

# Embodied and Enacted Futures as Artistic Practice

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## Abstract

This paper describes embodied and enacted futures as artistic practice as demonstrated through collaborative artistic projects discussed as a suit of immersive digital experiences - *Spheres a Dance for Virtual Reality*, *Glasshouse Evocation* and *Transmittance*. Each of these works are created through transdisciplinary collaboration across choreographic, sound and visual design, interactivity and game development combined through a distributed feminist artistic process. Embodied and enacted futures as artistic practice is informed by future studies, physical narratives and experiential design. These speculative future enactments are activated as immersive digital applications and embodied experiences. In each case the outcome of a futures driven process is a participatory work that evokes creativity and change for the participant through transformation.

## Keywords

Speculative practices, Experiential Futures, Embodiment, Enaction, Virtual Reality, Participatory Practice, Futures Ethnography

## Introduction

By moving we experience the world, putting us in the best position to feel our way forward to the next step. The goal for my artistic processes and outcomes is to keep creativity alive and in motion. For this reason, I drive experiential futures processes to create dynamic artistic works that transform creative change. Creative processes prompt collaboration across fields and research areas, especially contemporary practices where the goal is to be informed and future focused. Experiential futures rely on a similar premise, as

does the activation of scenario design through physical narratives, as part of an enacted embodied experience [1]. This paper will traverse immersive digital artistic projects that demonstrate dynamic processes of change influenced by experiential futures and physical narratives and resulting in transformational experiences through subjective participation.

**Background** Dance is my field of practice and over time I have shifted from choreographing work received passively by an audience to choreographing dance experienced firsthand in immersive digital environments. The transition between positions of presentation, includes applying a distributed post-humanist perspective activated with performers and creatives having agency to improvise in performance. Recently I have been creating immersive digital works with a team of collaborators and found ways to create performance where the audience are no-longer out of the loop but involved in triggering outcomes through their own creativity and movement. The participant at the centre of their own experience is transformed through sensory engagement rather than watching someone else performing. I understand subjective participation as a futures process allowing participants to make decisions about where they are going in consideration of where they have come from.

## Futures

Futures methodologies applied to creative process' and artistic outcomes is not new. I became interested in experiential futures through artist residencies with European/ Australian cultural groups FoAM<sup>1</sup> and Times Up<sup>2</sup> in 2015. During a residency in Croatia with FoAM, I was invited to attend a series of future forecasting workshops with Times Up through the European project Future Fabulators<sup>3</sup>. Working

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<sup>1</sup> FoAM explore cultural questions through a breadth of themes and methods, from machine wilderness to permaculture, future crafting to hosting craft, weaving codes to cultivating minds, open source to open saucers (<https://fo.am/about/>).

<sup>2</sup> Time's Up's mission is to investigate the ways in which people interact with and explore their physical surroundings as a complete context, discovering, learning and communicating as they do. Their research is based upon constructing interactive situations not unlike the normal physical world, inviting an audience into them and encouraging their playful experience-driven exploration of the space, and its behaviors, alone and in groups. (<http://www.timesup.org/content/about>).

<sup>3</sup> The Future Fabulators (FFab) project aims to imagine, research, and prototype a range of possible futures, designed as artistic investigations and narrative artefacts to be experienced in the present. FFab uses techniques from physical narration, context-aware narrative, and future pre-enactment to translate future scenarios into storyworlds, which are built as immersive situations in public and private spaces and designed to be playfully explored and enacted by a broad population. Future Fabulators is an EU-funded project led by Time's Up, in collaboration with FoAM, M-ITI and AltArt, with the support of the Culture 2007-2013 Framework of

with experiential futures as an embodied practice gave me insight into emerging cultural trends and put me in direct communication with the communities to which I belong. The field of futures has a community engagement process whereby the hopes and fears of a community are elicited, sorted into scales of positive and negative outcomes, and written and designed into future scenarios that can be enacted and trialed. Through this process one can remain informed of a wider scope of perspectives as well as become aware of concerns and hopes within communities large, or small. Most importantly, enacting scenarios stimulates possible futures.

