

Editors

Anastasia Mortimer anastasia.mortimer@sydney.edu.au

Michelle St Anne michelle.stanne@sydney.edu.au

Sydney Environment Institute Charles Perkins Centre (D17) University of Sydney NSW 2006





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The 'Anastasia' Project — Representing Heat through performance.



Despite the now vast body of accumulating scientific evidence of the realities and likely impacts of climate change, denial persists, and most people remain unable to absorb and respond to what is happening to and around us. Scholars across the hard sciences, social sciences and humanities are recognising the need to find new forms of collaboration and communication for our research to have the impact it must have if political, social and economic transformation is to occur.

Currently Sydney Environment Institute is collaborating with Resilient Sydney, an office hosted by the City of Sydney Council as part of the Rockefeller Foundation's 100 Resilient Cities initiative, in an effort to better understand the nature of shock events and their impacts on the Sydney Region. As part of this project,

SEI has been gathering information from focus groups on community experiences of climate impacts and how people cope with these events. The aim of the Pop-up described here was to explore innovative and impactful ways of bringing research undertaken by the Sydney Environment Institute on climate change and heat waves to the public in vibrant and affecting ways.

Specifically, we sought to expand upon the theoretical and practical finding of the SEI/Resilient Sydney research through the development and presentation of theatrical work. The aspiration was for audiences' experience of the theatrical production to facilitate their intellectual and felt understanding of the significance of shock heat events in communities, while helping university researchers to discover the role of artistic practice in effective knowledge transmission.

Overview



This magazine illustrates a unique collaboration organised by the Sydney Environment Institute – one between a broadly interdisciplinary set of natural and social science researchers working on the impacts of heat and heatwaves on the one hand, and a set of artists, musicians, and theatre auteurs on the other. As researchers, we know that the reality in Sydney is that in a heatwave it is generally older and poorer people, living alone, who are most vulnerable. We understand this process climatically, physically, and socially. But how can that reality be communicated beyond the usual research community in innovative and impactful ways? The goal of this project was to translate, represent, embody, and present to the public through the arts some fairly straightforward physical and social research on the impact of heatwaves.

Musicians incorporated sound loops of public testimony of the experience of heat waves into moving compositions. The Living Room Theatre created performances that integrated research on human and animal physiology to ground the story of the death of an elderly woman. Along the way, events were organised to explore the creative process, to engage theories of climate denial, to experience innovative forms of music composition and theatre. The 'elephant in the room', the reality of increasing climate change and its

impacts, became the recurring theme and image – constantly and over multiple events prompting reflection and engagement.

What follows is a set of stories and reflections generated by this broadly collaborative project. We conclude with a small study of the impact of a performance on a select group of audience members. Here, discussions illustrate how artistic representation impacts the senses, renders the invisible visible, illustrates our entanglement with the nonhuman realm, and promotes thinking about connections, community, and care. Overall, this project powerfully reinforces the multidisciplinary mission of the Sydney Environment Institute, and illustrates the potential of work across the sciences, humanities, and arts.

Support for this project was provided by the Sydney Social Sciences and Humanities Advanced Research Centre (SSSHARC), the Sydney Environment Institute, the School of Veterinary Science, the School of Media and Communications, the Department of Performance Studies, and the Thermal Ergonomics Laboratory at the University of Sydney. The Living Room Theatre's contribution was also supported by a partnership with the City of Sydney and Brand X. May thanks to all of our supporters, collaborators, and creators.

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Research Leads

Professor Danielle Celermajer

Danielle Celermajer is a Professor of Sociology and Social Policy at the University of Sydney. Her research stands at the interface of theories exploring the multidimensional nature of injustice and the practice of human rights.

Professor David Schlosberg

Co-Director

David Schlosberg is Professor of Environmental Politics in the Department of Government and International Relations at the University of Sydney, and Co-Director of the Sydney Environment Institute. His work focuses on contemporary environmental and environmental justice movements, environment and everyday life, and climate adaptation planning and policy.

Researchers

Dr Benedetta Brevini

Benedetta Brevini is a journalist, media activist and Senior Lecturer at the University of Sydney. Before joining academia she worked as journalist in Milan, New York and London for CNBC and RAI. She writes on The Guardian's Comment is Free and contributes to a number of print and web publications including the Conversation, Open democracy, Index of Censorship and Red Pepper Magazine. She is the author of Public Service Broadcasting online (2013). editor of the acclaimed volume Beyond Wikileaks (2013) and Carbon Capitalism and Communication: Confronting climate Crisis (2017). She is currently editing a new volume entitled "Media and Climate Change" (2018).

Assoc. Professor Ann Elias

Ann Elias is Associate Professor in Critical Studies at Sydney College of the Arts, the visual art school of the University of Sydney. Research interests include: camouflage as a military, social and aesthetic phenomenon; flowers and their cultural history; coral reef imagery of the underwater realm.

Dr Ollie Jay

Ollie Jay is the Director of the Thermal Ergonomics Laboratory, in the Faculty of Health Sciences at the University of Sydney, and Lead Researcher of the Charles Perkins Centre (CPC) Research Node on Climate Adaptation and Health. His research activities primarily focus on developing a better understanding of the physiological and physical factors that determine human heat strain and the associated risk of heat-related health problems during work and/or physical activity, as well as among the general population during heat waves.

