

ART + SCIENCE + TECHNOLOGY

A Partnership for Uncertain Times features four exceptional South Australian artists working at the intersections of art, science and technology:

BRAD DARKSON DEIRDRE FEENEY NIKI SPEROU CATHERINE TRUMAN

Co-developed by Dr Deirdre Feeney and Australian Network for Art and Technology (ANAT), A Partnership for Uncertain Times is especially relevant to our contemporary lives. The curatorial premise of 'uncer-tainty', references both the precarious and unpredictable nature of the world we live in, as well as the complexity and conjecture of creative research.

The Arts South Australia funded collaboration between the University of South Australia (UniSA) and ANAT commissioned the featured artists to research and develop innovative and experimental artworks engaging with science and technology. The project focuses on creative research, placing emphasis on courageous experimental development over perfecting finished artworks.

A Partnership for Uncertain Times is an exploration and unveiling of process, featuring a workshop, an online forum, an exhibition, a Q&A artist talk as well as commissioned text and video essays. The project launched with an in-person student-focused workshop on 22 October, 2022 at UniSA entitled Expanded Fields, Cross-disciplinary Practice in Uncertain Times #1.

An online forum followed on 19 May, 2023 entitled Uncertainty Across Expanded Fields of Practice #2, this time open to artists and researchers at any stage of practice.

The evolution of these experimental artworks, with intimate glimpses into the artist's work spaces and process, culminated in a work-in-progress exhibition at Newmarch Gallery, 16 June to 15 July, 2023. The accompanying public program included a 'fire performance' by Brad Darkson and an Artist Q&A Panel Discussion, chaired by ANAT CEO Melissa DeLaney at Newmarch Gallery on Saturday 1 July.

A PARTNERSHIP FOR UNCERTAIN TIMES NEWMARCH GALLERY, 16 JUNE TO 15 JULY, 2023







Acknowledgements

South Australian artist and photographer **Taylor Parham**, captured the artists at work during the project.

Taylor's recent practices have shifted towards documenting a passion of his, the world of science and all its potential. His intent in photographing these environments is to reveal the accidental aesthetics and beauty that exists in spaces built where form and function are a priority, exploring an idea of science intersecting with art and vice versa.

Click Films documented the rich responses the featured artists had to *A Partnership for Uncertain Times.*

Click Films is a creative team of digital story tellers based in Adelaide. Behind the fancy video equipment and production technology are a group of downto-earth humans, working to bring great visuals and relatable narratives to life. They engage with people across many sectors including education, private, NFP, arts and hospitality.

Opening in October 2019, **Newmarch Gallery** is a high-quality, nationallyrecognised exhibition space. As a gallery run by City of Prospect, it is a unique facility. The diversity of its exhibition program reflects its role as a contemporary public exhibition space with a longstanding community focus.

A Partnership For Uncertain Times by Deirdre Feeney

1 Alpers, Svetlana, 'The Studio, the Laboratory, and the Vexations of Art'. In Galison, P., & Jones, C. A. (Eds) Picturing Science, Producing Art (New York, London: Routledge, 1998), 406.

2 Ibid, 407.

3 Yang, A. "That Drunken Conversation between Two Cultures: Art, Science and the Possibility of Meaningful Uncertainty", Leonardo, 48, No. 3 (2015): 319.

4 Ibid.

What is it like to be in a particular light, asks art historian Svetlana Alpers in her exploration of the connections between the artist studio and scientific laboratory in the 17th century.¹ She notes that both types of practice engaged with ways of knowing the world, where artist and scientist selectively allowed the external world to enter their experimental environments. They observed it from the inside out. The reverse, however, was not the case. Perceiving only what was presented as the finished work of art or proven hypothesis, the outside world rarely saw the inner mechanism of the studio or laboratory. The light of these spaces in which the painter painted, and the scientist experimented remained hidden from view.² A Partnership for Uncertain Times turns our attention to the 'particular light' of the practices of four contemporary South Australian artists working at the intersection of art, science and technology - Brad Darkson, Catherine Truman, Deirdre Feeney and Niki Sperou. It reveals the processes these artists engage with, inviting the viewer into the normally unseen mechanisms of creative practice. In place of the controlled and enclosed spaces of the historical practitioner, these artists collaborate across diverse disciplines and sites, intertwining studio, laboratory and world, and thereby transgressing the delineation between them. Focusing our attention on process brings transparency to these interconnections and how cross-disciplinary artists navigate the complexities of creative development.

Through the revelation of experimental process, this project empowers us to meet the uncomfortable gaze of our uncertain times. It permits us to dwell in the light of unpredictability, of constant renegotiation and in the space inbetween intended and realised outcomes. The commissioned works of Darkson, Truman, Feeney and Sperou engage with speculation and processes of emergence. The artists' projects do not fit neatly into any single disciplinary domain, evoking uncertainty around where or how we might position these explorations.

Decloaking artistic process brings visibility to how things come into being in the world, how things don't go according to plan, how things move forward from failure, how we don't necessarily know where the finish line lies or if such a line exists. This is a light that is constantly changing, dappled by the surrounding variables of artistic practice engaging with cross-disciplinary collaborators, and diverse perspectives and approaches to knowledge. It is an open engagement with (non-) materiality, agency and our ever-changing world. The uncertainties of artistic process resonate with our current state of global uncertainty, in that we are no longer convinced by our constructed narrative that we know where we are headed. The practices of Darkson, Truman, Feeney and Sperou are all familiar with the world of the unknown, where knowing is not a place of certainty, but of questioning, wonder and speculation. A Partnership for Uncertain Times explores if revealing crossdisciplinary artistic process can reframe our understanding of uncertainty and cast it in a new light.