Futures is the study of postulating possible, probable, and preferable futures and the worldviews and myths that underlie them. In general, it can be considered a branch of the social sciences with parallels to the field of history. Futures as an embodied practice is actioned through experiential futures, which is a family of approaches for vivid multisensory, trans-media, and diegetic representations of images of the future. There are several ways in which participatory practice informs artistic practice. These include the use of physical narratives, experiential futures and speculative design. Each of these descriptors evoke images of bodies-in-action and suggest approaches to problem-solving that require physically trialing situations in specific environments. Whilst the lineage of each futures position varies, the outcomes of participatory practice and sustainable futures unite each perspective and provides an analytical framework in my research.

Experiential Futures and immersive participatory theatre are a type of rehearsal or drill for what may happen next. Sustainable futures pay attention to the present so with all senses geared toward positive potentialities, there is less chance of crashing blindly into the unknown. What is sustained is that which works and that which is discarded no longer serves a purpose. As futurist Stuart Candy gives insight, “A foresight culture therefore emerges at the dawn of the 21st century. It is a culture that routinely thinks long-term, takes future generations seriously, learns its way towards sustainability and brings the whole earth back from the brink of catastrophe” [2].

## **Futures as Artistic Practice – Embodied and Enacted**

**Experiential Futures** FoAM together with Times Up, describe a strategy for engaging participants in enacting possible futures as physical narratives. Physical narratives are a reflective cultural device inspired by the approach of futurist, Peter Schwartz [3]. Schwartz advocates for a process that highlights the best way to think about the impact of your actions, how you can clearly see the environment where your actions take place, and how those actions fit with or against prevailing forces, trends, attitudes and influences.

This process is initiated by inventing stories of plausible futures, designed into scenarios that bring about leaps in understanding about current perceptions. For FoAM and Times Up, this approach enables the integration of information into artistic interpretations that address specific cultural and environmental concerns. Their aim is to develop foresight so that better decisions can be made about current and future actions.

In FoAM’s physical narratives, participants engage playfully through participation and discover futures within an open scenario. “[I]n physical narratives, visitors become a part of the scenario, surrounded by it as if they were in a parallel world. The level or depth of immersion is important, allowing visitors to investigate the scenario using all their sensory, somatic, intuitive and cerebral faculties” [4]. Futurist Maja Kuzmanovic doesn’t talk specifically about virtual reality, but rather about participants immersed in a scenario that is confrontational and intense. However, face-to-face, personal experience can elicit a desire to understand such repercussions outside of the scenario. Hence these experiences, like simulation for work-based training, require a period of debriefing and reflection once the experience has been completed. This is because physical narratives incorporate within their design a playful multisensory experience of social interactions that needs processing over time.

Anticipation studies, according to sociologist Roberto Poli [5], is the practice of making decisions in the present about something that might happen in the future. Improvisation plays a key role in anticipation studies because it is creative and receptive, active and passive, spontaneous and strategic. Most importantly, the embodied practice of improvisation shifts the discussion from speculation to the enactment of a lived experience. Possibilities become trialed and felt through mistakes, new ways of doing things, and established pathways are rediscovered by moving and sensing with the body. This somatic trial and error demand that the participant be present and aware of the impacts of future decisions informed by their lived experiences.

Like anticipation studies, embodied foresight, as described by strategic foresight expert Joshua Floyd, provides a background to the methods used by Times Up and FoAM when creating their physical narratives. Floyd in his article, *Action research and integral futures studies: a path to embodied foresight* [6], engages with biologist and cognitive scientist Francisco Varela, philosopher Evan Thompson, and cognitive psychologist Eleanor Rosch [7] to describe the enactive approach as one that foregrounds perceptual action and guidance that are inseparable from our sensorimotor capacities. Floyd explains, “cognition consists not of representations but of embodied action” [8]. Floyd’s comments lead us to consider what we get to know of our world by projecting into the future via enacted scenarios that are dependent on our physical capacities as embodied beings. Floyd uses methodologies that include improvisation,

sensing, presencing and realising, as well as practising higher states of mindfulness through meditation. All of these methods make up the practice of embodied foresight. Floyd suggests that a framework is needed for day-to-day practice that encompasses the principles of integrated future studies and the enactive view of knowledge, culture and cognition within participatory practice. This framework became the process I applied when creating embodied immersive digital simulations and dance for virtual reality.