Dr Alana Mann

Alana Mann is the Chair of the Department of Media and Communications. She joined the University of Sydney in 2007 after a professional career in the media and nonprofit sectors. Her teaching and research focus on how ordinary citizens get voice in policy debates regarding wicked problems such as food security and climate change. 05

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Assoc. Professor Ian Maxwell

lan Maxwell is the Chair of the Department of Theatre and Performance Studies. He is a graduate of the Victorian College of the Arts School of Drama, where he majored in Directing, and subsequent to that training, he embarked upon academic work at the University of Sydney, where he completed his PhD, ethnography of Hip Hop culture in the suburbs of Sydney in the 1990s in 1997.

Dr Killian Quigley

Killian Quigley is a Postdoctoral Research Fellow at the Sydney Environment Institute. His academic inquiries engage, primarily, with poetic and aesthetic histories of the sea. He is co-editing, with Margaret Cohen, a collection of essays called Senses of the Submarine: A Cultural History of the Undersea. He is also at work on a monograph entitled Seascape and the Submarine: Aesthetics and the Eighteenth-Century Ocean. His writing is available or forthcoming from Eighteenth-Century Life, The Eighteenth Century, A Cultural History of the Sea in the Age of Enlightenment, the SEI blog, and elsewhere. He received his Ph.D. in English from Vanderbilt University, in Nashville, in 2016.

Dr Glenn Shea

Glenn Shea is Senior Lecturer in Veterinary Anatomy at the Sydney School of Veterinary Science, and a Research Associate of the Australian Museum. His teaching for over three decades has concentrated around equine regional anatomy and the anatomy of non-domestic vertebrates.

Michelle St Anne

Michelle St Anne is the Artistic Director of The Living Room Theatre. Her work sits at the junction of performance, concert and the visual arts.

Visiting Fellows

Assoc. Professor Kari Norgaard

Kari Norgaard is Associate Professor of Sociology and Environmental Studies at University of Oregon. Dr. Norgaard trained as a postdoctoral fellow in an interdisciplinary IGERT Program on Invasive Species at University California Davis from 2003-2005 and from there joined the faculty as Assistant Professor at Whitman College in Walla Walla, WA from 2005-2011. She joined the University of Oregon faculty in 2011. Over the past ten years Dr. Norgaard has published and taught in the areas of environmental sociology, gender and environment, race and environment, climate change, sociology of culture, social movements and sociology of emotion.

Professor David Roesner

David Roesner is Professor for Theatre and Music-Theatre at the LMU Munich. He previously worked at the Universities of Hildesheim, Exeter and Kent and as theatre musician and facilitator. In 2003 he published his first monograph on 'Theatre as Music' and later won the Thurnau Award for Music-Theatre Studies for his article 'The politics of the polyphony of performance' in 2007. Recent publications include Theatre Noise. The Sound of Performance (with Lynne Kendrick, CSP, 2011), Composed Theatre. Aesthetics, Practices, Processes (with Matthias Rebstock, Intellect, 2012) and his latest monograph Musicality in Theatre. Music as Model, Method and Metaphor in Theatre-Making (Ashgate 2014).

Artistic Collaborators

Michelle St Anne Animateur | Performer

Michelle is the Artistic Director and founder of The Living Room Theatre. As a theatremaker she has created 19 ambitious productions and has received the 2013 national IDEA (Interior Design Excellence Awards) Award in the Event Category.

Her work has been performed in various venues in Sydney and Melbourne. She is a graduate of the Victorian College of the Arts 2003.

David Roesner Dramaturg | Mentor

David is Professor for Theatre and Music-Theatre at the LMU Munich. He previously worked at the Universities of Hildesheim, Exeter and Kent and as theatre musician and facilitator.

In 2003 he published his first monograph on 'Theatre as Music' and later won the Thurnau Award for Music-Theatre Studies for his article 'The politics of the polyphony of performance' in 2007.

Recent publications include Theatre Noise. The Sound of Performance (with Lynne Kendrick, CSP, 2011), Composed Theatre. Aesthetics, Practices, Processes (with Matthias Rebstock, Intellect, 2012) and his latest monograph Musicality in Theatre. Music as Model, Method and Metaphor in Theatre-Making (Ashgate 2014).

Eduardo De Oliveira Barata Set

Eduardo is Lecturer at the Sydney School of Architecture Design and Planning at the University of Sydney and a practicing architect.

His interests lie within the realm of computational design strategies in order to inform building, robotic fabrication and digital design models.

Eduardo's work spans buildings, installations, exhibitions and publications

Bridget-Rose Dutoit Production Creative

Bridget is a determined young artist who enjoys learning and collaborating with other artists. She grew up in Fairfield and is almost as passionate about Western Sydney as she is about the arts, having been an activist and youth ambassador for her local and greater area since high school.

While studying At AIMDA Bridget-Rose has honed her craft while also developing a love for Stage Management, Design and Directing and hopes to build a long career as a Jill of all.

Alicia Gonzalez Performer

Alicia trained in Paris, France a theatre maker specialising in physical comedy, movement and ensemble devised techniques to story telling. She works across theatre, film and education as co-devisor, movement director, teacher and performer.

Kate Gorman Performer

Kate has worked in the entertainment industry for the last 25 years. Appearing in more than 25 TV programs including *City Homicide, Rush, Kath and Kim, Full Frontal* and several years run on some of Australia's best loved soaps.

