

## Are you Thinking What I'm Thinking? Symposium Speakers

**Keynote: Joanna Zylinska**

***Biomediations, or does sci:art have a blind spot?***

Abstract

Responding to the topic of this symposium, I will suggest that there exists a fundamental blind spot in the way many art+science collaborations have been defined and structured over the years, on an institutional, conceptual and practical level. This blind spot is, or rather are, media. I will then offer a concept of biomediations as a critical intervention into such collaborations. I will suggest that this concept can breathe new life into art+science, the reason for it being that media themselves are teeming with life – and not just metaphorically. The concept of biomediations can thus help us position art+science as a dynamic and evolving conjuncture of various life forces. Drawing on my own scholarly and curatorial experience, I will then show some ways of putting 'biomediations' to work. I will also present several projects from my own art practice in which art and science have been mediated in a variety of ways.

Bio

Dr Joanna Zylinska is an artist, writer, curator, and Professor of Media Philosophy + Critical Digital Practice at King's College London. She is an author of a number of books, including *AI Art: Machine Visions and Warped Dreams* (Open Humanities Press, 2020), *The End of Man: A Feminist Counterapocalypse* (University of Minnesota Press, 2018) and *Nonhuman Photography* (MIT Press, 2017). An advocate of 'radical open-access', she is an editor of the MEDIA : ART : WRITE : NOW book series for Open Humanities Press. Her art practice involves experimenting with different kinds of image-based media. In 2013 she was Artistic Director of Transitio\_MX05 Biomediations, the biggest Latin American new media festival, which took place in Mexico City. She is currently researching perception and cognition as boundary zones between human and machine intelligence, while trying to answer the question: 'Does photography have a future?'

---

## Symposium speakers in alphabetical order

**Steven Adams**

***REF, Gradgrind and Aporia ... some (mis)adventures in the arts and sciences***

Abstract

This paper sets out to examine some of the ways in which we might find a discursive space for collaboration in the arts and sciences, or rather, a space for collaboration that has epistemological credibility. While much has been written about exchanges between the arts and sciences, they are often configured asymmetrically: the former has sound, or at least *sounder*, epistemological points of reference while the latter's discursive frame is hard to identify, sometimes wilfully so, I'd suggest. (I pause at this point and reflect that I could easily rewrite this first sentence less instrumentally and altogether more happily, such is the sense of aporia that overcome all those who make or write about the arts in academia. But let's put this Gradgrind behind us for a moment.) Here, I set out to try to do three things: to look at the discursive frames, the spoken and unspoken possibilities that sustain at least *some* of the sciences, to do the same with some of the arts and then look at one or two possible points of conjuncture between them. And then I want to stop and start again, slay this Gradgrind and look for a point of reference in which the arts might offer insights that other disciplines might recognise as having some form of integrity which are peculiar to themselves without falling into a modernist abyss. (NB Creative Arts colleagues!) This is quite a task for twenty minutes. But let's see where we get to ...

Bio

Dr Steven Adams is Associate Dean Research in the School of Creative Arts. Deeply conflicted about the place of art in academia, he has written widely about modernism and its shortcomings, what came before and what might come

after. He is author of *Liberty's Embrace: Landscape Painting in Revolutionary France* (Routledge 2019) and is currently working on a monograph *Americans in Paris: art and the GI experience after 1945*.

**Fiona Crisp**

***Public Intelligence?***

***Moving beyond binary, transactional cultures of art/science exchange.***

Abstract

In her 2018 book, *Another Science Is Possible: A Manifesto for Slow Science* Isabelle Stengers provocatively calls for a 'Public Intelligence of Science' to replace the idea of a Public Understanding of Science. To do this, Stengers contests, we need a distributed amatorat of 'connoisseurs' that are 'agents of resistance against a scientific knowledge that pretends that it has general authority' and who can partake in the production of what Donna Haraway calls 'situated knowledges.'

The 'turn to matter' in the humanities and social sciences has challenged many dichotomies, including differentiations between natural and social worlds; between mind and matter; between animate and inanimate; and between human and non-human; but, whilst the work of writers such as Latour, Barad, Butler, Haraway, Stengers and Braidotti has been increasingly brought to cross-disciplinary exchange by researchers working across the arts and humanities, this field of thinking remains, for the most part, unexamined within the disciplinary cultures of the natural and biological sciences leading to a-symmetries of power and understanding.

