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RAPPORT nr.19 2023

INSTITUTIONEN FÖR
ESTETISKA ÄMNEN
UMEÅ UNIVERSITET

TILDE NUMBER 19 2023

DEPARTMENT OF CREATIVE STUDIES
UMEÅ UNIVERSITY

Artistic Research Within Creative Studies

TILDE NUMMER 19 2022

INSTITUTIONEN FÖR ESTETISKA ÄMNEN,
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Tilde ~ Rapporter från Institutionen för estetiska ämnen
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Omslag och grafisk form: Mikael Heinonen
Redaktionens adress: Institutionen för estetiska ämnen, Umeå universitet, 901 87 Umeå
Institutionens hemsida: https://www.umu.se/institutionen-for-estetiska-amnen/
Hela nummer finns tillgängliga digitalt på adressen:
https://www.umu.se/institutionen-for-estetiska-amnen/forskning/skriftserier-och-rapporter/

Tilde ~ Reports from the Department of Creative Studies
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Electronic copies:
https://www.umu.se/institutionen-for-estetiska-amnen/forskning/skriftserier-och-rapporter/

Tilde ~ nummer 19

Tryckeri: Print & Media, Umeå universitet
ISBN: 978-91-7855-955-8
ISSN 1103-8470
ISNR UM LÄR--4--SE

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INTRODUCTION

Artistic research has in recent years become an established field within academia. In 2021, Umeå University established UmArts as a research centre with the aim to create an interdisciplinary artistic research environment for visual arts, architecture, design, and creative studies. This *Tilde* publication is the first from the Department of Creative Studies to focus on artistic research by gathering together our past, ongoing as well as future artistic research processes. The intention is to showcase the position we are currently in as a department navigating the field of artistic research. The theme of the publication is processes. The starting point is that we must be patient. We cannot rush such a process. Still, challenges need to be met with actions. In so doing, questions arise. We stumble, we fall, we rise, analyse, and move forward. We believe that we learn through experience, which is not linear. Sometimes, we learn from actions in the past. Other times, we learn in the moment of creating. An artistic action will trigger a reflective reaction. An artistic failure may be a research breakthrough. We believe that the artistic actions, the doing, the process of practising our art is the key parameter for feeding an artistic research process. Namely, the artistic activity must be embraced and the skills and knowledge embodied by the artist seen as a tool in the research activity.

There is a long tradition at the Department of Creative Studies of conducting research within educational science in visual art, crafts/sloyd and music. Accordingly, our previous educational research has often included interdisciplinary approaches to our art subjects. In recent years, artistic research has grown in importance at the department. Besides the aim of artistic research to generate new knowledge to an artistic practice, it holds the potential to add new insights to the educational scientific field regarding practical, embodied and tacit knowledge, and new understandings of aesthetic activities and experiences.

Ele Carpenter, curator, artist and professor of Interdisciplinary Art & Culture and director of the UmArts Research Centre, describes in her text certain challenges in the process of building up a research environment for artistic research. Moreover, she highlights some of UmArts' initial strategies for working with a relaxed and flexible interdisciplinary approach to developing research within the highly diverse fields of arts.

Anders Lind, artistic associate professor and music composer, adopts a media ecology perspective to reflect on some of his artistic research processes over recent years. In particular, he discusses the limitations in a medium as being potentially stimulative in the creative process, highlighting two examples of his works of a handclapping orchestra and a telematic performance between three continents.

Lotta Lundstedt, artistic associate professor and textile artist, showcases an excerpt from her ongoing doctoral thesis in which she explores time and timing in textile-making using repetition, recurrence and return as methods. In this text, she describes one of her explorations where seven shirts were made slowly by hand and then worn for seven days each, to shed light on our unsustainable way of producing and wearing clothes today.

Karin Ågren, artistic associate professor and costume designer, outlines three concepts in the process of designing a performance: room, material and body. In her text, she also includes a conversation with a director to show how collaboration is crucial to the work of putting up a play.

Sofie Weibull, artistic associate professor and sculpture artist, describes a decision-making process while creating sculptures that promotes interaction, open senses and encourages physical activity and play. Both Karin Ågren and Sofie Weibull present their process of defining themselves and their previous works as artists for use as foundations in future artistic research processes.

Two SVP (Small Visionary Projects), short case studies funded by UmArts, are presented in this publication as well. In Crafting Revisited, Stina Westerlund and Åsa Jeansson, both associate professors of Educational work, take an interdisciplinary approach to explore overriding contradictions in the field of crafts between artistic and scientific understandings, and between analogue and digital technologies. In Home Participatory Orchestra, Anders Lind considers strategies for notation and conducting approaches in a novel networked music performance concept that challenges the traditional music performance ecology.

Lena Liljemark and Emma Ewadotter, both lecturers, give a sneak preview of the process of an embroidery workshop arranged to increase the interactivity of the different departments at UmArts.

We are sincerely grateful to all of those who contributed to this publication. By putting this to press, our artistic research processes are evolving. Reflections will generate new questions. Artistic actions will need to be addressed. The process is continuing. Slowly.

/Anders Lind, guest editor,
Lotta Lundstedt, guest editor

CONTESTED DEFINITIONS OF ARTISTIC RESEARCH; re-establishing art as a form of knowledge

Ele Carpenter

INTRODUCTION

This paper aims to identify a number of challenges arising from the separation of artistic and scientific research, and how they are being addressed through the establishment of the new UmArts research centre. Through a discussion of research principles and questions, the paper will start to articulate the value of interdisciplinary research practices where artists and curators have the freedom to develop all kinds of knowledge and disseminate it in many different forms.[1] This debate has many synergies with decolonial discourse in challenging the empirical traditions of science, opening up space for new kinds of knowledge and new (or very old) ways of knowing.

UmArts was established in 2021 as the new centre for interdiscplinary artistic research at Umeå University working with the departments of Architecture, Art, Design, Creative Studies and the Bildmuseet contemporary art centre. UmArts was established to cultivate an arts research environment working across the Faculty for the Arts and Humanities, and the Faculty of Technical Science. Interestingly the UmArts departments of Art, Creative Studies and Bildmuseet are situated in the Humanities Faculty; whilst Architecture and Design are part of the Technical Science Faculty. All of the departments support and develop research that is based on a physical practice of making, designing, building, prototyping etc. but some of these are deemed more artistic, or more scientific, than others. Although there is much confusion about the Swedish distinction between artistic and scientific research, what is clear is that all the research within UmArts is based on creative practice and critical enquiry, and a greater fluidity between artistic and scientific research criteria is needed to support the work. UmArts achieves this by taking an interdisciplinary approach which

1 In the UK, USA and many European countries practice-based research in the arts has been established as form of research equivalent to any other kind of practice-based research in the humanities or sciences. Learning through making, testing out ideas in practice, creating art, design, architecture, music, textiles, performance, theatre within an analytical, discursive, and practice-led framework is common in many art schools. Within practice-based research there is an integrated balance between thinking and making, ideas and form, theory and practice. The practical work is presented and examined along with a thesis which defines the research questions, methods and findings of the practice. Practice-based research can be presented in writing, exhibitions, artworks, performances etc. In Swedish this kind of practice-based research is defined as "Artistic Research" but it can also be applied to design, architecture practices etc.

embraces scientific research by researchers who self-identify as artists and have an artistic training in their career history; UmArts also embraces artistic research by artists, architects and designers by researchers who might want to write indepth alongside their practice. Meanwhile Bildmuseet is in the process of developing its role as a research infrastructure and starting to articulate the importance of practice-based curatorial research, within the Swedish category of 'artistic research' rather than an arthistorical or museological context which would be defined as 'science'. Like many public museums within universities, Bildmuseet has yet to establish itself as a knowledge producer within the academy.

UmArts takes an interdisciplinary approach both between the arts subjects, and between arts and humanities/sciences which embraces all the different artistic and scientific research criteria with the arts subjects. Whilst the definitions of art and science may seem somewhat arbitrary semantics for most hybrid researchers, their differences are constantly instituted within university and state research funding bureaucracies. With each bureaucratic inscription the characteristics of artistic research is in danger of being narrowed by trying to defend itself against the academization of its subject.

Whilst many artists will be glad to know that their subject is receiving due care and attention, the separation of art and science produces many semantic, intellectual and discursive problems. There is a danger that separating out art as an exception, can create a research hierarchy with art as a second tier within the academy, reducing its intellectual capacity and agency. A more relaxed and flexible approach is needed to develop a rigorous culture of arts research which can operate in hundreds of different ways. There are as many artistic research methods as there are artists, and not every artwork is a doctorate in itself, so a clear set of research principles are needed as a basic rubric for evaluation. Fortunately these already exist within the wider discourses and practices of research.

PRINCIPLES OF RESEARCH

UmArts is committed to supporting and developing artistic research as a form of knowledge according to the core principles of research, which are the same for any subject. Defenders of art as a pure form of making without discourse or analysis may find this language difficult to interpret in relation to their practice, but anyone who has undertaken practice-based doctoral research in the arts or humanities will be able to use and adapt these principles as a basic structure:

- Defining research questions.
- Developing new methodologies.
- Situating the work within the field.
- Developing new knowledge and practices.
- Disseminating the work within the field.

Whilst many countries and languages define these principles as 'science', they are actually principles of good research, wherever it is carried out.[2] It is up to each discipline, and each researcher, to define how they approach these principles through their work, and this will be dramatically different in design compared to history, or microbiology compared to environmental humanities. Artists may define their method as integral to their practice, and describe how this has evolved in relation to, or produced, a set of critical questions. Alternatively they might define an over-arching critical framework for their work, and use this to contextualise

2 The terms science and research are too often conflated. However, research can be conducted in the arts, humanities and sciences, so why should it be universally called 'science'? If the term 'research' can be used to describe all research, then 'science' can describe the scientific method, and 'art' can be used to describe artistic methods embedded in the practice. Therefore science is not equivalent to research. If this controversy can be resolved by a more careful use of language then there will be no need to differentiate artistic from scientific research, as both practices will equally be regarded as research.

it within the field. Either way there needs to be a critical analysis of the way in which practices produce new knowledge, and the practice should clearly demonstrate this. It is up to the researcher to articulate how their work produces this knowledge, and it usually takes several years to articulate clearly. The modes of practice and dissemination within the field will also need to be defined by the researcher. These could include exhibitions, conferences, a radio programme or podcast, performance, a film or a sound work, publishing creative writing, or even open access publishing and books. It could be a mixture of these things. The questions, method and dissemination may even be integrated into one form, and a strong argument for this would need to be demonstrated.

In short, the principles of research are an international standard upheld in every university, and are reinterpreted within every discipline and subject area. To be recognised as having equal research integrity to all other subjects, the arts need to engage with these principles. The aim of artistic research is to enable practice to contribute to a critical discourse, whilst situating the work within it. This discursive process goes beyond an explanatory, descriptive or reflective process, to investigate the complexity of the work and how it has agency in the world. Artists have the flexibility to develop critical frameworks in relation to their practice, and to evolve their practice in relationship to the framework; one does not have to illustrate the other. Like all researchers, artists must make a clear argument for how they challenge and expand the principles of research through their work.

It would be interesting to discuss each of these research principles in an arts context in more depth, but for now we will concentrate on the importance of the question in relation to art and curating.

QUESTIONS

Questions might be formulated and put to use differently within the traditions of the arts and sciences, but they still fulfil the principle of a research question. Questions are central to all research enquiry, although they can be framed in ways that are more or less likely to open up or close down critical engagement.

Artist Susan Kelly (2013) articulates the importance of the artistic or curatorial question to organise the relationships between experience and knowledge, rather than the more generalised thematics of interpretation. This is achieved through an understanding of what Kelly calls the "constituent" question which is developed within an understanding of the political context in which the question is asked. Otherwise, Kelly argues, questions are in danger of becoming a process of thematics which maintain the status quo and are easily marketised. Thematics create broad areas of interest, but do not direct questions at the structures that frame them. This is especially important for curating which has a tendency to use themes as a way of generalizing a series of art practices within an exhibition format, rather than address urgent forms of critique. This is perhaps a useful distinction between curating and curating as research. Curatorial practice can effectively group any number of artists or exhibitions together within a theme, but it is a research-based approach that defines a set of critical questions to further develop the discourse and commission new practice.

Kelly describes the philosophical question as a mode of operation as distinct from the scientific or legal use of the question:

> In science, when a question is answered or when a solution to the problem is found, the question becomes redundant. Likewise, in state politics and constitutional law, answers in the form of election polls or referendum

> results annul the question. By contrast, in philosophy, the claim is often made that questioning operates as a procedure that builds a way not only to a solution that would remove the question, but also to an altered, and perhaps critical relationship to the thing questioned. (P107)

It might seem self-evident that artistic and curatorial questioning is part of a reflexive procedure which contributes to the understanding of the artwork or exhibition. But it takes a researcher to map this iterative process to articulate how the project being questioned is altered or developed as part of a critical process, and in-turn, how the work produces new questions. This dialogic process is an integral part of the production of a critical framework. But how does the experience of art and the experiment of art contribute to the formulation of a question?

Kelly cites Adorno on the relationship between experience and question in philosophy, in contrast to the sequential question and answer mode of science:

> Adorno speaks however, of the difference between the weight of the question in science and in philosophy. Unlike in science he argues, 'philosophy knows no fixed sequence of question and answer. Its questions must be shaped by its experience, so as to catch up with the experience. Its answers are not given, not made, not generalised.' Rather than simply act as a framework for discourse, a point of initiation for an enquiry or some kind of action, the question might be understood here as a force that organises and brings into relation the categories of experience and knowledge.

This differentiation between the questioning modes of art and science might be useful for arguing for a more open-ended form of question within artistic research. It may even be helpful for a whole range of humanities subjects which are defined as a 'science' in Sweden, but employ very different forms of research enquiry. For example: action research and participatory research practices in design, education, ethnography, anthropology and sociology need reflexive and iterative processes that produce new sets of questions as the project develops. So again the category of the scientific or artistic research question starts to break down, although the methods might be very different.

Kelly however, is not too preoccupied with the differentiation between art and science, her urgency here focuses on how "the question might be understood here as a force that organises and brings into relation the categories of experience and knowledge." And "can the experiences that shape these questions be understood simply as individual or as inherently social?" (Kelly, 2013, p107-8)

The importance of the question as an organizing force, or even an assemblage of materials and ideas, or a human-object-nature entanglement, is vital for much contemporary interdisciplinary arts research. This relational understanding of the construction of the artwork needs to be investigated and developed within a lively research environment. To support this, there is a need to create a social and critical environment for understanding the relationship between individual and collective research questions. Arts Research Centre's are helping to address the challenges of forming collective research enquiry. A collaborative process which is fairly new for artistic research, as it goes against the grain of individual authorship both within the arts and academia. Perhaps alternative collective structures can be formed through interdisciplinary research models which

bring together teams of researchers.[3]

Kelly concludes that we need "constituent questions" produced through a politics of experience/ experimentation, which can have political agency through addressing power at the site of production "where it becomes possible to shape new imaginaries, struggles and social fields." This is where art and curating can create new discourses, as demonstrated through the role of HKW Berlin in defining the Anthropocene; Emily Pethick's former direction of the Showroom in redefining the community role of the gallery in London; and the South London Gallery's integration of education and outreach into its curatorial programme. Projects such as curator Helena Reckitt's Feminist Durational Reading Group, have transformed the role of the curator within feminist discourse. Whilst initiatives such as Open School East, and Dark Mountain have shown that there are alternative structures for art education and environmental discourse outside the University.

The recent increase in the profile of artistic and curatorial collectives, is perhaps another way of decentering the individual form of a creative research process to take a more collective response-ability. For example, this might prompt more diverse forms of collaborative authorship, where groups of curators and artists work together to produce research outputs in the form of artworks, papers or exhibitions. However they operate, artistic and curatorial researchers need to carefully consider the agency of their questions.

INTERPRETING POLICY DEFINITIONS

The current Vienna Declaration on Artistic Research[4] importantly calls for artistic research to be included within Educational and Research policy at a European and national level to be able to access research funding and support. However, the declarations description of a "high level artistic practice and reflection," is often cited without the rest of the sentence which reads: "it is an epistemic inquiry, directed towards increasing knowledge, insight, understanding and skills."[5] This epistemic or philosophical enquiry is integral to the development of a critical framework for knowledge production, and applies across art, architecture and design, as well as other arts subjects.

In 2013, the term "Artistic Research" was written into Swedish law, cementing the distinction between artistic research and scientific research. This controversial differentiation began in 1992 when the term "artistic practice", as something different from "scholarship" was defined in the Swedish Higher Education Act (Per Zetterfalk, 2020). This distinction has the danger of marginalising artistic research as failing to comply with the criteria for scholarship even though it is now defined as an "epistemic inquiry" (Vienna Declaration) which clearly identifies art as a form of knowledge production.