This is the third time Kate and Michelle have collaborated, the first being 'Man 40 Seeks Woman with Good Legs'.

Lisa Kotoulas Installation Artist

Lisa has a Master of Art, Painting from the College of Fine Arts, UNSW. She has exhibited since 2009 in various galleries including Galleryeight, Kaleidoscope Gallery, ESP and Kudos.

Her work has also seen in drinking holes including Young Henry's Brewery, City Hotel and 3 Weeds Hotel, Paddington.

'I strive to capture the moment, or better still a fine grained moment, where time stands still and masquerades are broken down to reveal an underlying raw, real and visceral emotion.'

In 2012 she achieved the Emerging Artist and Designer Award Finalist, Kudos Gallery & Marrickville Contemporary Art Prize Finalist, ESP Gallery.

Visit: http://www.lisakotoulas.weebly.com

Lian Loke Costume | Performer

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Lian is a performer, designer and researcher, with the body as the central focus of her interdisciplinary practice. She is co-founder of the *Pork Collective*, a group of artists working in performance installation and is currently training in the Bodyweather performance methodology. She is a Senior Lecturer in the Design Lab, Faculty of Architecture, Design and Planning, University of Sydney.

Matthew Paliaga Production Creative

Matthew is an early career performer with an interest in all aspects of production. He is a strong believer in the arts as a way of exploring both self-awareness and self-development, which are qualities that he admires in other artists.

Matthew has recently discovered his passion for directing, and hopes to forge a sustainable career in the global creative industries.

Lance Proctor Performer

Lance Proctor is the Technical Officer, Sydney School of Veterinary Science with a background in embalming.

This is his second appearance with The Living Room Theatre.

reinhardtjung Set

[architecture and design in theory and practice] are Dagmar Reinhardt and Alexander Jung. We dream up spaces for installations and theatres and people. Through discussions, sketches, digital crafting and sometimes robotics. We are interested in the tactility of material, colour, time in architecture, and conceptual design. On the side, we also run an award winning,

orn the side, we also full all award will lill, registered, research-based architectural practice with offices in Sydney and Frankfurt Main, since 2002 (www. reinhardtjung.de). Our building projects, design research, and academic studio results are regularly and widely published, and the office has received numerous prestigious recognitions and awards. We like lecturing internationally, exhibiting in an architecture, arts and events context, and contribute to professional design communities and conferences. And at present we write a book on design in and (be)fore architecture.

Glenn Shea Performer

Glenn is Senior Lecturer in Veterinary
Anatomy at the Sydney School of
Veterinary Science, and a Research
Associate of the Australian Museum.
His teaching for over three decades has
concentrated around equine regional
anatomy and the anatomy of non-domestic
vertebrates. His research focus is on the
taxonomy of Australian and New Guinean
reptiles, with over 170 publications in this
field. Both teaching and research work
have involved extensive contact with death
in its many forms.

Alexandra Spence Composer | Musician

Alexandra is a sound artist/musician from Sydney, Australia. She works within the fields of audiovisual installation, composition, and improvised performance. Alex is interested in the idea of listening as an active practice. She is inspired by the idea of 'collaborating' with one's environment, understanding the relationships between the listener, sound, and the surrounding environment to be a kind of communion or conversation. Her work favours subtlety, quietude and unusual sound sources.

Alex has performed and presented work in concerts, festivals, symposiums and galleries in Australia, Canada, and Europe She was recently awarded the Freedman Foundation Travelling Scholarship for Emerging Artists, and is a graduate of the MFA interdisciplinary arts program at Simon Fraser University, Vancouver, Canada.

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Reflecting on the Translation of SEI's Research through Theatre

By Michelle St Anne and Anastasia Mortimer Published 23 October 2017

Opinion

'If we are to convey climate change issues to create meaningful impact by communicating outside the academy, then a new form of dissemination is required.'

Sydney Environment Institute recognises the pressing need to communicate our research to a broader audience, which requires the use of innovative mediums for communication, that is outside of the traditional approaches to disseminating academic knowledge.

Since 2013, the Sydney Environment Institute has collaborated with The Living Room Theatre, led by Artistic Director, Michelle St Anne who has translated SEI's research into four large-scale performance artworks: She Only Barks at Night; They Come for them at Night; She [Still] Cries at Night and Black Crows Invaded our Country.

These collaborations have opened up academic knowledge on climate change to new audiences and broadened civic discourse on the impacts of climate change, while influencing people to make positive changes and take action.

The Sydney Environment Institute collaborated with The Living Room Theatre for 'Anastasia: Communicating heat & climate vulnerability through performance', partly funded by the Popup Research Lab scheme awarded by the Sydney Social Sciences and Humanities Advanced Research Centre (SSSHARC). The project explored the impacts of heat waves on communities as well as the theoretical problems which come from communicating academic research on shock climate events to non-academic audiences such as policymakers, community organisations, and the general population.

In continuing to interpret SEI's research, The Living Room Theatre was contracted to develop a series of three performance works for the project, which embodied the physical, ethical and emotional effects of heat wave related deaths which are a core component of the 'Anastasia Project'. St Anne explains that the first work 'followed the life of an elderly woman, living on her own, who dies from heat exhaustion, a condition which is predicted to become more common with temperature rises caused by climate change.'