The commissioned artists were encouraged to explore "what if?" scenarios by adapting uncertain methods of practice. In this way the project asks the question originally posed by transdisciplinary artist Andrew Yang in his *Uncertainty Principle* – 'how might this novel approach to uncertainty invite its own experiment?'³ The artists' embrace of uncertainty throughout the project opened up new possibilities for unchartered knowing and reflection upon process. Again, to borrow the words of Yang, these artists' creative enquiries demonstrate the power of 'having faith in uncertainty, finding pleasure in mystery and learning to cultivate doubt'.⁴

Truman's Taken Path engaged in a process of walking the same path at the Adelaide 100-acre estate of Carrick Hill over the project's year-long duration. She filmed these journeys with her neuroscience and video-poet collaborator Emeritus Professor Ian Gibbins. Truman's speculative approach revealed differences in seeing and experiencing between artist and scientist. These diverse viewpoints were mediated and recorded through the lens of the camera, and digitally video-edited to produce entangled perspectives of sensory engagement. Truman describes how her senses were heightened through her process. She became aware of her peripheral vision and the altering sounds of her footfall on the path during the changing seasons. Truman's process of repeatedly treading a single path led her into reflective worlds of different timespans, ecologies and sensory encounters with landscape, rendering her experience of the Carrick Hill site unfixed and unending.

Darkson's Never too hot intertwines Aboriginal practices of fire burning and western technological systems of sound. He explores how fire as a generator of heat and light can be digitally transmuted into auditory experience. His electronic feedback sound loops are powered by and adapt to the uncertainty of the ever-changing flame of the fire. Collaborating with the Kaurna Traditional Fire Management Team, Darkson engages in traditional fire burning as a means of protecting and reviving land and culture. Navigating Aboriginal and western cultural systems of knowing and knowledge, Darkson's process merges different understandings and methods to create unpredictable real-time outcomes that are in a constant state of flux.

Sperou's *MESH: Interspecies Empathy* is a crossdisciplinary collaboration engaging with nonhuman living organisms. Exploring ways in which all living organisms have their own agency, she establishes non-hierarchical systems enabling various processes to occur. During the project Sperou explained how in the lab, although she manipulates the biomaterials to produce a certain result, these organisms override her interventions to perform in their own unpredictable way. Sperou's process is open to unknown and uncontrollable outcomes. Her project establishes potentials between different realms – the human and non-human, and artist, scientist and her trans-medial performance collaborator Michael Dudeck. Through her entanglement of different cross-disciplinary and crossspecies elements, Sperou observes what emerges from these novel *in vivo* juxtapositions.

Feeney's (for consistency I will write about my project in the third person) Perceptual Illusions explores depth of field in the projected moving image. She intertwines a 19th-century animation device with digital fabrication to investigate the optical effects of materially generated images and how they engage with our perception. The revealed mechanisms of Feeney's image systems bring attention to the process of how we perceive technologically mediated images, which she terms 'optical fictions'. Feeney collaborated with micro-engineers Mark Cherill and Sudhakar Sajja at the Australian National Fabrication Facility to create bespoke optical mirrors for her project. Never knowing where each step will take her, she enters a dialogue with experimental process - iteratively readjusting and recalibrating her optical components in response to her observations of the images they generate. The only certainty in Feeney's process is the transfer of light in her experimental systems. Although everything else changes through timethe projected image and our understanding of light - the optical process of how light engages with the material object remains constant.

A Partnership for Uncertain Times places a spotlight on how cross-disciplinary artistic process continuously encounters and often embraces uncertainty. The projects of Truman, Darkson, Feeney and Sperou all share a kind of uncertain knowing. In other words, through their experience of process they come to know that things are not certain, clear-cut or predictable. This open-endedness is not about dismissing all forms of control or reliability. It is about learning how to incorporate the unexpected, the unanticipated, and how the questions rather than the answers can perhaps reveal a new light to help us find our way.

Deirdre Feeney is an artist and lecturer in Contemporary Art, University of South Australia



BRAD DARKSON

Never too hot

Fire is the cornerstone of traditional land management across the vast majority of our Country, socalled "Australia". Applying fire is cultural revival, healing people from the ongoing colonial project. Experimentation, observation, relearning. Never too hot. Never scald the earth. Never hear the deafening roar of a wildfire. The sound of balance.

Brad Darkson is a South Australian visual artist currently working across various media including carving, sound, sculpture, multimedia installation,

and painting. Brad's practice is regularly focused on site specific works, and connections between contemporary and traditional cultural practice, language and lore. His current research interests include hostile architecture, bureaucracy, seaweed, and the neo-capitalist hellhole we're all forced to exist within. Conceptually Brad's work is often informed by his First Nations and Anglo Australian heritage. Brad's mob is Narungga and he is a proud member of the Chester family.

How do I practice culture in the twisted ruins of modern economics?

Pick up the telephone.

It's an act of resistance. It's an act of sovereignty. It's an act of collaboration.

Yarning as research. Collaboration as process.

A thousand plus generations of oral tradition.

Listen to elders. Listen to stories about their day, about the weather, about their health, about their grandchildren, about anything.

This is non-transactional.

Learn about our intergenerational standpoint that centers Country.

A responsibility to pass on knowledge and culture. We are Country.

Wait for them to impart knowledge.

Be ready.

Apply the right fire to the land. Maintain the fire.

Their responsibility is my obligation, to my ancestors and to the next thousand generations of fire.

My awareness sharpened by the act of colonization.

Continue ancient knowledge systems and heal the land from cultural disruption.

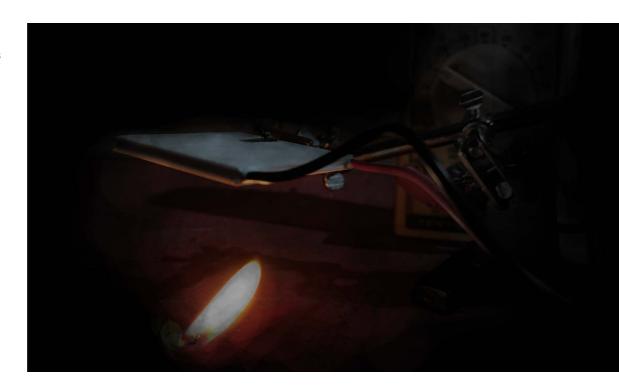
Brad Darkson, Never too hot, work-in-progress at ACE Studios, 2023. Photograph Taylor Parham.