There is little analysis to date that has been produced on futures-infected design outputs within immersive digital environments. However, experiential futures are trans-medial and creative in form. Mixed reality is mentioned by Candy when forecasting current technologies as a way of evoking and making available insights, thoughts and feelings about possible futures [9]. The potential for experiential futures methods within digital applications is evident. Game engines such as *Unity* or *Unreal* are operated physically, meaning that the design elements are created through clicking, grabbing and pointing. The environment can be activated through integral gestures, movements and specific choreography. Participatory practice in current computer gaming is not always enacted and is often operational rather than experiential. There is a wealth of possibilities for embodied response to digital environments that goes beyond computer control functions. Enacting futures through participatory practice is one way to begin to develop the embodied practices between futures and immersive digital environments.

Participatory practice is the common denominator in each area of future studies from physical narratives to experiential futures. Participation as an embodied process is how knowledge is transmitted and transferred between a participant and their environment. Learning by doing and the processes of debriefing inherent to experiential futures, guides how each future scenario is understood and applied. The process of participating in future scenarios through movement is defined in future studies as enactment. Enactment in future studies brings together the scope of embodied participatory practices outlined above from physical narratives and experiential futures.

Enactment amplifies anticipation and relational thought to propel users through the development of embodied techniques that merges the body with its environment into a future they are constantly shaping. Enaction is a term first used by Varela, Thompson and Rosch [10] to describe the relationship of cognition in the world through a variety of actions that a being-in-the-world performs. Other theorists, such as anthropologist and cognitive scientist Edwin Hutchins [11], philosopher Alva Noe [12], cognitive scientist David Kirsh [13 [14] and philosopher of cognitive science Evan Thompson, discuss the fundamental role of the cognitive theory of enaction.

An enactive approach as conceived by Varela, Thompson and Rosch [14] depends on how the perceiver is embodied as well as their sensimotor relationship with their environment. It presents a view of cognitive agents bringing forth a world by means of the activity of their situated living bodies.

On this view, knowledge emerges through a persons' bodily engagement with the environment, rather than being simply determined by and dependent upon either pre-existent situations or personal constructs. As Varela says, "the organism both initiates and is shaped by the environment" [15]. Varela's view in cognitive scientist John Stewarts very practical words, - "the fact of the matter is this: what the knowable world is, for each of us, is not independent of who we are, and how we go about our daily business of living." [16]. How we perceive the world is determined by our actions.

Human perception is part of the enactment process, so it is well suited to a methodology that brings together a future studies view of enactment with embodied cognition. Both enactment and enaction describe the relationship between action and perception within a continuously evolving environment. A futures view is channeled towards change, whilst an embodied cognitive analysis highlights perception and the perceiver's affordances, as understood in human-computer interaction. Each view contributes to an informed view of how embodied cognition makes the body inseparable from its environment thereby implicating the whole system in cognitive processes such as selection and decision-making.

Considering how an understanding of enaction in embodied cognition can add to the validity of future enactments raises the question of how embodiment in immersive digital environments can be activated in experiential futures. To answer this question, in which human and machine co-exist, I refer to the field of speculative enactment. Whilst experiential futures has evolved from a combination of speculative design and embodied anticipation studies [17], speculative enactment has developed from design research with participants. When looking at current human/computer interaction within contemporary design, participation processes and their requirements are paramount.

Speculative enactment has been defined by interaction designer Chris Elsdon, investigative designer David Chatting, computer scientist Abigail Durrant, user experience researcher Andrew Garbett, interactive designer Bettina Nissen, and human-computer interaction experts John Vines and David Kir, in their paper, *On Speculative Enactments* [18]. It is future focused and results in artefacts and environments that prompt discussion and further speculation. The field of speculative enactment informs the development of world-building. In a posthuman, post-covid and environmentally fragile world, speculative enactments "constitute an effort to meaningfully enact elements of possible futures with participants" [19]. Pairing participatory performance practices with speculative design is key to futures focused scenario design that promises to be self-reflexive through embodied experience. In both cases enacting futures through physical contact and somatic experience informs decisions about how people chose to live their lives in the future.