The series of works explored the human emotion and experience of climate change, which builds on St Anne's body of work which examines how the issues of climate change manifest in the everyday lives of people, with a particular focus on those vulnerable in society.

The four previous theatrical works merged academic research with The Living Room Theatre's artistic palette, as a way to transform complex academic research into new forms of expression, allowing the audience to see climate change research through a different lens.

St Anne explains that the goal of creating theatrical works which explore the issue of climate change is to 'communicate environmental research through new mediums, and to contribute to a larger conversation between artists, creatives, industry, and academia about the plight of the earth and its peoples in the face of climate change.'





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'The opportunity to incorporate our work into a theatric performance opens up a brand new way to communicate our research findings. After all, if we couldn't reach the people that that our research intends to help, our work would be wasted!'

'A Requiem for Anastasia' – Artist Talk and Showing

28 October 2018



The showing inhabited new arts studio space in East Sydney. Over 4 weekends St Anne played with a series of enduring images that were inspired by transcripts and mind maps collated from community consultation undertaken by the 'Resilient Sydney research project.' These transcripts documented the feelings, thoughts and ideas of a cross section of a community in Penrith.

Overwhelmingly present in the data were the feelings of isolation and of 'being forgotten.' which gave St Anne the premise for this showing.

The artist talk that followed allowed the academic collaborators and insight into the artistic process and to hear how St Anne drew their work into her palette.

Artists

Michelle St Anne, Alicia Gonzalez, Roma St Anne and Lian Loke from The Living Room Theatre.

Partners

The Living Room Theatre, Brand X, SSSHARC

More Details

Video 'A Requiem for Anastasia' a showing of a theatrical work in development.

www.youtube.com/watch?v=EbprTLPSj3A

Q&A 'A Requiem for Anastasia' in development. https://youtu.be/UpaZQBitFA8 Q & A

Reflecting on 'A Requiem for Anastasia'

By Michelle St Anne and Danielle Celermajer Published 12 December 2017

The showing, 'A Requiem for Anastasia' formed part of the Sydney Social Sciences and Humanities Advanced Research Centre Pop-u p Research Lab, in association with The Living Room Theatre and Brand X.

This showing was part of The Living Room Theatre's residency at the East Sydney Community and Arts Centre.

Danielle Celermajer [DC] to Michelle St Anne [MS]: Michelle, I'm interested in hearing why you decided to open the creative process so early to an audience.

MS Normally, audiences only get let in on the action when you have already come to a point of a reasonably complete product. During the discussion after the performance, you made the comment that if the show was the baby, what we were seeing was before the first date. Allowing spectators in at that very tender point seems like an usual and courageous act – why did you do it?

Why did I do it? It was an expectation of the residency that I put something preliminary out into the world. It didn't have to be polished, and it could have been to a handful of people. But I ended up showing a piece of work. I wanted to stitch something together so that the audience would have a sense of what the work was rather than these odd bits that I was kind of flirting with. It was important to me that the audience had an experience.

Having those boundaries put to me for the residency forced me not to be so precious about the material. I didn't have to explore something to the nth degree, which is something that I would normally do on a rehearsal floor. I would create one image and then massage it until I created the final product. This time it more like 'yes that is something, that will do ... for now'. For example, there is a choreographic scene with two women with netted shrouds. I need to show that this is the experience of many and for me to do this would need a Reichian phasing structure. However for the purposes of the showing I just decided to show the seed and spend the rehearsal period in January to add the layers.

I can then step back and see it as a broad idea. I don't know what she is or what she looks like, but I have a sense of her. When I talk about showing a work before the first date, I am defining the initial the attractions ... the little bits of text or imagery that I like. Similar to being at a party and thinking

'oh, I like that guy over there.' What I am doing is flirting with the material – trying to understand the energy behind it. There is something about the material that rubs me in a particular way that I know I can do something with as an artist.

MS What was it like for you to come in so early?

DC I'd like to answer that question along two slightly different dimensions – one concerning the creative process itself, and one specifically linked with the subject matter.

On process, like most scholars in the humanities and social sciences, my principal creative process occurs in the medium of solitary writing - although I have also thought and acted in teams. So it was fascinating and illuminating for me to be able to sneak in and witness a collaborative creative process in a different medium, or I should say in different media. Those of us who write all know that you don't go into the writing knowing what you are going to say, or even what you really think. Words and thoughts are formed together through the process of our hands touching keys on the board or our hand moving the pen. Still, it is almost always a very solitary business, and it happens - if you will in a type of cocoon we create in our offices, or cafes or wherever we write.

What I had the opportunity to witness here was how your creative process takes place in the inbetween-space that arises amongst you as director, the actors and the composer, but also importantly, space, and artefacts or objects and the music.

One of the theorists whose work I have been very influenced by is Bruno Latour – who, along with other Actor Network Theory thinkers insist that all action is the product of a network that comprises human and non-human 'actants'. All of the actants' capacity for agency is a network effect, an emergence of the relationships. Creation is not a God-like process, where human agents deploy non-human tools to reveal or enhance their intentions. Being present at this point of your process, this theory came to life in a very vibrant way. Latour speaks about 'black boxes' that need to be opened out so we can trace the relationships of creativity.

When one only has access to the final product, the interstices of creation have already normally been covered over, but here they were apparet – or at least some of them.

