we can probe ourselves as transitory beings? To me, this project does not revolve around an intervention into the organism but instead around the fundamental interconnectedness of organisms with their environment. Movement in space and imitation works “biomimetically” in my view: If we imitate, this rebounds on our organism and can even change it genetically. This is illustrated by biological mimicry: a butterfly develops patterns on its wings that resemble the eyes of its enemy. How is this possible? The writer and mimicry researcher Vladimir Nabokov called this the “incredible artistic wit of mimetic disguise” (Nabokov 1973, p. 110), also to counter a utilitarian Darwinism. Nabokov’s explicit rejection of natural selection is largely based on his conviction that this theory cannot fully explain the observed complexity and sophistication of the natural world. In this context, Nabokov emphasises above all the phenomenon of animal imitation and the extreme degree of its refinement: “Natural selection’, in the Darwinian sense, could not explain the miraculous coincidence of imitative aspect and imitative behavior, nor could one appeal to the theory of ‘the struggle for life’ when a protective device was carried to a point of mimetic subtlety, exuberance, and luxury far in excess of a predator’s power of appreciation.” (Nabokov, *ibid.*). Nabokov doubts that selection pressure has to work on such a meticulous scale to produce, for example, “markings mimicking grub-bored holes” on the leaf-like wings of a butterfly. On a scientific level, Nabokov argues that Darwin’s model of evolutionary selection falls short since the postulated mechanism is too rudimentary to produce all the fantastic twists and turns of nature (cf. Nabokov 1989, p. 154).

Exposing our bodies to a changing environment through technology and responding through mimetic movement is admittedly non-invasive but speculates with an evolutionary and aesthetic dimension:

the surroundings and counterparts shape the organism, just as the organism shapes its specific environment and acts on its counterparts. What do you feel, for example, when you immerse yourself so intensively in the environment of dog packs and mimetically approach them?

DREIGENTWÄCHSTALTERN.

THREEOUTGROWAGEING.

15.04.2021  
Dear Luois,

I begin to feel more intensely, shifts in perception are taking place:

DAS ERFASSBARE VERZWEIGT SICH  
ENTLANG DER Z-ACHSE.

THE APPREHENSIBLE BRANCHES  
OUT ALONG THE Z-AXIS.

Feeling feelings. Smelling becomes more important, and with it, odours: the ground inches closer and thereby my inner conflict to overcome a certain revulsion, the desire to detach myself from the ground, to remove myself olfactorily from it. It is thus not only a shift of sensual perception, but I also encounter therein the civilisational formatting of such perception. Admittedly, certain rituals of doghood related to other dogs, such as sniffing genitals, sniffing urine-marked areas on the ground, or marking by peeing, I have not practised, or at least not consistently – in this sense not as radically as the ancient Cynic philosophers in classical Greece – but certainly attempted to as a naked dog-human in the gallery context. You recall and have followed some of these actions. In the process, I encountered both the most diverse forms of smells but also the resistance to my curiosity that had become physical, sometimes even massive resistance from male companions of a woman I was sniffing. I was shoved or beaten. I also noticed that I was creating irritation about how to deal with myself. And I also discovered this irritation among the dogs, who, I felt, understood very well that I was not a real dog, but also realised that I belonged to the pack in a different way than the other humans. The biggest dog in my pack, for example, regularly jostled me, pushed me aside as if to prove his dominance, and I was glad that he conducted these body checks in a relatively good-natured way and without using his teeth. The other day I was out walking and saw a pack of

dogs: remarkably, they were wearing some kind of colourful overalls, a fast-moving horde on all fours, almost as if they were dressed for a Benetton advert. From a distance, one of the dogs' clothing resembled a spotted leopard skin, but on closer inspection, the black dots proved to be printed paws. These dogs were strongly anthropomorphised by their owners; I, in turn, felt clumsy walking on all fours compared to the agility, mobility, speed

of the animals. The sensitivity of my hands and feet also changed when I "worked" barefoot and with bare hands in summer, I felt the texture of the ground. And just as some of the dogs nowadays are clad in "dog shoes" to protect them against extreme cold and salt on the asphalted, sealed roads, i.e. the human, civilised environment, I later protected my hands with gloves, as I had often pulled splinters. It is always a matter of approximation – such as when I practise growling for hours and almost faint from the onset of hyperventilation symptoms. Yet, my controlled humanness indeed dissolves at times in this experience, I am present and growling, and in that growling, I exist. In Dietmar Dath's novel *The Abolition of Species*, a portrait is drawn of a cultivated wolf fighting an unfortunate surviving human, ultimately biting his throat as an expression of his philosophical-cultural, as well as physical-combative superiority and contempt towards this creature reminiscent of 'white trash' in a "bestial" culture war. The attempts at transformation are thus always also an attempt to become 'an Other' – or to experience contact with otherness. They are also an attempt (even if failing) to enter into a different relationship with nature. In her book *Staying with the Trouble*, Donna Haraway speaks of the search for true stories that are simultaneously fabulations and speculative realisms (Haraway 2016, p. 10ff.). What do you think about this in relation to our project? How does it navigate between fabulation and scientificity?