In more detail, Efva (2015) describes the "The Swedish model" of artistic research, "as defined in the Higher Education Act (1992: 1434)." And helpfully translates the second paragraph of the first chapter of the

3 The UmArts Symposium (2021) presented several different approaches to creating arts research environments, all with their own unique characteristics and emphasis. See www.umarts.se

4 The Vienna Declaration on Artistic Research, Culture In Action Europe, 24 June, 2001.
Available at: https://cultureactioneurope.org/news/vienna-declaration-on-artistic-research/ Note that the document is not dated, and does not have a named author, thus making it hard to reference. The date cited here is from the pdf filename.

5 "Excellent AR is research through means of high level artistic practice and reflection; it is an. Within this frame, AR is aligned in all aspects with the five main criteria that constitute Research & Development in the Frascati Manual. Through topics and problems stemming from and relevant to artistic practice, AR also addresses key issues of a broader cultural, social and economic significance. AR is undertaken in all art practice disciplines - including architecture, design, film, photography, fine art, media and digital arts, music and the performing arts - and achieves its results both within those disciplines, as well as often in a transdisciplinary setting, combining AR methods with methods from other research traditions." The Vienna Declaration on Artistic Research, Culture In Action Europe, 24 June, 2001. Available at: https://cultureactioneurope.org/news/vienna-declaration-on-artistic-research/

act which reads as follows:

> As the responsible authority for higher education, the government shall provide
>
> 1. education based on scientific or artistic basis and proven experience, and
>
> 2. research and artistic research, as well as development work.
>
> (unofficial translation)

The problem with the act is that it defines an either / or choice between art and science as two different disciplines, a distinction that has been taken very literally by the university system. Whilst full of good intentions this division has created a blackhole of needless circular arguments about the definition of artistic research which are entirely unproductive. But perhaps this is to be expected in such a new field. Remarkably the Swedish Research Council Vetenskapprådet (VR) have only funded artistic research since 2001, and the degree of Doctor of Philosophy in the Fine, Applied and Performing Arts was only established in 2009.[6] To establish a new research field without the qualified professors and supervisors in place has created many challenges. Evfa Lilja describes the Swedish solution:

> We can admit students by audition. Teachers, professors, examiners and supervisors can be hired by expert peer panels on artistic merit without academic degrees. (…) We also have doctoral candidates and professors, who engage in artistic research on scientific basis or with double merits using scientific methods in practice-based processes. (Lilja, 2015 p18)

This enables practitioners to be appointed on the basis of a professional 'equivalent' to a specific level of scholarship. And maybe this double-merit could be useful model for awarding doctorates, or appointing post-doctoral research fellows, that have both scientific and artistic research capacities.

ART AS A FORM OF KNOWLEDGE PRODUCTION

At UmArts we believe that art does not 'speak for itself' rather art is produced in a particular context and often with and through a specific community. In this way "the context is half the work" (Artists Placement Group), and all art is a product of socio-political conditions. To be able to understand the art that is 'speaking' to you, one has to have some apriori knowledge of its context and community. Therefore the written document is important, not only for establishing and analysing the context, but analysing how the artwork deals with this context in terms of its development and public engagement.

The academic model of establishing a critical framework of ideas with which to interrogate, analyse and contextualise the work of art, can be highly productive for many artists whose work is already engaged with research processes. Here the text is not an explanation or a description of the artwork, but an active engagement with the ideas of the artistic project identifying what is at stake, what can be learned, and how

6 "The notion of artistic basis entered into the present Higher Education Act in 1992, while artistic education and the equivalent of artistic research, called artistic development work, started with a reform in 1977. In the year 2000, artistic research was first mentioned in a government research bill (Prop. 1999/2000: 81) and the Research Council, VR, was given special funds for this purpose in 2001. The full educational progression was established in 2009, when the degree Doctor of Philosophy in the Fine, Applied and Performing Arts was written into the Higher Education Ordinance (1993: 100) 2009 (SFS 2009: 933). This means that Candidate, Masters and Doctoral degrees can now be deferred on artistic basis. The Doctor of Philosophy in the Fine, Applied and Performing Arts is awarded after the candidate has completed an education comprising 240 credit points in a subject at the research level. As a consequence of a government bill on research (Prop 2012/13: 30), artistic research was written into the legal text in 2013 replacing the earlier definition of artistic development work." (Efva 2015, p17)

the work contributes to new ideas about art and the world. Many artists today work in socially engaged, interdisciplinary and research-based modes which lend themselves to the rigour of academic research.

At the same time there are many artists whose practice is not particularly geared towards a research enquiry, where the work needs to be left alone to speak for itself because the conditions of its production and reception are already familiar and known. The novel can be read, the painting enjoyed, the music listened to without having to be classified as 'research'. Not every book or song is automatically innovative, or critically engaged with its own production, otherwise every novelist and painter would receive a doctorate. So the question is – how do we evaluate art as research? If there is no accompanying text then the examiners are put in the position of critics where their blind reading of the work is enough to make a judgement about the value of the work. This connoissorship is reminiscent of patronage, and lacks any equitable framework with which to access or compare the artists understanding of their practice. Instead of engaging with a wider set of ideas, the art research field is in danger of formal taste leading the academy without mechanisms for scrutiny. How then do we decolonise art education without any context in which to work? Art has its own histories and methodologies that need revisiting and re-inventing, and a wider perspective is needed. The pitfalls of allowing art to 'speak for itself' are more often found in the commercial art market, whilst the academy should have a completely different kind of responsibility to knowledge.

Artists and curators are constantly involved in the development of the critical context for their work: reading, writing, debating, exhibiting, critiquing and developing practice and ideas. The method of practice based researched is well established in the UK, but still continually revised and contested, each new PhD candidate has to create their own terms on which their work constitutes research in negotiation with their supervisory team and wider arts research culture of their university. It is here that a healthy vibrant research community is essential for establishing the context of arts based research in any given moment. Like any kind of research process, artists can define their own methodologies, research practice, and forms of presentation. There's no heirarchy of competition between text and form, and the text may use the form of another discipline, in a way that's rare in other fields.

As Zetterfalk clearly states: "Research needs to be open to a greater conversation in society…" before going on to identify research without theory as highly problematic. I take issue with Zetterfalk's identification of 'facts' as the product of research, within the arts and humanities, the results of a research enquiry can be productive failure, a new set of questions, a new hypothesis, or more broadly a discourse of concern, to borrow from Latour. Whilst pure science is in pursuit of facts - albeit complex and contested, surely the arts can explore a more reflexive and discursive set of concerns. In the same way philosophy, history or STS contest singular forms of truth, the arts consider multiple perspectives to help shape knowledge and understanding.

UmArts takes an interdisciplinary approach to research, where artists, along with designers, curators, architects, and musicians can collaborate with each other, as well as work with humanities scholars and scientists. This may involve drawing on the critical theory of one subject to analyse another, it may create messy conversations and projects that complicate the conventions of research funding.

Interdisciplinary art and science projects open up new spaces of critique for both

disciplines[7]. Often art takes an ethical view of science, whilst many scientists find the more open-ended art space a way to consider the socio-political context of their work. Of course there are many assumptions, mostly around whose work constitutes the 'research' and whose work facilitates the public engagement with it. Instead of artists being used to improve the public understanding of science, or visualise data, they must have academic validity to interrogate the visual forms of science, critique the aesthetics which are often received ideas about art, and create new forms of critical co-enquiry.

Whilst interdisciplinary research is a process of undertaking research through and within another field, for example an artist making art about and informed by science; transdisciplinary research – is work that brings together researchers from different disciplines to collaborate on a joint research project. Trans disciplinarity goes beyond the referencing of one field by another, to create a new project which involves contributions and developments from all parties. These projects require a high level of trust and respect to get established, they are hard to organise, fund and disseminate, but the research produced is usually exciting and productive.

There are moments when the definition of 'good art' and 'good research' might seem incompatible, or somewhat irrelevant, as the innovation and learning of the project can be densely presented and highly specialist. The role of the artist is to consider the visual or public form of the project, often using visual analysis of data, but trying to avoid the role of 'interpreter', engaging in a more indepth shared critique of the process. In both interdisciplinary and transdisciplinary research we can think of the artist as a socially engaged practitioner, developing their work through and with their collaborative research communities. In this way artists might employ scientific methods, or address the science as their subject, and hopefully a good thesis will address the relationship between the two.

Through opening out, rather than closing down, the potential for interdisciplinary partnerships, collaborations, references, etc, we can move beyond the archaic debates about artistic research, and take responsibility for the context in which we live and work. Understanding that education policy is simply a framework to gain equity for art as a research practice might take some time, but we can start by allowing researchers to define their own approach to their studies at this senior level, and not be afraid to commit ideas to paper.

CONCLUSION

UmArts has made a strategic decision to focus on the rigour of individual practices within interdisciplinary research teams, and not to be sidelined by the contested definition of artistic research as a filter for who can and can't be creative. However, this leaves many unresolved questions which continue to preoccupy the future development of a research environment. This paper has attempted to map some of the issues, highlighting a series of controversies, and proposing some critical frameworks for valuing art as a form of knowledge production.

UmArts aims to open up spaces for valuing art and creative practices as a form of learning, testing out ideas, developing new kinds of knowledge. We define artistic research as a process of developing a discursive conceptual and critical framework between theory and practice, where one analytically and practically informs and expands the other without falling into the

7 Ele Carpenter, 2014, The Nuclear Anthropocene, Keynote lecture, Fluid Encounters between Art & Science Conference, Bildmuseet, Umea, Sweden, 2-3 October 2014. Organised by Bildmuseet and the Riksutställningar Swedish Exhibition Agency in collaboration with Humlab-X and Umeå Academy of Fine Arts, Umeå University, Sweden. Available at: https://nuclear.artscatalyst.org/content/fluid-encounters-between-art-science

old patterns of descriptive or reflective narrative. This might involve traditionally scientific or artistic processes depending on the project, the background of the artist, and the way in which the artist chooses to situate their practice within a research framework.

Within the broader creative research community there is much confusion about the characteristics of artistic research, but in terms of research principles there is no difference. Artistic research is practice-based which simply means that you are assessed on the quality of your practical work alongside your written work. In much the same way in that I hope scientists are assessed on the precision of their practical work, as well as the analysis of their findings.

The singling out of art as a particular form of research, as distinct from any other, is rather unusual. There aren't separate research policies for other subjects or research methodologies. For example, there is not a separate category for field-based research where people work in a particular site or context, for example anthropology, ethnography, architecture, socially engaged art, visual sociology, or social biology. The characterisation of all 'non-arts' research as "science" is equally reductive, and conflates humanities and scientific scholarship as if occupying a single discipline.

In 2021 UmArts ran the Recentering Arts Research Symposium which demonstrated that there are many different approaches to supporting and developing arts research, including a range of interdisciplinary approaches which can include different kinds of research practices. The afternoon session included artists and architects who have established their own research projects and platforms alongside the university, focusing on the urgency of their work on issues of decolonisation. Perhaps it is not the art/science research debate that is really the issue here, but the need for both science and art to undertake a decolonial turn necessary for any kind of human survival.

It's time to ask constituent questions about artistic research: How can we rethink research to be more productive, more engaged, more relevant in our survival? How can we rethink the ways in which knowledge are framed? From the literature on our reading lists, to the kinds of art and artists we reference, to the range of staff we employ, and the students we teach. How can we move beyond growth economics, and growth universities, and consider more sustainable economic research models that integrate practices of care. This is not a question of discipline, but of politics and survival.

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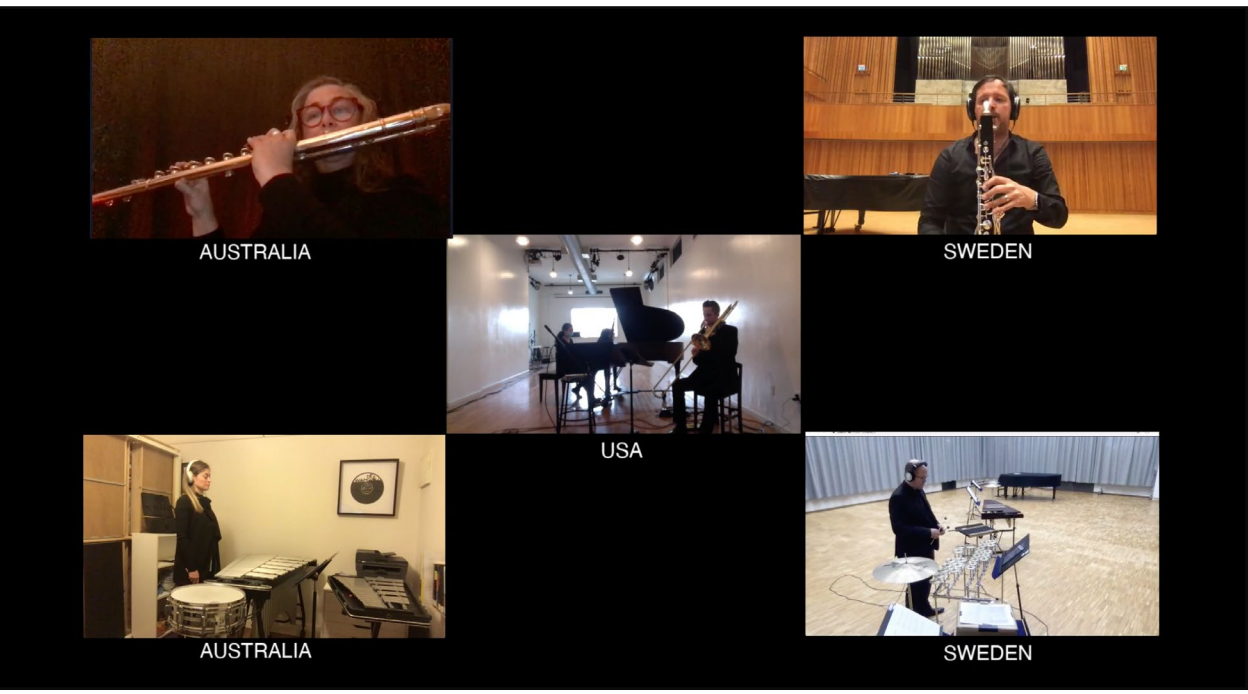

Figure 1: Screenshot from the performance of Embracing Distance

LIMITATIONS AS STIMULATION
Rethinking the music performance ecology

ANDERS LIND

NOTE
The video excerpts below document two compositions completed as part of my artistic research, as highlighted in the text. They are used as examples of how limitations in a medium and a creative environment can be used as stimulation and a creative force in the music composition process. Before continuing reading, please watch these short videos:

Put Your Hands Togheter – Live performance of a composition for electronics and a handclapping audience in 24 individual parts, conducted using animated notation: https://youtu.be/FLodUGpJBLE

Embracing Distance – A live Telematic Performance (Networked Music Performance) between three continents: https://youtu.be/rOhMFagkxAE

INTRODUCTION

As a composer and artistic researcher, I am interested in exploring new mediums[1] in my work, in how a new medium can affect a creative process and bring to life unexpected sides of a practice. I am exploring new mediums ability to create a reaction in the artistic activity, which may help us define the content of a tradition, and even make way for the development of new traditions and practices. But, most importantly, how a new medium and its embodied limitations may be highlighted as a frame that will strongly shape both the creative process and the generated artistic output, in this case the music.

In the last 8 years, I have initiated and been working with different artistic research projects within the field of Human–Computer Interaction. My research is situated within a contemporary art music context and has included work on and the development of: a mobile phone orchestra platform[2] (Lind et al., 2021), animated music notation systems (Lind, 2018), interactive sound art exhibitions[3] (Lind et al., 2016, Lind, 2020), audience participation concepts[4, 5] and telematic performances (or networked music performances). A new medium is always in the centre of my work and the majority of my projects have focused on participatory concepts and strategies for how to involve non-musicians in contemporary art music performances. In this text, I adopt a media ecology perspective to reflect on my composition processes. I make use of the terminology and metaphors of media ecologists such as Marshall McLuhan, Neil Postman and Lance Strate to illustrate and discuss the experiences made with my projects. Two compositions of mine, where one or several new mediums are involved in the performances, are highlighted and discussed as examples of thinking music composition from a media ecology perspective: 1) Put Your Hands Together, music for a

1 In this text, I use the term "new medium" to refer to mediums that are new and not yet commonly found in the tradition of a practice, in this case: the orchestra music performance practice.