Now on the content – and your specific desire to create a performative piece that engages with the experience of heat waves – I think one of the challenges we all face is how to get it – how do we overcome stock stories and the range of other defences we use (or that use us) against full-body knowledge? The type of performance you create, using music and light and bringing the bodies of the audience into the process pushes us past many of the strategies of abstraction that get in the way of that type of knowing.

In this case, there was something particularly poignant about the fragmented nature of the performance. Precisely because it was not stitched up – and still threw us in raw with detached images – your mama trying to get the microwave to work, the elephant dancing to Barry Manilow, the requiem to the unknown dead – there was a dream-like quality. It felt a little like what Lacan called 'the Real' – not yet integrated into the Symbolic order – and for that reason an irritant that we cannot 'deal with' by integrating it into a sense-making process. Scholars are very dedicated to making sense of raw data or impression, but sometimes that can be precisely the trap we need to avoid.

DC What has this process revealed for you? And what has come out of it for you in terms of where you move next?

MS I find showing my final work to be more confronting and challenging than showing my work early. When it comes to showing my final product, people walk away from it thinking it's done. I guess this is because we are all so used to seeing films and thinking – 'that's it'. When an audience thinks that a work is over, it opens space for the final product to be judged – leaving little space for reflection.

Whereas when I am showing a work early as part of my creative process, I find that people engage with it more, and feel like they are a part of the process. They own stakes in the final product. This process is actually a really beautiful way to establish a conversation with my audience, and I think that through including an early showing into the structure of a work, it allows for the full production to expand that ongoing conversation that I have with my audiences.

In answering the second part of your question on what comes next, I first need to figure out how the lines of thought I am working with fit together. I am working with two coinciding landscapes or lines of thought. This line of thought coincides with my personal story, which is the story of my mother – and I think I have realised the frequency that both lines of thought work on. On the one hand there is the emotional landscape of the personal story I want to share about my mother, and on the other hand, there is the scientific and social science landscape which comes from Ollie Jay's research on heatwaves, and that merges with the information that is coming out of David Schlosberg's field studies on heat and resilience. Now, I need to figure

out how they bleed together - how they dance together.

Where do I move to next? In the coming months, I will be spending some time on the concept of denial surrounding climate change, that was explored in the Norwegian case study in Kari Norgaard's book *Living in Denial*. Using Kari's research, I will create that third frequency, which delves into the experience of denial in the Northern Hemisphere – exploring that sense of 'the snow not coming' as a different kind of heat, and comparing it to the Australian context.

Come January, I will work with David Roesner as my dramaturg, who will help me find the rhythm and the pulse of the work through the cutting, shaping and questioning of the work. My time with Roesner will allow me to explore how I apply the framework of Composed Theatre to my work, allowing room for reflection on how I structure a piece – helping me compose the sound and image that allows the work to breathe.

Opinion

Implicatory Denial: The Sociology of Climate Inaction

By Kari Marie Norgaard Published 15 November 2017

Exploring how and why people who believe in climate change choose to ignore it, and how people can be empowered to take climate action.



Despite the urgent need to reduce greenhouse gas emissions globally if we are to lower the risks of catastrophic climate change, wealthy industrialised nations persist with a widespread public silence on the issue and fail to address climate change. This is despite there being ever more conclusive evidence of its severity. Why is there an undercurrent of inaction, despite the challenge of climate change being ever more daunting? One element is denial.

The most recognisable form of climate change denial is the phenomenon of 'literal denial' through the rejection of scientific facts on climate change by 'climate sceptics'. However, while climate change denial in the literal sense has become increasingly accepted in political discourse, media coverage, public opinion and government inaction over the past ten years, it is necessary to address the more pervasive problem of what British sociologist Stanley Cohen calls 'implicatory denial.' In terms of climate change, the phenomenon of 'implicatory denial' can be understood as a failure to integrate

one's knowledge of climate change into their everyday life or transform it into social action.

As it currently stands, the majority of us understand the threat that climate change places on our very survival, and yet this has not resulted in widespread action on individual and collective levels to address climate change. As such, if we are to address climate change, we need to understand how and why the phenomenon of 'implicatory denial' exists, and to discover solutions to empower people to engage in climate action.

How and why do people ignore climate change?

My research in Norway and follow-up work in the United States explored how and why those of us who believe in climate change continue to ignore it or fail to take action against it. I found that climate change denial is socially organised through intersecting factors such as emotions, social and cultural norms, geopolitics and economics, which perpetuate the psychological barriers that motivate

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Implicatory Denial:
The Sociology of Climate Inaction

people to distance themselves from the realities of climate change.

For many of us, thinking about climate change evokes a series of troubling emotions such as guilt, fear, and hopelessness, and while the majority of us may understand the enormity of climate change, many are afraid of it. As a form of protection against the dire realities of climate change, these emotions manifest into a type of inertia that can result in detachment from the issue and from taking the necessary actions to address it.

Furthermore, climate change denial is collectively reinforced by our governments and politicians, who promote the cycle of 'implicatory denial' as a way to ensure social cohesion and stability. As governments and citizens of Western industrialised nations heavily rely on natural resources to maintain our present way of life and to establish further economic development, the contemplation of lifestyle change is perceived negatively for most people. The fact that we must restructure our way of life to address climate change is met with feelings of anxiety and the need to avoid the issue, which again manifests into a failure to take action against climate change.