07.05.2021  
Dear Daniel,

the biosemiotician Johann von Uexküll wrote in his book *Umwelt und Innenwelt der Tiere* [Environment and Inner World of the Animals] about how stimuli from the outside world – chemical, visual, mechanical – become signs that are either interpreted differently or similarly by organisms. He argues that animal species differ in their environmental perception according to how their neural pathways are arranged (v. Uexküll 1921, p. 166ff.). This arrangement reflects the objects and stimuli of the environment and is a sort of counter-world or mirror world. He goes on to say that there should be “nothing more graceful and interesting than such a view of the world through the medium of various counter-worlds” (v. Uexküll 1921, p. 169). I think this sentence also applies to your practice, but possibly also to your question to me. What does this sentence mean? Does he mean: when I engage with the world of another organism, seeking to expand my senses to explore the ‘opposite world’ and look at my human world in an altered way, is that then graceful and beautiful?

HIER GERINNT DIE  
ERBLICKTE SUBSTANZ.

THE BEHELD SUBSTANCE  
COAGULATES HERE.

Imagining – fabulating – how other beings perceive the outside world turns into empathy. Your imagination becomes a body, the pattern of a neural pathway. The sign becomes ‘flesh’ and vice versa. We also refer to the concept of rite in our project. In a ritual, thresholds of transition are marked by actions, objects, sound and gestures to consciously move from one reading of the world

to the next, i.e. to change perspectives and thereby become ‘an Other’. Many examples exist of rituals in different cultures and epochs that accompany the transitions from human to animal, from child to adult, from life to death.

*Rewritable Creatures* addresses the tension between language and body, between notation and performance. In anthropology, negotiations take place as to whether the myth that has been passed on existed first as a narrative, or whether it was the performed rite, i.e. the action itself (Fischer-Lichte 2012, p. 16ff.). In our work, we follow both paths: we fabulate, invent transitions between beings and times, we describe and imitate.

This turns ‘doing-as-if’ into empathy, which only becomes possible for us through embodiment. Conversely, we move like other creatures, dance with robots, animals, plants and architectures, and then describe what we have experienced through this. In this penular movement we experience ourselves as hybrids.

04.06.2021  
Dear Lucie,

the counter-worlds seem to multiply in the mirror of technological medialities and modalities – thus, we face the endeavour of placing ourselves in relation to ‘neural pathways’, which are arranged, for example, mathematically as clusters of neurons in networks,

TABELLEN UND ZELLEN BESCHREIBEN  
EINE ELLIPTISCHE BAHN.

TABLES AND CELLS DESCRIBE  
AN ELLIPTICAL TRACK.

attempting to approximate realities in alignment procedures based on Deep Learning, but simulating new realities in these procedures as well. With our thinking of transformations in relation to three structural categories (plantimal<sup>02</sup> / architecture / cyborg), we approximate theorist Jeanette Zwingenberger’s reflection on the question of the constructional character of landscape, in her introduction to the exhibition *L’homme Paysage*, that is, whether humans still perceive themselves (only) in their anthropomorphic projection or agree to be part of the ‘realms’ of the animal, plant and mineral (Zwingenberger 2006, p. 12ff.). I recall in this context a description of a Miao ritual, a minority in southern China: the locals worship trees. Especially camphor trees. When a baby is born, one plants a tree. A deceased person does not receive a grave

<sup>02</sup>

The Plantimal is a hybrid of plant and animal. The marine gastropod *Elysia chlorotica*, for example, is known to have hijacked the photosynthesising organelles and some genes of algae.