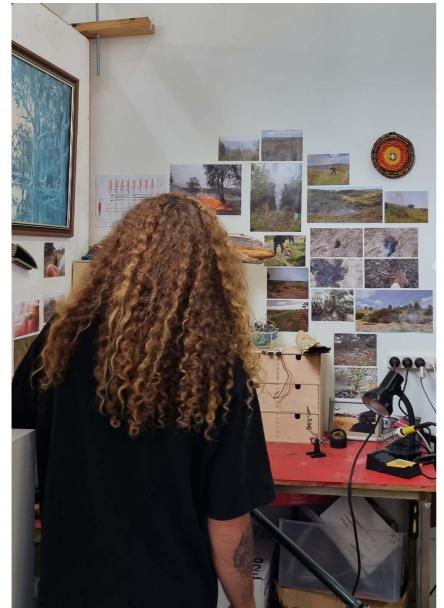
Brad Darkson, Never too hot, work-in-progress at ACE Studios, 2023. Photograph Taylor Parham.



Brad Darkson, Never too hot, traditional land management using fire, 2023. Brad Darkson, Never too hot, work-in-progress studio experimentation with heat generated voltage, 2023.



Brad Darkson, Never too hot, work-in-progress at ACE Studios, 2023. Photograph Taylor Parham.



Brad Darkson pays respects to Kaurna elders and members of Community that have supported his research for this project, in particular Ngangki burka senior Kaurna woman Aunty Lynette Crocker, Aunty Merle Simpson, and Uncle Jeffrey Newchurch for their time, for their advice and for the opportunity to participate in healing Country. Their dedication to Community and culture is inspiring. He would like to also highlight the important land management practices currently being carried out by Community, particularly through bringing fire back to Country through the dedication of Rayne Simpson, Clem Newchurch, Quahli Newchurch, Paul Dixon Jnr and Victor Steffensen. Thanks to Mehdi Hassanzadeh and technical staff at UniSA STEM for their advice and access to facilities, and also to local analogue synthesiser enthusiasts Riley O'Keeffe and Elijah Värttö for their time and assistance. Special thanks to Deirdre and the ANAT team for their hard work and commitment to the project over an extended period of time, and to Arts SA for supporting artists to research and take risks.

Invisible Horizons by Melissa DeLaney

Humans like making patterns.

Patterns with repetitive actions, methods and formulas lead to a certain predictability and result. Often the idea of routine and patterns of behaviour provide a sense of stability and reference points and maps to navigate the world.

The onset of global pandemic in early 2020 rocked the world. As a shared global experience of varying degrees, we were sent home. Very quickly, faulty systems were exposed and new systems emerged. The natural world continued as humans found emergent ways of being in a cultural environment that shifted every minute, with new instructions of behaviour and surging media channels. The world became upset.

It was during this time that this project emerged. Originally as an idea from artist, researcher and academic Dr Deirdre Feeney in a conversation with myself. As the conversations continued, the project, bedded in the ethos of experimental art practice evolved, aiming to bring into public discourse the processes of experimentation for a group of South Australian based artists working within the intersections of art, science and technology.

A Partnership for Uncertain Times over a year, fol-lows the trajectory of practice of Brad Darkson, Deirdre Feeney, Catherine Truman and Niki Sperou. It is through a number of position points that we, as an audience, are invited to enter into the world of the artist, through the articulation of their processes and modes of practice. This happens through a workshop, forum, writing, video, documentary, photography and an exhibition showing some of the processes explored by each artist.

Often audiences and publics experience art as a product, something that is given at the end of the 'work' – a materiality from the making, from concept and the investigations that happen in the studios and homes and collaborations and conversations by the artist. It has to be visible for an audience to understand, or to reference an understanding of toil and worth.

This project acknowledges and supports the vital work of artists in practice and the value in experimental process. Each artist exploring elemental materiality and within a human experience is a swirling, ever-evolving multispecies eco system of which we are part.

Air

Sipping memory Shifting the breeze as it makes unstable that which was This is enough and I open my eyes again To look away.

Aspects of practice, with each step each day is an edge towards something else.

The brain is a receptor, during this experiment I pare back external stimuli other than What was here before.

[PARTICIPATION -v- OBSERVATION] [EXPERIMENTATION] [CONVERSATIONAL]

[SILENCE IS A LANGUAGE]

Silence leads to loose discipline. Settling in, And distance creates much welcomed comparison and determination.

Remembering, and sometimes I see flashes of centuries etching into the next stage and other times timeless, endless, openings.

The productivity of space.

Conversations weave gently into daytime, At your own pace, we are moving quite slow together.

The morning sun has degree-ed its way to another fractional point in the sky. I'm taking photographs of my reflection in the window.

Water

Human. I see you human And we make, make a time to be human

I find you human Just momentarily I shift focus and the place becomes a well worn discovery of your mind. Your adventurous mind. I will make you into a book I am not ready to read you yet You are an aside to the bigger picture What else habituates space The space you share With nothing.

[BODY AS TEXT]

Amalgamation. Changes in body chemistry [TRANSFORMATION]. Embody the habituated future, genes as a library of possibility, the field creates matter.

It swells me, this light. Movement and consolidation, Around my room I move objects, talismanic notions. This is the routine of repetitive action, again shifting towards Fresh impulses and perspectives. [VIEWPOINTS]

Sense of occasion Removed observational

I observe you I scrape the belly of the kangaroo and his arms too short to open the door. He stands back in the trees, watching with his Small kangaroo hands.

The protector.

Earth

There are many of us now. Wandering the earth. Diluted sense of self as it muddies from ancestors strong. And brave.

Driving the landscape and feeling part of it. Centuries become me.

At one with the dry earth, Dry skin,

Dry hair

And the breeze, freshened from climate change brings morning and afternoon rainy. It must be the rainy season.

Although the grasses on the hill remain beautifully frayed. Encouraging perfection.

The start of something big, each moment adds to us and who we are and who we were is left in another place. Those who came before us. Giving, always giving. Sinking into the lap of the earth. Energy to provide.

Some people are dead but that's ok. They died and crusty earth contains crusty bones. As their bones crumble into shiny new things. Bone to bone. I will play with your bones when you die. I will make them my own.