How can we empower people to move away from climate denial towards climate action?

If we are to empower people to move away from climate denial and toward climate action, we must collectively demand political action and accountability from our political leaders. In our current political climate there is a sense that, since nobody else is acting, 'why should I?' and a belief that that successful political action against climate change is unachievable given the lack of national and international climate action. But, if we are to break the cycle of inaction, we need to encourage individuals to engage with democracy and demand that our leaders commit to climate action. Although it is not enough on its own, as a first step, individuals can get involved on a local level. Taking efforts to make climate change visible in one's community, to plan for coming challenges, and to reduce emissions at the community level can assist in breaking the cycle of denial from the ground up.

Additionally, we need to move past the notion that climate change denial is the result of a lack of information that can be solved by finding ways to better educate and inform the public. A sociological understanding of climate change denial and inaction highlights that denial is not the result of a lack of understanding of climate change information, but rather it is our emotional response to that information which leads to inaction. Greater acknowledgment of the underlying social and cultural factors which lead to denial will allow for more practical solutions to addressing denial and inaction. Furthermore, if we are to move forward in responding to climate change, more solutions and approaches to the issue of climate change that draw from sociological theory, insights and research are urgently needed.

Lastly, we must explore how to help people move beyond a sense of helplessness, guilt, or fear of the future and take actions that are in the interest of collective long-term survival. To do this, we must open up discourse on climate change and make such conversations socially acceptable. By encouraging public discourse on climate change, people can talk about climate change and their emotions surrounding it, helping them move past inaction.

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Beyond the Climate Elephant: From Climate Denial to Public Engagement

Keynote Lecture 7 November 2017

Kari Norgaard's keynote lecture spoke to the social attributes of climate change denial and explained avenues of moving from denial to public engagement and action. It was followed by David Schlosberg, who responded from an Australian perspective supported by Kyla Tienhaara who spoke from the grass roots approach to mobilsing public engagement to climate action.

Speakers

Keynote Speaker Assoc. Professor Kari Maire Norgaard University of Oregon

Chair

Professor Danielle Celermajer The University of Sydney

Respondent

Professor David Schlosberg Sydney Environment Institute

Respondent Kyla Tienhaara

Greenpeace Australia Pacific

More Details

Podcast

► https://soundcloud.com/ sydneyenvironmentinstitute/beyond-theclimate-elephant-from-climate-denial-to-publicengagement

Communicating the Environment: from climate denialism to action

Student Workshop 30 November 2017

What role does the media play in shaping public opinion surrounding climate change? Can we utilise the power of the media to combat widespread climate inaction? Facilitated by Benedetta Brevini and Alana Mann (Department of Media and Communications) this workshop paired media and communications students at the University of Sydney with environmental sociologist Kari Norgaard, to explore these questions, and other key climate communication issues.

Students were given the opportunity to present their research and Norgaard responded with insights into the sociology of climate inaction, constructed polarities in the press and the limitations of our social imagination - emphasising the need for the media to serve a lens for highlighting climate impacts, rather than an echo-chamber of 'alternative facts.'

The result was a rich exploration of climate change and the Australian mediascape. From the News Corp monopoly in Queensland and its influence on news commentary in the Carmichael coalmine debate, to a complete absence of coverage of climate-related events by some outlets, the discussion highlighted many local media mechanisms used to control climate discourse.

The workshop gave young communication practitioners the opportunity to enhance their theoretical understanding of climate inaction and in turn, develop practical strategies for combatting this inaction in their practice.

Partners

Department of Media and Communications

More Details

Event

▶ http://sydney.edu.au/environment-institute/ events/communicating-environment-climatedenialism-action

Q&A with David Roesner on Composed Theatre

By David Roesner and Anastasia Mortimer Published 6 December 2017

'Like heat, music is invisible and incredibly powerful. Translating research and stories about extreme climate into images, movement, spaces, and sounds strike me as a potentially very exciting approach.'

Anastasia Mortimer [AM] to David Roesner [DR]: What is Composed Theatre? How does Composed Theatre differ from multi-disciplinary frameworks?

DR Composed Theatre is also a multi-disciplinary framework, I would argue. Essentially, it is not so much a genre or style, but an attempt to describe particular ways of making theatre. These can differ from each other significantly, but have in common, that compositional thinking is applied to potentially all elements of the performance: text, gesture, sound, light, space, movement etc. What this also means that traditional hierarchies of the theatre. such as the predominant role of the dramatic text, are called into question if not suspended. As a consequence, Composed Theatre often renders the divide between 'the work' and 'the performance' problematic. In opera or dramatic theatre, we can usually identify a piece of work that exists independently of it being performed. Shakespeare's Macbeth, Verdi's Otello etc. In Composed Theatre the performance often is the work and its authorship often more complex, collaborative and emergent.

AM What are the challenges for writers, composers and performers when merging musical compositional structures with the theatrical creative process?

DR A first challenge is to identify what they mean when they say 'music' - there are many potential reference points and models. From baroque structure and affect to classical form, from the improvisational freedom and 'flow' of jazz to the energy and pulse of rock anything can inspire the compositional structures of a piece. The next challenge is that different media and materials follow different rules: what is a crescendo of costume? What is a counterpoint in text, a rock riff in lighting? Composed Theatre very much means that each creative process needs to identify and rehearse its own compositional rules. Finally, a strong compositional and thus conceptual approach to theatre runs the risk of becoming too cerebral, to 'brainy': intuition, humour, flow etc. should not be banned from the rehearsal room to fit a neat compositional concept.