The focus of speculative enactment is to engage people more viscerally in futures conversations through an embodied approach. Social interaction therefore becomes a critical strategy, which makes meeting others or acting in public a desired outcome. Participants are made accountable through

their interaction with speculative materials and settings. It is therefore necessary that participants are compliant in the experiment in which they act and have normalised points of reference in their stage settings by becoming familiar with them. A normalised setting allows for grounded unscripted improvisation of particular futures, which can produce a range of design research artifacts that can be presented as design fiction [20]. Elsdon et al recognises the influence of Candy's experiential futures model as participatory performance structures. There is evidence of recognition of the value of embodied knowledge shared across futures studies, speculative design and participatory performance practice all of which I take note from in my artistic process.

**Futures Ethnography** A futures ethnography underlies the interdisciplinary research component of my artistic practice. Taking example of Sarah Pink's [21] design ethnographies that advocate for a mixed perspective in understanding of people, society and place to best anticipate change in uncertain times, futures ethnography aligns with my intention to participate in ethical futures. Sitting within the practice of speculative futures, Pink defines ethnography as a process of representing and creating knowledge through interpretations of culture and society informed by theoretical principles and disciplinary agendas. Importantly, it includes on the ethnographer's own experiences. In this there is no need to produce an objective account of reality, as the task is to present a version of the researcher's own experience of reality that reflects the context, negotiations and inter-subjectivities through which their knowledge is produced.

As Pink demonstrates, visual images and metaphors are intertwined with ethnography and sensory ethnography assisted me in narrowing my research to the corporeal while staying abreast of contemporary methodologies [22]. Pink introduced me to imagination-based research methods as defined by social anthropologist Iain R. Edgar [23]. Imagination, future studies and scenario design all rely on 'what if' speculation. This emerging area of ethnography, which explores the edges of consciousness, correlates with the creation of scenario designs for virtual and simulated environments. Imagination based research considers the cultural structures of the unconscious as well as contextual studies of narrative accounts of visual imagery.

Ethnographic futures research as established by Textor as set out in his seminal paper *Ethnographic Futures Research Methods: An application to Thailand* [24] is highly relevant to my research and artistic practice. Increasing interest in the area spear-headed by foresight practitioner, designer, artist and educator Stuart Candy [25] brings focus to methods that elicit images, cognitive practices and values with respect to probable or possible futures for a particular cultural group. The goal is to gain insight into the specific changes within a sociocultural system from one time-period to another. This

research method is useful for investigating fields that are forging innovation, like immersive digital environments in work-based training, and current contemporary arts practices working with mixed reality.

Images of preferable futures can also influence change. It is these images and preferences that an ethnographic futures method can elicit, describe, summarise, analyse and interpret within the tradition of social science and ethnography. Embodied and enacted futures as artistic practice is a type of ethnographic futures practice, creating embodied experiences through immersive digital environments to probe the outer reaches of historical and symbolic imagination. Similarly, Times Up who describe their activities as a laboratory for the construction of experimental situations, create physical narratives<sup>4</sup> that contain artefacts of possible futures, as well as offering embodied experiences that reflect futures, sharing a theoretical background with experiential futures as designed by Textor. Conditions that inspire participants to engage their imaginations, senses, embodied awareness and to share this through speculative storytelling, is a sentiment shared by both Edgar and Textor.

The ethnographic futures framework within the research projects drove my intention to push the work in the direction of the near future. In observing how things evolve and the hopes and fears of participants for future developments. Questions about the future pushed the participants to self-reflect on where they are, and to better understand where they may be going. This practice maintained a sense of mindfulness and self-awareness that gave the research an openness to new developments. Artistic collaborators were asked their views about where the research, work or practice was heading. These questions opened up speculative and imaginative spaces so that the collaborators as participants and then the audience as participants could join me in the development and evolution of their own stories.