And I wonder if my world is the same as yours and we continue on until death decides to take us. Expanding. And contracting. Pathways deviations No need to absorb. We are becoming self-sustaining systems. = creative space, protected by the big

kangaroo his family on the hill

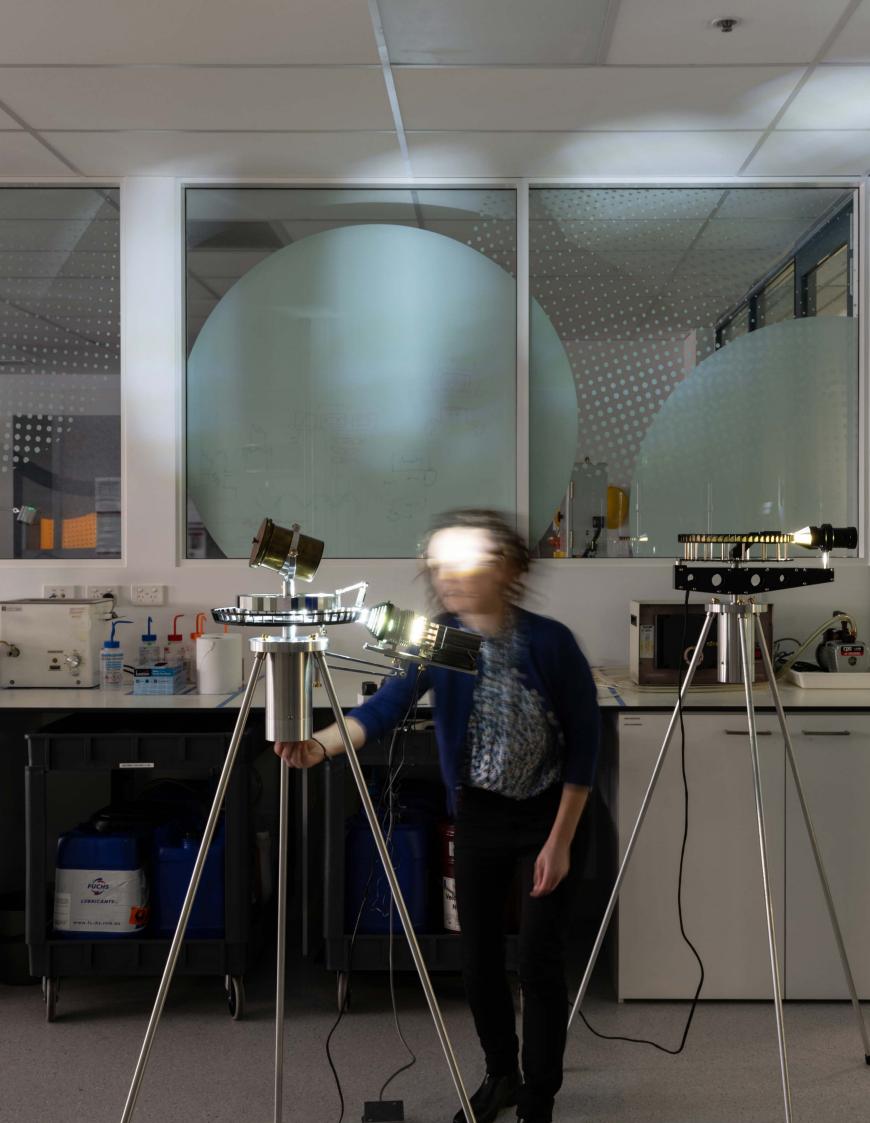
I will become a kangaroo What do they eat? Bugs and berries.

- As far as the eye can see I see in the darkness Shallow moon Cupped hillside Over there, distant industry provides lightshade. [TEXT] [NATURE] [MAPPING]
- Cardboard cut-out As the city over stimulates and Echoes the thoughts of us all Wave upon wave and walking solitary walker Small hill. They are there, all around Standing close by Yet undiscovered A cataclysm to crack open. Not quite a distance A world away And gentle
- Each time I return it is to the same place. How my mind thinks direction Leading this way and I find myself back in the same place we travel only small steps, into the return.

Fire

If I sit on a rock outside in the aarden will a kanaaroo come to shake my hand to say hello Are the kangaroos sleeping now, in a secret sleeping place A crevice, a rock shelf Sleeping from the day heat Or under this crescent moon as we all gaze Skywards Waiting for signs [IMPRINT] I've slept enough Building a sleep deficit To trade in for time spent with myself This is the quiet time. A vision, a dream becomes tangible Is this how it works? [FILTER] Cool breeze Inland swell Direct My thoughts are deep and connected to something bigger There has to be something bigger I feel the energy when it happens and Gives It just keeps giving. As it nears midnight I await a new day. The computer warms itself on my belly As with each movement more thoughts echo but take shape and form I would rather you warm to me Slowly [I saw the moon] There is a sense of place In the world We all have it as this is our place Each step, each word, each line etching progression. [CONSIDERED] Today is a day of personal turnaround for me. Leaving things in a better place than they were. Outside the black cat skirts The edge People are capable of anything. Facets of human Kangaroos go thump in the night

Melissa DeLaney is the CEO of ANAT.



DEIRDRE FEENEY

Perceptual illusions: exploring depth of field in materially generated moving images

This project intertwines optics, media archaeology, digital fabrication and human perception to explore depth of field in the projected moving image. It applies a 19-century animation system and contemporary methods of making to explore optical effects of material image making and how these effects engage with the viewer's perception.

Deirdre Feeney is an artist and lecturer of Contemporary Art at The University of South Australia (UniSA). As part of her creative practice Deirdre researches and develops optical image

Perceptual Illusions is a cross-disciplinary exploration of how we perceive depth of field in materially generated projected images. It engages with optics, digital fabrication, media archaeology and human perception to inquire how we perceive moving images of light with an illusionary '3D' aesthetic. The image systems developed for A Partnership for Uncertain Times invite the viewer to attend to the process of how optical image technologies invisibly manipulate our perceptual gaze. They reveal how mediated images are a kind of optical fiction.

Deirdre Feeney, Perceptual illusions, work-inprogress at the micro-machining lab, Australian National Fabrication Facility (ANFF-SA), 2023. Photograph Taylor Parham.