AM What are some of the historical and theoretical aspects of Composed Theatre that your research touches on?

DR What a glimpse into history shows is on the one hand that the notion of the arts being strongly interconnected is as old as theatre itself. It wouldn't be absurd to call Ancient Greek Theatre composed already. Later, many other influential theatre makers have spoken to guestions relating to what Walter Pater called the arts 'aspiring to the condition of music.' Goethe led his rehearsals like a conductor. Wagner famously sought to amalgamate the drama, music and movement in a 'total work of art' and Schoenberg sought to express himself by 'making music with the means of stagecraft.' Theoretically, an important touchstone is Lessing's famous Laookon essay (1766), in which he argues that poetry and sculpture cannot and should not be compared because their different materialities also result in different modes of reception.

AM Could you comment on what it means to you, to work with Michelle St Anne – someone creating Composed Theatre works on the other side of the world?

DR When Matthias Rebstock and I developed the project and later the book on Composed Theatre, we had a quite Eurocentric view: our reference points were practitioners from Germany. France. Greece, Poland, UK etc. Since then, I've had a few contacts with practitioners from the US, Asia and even a PhD project from Sydney who in their own ways responded to the notion of Composed Theatre. So I am very curious and excited to see Michelle in action, observe and reflect on her process. Practices like hers - from what I gather so far - add to the breath of examples, the range of aesthetics that Composed Theatre covers and challenge the concept in productive ways. Also - with a slightly different hat on - I am currently working on a new project on theatre music or incidental music, as it is sometimes called. I sense that Michelle uses music a lot and am intrigued to see what role it plays in her rehearsal room and to meet some of her musical collaborators.

AM How do you think the framework of Composed Theatre lends itself to a performance on climate change & heat vulnerability?

DR Music is not great at making discursive statements about the world, but it is very suited to capture atmospheres, stir emotions, make us experience time and space in new ways. If a theatre performance about climate change doesn't want to be a lecture (which would of course also be a legitimate path and recent project by Katie Mitchell or Rimini Protokoll have gone in that direction), then a musical and compositional approach may be particularly suited to facilitate an experience for the audience that allows them to reflect on the complex interplay between climate and the social, on natural disaster and the breakdown of human connection. Like heat, music is invisible and incredibly powerful. Translating research and stories about extreme climate into images, movement, spaces and sounds strike me as a potentially very exciting approach. •

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Music is not great at making discursive statements about the world, but it is very suited to capture atmospheres, stir emotions, make us experience time and space in new ways.

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'Lola stayed too long' Photo By Pusanisa Kamolnoratep



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Heat waves, cooling methods and the research from the Thermal Ergonomics Laboratory

By Ollie Jay, Published 26 October 2017

It often comes as a surprise to many that over the past 20 years heatwaves, both in Australia and overseas, have caused more deaths than all other natural disasters (e.g. earthquakes, floods, hurricanes) combined.

The elderly, poor, and especially people with preexisting cardiovascular diseases are the most vulnerable, with cardiac arrest among the leading causes of death.

By far the most effective cooling strategy for mitigating the physiological strain that develops when exposed to high temperatures and humidity during a heatwave is air conditioning use. Yet, >25% of Australians do not have AC, and rising electricity prices as well as the greater likelihood of blackouts associated Australia's imminent energy crisis makes the reliance on widespread AC use in heatwaves even more tenuous. The sustained annual increase in CO₂ emissions associated with AC use in Australia also cements our status as one of the top polluters per capita in the world.

Given the undeniable increase in frequency, intensity, and duration of heatwaves in Australia and worldwide associated with anthropogenic climate change, identifying simple, cost-effective, and sustainable ways of cooling has never been more important. Electric fan use is an obvious cooling strategy with up to 50-times lower electricity requirement and cost than AC. However, most major public health agencies such as the World Health Organization (WHO) have stated for at least the last 15-20 years that fans should be turned off above air temperatures of ~35°C as they paradoxically 'speed the onset' of heat exhaustion and exacerbate dehydration. In stark contrast, a systematic assessment of the scientific literature in 2012 concluded that no physiological evidence exists supporting or refuting the effectiveness of fan use for cooling in a heat wave.

Over the past 3 years our research team in the Thermal Ergonomics Laboratory in the Faculty of Health Sciences at the University of Sydney, along with international partners in the United States, has conducted a series of research studies trying to identify the most effective low-cost cooling strategies (including fan use) that people, particularly those who are at the greatest risk, can use to reduce heat-related physiological strain in different types of heat waves. Our state-of-the-art climatic chamber enables us to simulate a range of different heat waves, from very hot-dry events

such as the 2009 heatwave in Adelaide to cooler but much more humid events such as the Chicago (1995) or European (2003) heatwaves, and measure how people physiologically respond (e.g. how hot they get, and how much work their heart must do) when using different cooling interventions.