This paper looks to how we might address existing, instrumentalised models of collaborative practice between the cultures of arts and science and instead approach knowledge-making practices as what Karen Barad refers to as: "social-material enactments that contribute to, and are part of, the phenomena we describe." (Barad 2007, 26). In this context, artist, scientist and publics are placed inside of, and indivisible from, the knowledge-making process itself, creating a fundamental re-ordering of power-dynamics with, potentially, profound implications.

Bio

Fiona Crisp is Professor of Contemporary Art at Northumbria University, Newcastle, UK where she founded and co-leads the research group The Cultural Negotiation of Science with colleague Professor Christine Borland. Crisp's practice resides at the intersection of photography, sculpture and architecture where the limits and capabilities of both photography and video are explored through the making of large-scale installations. For the past decade she has been collaborating with institutions and individuals working in fundamental science, most recently via the Leverhulme-funded research project Material Sight. Her work is represented by Matt's Gallery London.

**Rob Godman and Loic Coudron**

***Using Electrowetting-Produced Audible and Near-Ultrasonic Waves for Water Sample Composition Analysis***

Abstract

From a scientific and engineering perspective, this project opens new avenues to develop novel, non-destructive characterisation techniques employing audible or near-ultrasonic waves. The sonic waves, interacting with discrete volumes of fluid, can produce signature spectra that can be correlated with the fluid composition. Unlike traditional sonic-based characterisation methods, where the audio source is external to the object under test, the liquid will be the emitter by electrically induced oscillation.

Whilst ultrasound characterisation is well known for defect diagnostics, the proposed method, using the object under test as the direct source of vibration, is wholly untested.

Recording sounds, inaudible to an average listener, presents unique technical challenges. Not only are the sounds themselves extraordinarily quiet, requiring an anechoic chamber for recording purposes, they also occur within the confines of microscopic scientific equipment. Whilst the audio analysis produces meaningful scientific data, exploring other ways to use it in the future is a significant area of our research.

## Bios

Dr Loic Coudron is a Reader in Digital Microfluidics (DMF) at the University of Hertfordshire where he leads the electrowetting and DMF research activities. Loic's research aims to integrate advanced physics and microfluidics principles with automated biological analysis techniques to deliver 'turn-key' solution for in-field bio-diagnostics and aerosol detection requirements.

Rob Godman is Reader in Music at the University of Hertfordshire. Working as a composer and sound designer, his theoretical and practice-led research is centered around a study of space and acoustics, manifesting as concert-hall, installation and experimental film works. He is part of an arts/science collaborative team with Simeon Nelson creating large-scale installation works combining sound and light sculpture. He regularly uses spoken narrative in his works, examining the everyday musicality of speech. His most recent film work 'this you must remember' with Sam Jury is being shown at The Cultural Center of Belgrade and Depo in Istanbul later in 2022.

## **Aura Goldman and Sebastian Utzni**

### ***From A to S and back again – connections to philosophy in art and psychology***

#### Abstract

Aura Goldman and Sebastian Utzni tried to take the title of this art-science collaboration project literally: "Are you thinking what I'm thinking?" Or maybe: "are you getting what I'm saying". In a series of email conversations, Sebastian (artist) and Aura (psychologist) asked each other questions that were recently appearing in each other's research, tried to ask the other person's questions from their own area of expertise, and reflected on the ideas and associations that emerged from these questions. For the symposium they will develop a co-constructed "glossary of understanding" out of these conversations

#### Bios

Dr Aura Goldman is a chartered psychologist, university lecturer and consultant to the British Association of Sport and Exercise Sciences. She researches the emotional and psychological impact of long-term injury

Sebastian Utzni is an artist and the Head of BA Fine Arts, The Lucerne University of Applied Sciences, Switzerland.

## **Alana Jelinek and Laura Urbano**

### ***Is this art?***

### ***Taking Galileo's 1635 Dialogo sopra i due massimi sistemi del mondo (Dialogue Concerning the Two Chief World Systems) for a walk***

#### Abstract

When molecular medicine researcher, Laura Urbano, suggested that artist Alana Jelinek comes to see the 'art' that her PhD student, Altin Kocinaj, made by using a particularly brilliant new microscope, Alana answered, 'we'll see', before making the trek to the Science Building on UH's College Lane campus. Alana writes about the role and value of art in society, as well as about the definition of art. For Alana, a scientist cannot, by definition, make art because to make art a person requires training and a knowledge of the discipline and its history. By comparison, she argues, a person cannot do science inadvertently, by mistake. Science requires training so that a person can contribute to the field with knowledge and understanding.