nor a gravestone but is laid into the ground, planting a tree there as well. It is strictly forbidden to cut down a tree. The Miao of this clan believe that a holy god and the spirits of their ancestors live inside the trees. The planting, growing and tending of the tree and its spirits reminds us that we ourselves are “liminal entities” (Turner 1977, p. 95ff.) I don’t necessarily think of grace and beauty, but I suspect that the latter might shine in the lively communication between us, in the attempt to find practices and take different perspectives in space and time in assemblages that we create for this purpose together with our colleagues: as manifestations of fluid territories between post-humanist,

technoid and natural worlds. Vera, as the author of the text elements of our performance, describes these. Her poetic linkages serve as an impulse for movement improvisations. On the other hand, they are a framework for us that newly arranges the various conceptual and material elements of our choreography. We noticed that we were applying a language to ourselves through the learning algorithm and, at the same time, asking an author to re-relate the building blocks of our material through her text. This gave rise to further cycles of hybridity. The fundamental mimetic approach was owed to the attempt to approximate hybrids by imitating posture and language. We have attempted declination in different categories: Choreography, improvisation, design and architecture, artificial intelligence, biology and literary text. What was your approach, Vera?

20.06.2021  
Dear Daniel,  
dear Lucie,

while writing, I create images: to draw closer to you, I collect close-ups of human, animal and botanical bodies, of hardware and software and of architecture, which are collaged into short descriptive sentences.

LEBENDIGE SCHRIFTKOLONIEN  
NISTEN IN DEN ÜBERWACHUNGS-  
LÜCKEN DER SZENERIE.

LIVELY SCRIPTURAL COLONIES  
ARE NESTING IN THE SURVEILLANCE  
GAPS OF THE SCENERY.

Abstract conglomerates without clear visual contours emerge. These linguistic reversals offer impulses for new movement patterns in the fabric of the performance.

Simultaneously, they are also subjected to a transformative process: with the help of algorithmic tools, the architecture of their grammatical scaffolding and their semantics splinter.

ZERSPENDIGENDE GESTE  
TRÄSTE WÄNEN.

SHATTERING GESTURES TEAR  
TO TATTERS.

These meaningless fragments expose the constructed nature of meanings and open new spaces for thinking about our physique as a fluid construct that is always subject to interactions with its surrounding and, at the same time, functions as an environment itself. What happens when reading this very text? How can language become an actor in the transformations you both describe? Where runs the boundary between coded tools and an actor?



FIG. NR. 1  
Video documentation  
of the performance,  
QR Code. Or see  
[cargocollective.com/  
streckerlucie/  
Rewritable-Creatures](http://cargocollective.com/streckerlucie/Rewritable-Creatures)

Your questions prompt us to talk about the performance itself. As I write to you, however, I think of only one fact: Daniel no longer lives. The artistic engagement with 'zones of transition' was caught up in a reality indescribable to me. A speechlessness spread through me after his death. How can I articulate the common without his voice? His wish was for us to continue the project after his passing. Thus I grapple with whatever remains: Videos, soundtracks, photographs and this correspondence here. In the enactment, these documents are made to speak. Recorded sequences in which Daniel and I derived movement impulses from your sentences became the source of an AI-generated video that interacted with my remarks and corporeal expression. Your sentences were inscribed in Daniel's and

18.10.2021  
Dear Vera,

my bodily dynamics. I repeated actions, gestures, postures that Daniel had performed. They evoked his moving image and made it generate new patterns of movement despite his painful absence. Our dramaturg Philippe Riera later called the production a requiem. Working on it gave shape to our grief. All building blocks of the project have received this signature of loss. Your texts, too, changed their meaning. Every transformation seemed to point to the ephemeral, which we keep describing in order to understand it. Your sentences, the algorithms of the AI, the fragmentary records of the samples – they all became signifiers of a gap that cannot be closed.

DAS ERGEBNIS BLEIBT INSTABIL.

THE RESULT REMAINS UNSTABLE.

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# List of Figures

Fig. nr. 1: Video documentation of the performance, QR Code. Or see [cargocollective.com/streckerlucie/Rewritable-Creatures](http://cargocollective.com/streckerlucie/Rewritable-Creatures)

# Authors of this issue

# Barbara Graf

*(Stitches and Sutures.*

*Textile Metaphors and Graphic Topologies as  
Methodological Artistic Tools, p. 27)*

is an artist and lecturer at the University of Applied Arts Vienna, Institute of Art Sciences and Art Education, Department of Textiles. Main area of work: body shells, flexible sculptures as a second skin and garments as living sculptures. Since 2018, Artistic Research PhD project titled “Stitches and Sutures” on the visualisation of bodily perception at the University of Applied Arts Vienna.