Optics and digital fabrication were key processes in the project. Feeney collab-

systems as perceptual tools for generating wonder and awareness of technologically mediated experience. Deirdre engages in cross-disciplinary collaboration with scientists and engineers to explore and realize her artworks. In 2020 she undertook an ANAT Synapse Residency at the ANU Research School of Physics. Her background in glass-making and the projected moving image were pivotal to her current practice encompassing material and digital methods to create her optical image systems. Deirdre's work has been exhibited nationally and internationally.

orated with micro-engineers Mark Cherill and Sudhakar Sajja at the Australian National Fabrication Facility to produce bespoke mirrored components for her moving image systems. The experimental approach to developing Perceptual Illusions resulted in a constant renegotiation with process. Continuously recalibrating and readjusting her optical components to achieve the '3D' projected images, Feeney's experimentation established a dialogue between intended and realized outcomes. Her iterative process was always underpinned by uncertainty, by never quite knowing how her optical interventions would effect the illusionary depth of field in her projected images.



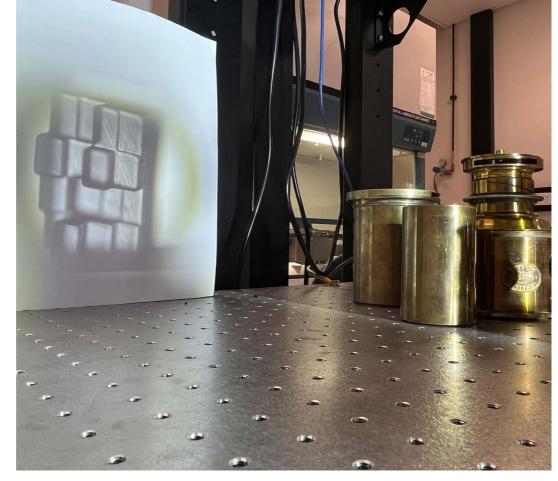
Deirdre Feeney Perceptual Illusions, work-inprogress at the Laser Physics and Photonics Devices Laboratory, UniSA, 2023. Photograph Taylor Parham.

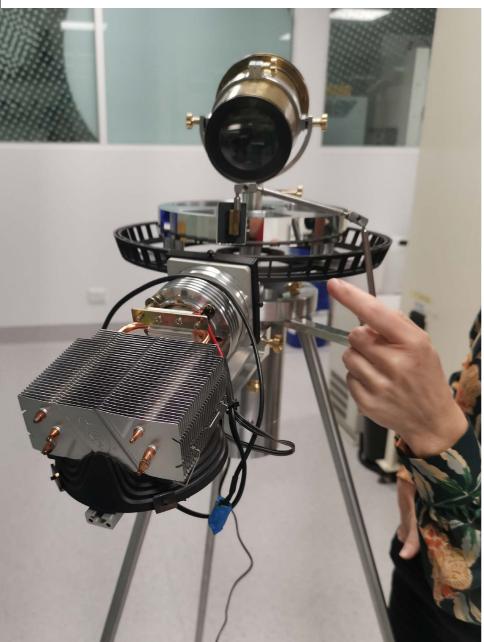
> Deirdre Feeney, Optical image system component (micromilled aluminium polygon fabricated by ANFF-SA, 230mm dia x 25mm high. Photograph Deirdre Feeney.



Deirdre Feeney Perceptual Illusions, work-inprogress at the Laser Physics and Photonics Devices Laboratory, UniSA, 2023. Photograph Deirdre Feeney.

Deirdre Feeney Perceptual Illusions, work-inprogress at the Research Centre of Interactive and Virtual Environments (IVE) Laboratory, UniSA, 2023. Photograph Melissa DeLaney.





Deirdre Feeney wishes to thank Mark Cherill and Sudhakar Sajja, Australian National Fabrication Facility (ANFF), Bob Chivell, UniSA STEM, Shane Haddy, UniSA Creative, and Daniel Williams, UniSA TestLab for their expert tech-nical assistance with fabrication of the artwork components. Deirdre also wishes to thank the UniSA Research Centre for Interactive and Virtual Environments (IVE) for providing lab space in which to test the image systems. She is additionally grateful to Dr Dale Otten and Professor David Lancaster for providing her with an optical bench in their Laser Physics and Photonics Devices Laboratory, UniSA which proved crucial for testing the optical components. 15

Deirdre is grateful to Click Films and Taylor Parham for their outstanding video and photography work for the project. She extends her thanks to Jessica Alice for her contribution to the catalogue and forum, Marchelle Matthew for the catalogue design, Michelle Wigg for forum technical support, and to Ning Yue Zhang and all at CTV Research for support in administrating the project. Deirdre thanks ANFF-SA for their warm support throughout the project and for allowing Click Films film in their micro-fabrication lab. She extends warmest thanks to ArtsSA, who generously funded the project and to the artists Brad Darkson, Catherine Truman and Niki Sperou, who engaged so generously and openly with the project. Finally, to Team ANAT - Melissa DeLaney, Jenn Brazier, Carollyn Kavanagh and Aushaf Widisto, deepest thanks for coming along the collaborative journey to bring to life a rich and engaging project.

Works in Progress by Jessica Alice

Three years ago uncertainty went mainstream. For many in the Global North, the pandemic was the first time the curtain of the world had been pulled to reveal unstable foundations. The running joke was that it felt like a little apocalypse. Others never had that luxury — they already knew apocalypse(s) big and small, whether by colonisation, the arbitrary cruelty of bureaucracy, migration, shifting borders, or moments where they found themselves policed and surveilled. For these people, uncertainty was a fact of life.

At a subatomic level uncertainty is accepted as an inherent quality of the universe. Quantum mechanics tells us that it is impossible to predict both the precise position and momentum of a particle even when one of these conditions is known.

Global events like pandemics, climate change and financial collapse function as a shared, magnified personal trauma. In a complex world of polycrisis, the interwoven nature of these issues makes this trauma feel magnified. At the level of the individual the difference can be stark; if before we experienced life and living as a seamless moving image, suddenly it all slowed down, our eyes able to focus on the discrete images and individual frames. These are moments where everything changes — where, as Joan Didion wrote: 'You sit down to dinner and life as you know it ends'.