## Immersive Digital Embodied Experiences

My suit of immersive digital embodied experiences; *Spheres: A Dance for Virtual Reality*, *Glasshouse*, *Evocation and Transmittance* were all created through an embodied and enacted futures methodology as artistic practice, with the intention of providing agency for a participant to experience and enact their own creative experience. *Glasshouse* and *Evocation* were both projects that involved qualitative user studies measuring modes of engagement, but this information is outside of the scope of this paper. Embodied and enacted artistic practice as creative process and mode for participant engagement is the focus of the examples below.

Besides a futures methodology, my work is concerned with posthuman and post Anthropocene concepts, defining the themes of the artistic works as well as the distributed and

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<sup>4</sup> Physical narrative (PN) can be described as a theatre without actors, where spectators become engaged participants, playfully discovering futures by experiencing physical spaces, objects and media. A PN is an explorable world, an open scenario rather than a

singular story, PNs take the form of immersive installations where entangled fragments of scenarios can be experienced through all the senses as a self-contained, aesthetically coherent reality.

decentralised power structures within my collaborative process. Themes that bring to bare non-human perspectives, such as insect life, plant life and the actions of robots are central to the ideas brought forward by collaborative creative teams in these projects. Just as we are intent on removing the human perspective from the central position of the narrative, we also give full attention to artistic perspectives other than our own, to best share understanding and create the work as an ecology of practices .

**Spheres: A Dance for Virtual Reality** My first work for virtual reality, *Spheres; A Dance for Virtual Reality*, was created for the graduating year of a professional dance course at the Adelaide Centre of Arts and was presented as a showcase performance in the mainstage theatre foyer. The instigating question that drove the futures methodology was grounded in questions about the future of contemporary dance in a digital form. The students' responses included feeling fearful that they might not understand the process or project as it was the idea of virtual reality was new to them, and fears that the physical body may lose value to the digital form. Other fears included the possibility that if people could view dance in virtual reality, then they would be less likely to come to the theatre. Hopes expressed included that the work may bring friends and family, who are usually disinterested in contemporary dance, to the theatre.

The futures questions assisted the creative team to craft the scenario design into an interactive dance work, whereby the participants (in this case friends and family of the dancers), could dance with the dancers represented as digital avatars (see figure1). The intention of the interaction was to engage the audience directly with the dancers through a social dance. Subsequent scenes allowed the participants to move the dancers in miniature form and for the dancers to encourage the participants to move via proximity. By activating the dancer's hopes that people who support their dance training see more of their performance, the VR dance engaged the audience through direct interaction. Family and friends, across generations experienced the dance and fed back that they could recognise the dancers they came to support in digital form.

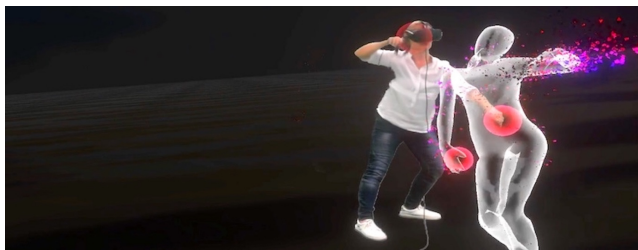


Figure 1, Sarah Neville interacting with a digital avatar, *Spheres; A Dance for Virtual Reality*, Adelaide College of Arts, Digital Still, 2019

**Glasshouse** Glasshouse was created in 2021, a time we described as post-covid, although the pandemic was still affecting travel, living and workplace restrictions that impacted our lives. The initial question was – How do we travel/ move in post-covid times? We focused on movement as the intention of the VR experience is to encourage the participants to move. Movement in one spot was then expanded to movement in a room – a building – a city – and then across and through countries as these were pressing concerns for the creative team within the context of this moment in time. We were experiencing border restrictions and feared we needed to renegotiate our relationship to place and travel.

Concerns about travel led to developing ideas about modes of travel dependent on affordances. We clustered our ideas into three groups – residents, tourists and nomads. We considered residents who wanted to, or had to, stay in one place and we imagined how self-sufficiency could be maintained in a future world in which organic and non-organic entities lived in harmony. We devised a place where a glasshouse keeper was composed of weather and could self generate light, manifest rain, excrete fertilizer and herd insect bots to kindly move organic insect life away from treasured plants. The glasshouse keeper nurtured the glasshouse through a series of interactive tasks introduced to the participants who could learn about the glasshouse ecosystem by taking part in sustaining the world inside the glasshouse (see figure 2).