2 Mobilephoneorchestra.com and solo chamber musicians. Retrieved 27 Jan. 2022 from: https://youtu.be/Zfc_2eYDFmk

3 LINES – interactive sound art exhibition. Retrieved 27 Jan. 2022 from: https://youtu.be/hP36xoPXDnM

4 Collectiveness – Excerpts from performance including 20 non-musicians using their voices as instruments, animated notation and chamber orchestra. Retrieved 27 Jan. 2022 from: https://youtu.be/OyMq13Uc6DY

5 Voices of Umeå – Excerpts from performance including 200 non-musicians using their voices as instruments, animated notation and interactive sound art instruments. Retrieved 27 Jan. 2022 from: https://youtu.be/VFebLXpeofo

handclapping audience, electronics, and animated notation; and 2) Embracing Distance, a telematic live music performance between three continents. From an artistic standpoint, I claim that any type of medium, including any sound object, any space environment – physically or digitally and in any combination of performers – even regardless of their musical background, can be used to generate a rewarding artistic expression for an audience.

This text addresses creative practitioners generally, but especially music composers, arrangers and educators who involve new mediums (in terms of alternatives to the traditional music instruments, music scores, music performers, performance spaces…) in their music activities. In a wider perspective, the ambition is to highlight and put focus on a new medium's ability to affect a creative process; most importantly, how limitations in a new medium can be used as a desirable creative force rather than a limiting aspect of a creative activity.

THE MEDIUM IS THE MUSIC

The medium is essential for how information or content is created, transformed and distributed as an output to affect an experience. An artist works with a medium or several mediums to communicate artistic ideas and visions to a receiver. Media ecologists like Marshall McLuhan talk about the medium as an extension of the human, where the content is highly influenced and shaped by the medium being used (McLuhan, 1964). Artists have long understood the McLuhan metaphor "the medium is the message", which Strate exemplifies as: "Musicians will tell you that when the same melody is played on violin, trumpet, and xylophone, you have three different pieces of music" (Strate, 2008). Neil Postman, who coined the term "media ecology" in 1968, highlights his interest in the interaction between media and human beings while talking about media as environments (Postman, 2000). A medium may be seen as an ecology of different cells interacting with each other. However, each cell in this ecology can also be seen as one separate medium (REF). All mediums in an environment affect the ecology depending on their respective embodied characteristics. No media is neutral, transparent, or free from values. Similarly, no user of a media is neutral, transparent, or free from expectations of the media and its characters. In other words, a media defines a frame for people to interact with, encouraging certain actions while discouraging others. McLuhan underscored this phenomenon in one of his famous quotes when stating that "every extension is also an amputation".

To enable defining the characteristics in terms of extensions and amputations in a new medium, we need to know what this is compared to. In this text, I use a traditional orchestra music performance environment within a contemporary art music context as the tradition in which the new mediums are compared to. I have chosen the orchestra performance ecology as a framework since it is a concept that relates to the majority of my artistic work.

Music as an ecology – through the eyes of a composer within contemporary art music

As a composer and sound artist, I am interested in sounds; the sound itself as the essence; and sound as a resonating body within a space. While creating variations and combining different sounds, which is part of the composition process, a new sound is generated. Adding the parameter of time, and also organising different sounds over time, will result in a musical structure like a rhythm or a melody. Further organising of different musical structures over time and working with contrasting elements and variations of them to create a musical form

is for me when the sounds, the combination of sounding textures, transcends into what may be defined as music. The composer Edgar Varese put it succinctly in one of his famous quotes: Music is organised sounds[6]. From a media ecology perspective, the sounding music can be seen as an environment where each sound is an individual medium interacting with the other sounds as mediums. Each sound has its own embodied characteristics and also an embodied tradition in which we have learned that the sound traditionally is situated within. The embodied characteristics of a sound may be the musical parameters defined as pitch, frequencies, dynamics, timbre, density, time and so on. A composer works within the musical parameters and organises sounds in various combinations, resulting in new sounds and musical textures, which depending on the musical parameter in focus and the type of interaction over time may musically be defined as a chord, a rhythm, a melody and so forth. If we think of music as organised sounds, the sounds used in a composition may not need to be limited to sounds only generated by traditional music instruments.

As a composer, the embodied tradition in which a specific sound is situated and your knowledge of that tradition will affect the choices made in a composition process. Working with, for instance, a sound of the piano, the tradition of how piano music traditionally sounds in different contexts and genres, and your relationship with and knowledge of these traditions, will certainly affect the creative choices. Being aware of this, a composer can choose to go along with working within a sound's embodied tradition or to go against it. Either way, the embodied tradition of the sound will affect the choices made in the composition process. Seen as mediums, all sounds have specific frames for a composer to work with, encouraging certain actions, while discouraging others. In any event, the embodied characteristics and tradition of the sounds as mediums will affect the composition process.

A Traditional Orchestra Music Performance as an Ecology

The two essential mediums generating the artistic expression within the orchestra music performance ecology are the orchestra medium and the space medium. The audience also forms part of the ecology, but in the orchestra music performance tradition has a role as a receiver, not as an active medium, to affect the artistic expression.

First, we have the orchestra medium, which includes the performers, the music instruments, the scores, and the conductor as individual mediums. The embodied characteristics of a traditional orchestra instrument both define what is needed to interact with the instrument, and what type of sounds can be generated. From a composer's perspective, the traditional orchestra instruments offer a wide and diverse range of possibilities for artistic expressions in terms of musical parameters like pitch, dynamics, articulations, timbre, and rhythmic variations. As a consequence, instruments such as piano, violin, trombone, flute and so on are very hard to master as a performer. The embodied skills and experiences of the performers are accordingly very essential for the traditional orchestra seen as an overall medium. Then we have the score as a medium. The embodied characteristics of the score are the musical signs giving instructions to the performers regarding how and when to interact with their instruments. Still, the often-detailed scores for orchestra music are not enough to communicate all the information of a complex musical texture. This means how the score is interpreted depends on the embodied tradition of the score; namely, how the score has been interpreted historically in a specific musical

6 https://www.inspiringquotes.us/quotes/tUoB_oyjxUvkX retrieved: 2022.03.23

context. Once again, the embodied skills and experiences of the performers deeply affect the embodied tradition and skill of the orchestra seen as an overall medium. Further, we have the conductor who also interprets the score and has a leading role in the artistic expression generated by the orchestra medium. Similar to a performer, the conductor has been trained within one or several music traditions, but has also of course gained individual experiences and skills due to personal and professional lived experiences, which have a further effect on the overall artistic expression.

Second, we have the concert hall as the space medium in which the performative interaction traditionally takes place. The main parameter affecting the artistic expression is the embodied acoustics in the space; in other words, how the sounds of the orchestra resonate and add an acoustic character of a sound depends on the embodied characteristics of the concert hall as a space. Then we have the tradition that is embodied in the traditional concert hall. The tradition in which we have learned what type of activities the space is used for will affect the musicians' experiences, as well as how an audience behaves in this space, which might affect the artistic expression. In the traditional music performance ecology, the audience is there as the receiver and not regarded as a medium that generates the artistic expression.

The traditional orchestra as a concept offers wide artistic possibilities to work with for a music composer. Still, since the tradition is deeply rooted in another century many artistic ideas relevant today are not suited to the traditional orchestra medium. In my artistic research, I am interested in embracing the fundamental concepts related to the traditional orchestra medium, which could be working with a large group of performers, being able to divide a group of performers into multiple individual parts, working with different types of scores and conductor techniques, and working with the concert hall as a space. However, the core of my work is putting new mediums into the orchestra context, which might be working with large groups of non-professionals as performers, working with mobile phones or interactive installations as music instruments, working with animated notation as performance instructions and a conductor, or working with home objects as sound material. From a composer's perspective, all mediums involved in a performance ecology together determine the frame within which to work in a composition process. The frame is changed when a new medium is put into the ecology. In particular, the mediums found in the orchestra environment are important from a composer's perspective. For instance, a melody performed on a piano will obviously have a different generated sound than if performed on a flute. Each instrument has its unique artistic extensions and amputations for generating and modulating sound, which will define the framework for a composition process. Moreover, switching performers will completely change the artistic expression to be generated. A jazz musician will interpret a score differently than a chamber musician. Similarly, the background, embodied skills and experience of the conductor make a deep impact on how the music is interpreted by the orchestra. Changing the space medium from a concert hall to a bar, an outdoor space or a church hall will also have a direct impact on the content within the environment. The generated sounds will resonate differently according to the space's acoustics. The performers will probably be affected by how the sounds resonate together. The tradition of how an audience behaves in a specific space may also result in unintended sounds, which would affect the artistic expression.

For this article, I chose to highlight two examples from performances in which new mediums are added or to replace former mediums within a traditional performance ecology. Both examples were chosen since

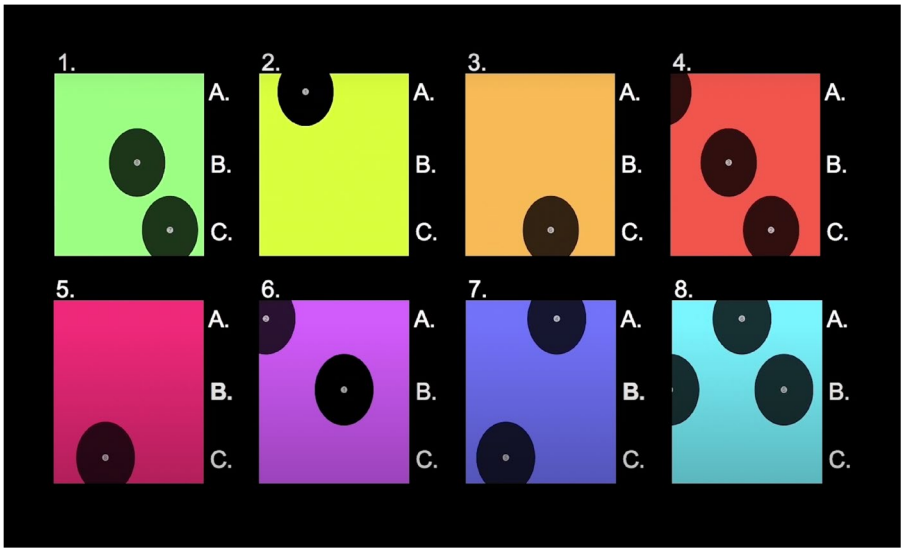

Figure 2: Screenshot of animated notation for Put Your Hands Togheter

they put different mediums in focus. The two examples are situated within a contemporary art music context, with the main ambition to explore the artistic extensions and amputations revealed in the environment.

PUT YOUR HANDS TOGETHER – AUDIENCE PARTICIPATION

Put Your Hands Together is a 6-minute composition for a handclapping audience and electronic pre-processed handclap sounds conducted by animated notation. The composition was premiered in Sweden in 2016 and has since been performed at various conference settings and festivals such as the New York City Electroacoustic Festival in 2017. In general, the idea of the composition was to explore the concept of audience participation from an artistic perspective. Audience participation is a concept whereby the audience is invited to participate and affect the artistic output in a musical performance. Within the field, there are two main approaches to audience participation. Either the audience affects a music performance by voting during the concert as to how the professional musicians on stage should perform the music (e.g. Dahl, et al., 2011. Wietzner, et al., 2012) or the audience itself becomes the performers and output the musical expression (e.g. Lee, Freeman, 2013. Roberts, Hollerer, 2011). In Put Your Hands Together, I use the approach in which the audience becomes the performers of the musical material. I have also used a similar approach in my work on, and development of, mobilephone-orchestra.com, a contemporary art music performance platform for people regardless of their musical backgrounds (Lind, 2021). Other examples of approaches using the audience as performers of the music material include; Moths by Hasse, La Symphonie du Millenaire by Chénard, and 268° by Áki Ásgeirssonæ[7].

More specifically, the aim was to explore the potential of using handclaps as the main artistic expression in composition, making the audience members (regardless of their musical background) a multiple-part hand-

7 Ásgeirsson, Áki. 268°. 2013. Retrieved 2020.12.14 from: https://youtu.be/KtoN3J9DLKc

clapping orchestra. Animated notation was used to give performance instructions and conduct the audience during the performance. Animated music notation is an emerging field within contemporary art music and has been developed by composers and researchers such as Cat Hope, Lindsey Vickery, Ryan Ross Smith and the S.L.A.T.U.R collective, to name just a few (e.g. Smith, 2016). It may be seen as a development of the graphic scores that composers like Earl Brown[8] and John Cage experimented with in the 1960s. It could be described as moving graphics presented on a screen to give performance instructions to a musical performer (Hope, 2017). Some advantages of animated music notation include its intuitive approach and the possibility to notate any type of sound source or non-traditional instrument (Fischer, 2015). Music teachers and scholars have argued that animated notation also may serve as accessible performance instructions to get novices involved in musical interaction[9]. Icelandic composer Áki Ásgeirsson used animated notation as performance instructions involving more than 1,000 9-year-olds as performers for his composition 268°, which can be seen in a videoclip on YouTube[10]. There are also examples of using animated notation within music education. The researcher and music educator Shane Mckenna has created an animated music notation platform called Dabbledoomusic.com[11]. On this website, he argues that his animated notation makes music education more accessible, engaging and fun for both teachers and students. The Dabbledoomusic platform provides musical exercises for preschool classes up to the 6th grade of primary school. By using animated graphics presented on a screen, a whole class can perform and accompany the music of videoclips, including both Irish folksongs, pop songs and classical music. The animated notation used for this performance was mainly developed within my artistic research project Voices of Umeå (Lind, 2018; Lind, 2016). It may be described as a cross-over between the graphic notation ideas of music composers like John Cage and the intuitive performance instructions found in modern videogames such as Singstar[12] and Guitar Hero[13].

This text is based on my reflections as a composer looking back at my reflexive notes, and video/audio documentation from the premiere performance of Put Your Hands Together in 2016. The performance took place in a concert hall environment and the performing audience consisted of approximately 200 people with diverse backgrounds in terms of gender, age and, most likely, musical skills. Before the concert, the audience was given a 5-minute instruction on how to participate in the performance.

The mediums in the Put Your Hands Together performance ecology

In Put Your Hands Together, the central medium of interest, which changes the content of the whole performance ecology, is the performer's medium. The audience as a group transcends here from a passive role as receivers to an active role as the content of the performer medium, which in relation to the tradition replaces the professional music performers. Since the audience as a group does not have the musical skills embodied in a professional performer, the choice of the other mediums to be included in the

8 https://graphicnotation.wordpress.com/tag/earl-brown/

9 https://www.teachingideas.co.uk/notation/graphic-notation

10 https://youtu.be/KtoN3J9DLKc (Videoclip of Áki Ásgeirsson, 268° live performance)

11 Dabbledoomusic.com. 2019. Retrieved 2019.11.01 from: https://dabbledoomusic.com/p/about-us

12 Studio, L. 2004. SingStar. Sony Computer Entertainment

13 Guitar Hero. 2005. PlayStation2. CA: RedOctane.

performance ecology is very important. In particular, the instrument, conductor and score mediums. First, the embodied characteristics of the mediums must be very intuitive and easy to master, without extensive rehearsals, to even enable a performance. Second, the mediums need to be engaging to maintain the new performers' complete focus while performing. Scholars have argued that one of the primary factors making an instrument intuitive and easy for novices to learn quickly is that the musical control is highly restricted (Blaine et al., 2003). Still, as a result, the limited musical control of the instruments can also lead to a lack of musical depth or expressivity (Barraclough, 2015). Accordingly, the main challenge in this setting is to provide for an artistically rewarding musical expression, despite the musical limitations of the mediums used within the performance ecology.

As instrument mediums, handclaps were used in this setting. Handclaps are very easy to perform and also a natural sound to be produced by this new performer medium. The control of the handclapping sound is restricted to varying the dynamics depending on how hard one claps. Animated notation was used to enable the organised handclapping sounds to be performed. The animated notation presented intuitive and easy-to-understand performance instructions for 24 individual parts in real-time and was projected on a big canvas visible to the performers. In this context, the animated notation replaces the role of the traditional conductor and score mediums. As a complement to the 24-part-handclapping orchestra, an electronic music part is used in the composition. The electronic sounds are based on recorded handclap sounds pre-processed in different musical textures and synchronised with the animated notation.