Alana's argument, while looking at the beautiful images created by the technology at the hands of the scientist, was that these were indeed beautiful images but that beauty does not define art. Beauty hasn't defined art for a long time, and beauty was only central to the definition of art for about a hundred years, particularly during the Romantic era. Philosopher Immanuel Kant (1724–1804) has a lasting influence with his writing on aesthetic judgment, which covers judgments of the beautiful, judgments of the sublime, and teleological judgments of natural organisms and of nature itself. Note these are not collapsed categories, but distinct. An appreciation of nature is distinct from an appreciation of art. It is Hegel's later philosophy of art (between 1818-1830) that offers an *a priori* relationship between beauty and art.

This talk will be a discussion between Alana and Laura about art, its definition and whether scientists should be seen as artists or not, responding to the recent article in Nature titled 'Approaching microscopy as art can give your science impact' <https://www.nature.com/articles/d42473-021-00498-5>.

#### Bios

Dr Laura Urbano is a Senior Lecturer in Pharmaceutics in UH's School of Life and Medical Science. Her current research is focused on formulation approaches and in vitro models for drug delivery to the lungs and she is the institution lead for UH within the CDT in Aerosol Sciences.

Dr Alana Jelinek is an Associate Professor in UH's School of Creative Arts. She was trained originally as a painter but today makes art in a variety of media including novel writing and museum interventions. She writes about the role and value of art in society and is co-founder and co-lead of UH's art:sci:lab

#### Sam Jury

***The Unknown Culture: the role of art and hierarchy in transdisciplinary collaboration.***

#### Abstract

Even in the most recent interpretations of CP Snow's 1959 *Two Cultures*, the culture most commonly perceived as the less understood partner is science (O'Riordan: 2010). Yet fifty plus years of art and science collaborations suggests that it is the arts that are the unknown culture. Because, while the discipline has undergone dramatic philosophical and theoretical shifts, in the art and science collaborative sphere, art is still commonly considered as a tool of communication - bestowed with a near magical ability to communicate just about anything to the general public. This, despite a modern art history that speaks differently. Arguably, the enduring legacy of *Two Cultures*, is its rallying call for a 'third culture', a rationale for transdisciplinary, or *extradisciplinary* (Wienroth, Goldschmidt 2017) co-creation. But even when this call emanates from the arts, the focus tends to be on a response to science. In this way, art is always entering the picture of science, but the same could not be said in reverse. At the root of this, is a lack of understanding of art as a knowledge forming discipline in its own right (Jelinek:2020). When funding and institutional structures tends to favour the sciences, another layer of hierarchy emerges. This paper will explore the asymmetries of collaboration, examine the disciplinary strengths of artists and, in the context of the Art:Sci Lab, suggest how the arts can reassert itself by initiating or leading future projects.

#### Bio

Sam Jury is a visual artist, Senior Lecturer and Research Group Leader of the Art:Sci Lab at the University of Hertfordshire. She works across the forms of moving image and installation and frequently collaborates with other disciplines.. For many years she has been interested in what she terms 'suspended trauma' and what cultural theorist Rob Nixon calls 'slow violence' - the long, drawn out effects of disaster. Her work has been shown in museums and film festivals internationally. In 2021, she was awarded an AHRC grant to explore new methods of art practice in post-conflict Abkhazia.

#### Ulrike Kuchner

***Understanding art-science collaborations for innovative forms of transdisciplinary research***

#### Abstract

Collaborations between artists and scientists can contribute to the development, co-creation and contextualisation of complex challenges. However, contemporary research practices typically do not capitalise upon the diverse behavioural and cognitive impacts of art and it is unclear if and how disciplinary approaches change through such collaborations.

The SEADS (Space Ecology Arts and Design) collective, a transdisciplinary and cross-cultural network of artists, scientists, engineers and activists, has created a number of projects that merge aspects of science with art and technology. One of these projects is *Biomodd*, an ongoing series of community-built and site-specific installations which has been realised more than 30 times since 2009 around the globe. It integrates living ecosystems with e-waste (e.g., recycled computers) and aims to ignite research, experimentation and critical conversations related to ecology, sustainability and consumer culture across different cultures.

The creative and cultural practice of projects such as *Biomodd* can be seen as innovative forms of transdisciplinary research and creation of artistic work. We now want to conceptualise the shared ecology while creating such a project and understand how collaborations work across the cultures of art, science and technology. How do we establish and sustain dialogue, even if there is disagreement or misunderstanding? Can a shared approach improve understanding, and what role does originality and ambiguity play? To answer these questions, SEADS members are conducting a number of systematic studies of the subjective perception of lived art-science collaboration using different frameworks for evaluating the dominant factors of collaborative experiences.