Figure 2, *Glasshouse*, Dance Hub, Photo by Juha Vanhakartano, 2022

Considering how tourists move, we developed the idea of insect swarms, visiting and moving quickly, taking samples of things and leaving trails of destruction. Their relationship to the keeper, the weather and plants is framed as a fun game. We considered how collecting experiences and images are goals when traveling in tourist mode. The insect world focusses on a social dance leveraged for maximum enjoyment. Set in a rave, participants as insects are encouraged to communicate by connecting antennae with new friends, dancing together and climbing tall stems to maximise their enjoyment.

Lastly, the plant world developed as a reflection of our conversations around nomadic movement. We considered

how plants move to face the sun and how seed or bulbs shift with the weather to be closer to water or in harmony with required shade. Alternative to tourist movement, nomadic movement is slow and considered and develops shape in response to climate, social pressures and world events. Our discussions considered space, deep connections with the earth, under the earth, into the sky and expressions of reach from roots to blooms. How choices and information are shared across plant life, were designed as expressions of light and sound. This world developed as an opportunity for a participant to engage in an intuitive response to their environment and encouraged subjective non task-based movement.

**Evocation** Challenging myself to juxtapose a speculative future within a real world, led to the development of *Evocation*, an augmented reality experience. The initial question was – How do we move with the earth/ with technology and how has this evolved human form. To develop our response we created avatars with extended and reimagined physicalities; twisted limbs, transparent skin, extended brains and fluid shapes. These forms, embedded with movement choreographed from improvisation scores defining movements in negotiation with the earth and technology, are matched with a line of poetry across 5 geographical locations within a room (see figure 3).



Figure 3, *Evocation*, Liverpool Gallery, University of South Australia, Photo by Juha Vanhakartano, 2023

**Transmittance** While all my works to date are collaborative ventures created through transdisciplinary practice, *Transmittance* is a solo work (complimented by a sound track from long-term collaborator Matthew Thomas). Without a collaborative discussion with several artists about futures, the process happened in reverse. I began by creating an installation with glass and projection and then asked myself what I was doing. Through reflection I saw that what I was interested in was simulating the dappled morning light found in my sunroom in winter. I asked myself why I considered this quality of light to be important and soon understood that the view of light on a wall marks time and seasons. I imagined a world in which we might find it necessary to weatherproof our home against sunlight and created an

installation that positioned ambient affect as a wellbeing strategy in times of climate change (see figure 4).

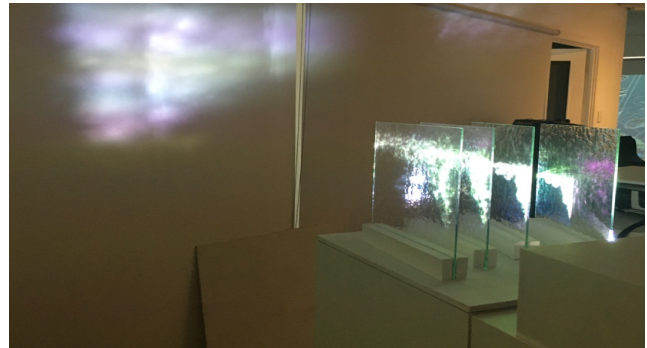


Figure 4, *Transmittance*, The Mill, Illuminate Festival, Photograph by Sarah Neville, 2023

## Summary

Each of the immersive digital embodied experiences created through embodied and enacted futures were informed by reading, observing and participating in the work of companies engaged with futures and audience interaction. Relating to the world through physical experience informs our future actions. By considering our actions as a community, and playing out scenarios, we can witness the repercussions of our actions and make better decisions about where we are going. This recursive action and reflection feedback loop allows for more sustainable futures. If we can put systems in place that interrupt our complacency, that provoke us to look back and reflect on how we got to a particular point and from there look to the future, then we are practicing sustainability across all industries and community wellbeing.