Reflections while working with this performance ecology as a creative space

When the audience transcends from a passive role as a receiver to an active role as the performer medium to generate the artistic expression, the whole performance ecology changes. From an artistic perspective, the handclap as a sound may be seen to be limited in terms of creating a wide variety of musical expressions. The length of the sound is very short and cannot be further controlled. No fundamental pitch is apparent and the timbre is relatively the same irrespective how the handclap is made. The only parameter at hand to work with as an instrument are the dynamics. On the other hand, the sound is very easy to produce, no instructions on how to make the sound are needed, and the instrument is very accessible since it is only produced by the body of the performer. This means that for an audience participation context the handclap may be seen as a suitable instrument and also in this perspective as an extension in relation to a traditional instrument. Moreover, from a composer's perspective, the restricted possibilities to control the instrument's sound may foster creative exploration within that limited frame in a composition process. As a consequence, dynamics as the only parameter available to work with for the instrument became an essential part of the composition. The handclap as a sound and conceptual frame was the essential part determining the choices made in the composition process. However, since music composition is about organising sounds, the key medium in this context influencing the composition was the animated notation and its embodied characteristics. The animated notation was able to give performance instructions to 24 individual parts, which made it possible to create up to 24 layers of handclapping sequences to be performed simultaneously. In other words, the animated notation enables the organisation of very complex rhythmical structures, which may be com-

pared to the concept of composing polyphonic musical structures for an orchestra. Still, compared to a traditional orchestra, many artistic possibilities are amputated in this specific performance ecology. The embodied characteristics of the sound of the handclaps amputate possibilities to create melodies or harmonies organised in fundamental pitches. The new performer medium (former audience) cannot trigger the sounds as accurately in terms of their timing as professional musicians, which amputates possibilities of creating traditional metric rhythms based on a common beat. On the other hand, the limitations force me as a composer to work with the parameters available and to truly explore them to create variated musical material. For instance, the animated notation used could make the performers trigger sounds in multiple parts synchronised with, for instance, an electronic music part. Even if each sound from a performer is not performed totally in sync, they could be triggered within a timeframe of 200 milliseconds relative to the trigger points of the animated notation (Lind, 2018). These timing characteristics make this performance ecology suited for performing more abstract, but nonetheless quite complex, multipart rhythmical structures in various densities, which are organised over time but not dependent on and related to a common beat. This feature in combination with the possibility of varying the dynamics of the handclap sounds in each of the 24 individual parts adds extra possibilities to a composition process. Compared to the traditional instrument, score and conductor mediums, the animated notation combined with the handclaps as instruments may be seen as an extension when it comes to being easily accessible and intuitive for the performers. Below are some examples of different musical ideas used for the composition, which can be found in the video/sound documentation of the performance presented at the start of this text.

> Reference Points for some artistic ideas shown in the video documentation of Put Your Hands Togheter: https://youtu.be/FLodUGpJBLE
> 0:44-0:47. Silence. 0:48-1:23. A multipart, very low-density handclap texture with soft dynamics spread out in the concert hall space. 1:24-1:43. The electronically processed high-density texture is then replaced by a high-density handclap texture with loud dynamics. A synchronised handclap sound by the performers (former audience) starts and stops the electronic textures. 2:33-3:44. Polyrhythmic structures with loud dynamics. The handclapping orchestra performs in eight individual tempos and the electronic part adds more polyrhythmic textures to it. 3:45-4:45. The electronics play a beat. The handclapping orchestra performs handclaps to the beat. 4:46-5:40. A multipart, very high-density handclap texture with loud dynamics in both the handclapping orchestra and the electronics. The handclapping orchestra is changing the dynamics in the texture according to the animated notation to create variation in the musical texture. 5:41-5:57. An electronic high-density texture is suddenly replacing the previous texture. Fade out. END. Applause.

EMBRACING DISTANCE – TELEMATIC LIVE PERFORMANCE BETWEEN THREE CONTINENTS

Background

Embracing Distance is a composition created to be performed in a telematic performance context. Composed for six contemporary art music chamber musicians situated on three different continents; New York/USA, Melbourne/Australia, Piteå/Sweden, performing in real-time over a network. The premiere performance was held online at the Swedish contemporary art mu-

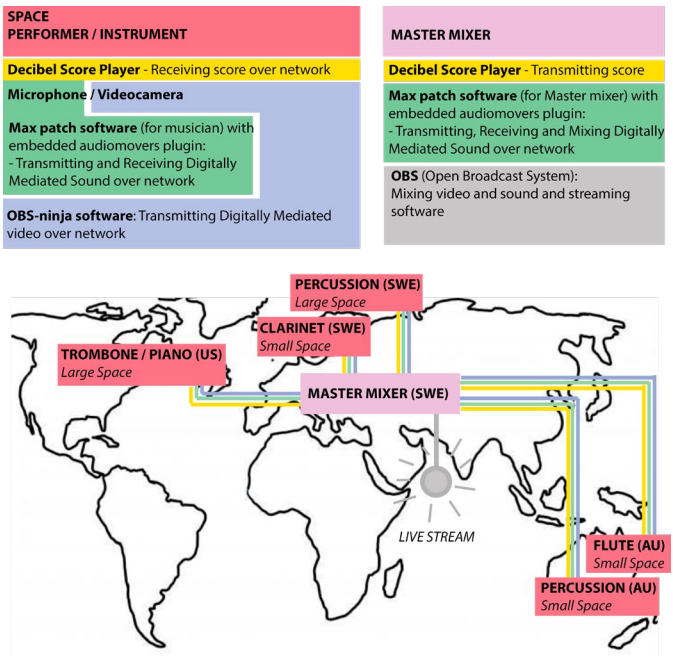

Figure 3: Illustrating the Embracing Distance physical locations and the network streaming processes

sic festival GAS festivalen 2020. The project was initiated by myself and entailed collaboration with researchers at Monash University and musicians from the Decibel New Music Ensemble (AU), Norrbotten Neo (SWE) and the Mise-En Ensemble (USA). In a telematic performance, telecommunications technology is used to bring performers together from multiple geographical locations in real-time via the Internet (Ascott and Shanken 2007; Dresser 2008). In other words; "when a group of musicians, located at different physical locations, interact over a network to perform as they would if located in the same room" (Lazzaro and Wawrzynek 2001). The main characteristics of a telematic performance is that the traditional concert hall is replaced by a combination of several digitally mediated spaces. Emerging in the 1950s, the field has since been developed by scholars and artists such as John Cage, the League of Automatic Music Composers, Chris Chafe, Pauline Olivieros, Gil Weinberg, Atau Tanaka, Georg Hajdu and Roger Mills to name but a few (Olivieros et al., 2009; Weinberg, 2005; Tanaka, 2005; Hajdu, 2017; Mills, 2014). The latency (delay) of sound as an unavoidable outcome of the digital mediation and network transmission of video and sound is widely discussed within the field. Carôt and Werner propose different approaches for dealing with latency, among others introducing the "latency accepting approach". When taking a latency accepting approach, there is no attempt to explicitly mimic traditional musical interaction, and musicians are set to use the delay as an artistic way of expression (Carôt and Werner 2007). Other key concepts embodied in the characteristics of the telematic medium are the digital mediation of sound and space, the uncertainty and unstable properties due to the Internet connection, and the multi-located aspect of a telematic

performance (Wilson, 2020). During the COVID-pandemic, which started in early 2020, the field of telematic performance has enjoyed a sudden and rapid increase in interest, including my own experimentations with the telematic performance medium. In 2020, I composed Latency Music for a telematic performance environment, using a 'latency accepting approach'[14]. Eight musicians from the chamber ensemble Norrbotten Neo (SWE) performed from different physical locations in Sweden. With Embracing Distance, the idea was to further explore the artistic possibilities from a composer perspective working with and embracing the characteristics of a telematic performance medium. This text is based on my reflections as a composer looking back at my reflexive notes, and video/audio documentation from the premiere performance of Embracing Distance in 2020.

The mediums in the Embracing Distance performance ecology

In relation to a traditional orchestra performance ecology, this environment contains several new mediums, which may affect the interaction. From a media ecology perspective, the space mediums are of particular interest. The traditional concert hall is in this ecology changed with three different mediums. First, we have the individual and physically separated performance spaces in which each musician is producing the sounds in their own spaces by interacting with their instruments. In Figure 3, we can see that percussion 1 and clarinet is situated in Sweden, Trombone and piano is situated in the same space in the USA, and flute and percussion 2 are situated in Australia. Second, we have the network in which the sounds and video from each space are converted into digital information and further distributed through the network as a medium, as shown in Figure 3. Third, we have computers, which receive digital information and convert them back into the sound and video distributed through the screens and headphones of each performer. Finally, the sound and video are further mixed by a master mixer and distributed once again over the network to be received by the audience through their individual screens and headphones.

Other mediums in this ecology, which may be seen as new in relation to the orchestra performance tradition, are some of the objects (for instance pen and paper) used as instruments, the big clock-digital conductor and the box notated score. However, in a contemporary art music orchestra context, these mediums or similar are more or less frequently found in the compositions of contemporary composers. Still, the embodied characteristics of these mediums all together affect how the artistic frame for a composition process is defined.

Reflections on working within the Embracing Distance performance ecology

The telematic performance ecology challenges the way we think about the tradition of music performance. The shared physical space, which is a fundament in a traditional performance, is in this context replaced by several individual and digitally mediated spaces. First, as often discussed by scholars within the telematic field, the latency of sound due to the digital mediation and distribution over the network must be considered as a condition in the environment. Compared to the traditional concert hall, latency may commonly be seen as an amputation in the telematic environment, largely because the possibility of performing together completely in sync is lost. This then makes it very hard, due to the delayed sound, to perform music to a common beat, which is how the majority of all western music in various genres is performed today. The western metric system and how we think about time and rhythm in western music, from classical music, folk

14 Video link for Latency Music by Anders Lind https://youtu.be/QTnGb2kH4A0 accessed 27 Jan. 2022.

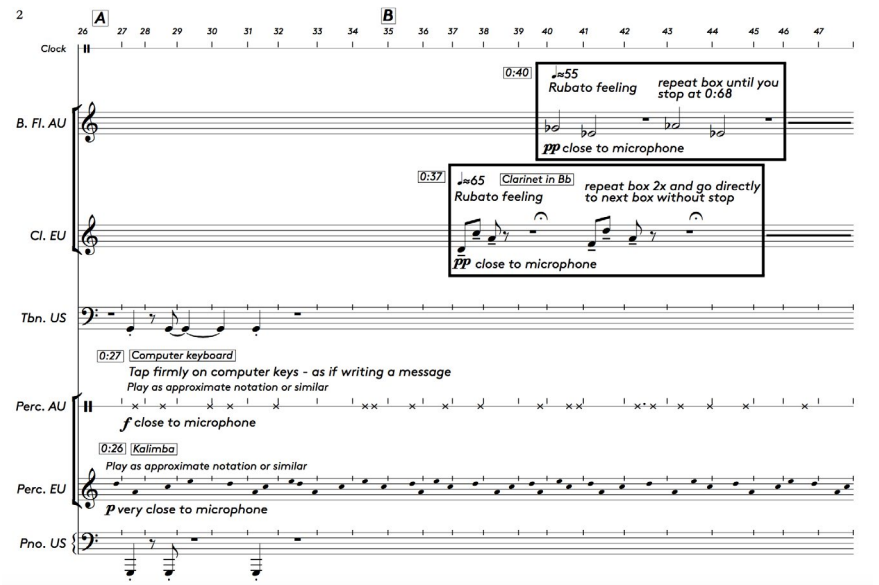

Figure 4: Example of box-notation and approximate notation in Embracing Distance

music, jazz to popular music and electronic genres are built on the idea that music is organised in relation to a common pulse. Even when a very small delay in sound is added to one sound source, it becomes very hard to perform even simple rhythms together if they are supposed to be linked by a common beat. Yet, if we take a latency accepting approach, we may see the limitation as an extension of the ecology in relation to the traditional concert hall. If we think of the delay in sound as a condition in the environment, this may foster creative exploration of the parameter of time in a music composition process. Embracing Distance is composed by having the latency of sound as a frame attached to the time parameter for the composition. The six musicians in the ensemble are treated as individual layers and performing their individual patterns more as an ensemble of solo performers than an ensemble as a group. The musical material is box-notated material and approximate-notated material, which both are notation techniques commonly found within the contemporary art music tradition. The performers are instructed to perform their boxes in different tempos and the approximate material is to be performed in relation to a master clock (see Figure 4). The musicians performing the notated music material in connection to a master clock, which is distributed over the network and shows the same time at each location. The sounds of the performers are organised together in time with an added latency factor, which will contribute to affect the artistic output. On a macro level, Embracing Distance is strictly organised as a fixed musical form. However, on a micro level and due to the latency factor, the start and endpoints of each individual instrument pattern will be fluently organised in relation to each other. Working with the Embracing Distance composition made it clear that this ecology is very suitable for creating various musical textures in various densities and more specifically poly-tempic music structures which overlap and intersect with each other during a performance.

Another key characteristic of this telem-

atic medium embraced by this composition was the digital mediation of sound, which may be related to characteristics found in a studio recording environment. Having the performers' sounds picked up by microphones and being in separate spaces allowed me to work with additional approaches to modulate the dynamics in relation to a traditional orchestra performance medium. For instance, the possibility of amplifying sounds with very low dynamics and having them work side by side with high dynamic sounds. Moreover, the different spaces of the telematic medium offered an approach to add different natural space acoustics to each of the separated performers' individual sounds. Further, to have control to be able to mix the completely separated sound sources into a single combined ensemble mix, to be further distributed to an audience. Indeed, these approaches to working with dynamics are not new in the tradition found within both the music recording practice and the live music practice. Still, compared to an orchestra performance medium, they may be seen as an extension of the telematic medium. At least when it comes to the ability to separate instrument sounds performed with various dynamics and make them work together with other sounds without having them interfere, which they would have done had they shared the same acoustic space. In Embracing Distance, there are many examples of where sounds with very low dynamics were combined with sounds with loud dynamics.

Compared to a traditional orchestra performance medium, the main amputation in this telematic medium is certainly that the ability to perform multipart music in sync with a common pulse is lost. On the other hand, if this is treated as a condition and a parameter in the composition process, one could argue that this aspect may be seen as an extension of the medium. In other words, the limitations in the medium may foster a composer to explore new perspectives of time in a music performance other than those present in the traditional pulse-based perspective, which is found in the majority of western music traditions. Indeed, working with approximate time concepts which are not in relation to a common pulse is not new in the field of contemporary art music. However, one may argue that the telematic performance medium is better suited for use while exploring these time concepts than a traditional performance medium.

Reference Points for some artistic ideas shown in video documentation of Embracing Distance: https://youtu.be/rOhMFagkxAE
1:53-2:15: Polytempic and poly-tonal textures between flute, clarinet and Kalimba in combination with music textures performed on computer keyboards. Also see the notation in Fig. 9. 3:37-4:25: Piano and trombone play a unison melody since they are located in the same space, the rest of the ensemble is performing with pen and paper, whose low dynamic sounds are amplified to balance with the trombone and piano. 5:10-5:35: Polytempic and poly-tonal textures between flute, clarinet, kalimba, piano and trombone, in combination with an approximate rhythm performed on a computer keyboard.

CONCLUSIONS

In this text, I have presented an orchestra music performance environment from a media ecology perspective. By looking at two examples of performances relevant to my ongoing artistic research practice, I have highlighted the importance of being aware of a new medium's ability to affect a creative process. When a new medium is put into an ecology it may completely change its conditions, which demands a process of re-thinking the ecology. In Put Your Hands Together, the new content of the perform-

er medium demanded new content of the instrument, score and conductor mediums to enable musical interaction. In Embracing Distance, the new content of the space medium demanded a composition approach to embrace this new space content to enable meaningful interaction. From an artistic perspective, the frame to work within in a creative process will depend strongly on the embodied characteristics of the new medium/s used in the ecology. More specifically, the embodied characteristics, in this specific setting the available musical parameters, and the embodied tradition, in which we have learned that the medium is traditionally situated within. In this text, I have argued that concepts like extensions and amputations shown in a new medium, as formulated by the media ecologist McLuhan, may help to define the frame to work within in a creative process. Still, how the extensions and amputations are understood in a new medium are very dependent on which medium/s it is compared to and who is making the comparison. Generally, I argue that any medium can be used in a creative process and still contribute to the creating of meaningful artistic output. In this specific orchestra ecology, this means any medium in terms of music instrument, music performer, music score, orchestra conductor, and/or the space in which the performance is situated within. In any event, if a new medium is involved the chief focus should be to work with the specific embodied characteristics the new medium offers. As a consequence, if the new medium is far away from the tradition, the generated artistic output will be far away from the tradition. Namely, in a music context, the new medium will always affect how the artistic expression will sound like. A violin can never sound like a piano and a piano can never sound like a violin, in the same way as a handclapping orchestra can never sound like a string orchestra, and a string orchestra can never sound like a handclapping orchestra. Indeed, a handclapping orchestra does not possess the same ability to variate music material like a string orchestra. However, the limitations on creating variations in music material will force a composer to work within that limited frame in the artistic process. Working with limitations is one of the core aspects from a composer's perspective. The limitations in a medium will define the creative process, formulate an artistic frame to work within, and finally be an important parameter concerning how the artistic expression will be generated. Embracing the limitations in a new medium as a creative force, rather than a limiting aspect of an ecology, will make way for creative explorations and may further open up new perspectives on how we define music and music performance practice today, and in the future to come.

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SEVEN SHIRTS

Lotta Lundstedt

This text is a rewriting of the artistic research project Seven Shirts included in the licentiate dissertation *Repetition Recurrence Return* (Lundstedt 2021). In this text, I further describe the exploration of the project in which seven slowly made shirts were worn for 49 days as an everyday performance, to not get lost in the interesting and new, but to force the clothes to be kept in active use and to embrace boredom and imperfection.