Bio

Dr Ulrike Kuchner is an astronomer (PhD) and artist (MFA) based at the University of Nottingham and coordination member of the transdisciplinary SEADS (Space, Ecology, Arts and Design) collective. Her scientific research deals with how mass is assembled in the Universe and how galaxies form and evolve over their lifetime. To do this, she bridges simulations of the cosmos with observations of world-class telescopes. As an artist and interdisciplinary researcher, she often joins, facilitates and studies interdisciplinary creative processes of art and science collaborations to integrate different approaches and knowledge systems. Her art deals with the themes of humanity and imperfections in data, something we tend to strip away from science.

**Simeon Nelson and Simon Walker-Samuel**

***Who's the Artist Now? Art and Science as Figure and Ground***

Abstract

This paper is a reflection on the dynamics of our collaboration on two Art-Science projects *Anarchy in the Organism* 2010-12 and *Cosmoscope* 2015-18 - what we offered and learnt from each other and the effect on our trajectories since.

Simon is a physicist whose research trajectory and experimental focus has been informed and contextualised by the artwork he has been making since our collaboration.

Simeon is an artist whose understanding and use of scientific/mathematical languages, ratios, sequences and correspondences in his work has become more fluent since the collaboration.

This paper opens with the question of what Simon makes of Simeon's science and what Simeon makes of Simon's art. We then look at what we learnt from:

- the emergence of the work from the dialogue of Simon's and Simeon's prototypes and images
- the perspectives of other scientific and artistic collaborators and stakeholders,
- recontextualising scientific research as a creative undertaking.

Secondly, we discuss the collaborative method that stemmed from a paradox - disciplinary boundaries evaporating in the face of our common quest without losing our respective identities in our own disciplines.

Lastly, we consider an ethical dimension implicit in our process and the artwork including:

- Epoché or bracketing, the phenomenological method of setting aside what you know about something so it can more fully reveal itself.
- the feedback loop of art figuring against the ground of science and science figuring against the ground of art.
- Neuroplasticity and the collaborative mindset, fluid rather than fixed identity.

Bios

Dr Simon Walker-Samuel is Professor of Imaging and Biophysics at UCL. His research focus is the development of new imaging techniques for characterising cancer non-invasively, principally using magnetic resonance imaging (MRI). He is developing large-scale, complex computer models of cancer, in order to develop improved methods for delivering drugs to tumours.

Simeon Nelson is a professor of sculpture at the University of Hertfordshire. His work investigates properties of pattern formation that govern the emergence of complex systems from simple elements. Patterns at varying scales

emerge from the tightly interlocked elements of his multimedia sculpture and video depending on the position of the viewer.

### **Naomi Soto-Forrester**

***Combining art and science, diversity leading to new creativity.***

#### **Abstract**

The role of science and art are often perceived to be exclusive and non-complimentary. However, nothing exists in a vacuum and society is dependent on art and science to challenge to become more than we thought we could be. Recently, we (Dr's Forrester and Jelinek) have started to collaborate on how science can inform art and art inform science. The process of communicating across two disciplines and how this changes the communication of both art and science is a novel approach. Often art and science meet superficially, and one is subservient to the other, for example, science in movies is often not representative, but subservient to the storyline, and science communication often subsumes art to get the scientific point across rather than providing a foundation where both can build and influence the other.

The exploration of what a true collaboration looks like and the benefits of each to either side is presented here. Some of the common issues that are found between both sides when attempting to communicate to the other are presented and the journey to generating a deeper, more effective communication that brings out the best in scientific and artistic expression is explored.

#### **Bio**

Dr Forrester-Soto's research focuses on the within-host evolution of RNA viruses, particularly how viruses infect mosquitoes at the molecular level. She spent the majority of her research career at the University of Texas Medical Branch in Galveston, Texas. Since moving to Keele University at the beginning of 2018, she is establishing a similar research programme, as well as branching out to investigate environmental pressures on the mosquito vectors of important viral infections. Her goal is to identify how viruses adapt to their mosquito vectors and how these evolutionary pressures result in successful infection and transmission of the mosquito vector.

---

#### **About the Symposium**

This event is organised by academics from the School of Creative Arts: Dr Alana Jelinek and Sam Jury. For more information, please see the web page.