Uncertainty and process are concepts themselves entangled. In The Ethics of Ambiguity, Simone de Beauvoir wrote that we mustn't 'attempt to dispel the ambiguity [of] being but, on the contrary, accept the task of realising it.' Nietzsche, likewise, says that 'reality is a flux, an endless becoming.'

In A Partnership for Uncertain Times, four works are presented in flux. These explorations in ongoing creative research address uncertainty in its various forms and are intended to be viewed "unfinished" - or in a process of becoming. Within the gallery space, they are both static works in progress and perpetual events, always unfolding, before and after the viewer is present. As speculative projects, they are exercises in cultural practice and maintenance, calibration, resource gathering, healing, questioning.

In Brad Darkson's Never too hot, culture is both practice and process. A fire is lit in the way of a cultural burn. The heat from the fire is applied to a thermal resistor, which serves as input to a synthesiser and vibrations from the heat create sound. If the fire goes out, there is silence. Combined with the science of traditional land management, which uses cool burns to clear weeds and promote native grasses, the work's research process is based in the shared knowledge passed down by elders. It is a holistic practice, demonstrating the interdependence of humans and the environment — recalling Frantz Fanon on blackness as being in 'total fusion with the world [...] sympathetic affinity with the earth'. As Darkson continues to carry this knowledge through an unbroken oral tradition, Never too hot shows how culture is an inherently collaborative, ongoing practice that must be nurtured and maintained or the fire goes out.

In *The Taken Path*, Catherine Truman walks a path of the Carrick Hill garden each day over a year, filming it each time. It becomes a practice of noticing — light, birdsong, how the path feels underfoot, how the plants and vegetation changes each day and season, and how much human labour goes into its maintenance. The highly managed gardens of Carrick Hill sit in contrast to the landscape beyond its boundaries, in which traditional land management has been prevented. Video and image stills capture the garden at different moments that show how the certainty of the garden is an illusion. This environment is in a permanent state of becoming; in that sense the garden is fragile, its future neither guaranteed nor totally at risk. Though Truman walks the garden path in repetition, neither she nor the journey is ever the same. The garden is always in flux.

Deirdre Feeney's Perceptual Illusions is a model of artistic process as scientific process. To create a projected moving image with the illusion of depth of field, Feeney has repeatedly calibrated a mirrored device to infinitesimal degrees in a process of experimentation and adaptation. Through its multiple distortions, the work centres the material intermediaries — such as a glass lens — that alters what we see. The moving image, meanwhile, mimics the complexity of human optics, in which our brain processes movement as a series of still images. Feeney's use of a nineteenth century animation system and her practice in glassmaking connects our changing perception to the materials used throughout time, revealing the process of how we perceive.

Bio-artist Niki Sperou's materials are fat, flesh, blood and chlorophyll. In *MESH: Interspecies Empathy* she entwines her artistic practice and Greek heritage to create hybrid chimaeras that are human, nonhuman, ecological, technological. Like Feeney, Sperou employs intermediary materials and layers, here at times to present some of the graphic imagery of her own surgery. Rather than alienating us from these otherworldly creations, the multiplicity of their constituent parts creates an uncanny familiarity, an intimacy that allows us to see ourselves in the other. In this mess/mesh of multispecies, posthuman futures, Sperou deconstructs hier-archies and reorients our collective experience towards an aesthetic and ethic of healing.

These works allow us to reflect on contemporary issues. If the pandemic was the crisis of yesterday, today the spectre of climate change is in the headlines along with new threats, such as the threat of artificial intelligence. For artists, the risk is not that AI will replace those engaged in creative work, — although how the issue of intellectual property and copyright infringement law may develop remains an open question. It is that human misuse of AI as a tool risks alienating art from artist labour in the pursuit of capital. In *A Partnership for Uncertain Times*, these four artists are shown as artists at work. We are invited to witness their labour, the many iterations an artwork may take, the time, the boundless experimentation, the variety of tools and technologies they use, the specialist expertise they employ. Further, by positioning the works in a constant state of process, the artist is never separate from her environment and community. In a time of increasing financial insecurity and precarious work for independent artists these works demonstrate the importance of solidarity and the potential of artist unions.

From the literal collaboration between artist and scientist, elders and community, to the rhizomatic interdependence evoked between subjects, consciousnesses, time and space, these works can be thought of as provocations. They are born of ethics of mutuality and reciprocity, both between nature and between people. The result are works that are subtly anti-authoritarian, drawing on anticolonial, queer, and feminist thought, within which multiple creative centres can be found. The act of viewing enables infinite narratives.

The contradiction of uncertainty is that it produces both fear and curiosity, a creative tension that gives rise to possibility and, ultimately, change. *A Partnership for Uncertain Times* invites us to dwell within this generative space, viewer inseparable from art and artist. Here is an embodied interconnectedness — a perpetual, collective state of becoming.

Jessica Alice is the CEO of Writers SA.



NIKI SPEROU

MESH: Interspecies Empathy

Uncertainty evokes new questions, viewpoints, and futures. Initially, Niki was concerned with the impact of technology upon 'what it means to be human' but this interest has evolved toward expanded entanglements and chimeric possibilities; post-human, multispecies, queer, repurposed, interdisciplinary, eco-techno and postcolonial; raising interrogations of relationships and speaking for others.

Niki Sperou is a South Australian artist with a longstanding engagement within the nexus between art, science and culture. Since 2006 she has been the resident artist at the Department of Medical Biotechnology, Flinders University. Her interest in contemporary innovations in technology, the body and her cultural background have led her to draw parallels between biotechnology and ancient Greek cultural paradigms. For Sperou these connections emerge in chimerical forms and concepts.

MESH: Interspecies Empathy

I believe it's of consequence to MESH the voices of nature, science, culture and mythical speculation, to question the uncertainties of life, technology, co-existence, and spirituality. My process is to reframe the past and create new chimaeras of meaning across time, to 'heal' the future.