The speed of fashion is accelerating, what we have learned to think was in fashion 6 months ago is now the ugliest thing we have seen, and must therefore be replaced. The pace is increasing for fashion companies to replace their collections, meaning we now have barely a few seasons left but instead new garments are constantly being replaced in the stores. At present, it is almost impossible for anyone to keep up with the changes in fashion, it is moving quicker than we have time to start using our clothes. The way clothes are valued these days is not about their material value but their fictitious and symbolic value (Kipos 2020). Today, we have agencies that are forecasting trends, predicting the future of fashion. Fashion as a system striving for the new (Benjamin et al. 1999) is based and trapped in the capitalist system that depends on us consuming.

Slow fashion is a response to the fast speed in fashion and the starting point of the 'slow movement' may be traced to 'slow food'. When McDonald's came to Rome in Italy and changed the long and relaxed dinners with friends and families in favour of eating alone at a fast-food chain, the gastronome Carlo Petrini started to protest and used the term 'slow food'. Slow food is about fresh and local products, ecological and small-scale production, but also how the ingredients are prepared, which recipes to use, cooking without stress, and of course the sensory experience of eating. Here the pace in all parts of the process from soilearth to table is conscious and slow (Honoré 2004). Now 'slow' has become an approach in many areas. In slow art, the time and process of making are central, yet it is not just about doing things slowly, but what happens in time and space between the object and the viewer, it can happen immediately yet can also linger in the memory an art experience provides. Slow art can be created independently of slowness and high speed, stillness, movement, commitment, boredom, attention and distraction, present and past. Slow art is individual and each individual will experience art differently in the same way as we experience time in different ways (Reed 2017). When it comes to 'slow fashion', the main focus is not on speed but the economic, ecological and social aspects of the idea of slow. It is about the large-scale, logistics-dominated and economic-growth focus that dominates the industry that slow fashion seeks to change. Economic growth makes us poorer; it means that smaller companies are knocked out of

the market by big giants that can keep prices down. A new interest has emerged in slow fashion that wishes to create a community on a regional level, establish values based on the local, craft and traditional production, where satisfaction in materials is in focus. Slow fashion wants to strive for biodiversity and a healthy ecosystem, awareness, responsibility and information (Fletcher 2010). Sustainability in clothes is not simply about a technical crisis that can be resolved with new technical solutions, but about social, relational, material and practical issues that take place in and around the wardrobe, and how we dress (Fletcher 2017).

I believe many people think about the fact that our world is going ever faster, where everything is spinning and we are becoming more and more stressed, both humans and nature. It seems as if we do not see the connection between making things quicker and what that contributes to the fast-paced society we are living in. In this project, I made seven shirts, all stitched by hand, to slow down the production time, I also wore these shirts repeatedly to slow down the pace of change. I explored how the consumption of time can add to the expression of a garment, as well as the mindset of myself as its maker. Making a shirt by hand and avoiding the use of machinery is a slow process that can be seen as a subversive act in an era in which speed is everything. The focus of slow making is not on consciously breaking the established rules of the modern way of making clothes, nor is it a rejection of all modern technology; instead, the focus is a rejection of the exploitative and controlling economic and political system in which garment manufacture has become trapped.

Sennet (2009) describes how craftspeople establish a dialogue between concrete practice and thinking in which there is a rhythm between problem-solving and finding problems to solve. There is a connection between the hand and the head, and the time you spend on each repeated exercise is important for keeping your attention at all times. Moreover, there is a difference between a machine and a craftsperson: when technology and machines first appeared, they made life easier for craftspeople, but later became their enemies due to their speed and never becoming tired. How I perform things is crucial for how the experience of time will happen through a craft, I experience a slowness, where the surroundings are progressing slowly. I find a meditative existence where I let the needle go up and down, sometimes it feels like the different steps of ironing and changing thread etc. bother me. When I reached the step when the buttonholes were to be sewn by hand, boredom started, the time was counted down, it took a long time, much longer than a machine and I started to feel that I was wasting time.

In Hållander's (2015) view, practice is important, and so is working with her hands: "I make to learn something I did not know before I did it" (p. 42). She believes that thinking and making are connected, and the objects that we make will be filled with meaning and intentions where the process of making becomes a way of obtaining knowledge about the practice and the material. Wellesley-Smith (2015) describes her slow work with stitches as a mindset where the repetition of the movement of the hand explores the material and creates a connection with the object. The time spent with the seven shirts made me connect to them in a way I had never experienced before. The fabric between my hands and every stitch with the needle became like an everyday ritual.

The repeated act required while making seven shirts by hand can be compared to what it is like in a factory where the seamstresses sit and repeat the same steps all day long. Yet, one difference is that the personal imprint of the seamstress in the factory should not be there, no traces of a hand holding the material should be visible, no feelings or thoughts embedded, everything should be neutral, spotless and sterile. An-

other thing is that what was thought to be a revolution for women when the sewing machine appeared was, of course, a boost for some women while others became slaves in factories. It is difficult not to think from a feminist perspective when it comes to craft and clothing. Women have been engaged in beauty and clothing for a long time in history and thus it strikes me that we are a big part of the situation that exists now. At the same time, we are often the ones who take care of our clothes and textiles. Crafts empower and strengthen women and try to bypass the culture of consumption and regain the valued view of their knowledge that society has.

The design of the shirts comes from a basic shirt to work with as a white canvas. Some of the design decisions arose from the fact that the whole shirt should be stitched by hand; a two-piece sleeve made it possible to avoid making a separate slit, the collar has the collar stand included to rationalise the stitching, as the cutting would be easier and create less waste. The question of waste in the fashion industry is a big issue, with 15% of fabric while cutting a garment going to waste (Rissanen and Mcqullian 2016). The enormous number of garments produced globally also mean the amount of waste is enormous; in 2015, around 600 billion square metres was thrown away. The concept of zero-waste fashion design does not necessarily use less fabric but does not have to handle the waste, which is included in the design. While designing a garment, the waste thereby created is rarely considered, it is in the pattern cutting phase that this information becomes clear. The separation of the role of waste in the design process is a challenge in fashion design. Rissanen and Mcqullian point out that pattern cutting needs to be dynamic, with an open-ended practice. If the hierarchies between design and pattern cutting are dismantling, unexpected benefits an arise. The use of waste in this project as an opportunity to extend the possibilities for the design became interesting. By using waste from the first shirt and joining it into the next,

Wearing one shirt while making another.

Wearing the first shirt on the first day.

Wearing the first shirt for another six days.

Wearing the second shirt for another day.

Wearing the third shirt for one day.

Wearing the fourth shirt for another day.

Wearing the fifth shirt for one day.

Wearing the second shirt for six days.

Wearing the third shirt for another six days.

Wearing the fourth shirt for six days.

Wearing the fifth shirt for another six days.

Wearing the sixth shirt for six days.

Wearing the seventh shirt for six days.

Wearing the sixsth shirt for one day.

Wearing the seventh shirt for one day.

something that would usually be discarded came into play again, acting as a dislocation of the material and, in turn, possibilities to explore similarity and variation. When I have finished one shirt, I immediately start to think about the next. I think about how I can handle the next round of waste. The waste will not be the same every time because the repeated method I devise causes a shift in the expression.

To add to the expression of variation, the series of shirts was all dyed in the same dye bath made out of red and yellow onion peel, one at a time. The repeated procedural of dyeing created a similar colour but with a shift of nuance between each shirt. When using natural dye, you can see time as a material – the longer you wait, and let the fabric soak in the dye bath, the fabric will absorb more of the colour. The use of natural dye has environmental aspects as no chemicals are used. Natural dying works with time and chance as a design variable, where the outcome of the colours and nuances with natural dye cannot be fully controlled. By using natural dye as a method to give colour to the shirts, the aim is to work with change and imperfection as a design possibility, in the same way as Worbin (2013) worked with natural dye while investigating possibilities to imply new expectations and understandings of colour expressions in textiles that over time will evolve. Riisberg and Grose (2017) see new fashion experiences for wearers by including temporal dimensions in designing where garments change in time, evolve, and obtain new expressions. This slows down the flow of material within the fashion system. I believe that natural dye because of its lack of colour-resistance can contribute to this thought due to its possibility of changing colour over time.

It is not only in the cutting phase that waste is a problem in fashion. We also throw away garments before they are worn out. In Sweden, each year an average of almost 14 kilograms of new clothes and textiles are purchased per person. Almost one-third of what is bought is not used, and on average 8 kg of textiles per person and year are thrown into the garbage, even though a considerable share of these clothes could be used longer (Naturskyddsföreningen 2021). We wear our clothes on different occasions, which adds to the need for many garments. Since some occasions require you to have a certain outfit, many garments are never used more than once. In the Grimstad Klepp, Laitala and Wiedemann (2020) study, it turned out that when people were allowed to estimate their own use of garments in the wardrobe, the average was about 100 times, yet it also emerged that more than half the garments were used less than 20 times before being discarded. Every time you use a garment you will save material, the need to produce something new is postponed, with time thereby becoming an exchange for the material.

When I started to wear the shirts, I wanted that part of the process also be slow and like a ritual with the expectation of moving even closer to each garment. The purpose of wearing the same kind of garment for 49 days in a row was about paying attention to something, time and adaptation. The stigma around how often one can use the same garment (Emmanina C. Estoesta 2014) means that being able to wear the same item requires strength. The social aspects of wearing are sometimes hard to challenge and thus wearing each of the seven shirts for seven days felt like something that had to be performed, rather than coming naturally. Repeated rituals play a central role in many people's everyday lives. Independent rituals include daily routines like brushing teeth, making tea or getting dressed (Michaels 2019), where the last one is connected to imitation whereby we wish to fit in and play by the rules of conformity for which both written and unwritten dress codes relate to age, particular spaces, occasions, and gender (Yodanis 2019). How Seven Shirts was performed may be seen as part of the culture of environmental performance described as

having an aesthetic function in social and cultural life that forges meaningful and open relationships between living bodies and the environment (Besel & Blau 2013). How one participates in the universal always matters and everyday performance informs attitudes to the space in which we live our lives. Everyday performance can entail resistance to the power of the system that we sometimes feel trapped in, it can challenge norms that we once created. Slow wearing, like in Seven Shirts, is about durability and connections to what we wear, it challenges the need to transform, and strive for the new in fashion, which the abundance culture stands for. Repeated wearing can appear boring, but opens up to thinking beyond expectations of variation in wearing and looking at what is in between and the difference. Kierkegaard (1995) described how getting lost in interest happens when we flee from boredom to something that is self-experienced, connected to aesthetic attraction, or pleasant. He highlights the importance of controlling yourself: escaping boredom and despair and running towards what is interesting cannot succeed in the long run because if we strive for what is interesting then that destroys our future. Walker (2019) expresses a similar understanding of this issue:

> [T]he discoveries we make are not new. They merely throw light – often a dim light – on that which already is. Seemingly new, seemingly solid, in time they too dissolve and disappear as subsequent discoveries and interpretations supersede them. And as for all the "new" gadgets and gizmos and bells and whistles that preoccupy us so completely, these are but passing trinkets. They burn brightly under a flourish of fanfare, they amuse us for a moment, but like the firefly, their flame is soon extinguished. Their transient distractions are of little consequence. In the scheme of things, their purely extrinsic rewards count for nought. (Walker, 2019, p. 111)

In what is familiar, we can find comfort and convenience that make us return to it again and again, even though it is not perfect. Getting to know something in depth, past the surface, can make one stay with a certain garment for a longer time. By wearing the shirts, I have taken them out of the production room and placed them in the everyday. In this way, I materialise the everyday, the ordinary, the common, the informal, which are in contrast to design or craft that wants to create something unique. Working with waste, with hemp fabric, sewing by hand, the use of natural dye, and wearing all contribute to the displacement and imperfect aesthetics of the shirts compared to a fast-fashion garment. Saito (2017) argues that we need to cultivate an aesthetic sensibility to appreciate imperfection in our everyday experience. The norm of the perfection of objects, artefacts and garments for example can be rejected and considered imperfect if it fails to fulfil its design. Perfectionism limits our aesthetic range of appreciation but also holds negative environmental consequences.

> Another consequence of perfectionist aesthetics is the accelerated pace of the perceived obsolescence of manufactured goods, ranging from clothing to hi-tech gadgets, that encourages fast fashion. This economic system entices consumers to continue to seek more fashionable, stylish, and up-to-date goods. Furthermore, when an object starts showing signs of wear and tear, even if the object still functions well, we are compelled to discard it and purchase a new one. (Saito 2017, no page)

In the same way as Satio (2017) describes how the imperfect artefact that bears marks of use can change norms of aesthetic value,

Lushetich (2018) describes how dust can be a carrier of memory and nostalgia and therefore add value to the material world. While working with the seven shirts, it became clear that the slow process of making had left traces on the garment, every stitch became important, it left a memory of how it was made, how the garments had sunk into the dye bath was shown, the uneven colouring from a small pot without stirring. The mark of my hand that made the shirts and the body that was wearing the same, together with the chance of using natural dye, created a perfect expression, from my intentions, but possibly an imperfect expression from a common view.

By wearing the same as an everyday performance or environmental performance, I found familiarity, comfort and convenience when the change from one day to another became performed and visualised. The shirts became time intervals of days, they marked out different elements and allowed me to observe the variation in these elements, the daily sequence of variations relates to what came before and what followed.

> Progress is a forward march, drawing other kinds of time into its rhythms. Without that driving beat, we might notice other temporal patterns. (Tsing 2015 p. 21)

When wearing one shirt for several days, it will start to bear traces of the upper body, in turn, creating a personal imprint that is shaped after the physical presence and memory of a body where the remains of that body, skin deposits and body scent can be seen as adding value to the expression. I discovered that I began to notice small changes in materials and their shapes and surfaces, as well as in myself and my surroundings. Boredom in wearing the same item created a connection that became a relief and, together with active noticing, it helped to create new meanings in the material world.

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The first shirt after it had been worn for seven days.

The second shirt after it had been worn for seven days.

The third shirt after it had been worn for seven days.

The fourth shirt after it had been worn for seven days.

The fifth shirt after it had been worn for seven days.

The sixth shirt after it had been worn for seven days.

The seventh shirt after it had been worn for seven days.

DOES THE COSTUME FIT?
About costume creation for performing arts

Karin Ågren

INTRODUCTION

In this text I will showcase my ongoing work of articulating different concepts important for my artistic practice. The primary aim is to create a foundation, which could be used in my future artistic research projects. But the aim is also that the mapping of concepts may help and clarify creative processes in teaching in aesthetic subjects. By looking back at my different work as a costume designer, the idea has been to get a new view on my artistic practice and what could be interesting in it. My reflections in the field of stage costume will lead to insights and new ideas and questions, which are valuable both for my pedagogical practice and also to define future artistic research.

I will write about creating stage clothes where artistic expressions meet textile exploration and craftsmanship. I have for a long period worked in processes to explore the textile material area, which has led me to develop methods for exploration through designing and crafting stage costumes. I will exemplify what a design process for me can look like and I will describe different concepts that I can relate to. The three concepts that I have identified and that I highlight are: *Room* – In what context and where does the play take place? *Materials* – What textile materials, colors and shapes can I experiment with? *Body* – Which bodies will wear the clothes I design and how will they move?

The idea work for me as a costume designer is based on what is to be told and why, and is put in relation to other framing factors that apply to the current performing arts work. The costume should reinforce an expression or mood of the actor and can place a character in terms of age or gender or to arouse empathy or intimidate. The stage costume can also relate to a particular concept or era. The appearance and attire of the characters is important and it is often most natural that the costume blends into the plot or the scenic whole and thus there is not much talk about stage costumes. That's one of the reasons why I'm interested in exploring the meaning of stage costume more. A costume designer's work is so much more than clothes or not clothes. It's about that the costume will help the actor to feel comfortable when it enters his character. The actor must have a good relationship between body and clothes and thus be strengthened in his or her role work. How the stage costume is designed, what it expresses, what materials are used is related to performance

and the actions to be performed. Expression and design belong together!

My interest in designing stage costumes is based on my curiosity in the textile field and its many uses. To craft clothes to be used in theater performances is challenging in several ways. It is important to build familiarity with those who will wear the clothes and to convey an expression or a style. The expression of the costumes is visualized with the help of the actors' bodies that must function in their context and relate to the environment that the stage room constitutes. I strive to communicate in materials and design when I create clothes for the stage. My artistic research is context-bound and I will describe some projects within the framework of creative exploration that has given me new insights.