# Tanja Kimmel

*(Making museum repositories greener, p. 41)*

worked as textile conservator at Kunsthistorisches Museum Vienna from 2004 to 2015, responsible for all conservation matters of the museum’s new central storage. Since 2015, Head of the University’s Textile Conservation Department. Pursuing a doctoral programme in philosophy since October 2018. Committed to sustainability, actively works to implement this essential topic in university teaching and research.

# Barb Maoek

*(Exercises in Existential Eccentricity.*

*Conceptualising autoimmunity as a variation of  
the conditio humana, p. 57)*

is a writer and artistic researcher, and studied psychology and Art & Science. She received the Award of Excellence of the Austrian Ministry of Science in 2018 and the annual prize of the Society for Artistic Research in 2019. Since 2021, she has been a research fellow of the Austrian Academy of Sciences and works on her PhD project on autoimmunity at the University of Applied Arts Vienna.

# Daniel Aschwanden†

(21.01.1959–08.07.2021)

*(Rewritable Creatures.*

*Correspondence between Daniel Aschwanden,  
Vera Sebert and Lucie Strecker on*

*Mimesis and Hybridity in Choreography, p. 111)*

was a Swiss performer, choreographer, director and curator who lived and worked in Vienna. Winner of the Austrian State Prize for Art and teacher of Art and Communication Practice, he shaped the field of study of performance art at the University of Applied Arts Vienna and its Angewandte Performance Lab (APL). Posthumously, he received the City of Vienna’s Medal of Honour.

# Pamela Bartar

*(Citizen Science – a new field for the arts?, p. 15)*

works in research & /social/ innovation (R&I) and science communication projects; she is a teacher at the Center for Didactics of Art and Interdisciplinary Education and a volunteer mentor for citizen science projects at the interface of art and design at the Austrian platform Österreich forscht.

# Valerie Messini

*(Nothingness in the digital Space, p. 73)*

is a registered architect and an independent digital artist. She graduated from the University of Applied Arts Vienna (studio Prix) in 2011 with distinction. She co-founded 2MVD, which focuses on connecting architecture with innovations and advances in the field of digital art and technology. She has been active in academia since 2013 and currently works on her PhD thesis, supervised by Peter Weibel.

# Verena Miedl- Faist

*(Await what the stars will bring or moulding the gap, p. 95)*

is an artistic researcher, writer, friend, art educator and photographer based in Vienna and its neighbouring woods. Currently, she is a PhD in Art candidate at Center Research Focus at the University of Applied Arts Vienna. Her projects have been hosted and screened by museums and cinemas and exhibited in various group shows in Vienna and abroad.

# Vera Sebert

*(Rewritable Creatures.*

*Correspondence between Daniel Aschwanden, Vera Sebert and Lucie Strecker on*

*Mimesis and Hybridity in Choreography, p. 111)*

is a media artist and writer. Her works embrace visual media, language, film, and computer programs. A computer code allows the adaptation of all other media. The hybrid exposes the categorical separation between artistic image and text production and creates a space for experiments that explore the mesh of code, image, sound and language in a digital environment.

# Lucie Strecker

*(Rewritable Creatures. Correspondence between Daniel Aschwanden, Vera Sebert and Lucie Strecker on Mimesis and Hybridity in Choreography, p. 111)*

is an artist and performer who works internationally across various media, exploring experimental systems in art and science. She is a Fellow of the Berlin University of the Arts, was appointed at the Angewandte Performance Lab (APL) and is currently lecturer for Art and Communication Practices at the University of Applied Arts Vienna.

reposition

Journal of  
reflective  
Positions in  
Art & Research



# Erratum

Sometimes we need to reposition ourselves.

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ZFF.UNI-AK.AC.AT, ONLINE OPEN ACCESS:



Publisher  
UNIVERSITÄT FÜR ANGEWANDTE KUNST WIEN  
UNIVERSITY OF APPLIED ARTS VIENNA  
OSKAR-KOKOSCHKA-PLATZ 2  
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Editorial Assistance  
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130

Graphic Design  
HAMMERALBRECHT, HAMMERALBRECHT.DESIGN  
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Type  
“DROULERS” BY BUREAU BRUT, BUREAUBRUT.COM  
“WALZE” BY FRANZ TIEFENTHALER,  
@FRANZ.TIEFENTHALER, @TOTALLY.MY.TYPE

Print  
BÖSMÜLLER PRINT MANAGEMENT GESMBH & CO. KG, STOCKERAU

ISBN  
978-3-9505090-1-4

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