Niki Sperou, MESH: Interspecies Empathy, workin-progress, in Niki's kitchen, 2023. Photograph Taylor Parham. Niki Sperou, MESH: Interspecies Empathy, workin-progress, in Niki's kitchen, 2023. Photograph Taylor Parham.





Niki Sperou, MESH: Interspecies Empathy, workin-progress, Prof Haolan Xu & Functional materials group, Future Industries Institute, UniSA, 2023, Photograph Taylor Parham.



Niki Sperou, Apparently it's a Thing, 2022, embellished textile. Image courtesy the artist.

Niki Sperou would like to thank Deirdre Feeney, University of South Australia, Team ANAT Melissa DeLaney, Jenn Brazier, Carollyn Kavanagh, Aushaf Widisto and Arts South Australia for their generosity in instigating and supporting A Partnership for Uncertain Times. [M] Dudeck, collaborator on the evolving and expanding Skin Bible project. Peng Su and Prof Wei Zhang, formerly at the Centre for Marine Bioproducts Development, Flinders University, for ongoing support toward marine algal bioplastics and biopolymers for MESH: Interspecies Empathy. Associate Professor Alice Gorman, Archaeologist, College of Humanities, Arts and Social Sciences, Flinders University, for access to lectures in Archaeology 101, 2023. SKARA BRAE, Neolithic settlement located on the Bay of Skaill, Scotland. Click Films and Taylor Parham for video and stills documentation. Jessica Alice for her contribution to the catalogue and online forum. Participating artists, Brad Darkson, Deirdre Feeney & Catherine Truman, for kindly sharing insights into their practice during the Uncertain Times workshop and forum.





Entropy, Antifragility and Dancing Stars by Aushaf Widisto

Change is the only constant, we're often told. That means uncertainty is the only thing that's certain. Our very existence is subject to this paradox, and this is but one among many. This universe is cruel. It makes us long for certainty while ensuring we'll never have it. The closest we'll ever reach is merely the illusion of certainty, and no closer.

Uncertainty makes for an eventful life. You may think, maybe for once, everything will fall in order and you can rest easy, but then a pandemic struck the planet, the seeds of a world war were sowed in the north, your landlord increased your rent, a stranger bumped into you in the streets and spilled your flat white. There's always something.

Something changes and everything else changes. Some might say this uncertainty is part and parcel of life's beauty, but I don't think uncertainty is beautiful. I think it's annoying and I'd rather not deal with it unless I absolutely have to. What I do think is beautiful is mankind's relentless struggle to cope with, and even overcome, uncertainty.

This struggle is ultimately futile-a Sisyphean task, as Albert Camus would put it-but it's beautiful nonetheless. We are doomed, like the mythical Sisyphus, to push a boulder up a mountain knowing full well that it will roll back down once we reach the summit. Sisyphus will never be able to rest. His world will never stay still.

Learning to live with that condition, experiencing it over and over, then instilled in him an appreciation for life's uncertainty. "The struggle itself towards the heights is enough to fill a man's heart," Camus famously wrote, "One must imagine Sisyphus happy."

I. Entropy and Equilibrium

Entropy, commonly defined as "the degree of disorder or randomness in a system," is the measure of uncertainty. The higher the entropy of a system goes, the more uncertain it becomes, and vice versa. But it's not that simple.

When the entropy of a system reaches its highest threshold-its maximum level of chaos and disorder-that system will attain equilibrium. In other words, the more uncertain your life is, the more certain it is. Paradoxes, right? I had a hard time grasping this concept until I tried it myself, with a little thought experiment.

Imagine stacking books on top of each other. For each book you stack, you're increasing the entropy of this book tower, and while the books look more orderly when stacked, it also becomes likelier to crumble. Once the tower grows high enough, the slightest gust of wind will destroy it, and only when the books have fallen down, when they scatter on the table and the floor, will the system be 100% balanced. Entropy is the force that both shakes and enables equilibrium. Uncertainty, then, is the only way to be certain.

Our book tower is Sisyphus' boulder. We long for stability and order. We long to stack the books as high as we can, and to put the boulder at the mountain's summit. And yet, with all the entropy in the system, we'll never be able to do so. Given a long enough timeframe, our system will return to its natural state: the equilibrium of uncertainty.

The universe begins with chaos and will end in chaos. Yet we still have the gall to demand order. What can be more beautiful than this uniquely human struggle?

II. Things That Gain from Disorder

As fragile creatures with a fragile existence, our fight against uncertainty can only be won by creating antifragile systems. Before we go on, there's an important distinction to be made here. Antifragility is not "nonfragility." It is not "sturdiness" or "resilience." It's also not "adaptability," although this one's hitting closer to the mark.

Coined by statistician Nassim Nicholas Taleb, the concept of antifragility describes a system that "becomes stronger because of disorder." Contrast that with nonfragility, which means "standing strong in spite of disorder." Now, the question is, what might be an example of an antifragile system? If everything must reach its highest degree of entropy to attain equilibrium, aren't all systems inherently fragile?

I can think of at least one example, and that is art. There's no requirement for structure in art. It barely has any rules, and the few rules it does have are allowed-even encouraged-to be broken. The more chaotic and complex an artwork is, often the more beautiful it is. Art doesn't just survive amidst entropy and disorder, it thrives on them.

Hence, we're often told, the most brilliant artists are also the craziest.

III. Zarathustra's Inner Chaos

This "mad artist" trope often led me to the words of Friedrich Nietzsche, in his magnum opus *Thus Spoke Zarathustra*, which has been described as a "gorgeous disaster." He wrote: "One must still have chaos in oneself to be able to give birth to a dancing star."

Resolving the chaos within one's mind, unfortunately, also dulls its greatness. We tend to forget the names of artists who didn't wander into some unknown, and often forbidden, territory. To live and create without limitations is to embrace the primordial and innate disorder of this universe, and to refuse-even actively fight-our unreasonable longing for certainty in this uncertain world. There's a reason why we assigned the title "star" to celebrities-those whose presence we "celebrate." Indeed, few things are more beautiful and worthy of celebration than a star, much less a dancing one. And to create a work with the brilliance of a star, one clearly needs a degree of lunacy-a high level of "inner chaos," we could say, as opposed to "inner peace." Art is the last resort to unsolvable problems, and the greatest artworks have always come from artists with wounds to heal and itches to scratch.