CREATIVE PROJECTS LINKED TO TEACHING

These experiences of creating clothes for scenic contexts and directed uses are a good foundation for me when I teach. In relation to my teaching, I want to explore core aspects to clarify different pars of clothing creation for the stage. I also want to deepen the students understanding of the complexity of the working with expressions, bodies and clothes. I want to encourage students to experiment and try to find their own expression when designing clothes. For example redesigning old clothes, dye textiles or manipulating fabrics provides many opportunities to create new designs with a more sustainable foundation.

In several productions I have worked together with Johanna Salander who is a director and screenwriter and I have talked to her about what she sees as important in her directorial role and which is important for the design and function of stage costumes. In my upcoming examples where I relate to different concepts I will use some quotes from our conversation.

THE ROOM AS A CONCEPT TO RELATE TO IN COSTUME DESIGN FOR STAGE

The design and function of the costume must relate to the room where the performance takes place. In the play Small as Ant – Mighty as a Whale for primary school, the stage consisted of a floor surface covered with a tarpaulin with the actor in the middle and the children's audience sitting around.

It is challenging to present current topics in as natural a way as possible. The theme in this play is environmental degradation linked to wildlife and the deteriorating conditions under which animals have to live. The audience meets small animals such as the ant and one of our largest mammals, the whale.

When animals, plants and people stay in the deep seas, there is a plastic mountain that you can easily get caught in. After a dive through the plastic mountain, the rubbish has been transformed into a dress!

When I design costumes for a theater performance, it is important that the cos-

Small as an Ant - Mighty as a Whale

Dance in the plastic dress

tume helps the actor in his character work. The clothes must be durable and withstand being used many times. Here are some thoughts about stage costume from Johanna Salander, who in her role as director drives the work with a performance and has the ultimate responsibility:

> The stage costume helps the actor to find his type. It's good with costume suggestions that I can say yes or aha to. There may also be a no because I as a director want to show a new image. For example, if an actor can be pulling on a garment that can work well for the character, there should be the right feeling in the garment. There, clothes can help create movement patterns. When it comes to costume suggestions that are not a typical style for that particular actor, it can help me as a director to see other things that suit the character. (J. Salander, personal communication, April 14, 2021)

In this performance, the only actor is at the center and acts himself all the time. The space for the acting is limited and the attributes and costume parts that are to be used must be carefully tested for everything to work. In the research work, the actor and I experimented with different types of recycled materials to reinforce the environmental theme that is in the performance. We collaborated here with two directors who wanted to try out different ideas. The result was good after a time-consuming approach.

> In The Ant and the Whale, no clear idea had been formulated for the design before the rehearsal work

began. The form of the work was experimented with, which meant some practical inconveniences and misunderstandings before everything landed. A lot was about testing, rethinking and trying new ideas. (J. Salander, personal communication, April 14, 2021)

MATERIAL AS A CONCEPT TO RELATE TO IN COSTUME DESIGN FOR STAGE

Johanna Salander directed the performance. In Secrets Wanted! was the design of costumes about finding a concept that worked so that the four actors easily could go in and out of different characters. My basic idea about the costume design was that all clothes should be based on knitted materials and knitwear to be compliant and provide good mobility. Knitted clothes give different expressions when worn compared to clothes in woven materials. Knitted textiles is experienced as comfortable and pleasant and invites to movements. Knitted clothes of various sizes were created for the perfor-

Here are some pictures from the performance Secrets Wanted! where the audience can take part in people's innermost secrets and raise questions about justice and everyone's equal value.

From Secrets Wanted! The John Lennon vest is visible

The school elevator is broken and a wheelchair bound student missed the lesson.

The show Secrets Wanted! was a documentary, newly written work based on collected 'secrets' from people with norm-breaking functionality (disability). The research prior to the performance was done by putting up large sheets with the invitation; "Secrets Wanted!" on all notice boards in Umeå. There was a mailbox at the theater where people could leave their written secrets - anonymously or with senders, and interviews were conducted to gather material for the performance. Camilla Blomqvist wrote a script based on the collected material and

mance. For example, coarse knitted scarves were used which were reinforced with more stable fabric and then became trousers. The color was a bit greyish, and that worked well against the design of the stage room. One of the characters was John Lennon in his previous life and carried dreams of time with the Beatles. There I made a vest with knitted peace appliqué and hand-knitted 'fur' around the edges instead of sheepskin. This is to stick to the knitted costume idea and to create a lighter and more compliant garment than if I used curly sheepskin.

Finding love! Coarse nit material for his trousers

As a costume designer, I had more challenges in this particular production where one of the actors was in a wheelchair, which means additional things to take into account in the costume designer's work. It is important with comfort and that the actor should move easily with his wheelchair and also be able to stand and walk with a walker in certain scenes during the performance. Costume change for this actor was solved so that other garments were put on top of the basic costume.

> Sometimes I have pretty obvious thoughts about what a character can look like, but in some productions this is not very clear, so then it is important to find a concept that works and not an outfit for each character. Based on this concept, there should be traces of things that support the current character, which is sought in Secrets. It could be a color, a track by the Beatles or something else. (J. Salander, personal communication, April 14, 2021)

At an early stage, there may first be quite stereotypical ideas about how the characters can be dressed. Here, as a costume designer, I get to twist and turn these ideas and find motives for the choices I suggest. When we talk about characters, the choice of shoes can be important for how the actor can move and find his character. In shoes with heels, the actor immediately becomes someone else if the person is not used to wearing heels. A tight and restrictive suit, I mean clothes that have certain limitations in how you can move, will also be something

to work with for an actor.

> A tightly held stage costume can help the actor get away from himself and into another character. An example of the costume designer's choice is that female actors in the play *Society* wore skirts that they never usually wear privately. This led to the emergence of other movement patterns that strengthened the character. (J. Salander, personal communication, April 14, 2021)

THE BODY AS A CONCEPT TO RELATE TO IN COSTUME DESIGN FOR STAGE

When I worked with the theatrical performance The Sauna Club people wondered what I had done as a costume designer, because there were no clothes in the sauna. This is maybe a natural thought because it becomes difficult to understand thoughts and conscious choices about costume in a sauna theatrical performance.

In the performance The Sauna Club where Johanna Salander wrote the script and directed, we meet three women who meet and bathe in the sauna together and talk confidentially about life. They are of different ages and have different social situations. They have bathed in the sauna together for several years and follow each other's lives, sharing joy and difficulties. The sauna as a stage room requires a some nudity and the director wanted to show as naturalistic feeling as possible. In the performance, there was a basic idea from the beginning that the work should be experienced 'naturally and for real'. For me it was new and different challenges when it came to designing costumes for actors who are in a sauna

The performance The Sauna Club is a meeting place where creating confidential relationships. These conversations can unite, engage and create security.

all the time. As always when I work as a costume designer, the character's personality, age, family relationship and possible time shift in the plot are important aspectsto be able to work out suggestions for costumes. In the idea work, me and the director discussed what type of sauna these women meet in. Should we have a SPA feeling like where everything is bright and fresh? No, it's about friends who are bathing sauna in their immediate environment somewhere. This is of course important when choosing the color scheme and material. My color scheme interacts with the scenography and sauna colors.

To create a comfortable relationship with 'naked costumes' for the actors in a sauna was the most important challenge. They should feel comfortable and safe in the nudity that the work requires. This was about using large towels, bathrobes and attributes that personify each character. We have a young parent of small children with colorful towels and she takes the one that is clean at the moment, a middle-aged woman who likes spas with luxury and who chooses good quality towels, and then we meet a retired woman who likes real things and striped towels.

> Crucial to the performance was that everything would be experienced naturally. The sauna is heated and naturalistic and then some things go away naturally. It does not work with clothes or body stockings but possibly a swimsuit. We wanted to get nudity but also talked about the buttocks and other things but it is not something I use and associate with sauna. It was also important to reflect on where the characters are in their life cycle. It was not just towels but bathrobes, shoes, hats that are not as obvious but

Textile screen print on towels as mechandice products

> still important choices for the play. They could cover themselves and not freeze before entering the sauna. So they should feel real when they went to the sauna in their roles as Rita, Gunnel and Anna. Karin, your choices of colors and varieties of textiles have to do with their personalities. (J. Salander, personal communication, April 14, 2021)

In rehearsal work in general, it is always good to use what we call 'rehearsal clothes' so that the actors can get a genuine feeling for the intended stage costume. In the Sauna Club, the actors had to rehearse as lightly dressed as possible to get the sauna feeling right from the start. During the rehearsal period, the ensemble first worked indoors with lighter clothes, towels and attributes where we gradually, in a common process, could peel off different garments so that the skin's natural suit was made visible. When then the rehearsals continued in our stage room: the sauna, it was no wonder with nudity as a wearing suit. A naked body as a theatrical costume is difficult and must be thought through carefully. The intimacy shown is about neutralizing nudity and ignoring sexualization of bodies. A naked body is still a clothed body depending on how we set our framework and in which context the body is in.

CONCLUSIONS

I want to continue to explore the significance and impact of stage clothing on the wearer and clothing signal system both physically and culturally. What does the actor feel and what does the audience experience? Based on my experience of having worked with creating functional and comfortable stage clothes that are a support for actors, I am curious about the feelings that can arise when actors get to take part in sketches and concepts around the expression that the costume should convey. Can there be resistance in a costume design that can be turned into something good for the role? Working with clothes that are not completely comfortable may create other movement patterns.

How can I proceed based on my three concepts *Room*, *Material* and *Body*?

As regards the aspect of Room I can investigate more about how the stage costume breaks off or blends into the stage room

and what is important for the whole performance.

As a material aspect, textiles or textiles in combination with other materials is a great field to explore more. Experimenting with materials to create a special look is interesting work. The surface and colors of textiles can be changed to have different effects and sometimes clothes need to be given a worn look by patinating them.

Finally and most important of the three aspects, The body that wear stage clothes needs to be addressed. The body should be able to move freely and not be limited by the clothes, but it can also be interesting to investigate how a movement pattern can become if the clothes are instead limiting. Stage clothes should work well regardless of the shape or size of the actor on his own body.

When I connect to my teaching, I can clearly show the importance of clothes' ability to communicate. Clothing is a complex area where we show and interpret expressions. We also want fit and comfort and we want to use good materials when we choose design for clothes.

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Photographers: Alexandra A. Ellis, Elin Berge, Johan Gunséus, Sara Lindquist

Closeness. Interactive sculpture installation of three fabric sculptures filled with cellular plastic balls. Konstnärshuset Stockholm, 2014.

BODY AND MATERIALITY IN INTERACTION WITH THE VIEWER

Sofie Weibull

Several of my artworks are meant to be interactive. I want the viewer to be emotionally touched and that they with curiosity want to investigate, feel the desire to be close to the sculpture, to possibly climb on it or crawl into it. The sculpture should convey several dimensions in which the different senses are activated.

When I look back at my way of working over the years, I see that I have had recurring method patterns. For example, I try different solutions with different material choices, colour, size and quantity. When I create my artworks, I engage in an inspiring and sometimes long and tentative process before the work is produced. It may be something that interests me in nature, which on a deep level can lead to an idea. For example, from aquatic organisms, such as aquatic organisms or forest-living mucous fungi, so-called Myxomycetes, "A group that has an unclear systematic location, but which is now usually carried to the sub-tribe Amoebae" (Nationalencyklopedin, 2022). In addition, I connect different parts of both old experiences and new impressions. It may be a sculpture I made before, which had both a conceptual idea and a clear form of expression. I go back and look at the sculptures' first process chain, like texts with drawings. Inspiration can also arise from collected images of works of art by other artists from news articles, newspapers, radio and movies. Sometimes, it is pictures I have made following a dream that form the basis of an idea. I have collected some of the material in different categories in coloured plastic folders. I usually put all of the content on a table and process it in different ways with possibly new ideas. This cross-fertilisation method contributes to the creation of new artistic ideas. In the inspirational images, there may be emotional expressions which are strengthened in the new works of art by adding new material choices. Based on this working method, I created the soft fabric sculpture, A Feeling of Frustration, of bounded tights with a cellular plastic filling.

INTERACTION

As mentioned, I want the viewer to experience my sculptures through a tactile touch. With our sense of mind – the haptic system, we absorb information by touching things. When we have experienced the touch of different objects during our lives, a large

store of impressions is saved in our brain. It can be how we have interpreted something that is soft, hard, rough, sharp, hot, cold etc. Our fingertips' experience of the texture of a surface that we have touched can be translated to things we only see from a distance, without having to actually touch them. This allows us to interpret how an object should be, for example, rough or smooth (Berefeldt, 1976). Thus, the structure is important for the tactile encounter with the viewer's hand or their perceptual sensation of how it might feel. When the work of art is touched by the viewer, it is affected by its surface structure.

> A clay-based linguistics is by no means as central to human social life as spoken and written language. As part of a material-based visual and tactile culture it is not, however, without significance. (Medbo, 2016)

When we touch a work of art tactilely, we are affected by its material structure and design language. We are sometimes tempted to touch an object we have never touched before. Through our experience we have already processed how certain objects feel, meaning our attraction to an object varies depending on whether a positive or negative feeling has been experienced. There may be a lack of experience and the question then arises of how the object feels. The curiosity within us is activated and we wish an answer to this question. Several of my artworks are interactive. I want the viewer to be emotionally touched and curious to want to investigate, feel the desire to be close to the sculpture, to possibly climb on it or crawl into it. The sculpture should mediate several dimensions in which the different senses are activated.

During one exhibition, I found a visitor who shared his experience with the sculptures. He told me about his autism and that he was unable to hug other people, even ones he was close to. However, he felt that it was OK to hug a sculpture instead of hugging a human being. He does not have to think about receiving a hug (from someone who hugs back) and can then instead feel an undemanding closeness to the shape and material in the sculpture. Its filling material, the foam balls, also provide some reflective heat from the person hugging, meaning it will still be a warm embrace, even if it is not a living creature that is being hugged. I had the colour red as a starting point when I first created the hug sculptures, but have since tried to have them in different colours because colours give different expressions. When I exhibited at the Alva Gallery (2011) adjacent to the Norrland University Hospital, I did not choose to have the colour red on my five hug sculptures. I thought that in a hospital the colour red would be linked to blood and then perceived as something negative that hurts or is deadly, that it would not attract viewers to approach and hug them. I therefore chose shades of yellow, light and dark-green as a kind of abstract forest environment in the sterile hospital. The sculptures wore red in another exhibition I held at Konstnärshuset (2014) in Stockholm. They gave a calm expression as they slowly swung back and forth. Even though you could perceive them as three huge drops of blood, viewers were drawn to embrace them.

ROOMS

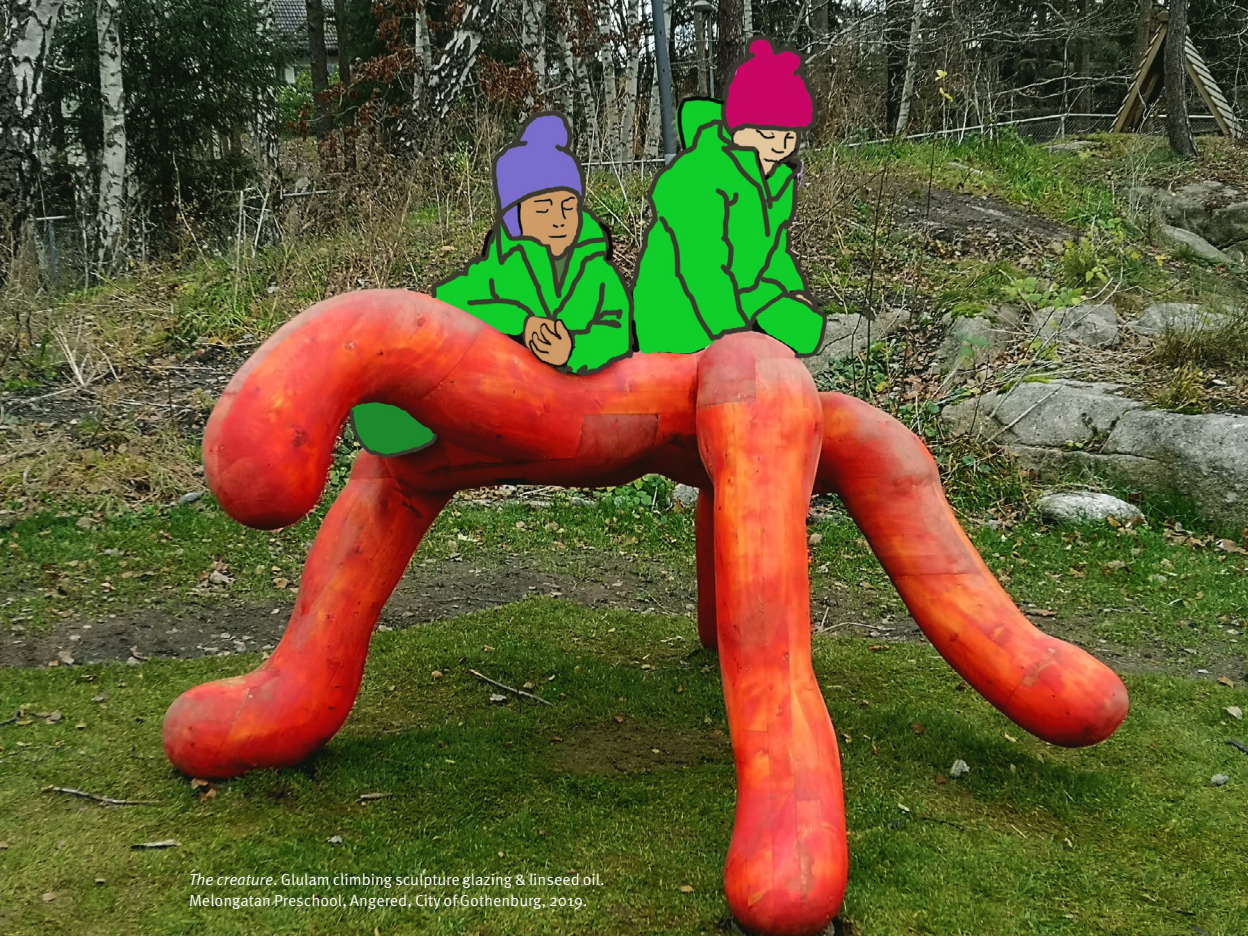
Arnheim (1974) states that physical bodies are more easily represented in sculptures than on paper or canvas. We humans see in stereo and this makes it more expressive for us to understand a three-dimensional sculpture. I like to make two-dimensional sketches of sculpture ideas, which are drawn with spatiality, as they give a good description of what they might look like in reality. As part of this process, I also create a sculpture model on a scale of 1:10, usually in clay such as stoneware clay or plastic clay

Closeness. Interactive sculpture installation of five fabric sculptures filled with cellular plastic balls. Gallery Alva, 2011.