Observed and experienced through a futures ethnography that enhances the importance of teams of people physically engaged and connected to each other, technology and their environment, brings to bare experiential futures produced through physical narratives such as those designed by Times Up and FoAM, that attempt to empower participants to proactively enable change. This change is produced physically through embodied experiences that provide participants with knowledge that enables them to make changes in the present, and thereby inform the future. The development of immersive digital environments also calls for change enacted through embodied experience. The field of futures provides not only a parallel model but it also reveals the direct intentions from which scenario designers of immersive digital environments can learn.

Future studies and the associated cultural methods and processes demonstrated by Times Up and FOAM

also indicate how participatory practice in immersive environments is embodied and can be transformative. These examples provide a methodology and models of collaboration that can be used to develop future focused simulations and art works in immersive digital environments.

Methods of embodied learning that build resilience and consider the importance of sustainable futures are vital not only for dance but across all industries. It was critical to frame questions from a wide range of fields across arts and industry to speculate about the future direction of their practice and research. The objective was to observe in order to better understand the direction of current work projects, pinpoint generative processes and identify junctions of transformation. In times of uncertainty, there is an urgency to reconceive the way we work, our workspaces and the way we communicate. "What If" scenarios have become an everyday methodology alongside statistical modeling for policy makers, who chart potential chaos and implement strict life changing conditions for everyday life. Speculative story telling in the vein of futures studies is currently saving lives.

The ability to manage change revolves around the ability to be self-aware and mindful. From this point of concentration, the ability to improvise and manage change is possible. Improvisation is a component of the dance knowledge and one identified by cultural lab FoAM as integral to experiential futures. Hypothetical futures are not being just projected and practiced, but observations on a world scale across continents are providing new social models that include more digital platforms for communication within communities across continents. From observation comes improvisation and change.

Once again, the way we move elicits change but movement can also restrict us, which applied more generally raises questions about where we think we are going. Such questions call into practice future forecasting methods as discussed above. Across the field of futures, community participation ensures co-authorship in creative problem solving and is dependent on physical interaction. Participation emerges as a key insight from my research into futures and continues to be foregrounded throughout the outcomes of my artistic practice. Participation means to actively take part in something that involves a level of interaction with others and the environment with the view to facilitating change. The value of participatory practice within human-computer relationships can push the process of embodied knowledge transmission into possible futures. In future studies, lived and felt experience is privileged through enactment and the subsequent reflection on how things might be, and therefore are.

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Spheres: A Dance for Virtual Reality  
Developer: James Wilson  
Interaction design: Daish Malani  
Composer: Matthew Thomas  
Performed by: Madeline Blumer, Ashlee Vermeer, Jazz Hriskin, Tiarna Linke, Leo Ashenden, Tiphonie Evans, Kirra Doherty  
Supported by: Creative Computing Studio, University of South Australia, Adelaide College of the Arts, Dance Department

Glasshouse  
Producer: Julianne Pierce  
Choreography/ Scenario Design: Sarah Neville  
Developer/ 3D Graphics: Alexander DeGaris  
Interaction Design/ 3D Graphics: Daish Malani  
Composition: Matthew Thomas  
Communications/ Design: Amy Milhinch  
Performed by: Sue Hawksley, Tanya Voges, Jazz Hriskin  
Supported by: Arts SA, Dance Hub SA, ADT International  
Choreographic Centre, Nexus Arts, Creative Computing University of South Australia, Stone and Chalk, Piccadilly Community Hall

Evocation  
Choreographer/ Scenario Design: Sarah Neville  
Developer: Alex DeGaris  
Composer: Matthew Thomas  
Performed by: Sue Hawksley  
Supported by: Arts South Australia, UniSA Creative/ IVE, Assemblage Flinders University

Transmittance  
Designed by Sarah Neville  
Composer: Matthew Thomas  
Transmittance was commissioned by The Mill for the Illuminate Festival and supported by The Australia Council of the Arts

## Ethics

This project has been approved by the University of South Australia's Human Research Ethics Committee, University of South Australia (Ethics Application P62254). All participants provided signed informed consent at the beginning of the user studies.

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## Biography

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