Indeed, you must have chaos within you to give birth to a dancing star.

IV. Coda

The only constant is change. To label a period "uncertain" is about as helpful as labelling water "wet." If you think about it, when have the times ever been certain? And why would you want them to be? It's the storm that we remember, not the halcyon days. In matters of art, uncertainty is like oxygen. Take it away, and no fire will ever burn.

Disorder is the primordial state of the universe and the only way to reach equilibrium is by increasing a system's entropy to the brink. To survive in such an unforgiving world, one must be nonfragile. To thrive in it, one must be antifragile. Not all systems can be geared toward antifragility, but if there's one that can, it's art. Art is one of the few things in this universe that gains from disorder instead of losing from it.

Artists, therefore, hold quite a unique power in regard to uncertainty. Who else is more primed to embrace entropy, to channel it into antifragile systems, and to give birth to a dancing star; other than artists? The good news is, everybody's an artist.

Life itself is a Sisyphean task, but you have the means to win the fight.

May the art you create make you as happy as Sisyphus.

Aushaf Widisto is an emerging writer & ANAT Arts Administrator.



CATHERINE TRUMAN

The Taken Path: a durational project

There seems to be an innate drive in us to intervene in, alter and reorder the natural environments around us, even if we have no place in them.

Based at the historic homestead, Carrick Hill (SA), a defined path that traverses natural and altered landscapes was filmed at monthly intervals over a year to bring focus to these constantly shifting interrelationships.

Catherine Truman is an established South Australian artist working across the disciplines of art and science. Catherine's practice is renowned for its

The Taken Path is an open-ended experiment in observation and embodied experience.

The project revolves around the repetitive action of walking and filming a defined path that traverses both the cultivated and uncultivated landscape of the Carrick Hill estate.

Catherine Truman, The Taken Path, Glass Gloves, 2023. Workin-progress. Catherine Truman wearing experimental glass gloves at Carrick Hill. Hand-blown glass form by Liam Fleming. Photograph Taylor Parham.

Each month Ian and I randomly chose a day and time to film using three devices; a video camera, a digital SLR and an iPhone.

We walked the centre of the path in both directions, holding the devices the same way each time, filming whatever conditions were present on that day. This repetitive diversity and depth and incorporates objects, contemporary jewellery, digital imagery, film and installation works with a focus upon the parallels between artistic process and scientific method. During 2022 Catherine was artist-in-residence at Carrick Hill, undertaking a project titled *The Arrangements: assembling nature.* Catherine's work has been exhibited nationally and internationally.

Catherine Truman in collaboration with Ian Gibbins, Emeritus Professor of Anatomy and Neuroscientist and video poet.

action created the control films and the raw material for experimental footage and stills.

If we keep to the path already taken what will happen to our powers of observation?

If we walk it many times does our awareness shift or is it be-calmed?

Can we learn anew from this repetition?

The relationships established across creative arts and scientific fields, as a result of projects such as this are important and rare. They are the catalyst for dialogue that tests the boundaries of language and our understanding and representation of held and new frontiers of knowledge about the natural world we share.



Catherine Truman in collaboration with Ian Gibbins, Light Study: long soft blur green, film still, 2023.

> Catherine Truman, The Taken Path, 2023. Catherine Truman in discussion with collaborator Ian Gibbins at Carrick Hill. Photograph Taylor Parham.





Catherine Truman's studio at Carrick Hill, 2023. Photograph Carollyn Kavanagh. Catherine Truman would like to acknowledge that The Taken Path project took place on the unceded traditional lands of the Kaurna people, I respect their deep connection to Country and pay my respect to elders past, present and emerging.

My gratitude to Deirdre Feeney, University of South Australia, Australian Network of Art and Technology and Arts South Australia for instigating and supporting *A Partnership for Uncertain Times* and to Niki Sperou, Brad Darkson, Deirdre Feeney and John Blines for sharing the riches of their process.

The opportunity to generate a creative response to such relevant and timely themes, is vital for contemporary practising artists.

Heartfelt thanks to my collaborator Emeritus Professor, Ian Gibbins for videography, steely commitment, expert advice and willingness to take on the challenge of this ever-expansive, open-ended experiment.

Thanks also to Susan McCormack and Matt Bennett for generously facilitating our access to Carrick Hill and special thanks to the hardworking, dedicated team ANAT.

> Catherine Truman in collaboration with Ian Gibbins, East Path Pear Arbor: concentric sequence, film still, 2023.



Our Partners

A Partnership for Uncertain Times is an Arts South Australia funded collaboration between the University of South Australia UniSA and ANAT (Australian Network for Art and Technology).

UniSA Creative is an academic unit within the University of South Australia (UniSA). UniSA Creative brings together disciplines of architecture, planning, art and design, journalism, communication and media, film and television and creative industries to produce flexible graduates with multidisciplinary capabilities. UniSA Creative engages in future-focused, cross-disciplinary research and provides a platform for emerging and established creatives both locally and internationally. UniSA STEM harnesses connections across disciplines such as engineering, mathematics, science, information technology and environmental science, bringing fruition to ideas relevant for our present and future times.

For over thirty five years, from its home base, Tarndanya on Kaurna Country (Adelaide, South Australia), **ANAT** (Australian Network for Art and Technology) continues to be the national leader in the field of experimental arts and crossdisciplinary practice with science and technology partners. The not-for-profit organisation operates on a continuum with varying entry points, including residencies, workshops and triennial events. Engaging artists at every level of their creative research practice, sci-tech-art curious audiences and science and tech-nology partners like universities and research facilities, ANAT believes in the essential role artists play across all areas of society.

Arts South Australia is a business unit within the Department of the Premier and Cabinet. Arts South Australia's role is to:

- promote the growth and development of the arts sector by providing advice on arts policy and strategy to the government
- encourage cultural and creative industries to thrive by providing targeted financial support to artists, arts organisations and events
- conduct research and analysis, monitor developments, issues, opportunities and emerging trends in the arts sector and their implications for South Australia.







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