A feeling of frustration. Sculpture of tights and cellular plastic balls. 1x1x1m. Umeå School of Design, 2011.

and, after that an environmental model in cardboard. Alternatively, I take a photo of it and mount it digitally in Photoshop with an environmental picture from the location of the intended place (e.g. a stairwell). This is to gain an overview of how the sculpture would work in its imagined environment. I then make the sculpture. Where the artwork is intended to be placed can affect the production. It varies depending on whether it is in a public school environment where a certain safety regulation must be complied with or if it is at an exhibition in a gallery. If I choose to make a work of art that is to be touched, I must consider that it should hold for the right kind of load. If, on the other hand, there is something on the wall or from the ceiling that no one can come in contact with, I can have greater freedom with the choice of material.

Berefeldt (1976) says that the experience from our orientation system is based on visual experiences of balance and imbalance in the image of movement and dynamic tensions. It is mainly in three-dimensional objects that we benefit from our ability to discern, where we form our experience bank, gathering various information about the basic orientation system. I have repeatedly used movement and volumes with different tension points in my sculpture creatures to emphasise a lively expression. Although these are organically dead things, we read figures in the forms of sculptures with life. One explanation for this is how we use our senses to interpret



The creature. Glulam climbing sculpture glazing & linseed oil. Melongatan Preschool, Angered, City of Gothenburg, 2019.

our world. I usually strive for simplicity in my sculptures. Arnheim (1969) believes that even works of art that look simple turn out to be complex. In addition, when a work of art is said to have simplicity, this means that the place and function of each detail in its entirety is clearly defined. In a mature work of art, all things seem to be related to each other.

BODY

Through the design language in my sculptures, I try to bring out a liveliness that expresses a feeling of organically fantasy creatures. I work carefully with the sculpture's material so that the right expression emerges. Some of the visual perceptions I focus on are form, balance, space, rhythm and movement. The creatures have had a head without eyes, a nose, mouth or ears, with only a tail-like body part. They have had a living expression with a movement, even if they have been in a solid form, in various hard materials such as iron. They have been mounted vertically on walls, horizontally from the ceiling, directly onto the ground or protruded from the ground through a foundation.

I do not produce the same sculpture in several exact copies or editions, but repeatedly producing similar expressions with different shades of form or colours has attracted me. In order for the different sculptures to have a connection between them,

Evolution. Milled relief of aluminium sheet metal, painted & decal plastic. Melongatan Preschool, Angered, City of Gothenburg, 2019.

the corresponding similarities between meaning and obvious pattern, so-called isomorphism, (iso morphine = same form) are needed (Arnheim 1969). What I recreate is the design language but in different contexts, depending on the environment and for example the choice of size or material. The visual expression can also be enhanced by repeating certain shapes. I applied this in my algae-like works like Evolution where I repeatedly made tentacles in an irregular pattern. Although the tentacles are similar in their design, an active movement is created by spreading them in different directions. It can be something that has a calming effect with a harmonious impression like the large fabric sculptures called Closeness. Sometimes, it is a curious expression that is perceived as someone seeking an answer. This can be seen in my unidentified tadpole creatures that are made of different materials. In these amoeba-like creatures, the body eels forward through its elasticity of convex and concave shapes. The tension points of the sculptural body suggests an active shape and thus an active outward movement The law of gravity also affects the creature's body so that it broadens its volume and the surface that is pressed against the surface. Its surface is shiny and perceived to have a hard shell, which then expresses strength. With the work, I wish to bring out the feeling of how something wells up and becomes bigger and bigger and almost bursts.

I learned from a sculpture teacher at an art school a good method for sculpting the model's position so that it has the right focus. He taught us to stand in the same posi-

tion that the Kroki model was standing in. The purpose of doing these bodily exercises was to give us tools to gain bodily knowledge of the position of the Kroki model. This allowed us to create with the right focus where the balance, weight and pressure against the surface was in the sculpture. The physical stimulus of gravity affects our kinaesthetic sense of mind consisting of weight and balance (Hasselgren, 1985). It was then necessary to add the sight's observations of e.g. volumes, directions, rhythms etc.

MATERIAL

I can have materials in mind at the outset or it will be a process to work out which one I want to use to make the sculpture from. What I have worked in is marble, concrete, different wood materials (such as glulam, MDF board, Valchromat etc.), various metals (such as bronze, powder-coated cast iron, stainless steel, flexi pipes, aluminium etc.), a range of plastics (such as plexiglass, polyester lamination, epoxy moulding, cellular plastic etc.), fabrics, felted wool, rubber hoses etc. I cannot stick to one material, but constantly try new ones. I have no limit here. The driving force is a kind of curious restlessness, with exciting challenges that entice me to throw myself into something unknown. It can be challenging to find a material that gives the right expression to ensure the purpose of the artwork is highlighted. If the sculpture is glossy, like the orange creatures in painted cast iron, the surface expresses a strong shell with confidence and strength. If its surface is uneven, the expression becomes more uncertain. I sometimes encounter various technical difficulties, such as in wood sculpture where I have to work with the grain of the wood to avoid damage like notches etc. This applies whether I am working with a chisel, chainsaw or planer. This method also applies when I process in stone, like marble. Then I read the structure and work with the fibres of the stone so that it does not break. With papier-mâché, I must be patient with the process of many layers upon layers and the slow drying times.

> Artists express something through their art. They do it in different ways. Some use clay, others wood, some their own voices and bodies and still others use words and concepts. The examples of artistic materialities are innumerable. Everyone has their own uniqueness. I see them as different forms of language. (Medbo, 2016)

For my creation, that means when the sculpture is made of wood, I want its surface to emphasise a soft yet still firm expression. If I made the sculpture in cast iron, outdoor temperature will affect the metal, which absorbs heat or cold in a clear way. If I also powder-coated the metal, the smooth and shiny surface will give elasticity to the shape's expression. When I have worked with marble, I have in some cases had a well-polished waxed smooth surface and other times an unpolished rough surface. It has then given different emotions in its expression. I have also made sculptures in soft materials, like my hug sculptures in tricot fabric filled with cellular plastic balls. I wanted the viewer to feel a sense of security and warmth while hugging the large Barbapappa-like sculptures. These are not meant to be outdoors, but are allowed to be in gallery environments.

The choice of treatment method can vary between working by hand or using machines. Sometimes it can be nice to work with the craft by monotonously sanding a surface smooth or carving out a certain structure on a surface. The advantage of the hand's slow approach is that I have time to see how the result develops at a calm pace. In addition, the hand leaves personal traces that make the sculpture more unique than a machine. It is sometimes easier to work with a machine tool, such as a grinder, a

The eye. Sculpture relief of glued wooden boards of Valchromat (coloured MDF board). Kvarnbackens Preschool, Tierp Municipality, 2018.

chainsaw or an overhead cutter, because it is faster to remove unwanted material with the machine. Still, there are risks from working with hand machines as it is easy to grind away too much material, saw too far, or mill in the wrong direction. I also let other craft companies make parts of the artwork. I send a digital picture of the drawing to a company. They reprogramme it on a CAD program and then they print it out using a robotic cutter.

A material can be made deceiving in its expression to appear to be in a certain way, but in fact it is not physically what we think it is. It is, for example, a common prejudice that snakes are slimy and cold when in fact they are not slimy and it is only illusory to think they are like that as their leathery scaly skin shines. In some cases, it can be good to not mount heavy sculptures on the ceiling since extra work is required for stronger attachments. Then there may be a reason to make a light object look heavy. This is when the artistic challenge of creating illusions is needed. For instance, a sculpture that looks like a heavy figure can be made of light papier-mâché material. It does not matter that the sculpture is fragile material as it is placed inaccessibly like on the ceiling or high up a wall. This does not reveal the material the work is made from. You can see an example in the sculpture.

In this text, I have attempted to formulate my way of creating art. This writing contributes to the fact that I now spend more time considering my process and my working methods. In the future, I intend to immerse myself in one of the above areas I have described.

The creature. Sculpture in papier-maché. Kvarnbackens Preschool, Tierp Municipality, 2018.

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All artworks and photographs by Sofie Weibull.

Seven small creatures. Three cast-iron sculptures treated with orange powder coating. Melongatan Preschool, Angered, City of Gothenburg, 2019.

The creature. Glulam climbing sculpture glazing & linseed oil.
Melongatan Preschool, Angered, City of Gothenburg, 2019.

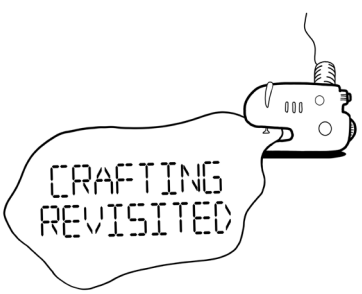
CRAFTING REVISITED
A Small Visionary Project 2021–2022

Stina Westerlund & Åsa Jeansson

Crafting revisited is an ongoing project financed by UmArts, an interdisciplinary arts centre located at Umeå University. The arts centre, which includes five departments from the Faculty of Arts and Humanities and the Faculty of Science and Technology, aims to stimulate and strengthen interdisciplinary arts research in visual arts, architecture, design, curatorial and creative studies.

INTRODUCTION AND PURPOSE OF THE PROJECT

The project idea for *Crafting Revisited* arises from our joint background in textile craft and professional work as Crafts teachers, teacher educators and associate professors in Educational Work at the Department of Creative Studies at Umeå University. While teaching Crafts (i.e. *slöjd/sloyd*) at university level, the need for a broader research base for knowledge in the area becomes apparent. The Crafts field lacks its own academic discipline with the outcome that research is conducted in other disciplines. This means existing research in Educational science mostly consists of studies with a pedagogical focus (Borg, 2021; Johansson 2018), whereas studies in Crafts that take advantage of technological aspects or examine craft processes and artefacts as a means of artistic expression and consider research problems are sparser, and established methodological approaches are missing (c.f. Halvorsen, 2007; Nygren-Landgärds, 2021).



The artistic dimension of Crafts in educational contexts is thereby overlooked and unexplored in research. The field of Crafts also contains overriding contradictions between artistic and scientific understandings and between analogue and digital technologies that seem to challenge traditional craftmanship as well. In this Small Visionary Project, we will question and move beyond such dichotomous and discursive limitations by approaching a reciprocal and complementary collaboration between artistic and scientific research (cf. Bränström-Öhman, 2015) and explore

the encounter between previously acquired craft knowledge and the digital technologies that are bringing new craft tools. We are curious about whether and how scientific and artistic research can be integrated and intend to investigate this by studying how analogue and digital craft knowledge can merge in explorative craft processes.

The project was started in November 2021. Given that research is sparse in Crafts, i.e. in work processes and materials, and noting the tension drawn between analogue and digital tools, we intend to revisit crafting through own and joint craft work in textile materials with a digital embroidery machine and software. For us, this revisiting means returning to our own craftmanship in a collaborative artistic research process and using the textile medium and its mode of expression as a way to articulate, document and communicate the research result (Borgdorff, 2012). Although the textile medium is well known to us, what is unknown is what it will tell in the research process concerning the new, digital tools and which knowledge is required to appropriate (Wertsch, 1998) the material expressions.

The purpose of the project is to find connections and exchanges between artistic and scientific research as well as between traditional craft and modern technology. More precisely, our intention is to create and test a critical framework for interdisciplinarity between artistic and scientific research, and the so framed 'revisit' to our own textile craftmanship with digital embroidery technology and software to examine the knowledge needed to create mediations and develop our own material expressions. We are searching for how previously consolidated craftmanship and the newly acquired knowledge in digital embroidery merge, and how this is expressed (or can be 'read') in the textile materials resulting from our joint work.

THE WORK OF THE HAND – THE OPPOSITE TO OR ESSENTIAL FOR DIGITAL DEVELOPMENT?

Educational Crafts as a phenomenon is rooted in material culture and social practice. Materials and aesthetics are traditionally prominent and creative self-expressions are given space. The presence of the physical hand is in a way inscribed in the material expressions and the craft artefacts. Even if hand tools and machines are used, representatives of Crafts have defended the work by hand and tactile experiences as important for educational purposes. Slow work by hand with materials has thus been protected. In, for example, Contemporary Art and Design, the handmade and the work of the hand have undergone renewal, dissemination and increased relevance in response to decades of the exploration (and celebration) of digital technologies in artistic procedures (Hung & Magliaro, 2007). The speed and effective perfection that characterises digital technology meets with resistance in the skilled hand's slowness and imperfection in what Openshaw (2015) describes as a "resurgence in the most tactile and analogue forms of human culture" (p. 8). Despite the number of new opportunities that digital development brings, there are also risks of de-mediation and alignment of expressions (Han, 2014). When the physical hand is removed through use of digital tools, the sensuality and personal presence in details, as important components in the material expression and artefacts, could become lost (cf. Openshaw, 2015; Lundborg, 2019).

However, digital technologies are here to stay. Political demands have led to a revised curriculum for educational Crafts with stricter directives to support pupils' development of digital competence and use of digital technology (Swedish National Agency of Education, 2017). The polarised positions between analogue and digital technologies in craft reveal different aspects and qualities that are ultimately interdepen-

dent. Digranes et al. (2021) describe this "coexistence and collision" as dependence, although it changes our experience of artefacts (p. 2). According to Adamson (2015), the interaction between the analogue and the digital in craft must be perceived as recursive and inevitably influencing each other, not the least when it comes to aesthetics. The problem, he says, is that digital technology brings approaches that complicate the specialisation needed to achieve expertise in craft. Research also shows how digital technology can form the basis for a new kind of creativity where neither traditional craft methods nor new technology hold power over what is possible or allowed to do with different materials, and where the craftsperson instead uses both traditional and new opportunities when forming their material (Johnston, 2017; Lehman, 2009; McCullum, 2018; Openshaw, 2015). In terms of research within an educational Crafts context, we do not know much about this merger and interdependence, or the consequences in the craft processes, material expressions and knowledge developed that comprise the focus of our project.

FORMATION OF A METHODOLOGICAL FRAMEWORK

The project's interdisciplinary approach enables us to use perspectives from artistic research in relation to materiality in craft and design processes that is digitally performed, and to explore the tensions that may arise in our work. Our methodological approach is hermeneutically inspired (Ödman, 2007) and based on our pre-understandings of hand and digital embroidery. An introductory workshop was held in November 2021 at which our previous work with hand, machine and digital embroidery was mapped and established the starting point of the project. Prominent in the preliminary analysis was how our embroideries have developed over time from traditional hand embroidery and pure technique exercises to more complex expressions and the use of combinations of materials and hand and machine techniques. Our overall experience with digital embroidery, by comparison, was at that stage quite limited.

Our methodological considerations in the project are also influenced by the field of Material culture where artefacts are used as primary sources and documentation in research, and the researcher combines scientific methods and theories with personal reflections from the processual work with materials. With experience and knowledge from the handling of textiles and tools and of the manufacturing of artefacts follows important understandings that otherwise often remain invisible. The method is systematic and based on asking questions to the created artefacts that they can "answer" (Kragelund, 2001). Our collaborative and processual craft work will be video-documented and this documentation, together with the processed textile materials and our reflections, will constitute cornerstones of the research process.

PROJECT CONTRIBUTION

With this project we hope to contribute to the interdisciplinary linking of artistic and educational research and examination of a methodological framework that supports practical and material explorations with relevance to the fields of both art and science. This "act of relating" (or boundary work, cf. Borgdorff, 2012) is a prerequisite for Crafts in the education system, in that educational Crafts is multidimensional and simultaneously spans areas like arts, design, technology and crafts. Under the Education Act of 2010, education in the Swedish compulsory school is to be scientifically based, as should the teacher education. Yet, the craft and design field contains prominent aesthetic and artistic dimensions, and its action-based and tacit knowledge needs

artistic articulations in materials for it not to remain silent. At stake here are both the tacit knowledge that craft can articulate and the ability to communicate and to 'read' human experience through textile materials and artistic expressions. For children and young people to have a high-quality education in the Crafts, the teachers, teacher education and researchers must incorporate both the 'scientific' and the 'artistic' perspectives. Continued separation will unfortunately hinder the development of necessary knowledge.

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Logotype for the project "Crafting Revisited" by Henrietta Jeansson, 2021.

Figure 1: Picture from “kitchen jam session” as part of the Home Participatory Orchestra SVP-project.

HOME PARTICIPATORY ORCHESTRA
A Small Visionary Project 2021–2022

Anders Lind

INTRODUCTION AND PURPOSE OF THE PROJECT

The COVID-19 pandemic has seen a growing number of attempts to distribute live music performances on the Internet by performing together from different geographical locations, so-called telematic performances. Most of the research concerning telematic performances has focused on technical issues, where the latency of sound and image due to the digital mediation of sound and space is extensively discussed. In this project, I take an interdisciplinary approach to explore and highlight the artistic dimensions of a novel telematic performance concept. The project builds on the foundations of my previous artistic research within the fields of telematic performance, animated notation, and participatory art (e.g. Lind 2018, 2021). The starting point is to embrace the unique conditions of a specific telematic medium created and defined in the project as a Home Participatory Orchestra (HPO). The aim is to explore the artistic challenges and possibilities of a Home Participatory Orchestra with new forms of the score and new strategies for conducting. The traditional concert hall is replaced by multiple digitally mediated spaces distributed over the network. The traditional conductor and score are replaced by web-based animated notation. Further, the HPO will embrace participants regardless of their musical background, who will use everyday objects and their home environment as musical instruments. The project shall investigate how the HPO affects the composer and the performer perspective of a live music performance, especially by experimenting with different approaches to performance instructions to conduct a live performance in this setting.

TELEMATIC PERFORMANCE AND ANIMATED NOTATION

The fields of telematic performance and the closely related networked music performance are not new. Starting with John Cage in the 1950s, the fields have since been developed by scholars and artists like the League of Automatic Music Composers, Chris Chafe, Pauline Olivieros, Gil Weinberg, Atau Tanaka, Georg Hajdu and Roger Mills to name but a few. A telematic performance is characterised by having several musicians from different geographical locations perform together in real-time over a network. Accordingly, in a telematic performance the shared physical performance space is replaced by a combination of several digitally mediated spaces. The

digital mediation of sound and space is thus mentioned as a primary characteristic of the telematic music performance format (Wilson, 2020). In particular, the latency of sound and image due to the digital mediation and digital transmission over networks is widely discussed within the field (Carôt and Werner, 2007). Researchers have reported challenges arising from the absence of a shared physical space, an essential parameter in the music performance tradition that affects social aspects between both performers and between performers and audience in music performance. Other researchers have explored the aesthetic dimensions of the telematic medium and highlighted the artistic possibilities of working with digitally processed sound in a telematic live performance. Researchers have also shown working with aleatoric approaches to time could be a possible asset in a telematic medium. This includes the possibility of performing from different physical locations, as both a practical asset and an artistic asset, through to working with different space acoustics in a live performance setting.

Animated notation is a notation approach that may be seen as a natural development of the work on graphic scores made famous by composers like Earl Brown and John Cage in the mid 20th century. Researcher Cat Hope defines animated notation as "a predominately graphic music notation that engages the dynamic characteristics of screen media" (Hope, 2017). Its intuitive approach and the opportunity it provides for notating any type of sound source or non-traditional instrument are additional advantages of animated music notation (Fischer, 2015). Researchers and composers such as Lindsay Vickery, Georg Hajdu, Guðmundur Steinn Gunnarsson and David Kim-Boyle, alongside the previously mentioned researchers, have contributed their work to developing the field. Within contemporary art music, animated notation is mainly used by professional musicians as an extended notation for developing new musical expressions. Still, there are examples of composers instructing novices as performers by adopting animated graphic scores. Áki Ásgeirsson, a member of the Icelandic artist collective S.L.A.T.U.R., together with Guðmundur Steinn Gunnarsson, gathered over 1,000 9-year-olds to perform animated notation in his composition 268°. Moreover, the researcher and music educator Shane McKenna stresses the intuitive manner of animated notation in his platform Dabbledoomusic.com [4]. He argues that his animated notation is accessible, engaging and fun for both teachers and students. However, the intuitive nature of animated notation is probably best demonstrated in music videogames such as Singstar and GuitarHero. The popularity of these videogames reveals the ability of animated graphics to engage and provide music performance instructions to people regardless of their musical background. In this project, knowledge and concepts generated within the animated notation field are to be used as a point of departure to explore strategies to give performance instructions and to conduct a Home Participatory Orchestra.

ACTION RESEARCH AND MEDIA ECOLOGY

Inspired by action research, the research process will evolve in short iterations, where each iteration will include three key steps: planning, action, analysis of results (Lewin, 1947). Four iterations are planned in the project. Each iteration is to include a composition and a performance artistic process. These artistic processes will be central to the research and generate the data for analysis. The data for analysing will include reflexive notes from the composition processes, sound and video recordings from the performance processes, and surveys and group interviews with the HPO performers. Each iteration will start with a new research ques-

tion, which shall be explored by an action. The action steps will be workshops and performances. The analysis of the results of one iteration will inform how the new research question is formulated at the start of the next iteration. A media ecology perspective is to be used as a theoretical framework in the process. Taking a media ecologists perspective on a music performance, the concert medium may be seen as an environment in which musicians interact to generate, modulate and distribute the music material, traditionally in a concert hall. The specific characters embedded in the mediums in terms of their limitations and possibilities will strongly shape the artistic expressions generated. In other words, a media defines a frame for people to interact with, encouraging certain actions, while discouraging others. In particular, the "remediation" concept formulated by Bolter and Grusin (1999), combined with Marshall McLuhan's idea that "every extension is also an amputation", are to be used as a point of departure while discussing the findings of the iterations (1964).

PROJECT CONTRIBUTION

First, it is intended that the project will add to the field of telematic performance by critically exploring and evaluating a novel telematic orchestra setting, which embraces telematic performance conditions such as the latency of sound and digitally mediated multiple spaces. Further, the participatory approach to a telematic orchestra setting is not yet extensively explored in the field of telematic performance. Second, the aim is to contribute new knowledge to the field of animated notation by evaluating the animated notation concepts which are to be created and tested in the project. One of the project's distinguishing characteristics is its combination of participatory aspects and high artistic ambitions, where animated notation will lie in the centre of the exploration. The real-time and web-based animated notation example for performers regardless of their musical background may also add to what is known in the field of animated notation.

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EMBROIDERY GROUP – a sneak peek into the process

Lena Liljemark & Emma Evadotter

"Bring embroidery you have already started or start a new project with us (materials provided). When we stitch, we will share and discuss research in contemporary embroidery and textile crafts" – this was the wording of an invitation to start an embroidery group within UmArts in the autumn of 2021. The starting point was that by carving out time to embroider together, we may have the opportunity to make a difference in each other's lives and our communities. Interdisciplinary gatherings and networking in a relaxing environment may hold a high value. Moreover, when practice is at the centre of a gathering, new types of conversations and values can arise, the craft may permit calm, reflection and thoughtfulness in the dialogues.

Four meetings were held, each with a different theme: 1) share thoughts and experiences; 2) embroidering words; 3) new stitches; and 4) tie together. The location of the workshops varied between the Art Campus, the School of Architecture, and the Department of Creative Studies. The project is still a work in progress and below are some excerpts as part of the documentation of these four meetings that provide a sneak peek into the process of the embroidery group.

The idea of meeting and making something practical together is excellent in many ways, it creates relationships, it is relaxing and fun. Textile craft offers a tactile and sensory experience, a different type of touch and connection.

Choosing embroidery as a craft for coming together is superb, the materials are easy to find, a needle, thread and fabric is all you need. Some guidance can be helpful, craft literature together with someone who has experience and knowledge. Within the framework of embroidery, you can express a thought with text, or shape a surface through structure and form, the colours can be a toned-down, graphic or vibrantly colourful according to what you want to express.

A participant who had not tried embroidery before expressed their fascination with the calmness it gave, that you can both sit quietly in your own thoughts and in the next moment join in the discussion. This way of meeting can become a start where new ideas can be created.


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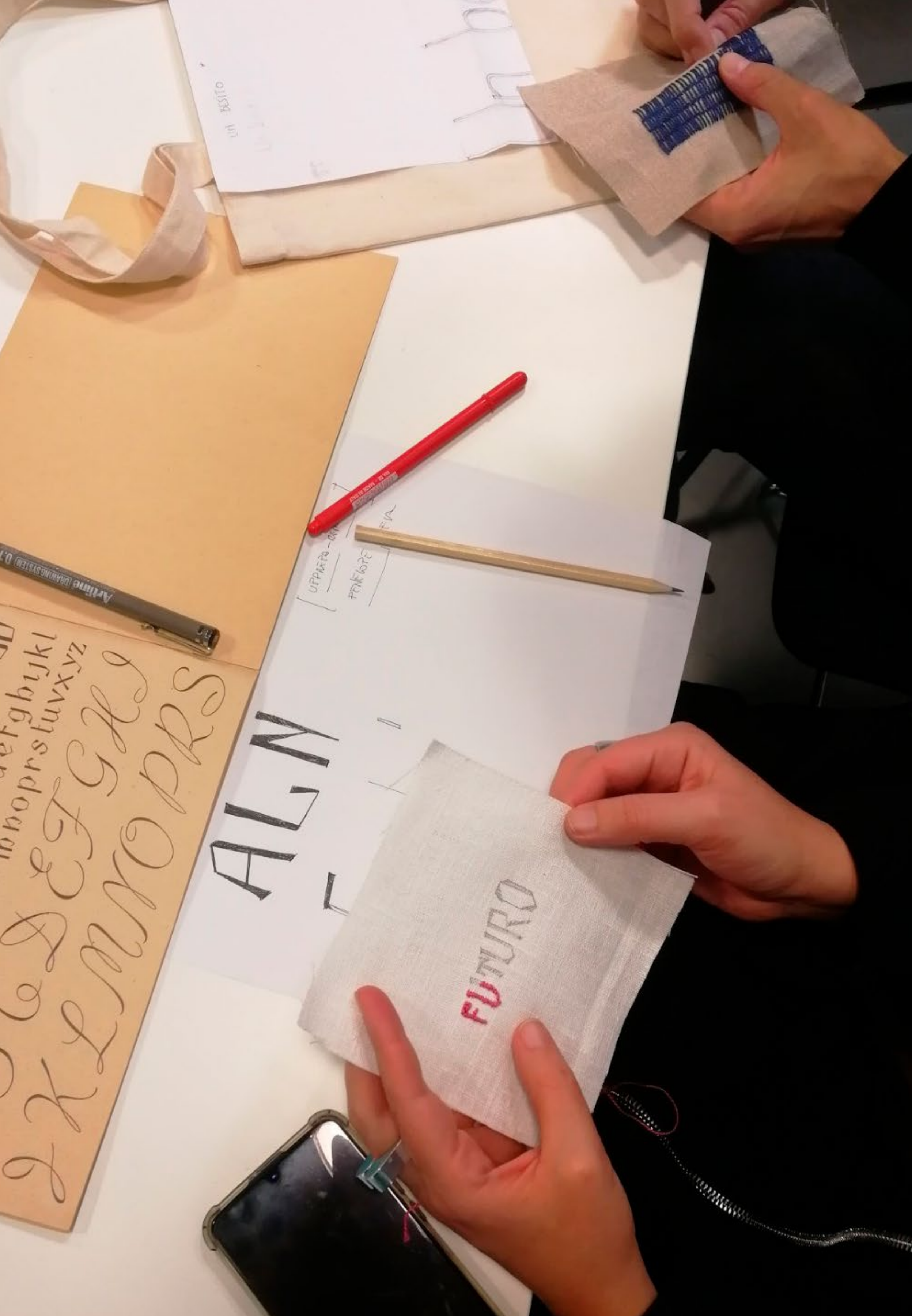
Gud hägne vår släkt!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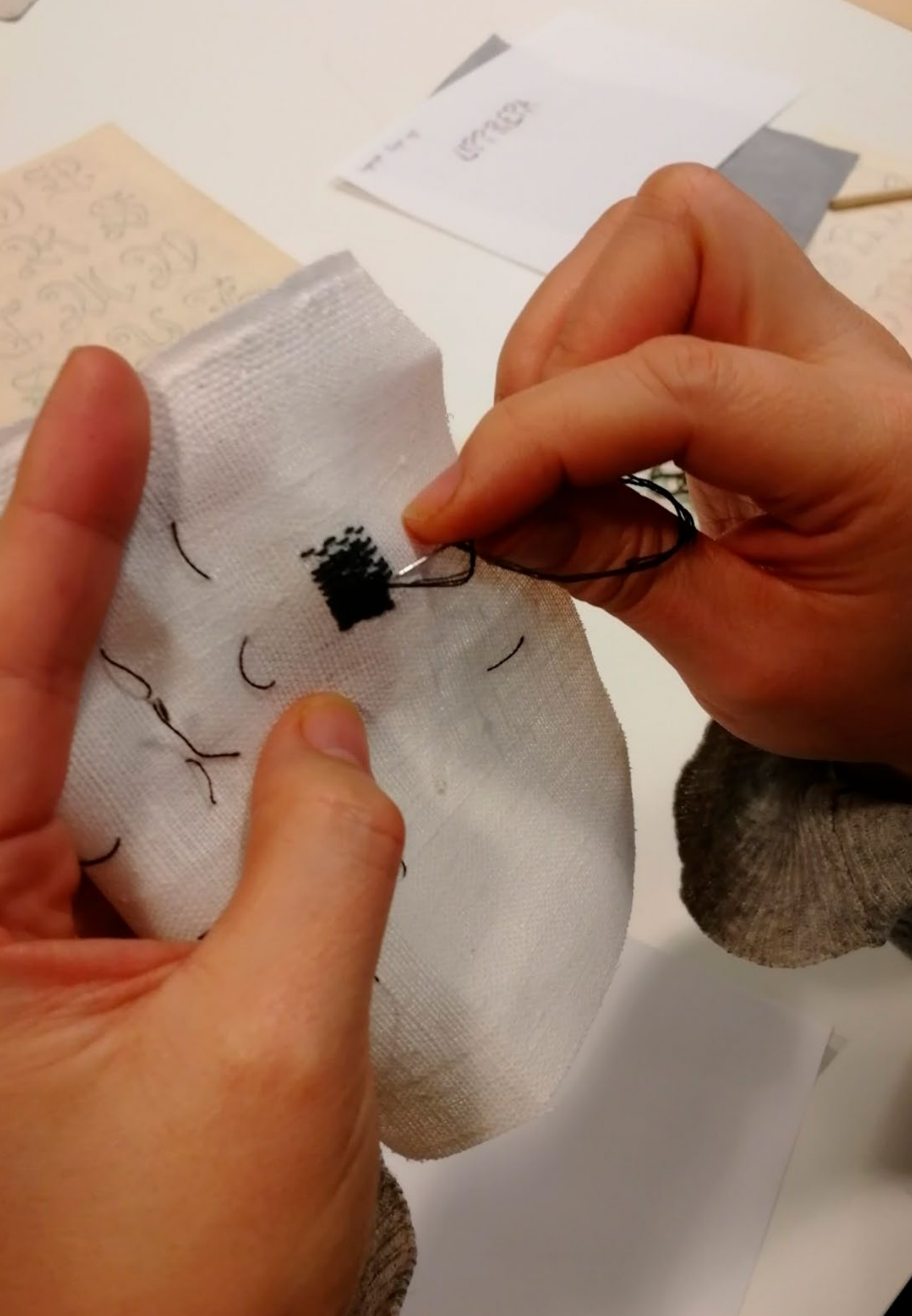

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isbn: 978-91-7855-955-8
issn: 1103-8470