So far, we have found that best cooling methods are dependent on the type of heatwave and a person's ability to sweat. For example, contrary to the existing public health guidance on fan use in heatwaves, we have shown that fans can be very effective cooling devices at air temperatures up to at least 42°C with 50% relative humidity for young healthy people, but less so in older adults (>65 y) because of age-related reductions in the ability to sweat. However in very hot (46°C), but dry (<15%RH) heat waves all sweat evaporates anyway and more heat is just added to the body with fan use resulting in accelerated body heating even in young healthy people. These limitations can likely be offset though by wetting the skin with a sponge and/or placing the feet in a bucket of cold water.

This work is ongoing and in the next year, we plan to extend our studies to focus on developing an understanding (which is desperately lacking) of how different prescription medications and health disorders (e.g. coronary artery disease) affect the ability to keep cool in a heat wave. Ultimately, the goal of this work is to develop and disseminate through changes to national and international public policy the world's first evidence-based guidance for sustainable cooling strategies for the most vulnerable in all types of heatwaves. This work will also demonstrate the utility of various cooling interventions that can be used to mitigate the unsustainable energy demands and destructive environmental impact of mass air conditioning use.

The opportunity to incorporate our work into a theatric performance opened up a brand new way to communicate our research findings. Given the importance of reaching as many people as possible with our message, such novel knowledge translation collaborations are absolutely essential to maximise the impact of our research. After all, if we couldn't reach the people that that our research intends to help, our work would be wasted! •

Composed Theatre Roundtable

Masterclass 9 January 2018

What Lola Heard: Theatrical Sounds from Climate Change

Performance 11 January 2018

This multidisciplinary masterclass led by Professor David Roesner explored how 'Composed Theatre' can contribute to forms of audience engagement that are outside of traditional academic approaches. The roundtable discussions examined the limitations of the academy's ability to make change. Through video recordings of theatreworks Roesner discussed how the techniques of 'Composed Theatre' can be used as a new framework for cross disciplinary research.

The participants used this platform to discuss how St Anne's theatre transforms research, into images, movement, spaces and sounds that evoke emotional responses, to enable people to engage with climate change information .

Convenors

Michelle St Anne

The Living Room Theatre

Dr Killian Quigley

Sydney Environment Institute

Prof David Roesner LMH, Munich This event brought together internationally acclaimed improvising musicians in conversation with Professor David Roesner, and Michelle St Anne, who discussed the theatrical lens of Composed Theatre, and how the approach could lend itself to theatrical knowledge translation.

The concert component of the event provided the audience with a glimpse into St Anne's collaborations with musicians, which portray the musical embodiment of climate instability and climate knowledge. It featured the field recordings from the community engagement workshops, recorded by the SEI team, which composer Alexandra Spence manipulated live on stage to create a sound tapestry.

'...where improvisational music scrambled my senses, rendering me thrillingly aware of the power of unexpected arrangements of sound to reorganise my world.'

- Killian Quigely, Sydney Environment Institute

Collaborators

Michelle St Anne, David Roesner, Killian Quigley and Lian Loke (MC)

Musicians

Alister Spence

Prepared piano and samples

Mary Rapp

Cello, double bass and voice

Alexandra Spence

Field recordings, tapes and amplified objects

Partners

The Living Room Theatre, SSSHARC

More Details

Video

▶ https://youtu.be/rqjdEvG60HI

Podcast

https://soundcloud.com/

sydneyenvironmentinstitute/what-lola-heard-11117-lecture-only



Progress Report

An update on SEI's Pop-Up Research Lab

Composed Theatre and Climate Change

By Eloise Fetterplace Published 14 February 2018

Recently, as part of our SSSHARC funded Pop-Up Research Lab project, the Institute welcomed Professor of Theatre Studies at LMU Munich, David Roesner, as a collaborator on the grant.

Roesner's book *Composed Theatre* (co-edited with Matthias Rebstock) played an important role in laying the theoretical foundation for the *Pop-Up Lab* – an exploration of heat and climate vulnerability through performance. The project has produced three original artistic works that have been framed around the research and broad concepts of compositional theatre.

Roesner's visit was instrumental in revealing the 'art' and theory of compositional theatre and the value of arts-based knowledge translation in communicating climate change, while also raising questions about the role of the artist in the 'translation' process.

In rehearsal for 'Lola stayed too long'

What we learnt about Composed Theatre

Composed Theatre is a theoretical lens that combines musical composition and theatre, applying the compositional techniques traditionally associated with musical material, to theatrical elements, such as movement, speech, actions, and lighting (Rebstock and Roesner, 2012, 20).

Differing from musical theatre, Composed Theatre problematises what we consider to be the most basic elements of theatre and music, from the idea of the 'protagonist' to the musical note itself. It is a sonic and visual interpretation of the world, where the 'being' is in the creating or the process, rather than the finished product.

Being experimental in its outlook, compositional theatre activates a different type of spectatorship or engagement to narrative-driven theatre, whereby the audience is asked to 'connect the dots.' In fact, a key characteristic of compositional theatre is its openness to collaborative authorship.

Not concerned, or bound by a traditional narrative, Roesner explains that compositional theatre leaves space for the audience to be part of, and bring something into existence. In opening this space, this type of theatre has the ability to provide 'entry points' for audiences to engage with, allowing people to disengage with their prejudices as they become immersed in the work.

Why is important?

By incorporating Roesner's research and approaches to Composed Theatre, there is hope of broadening academic discourse on climate change to engage the audience through the multi-modal 'touchpoints' that the emerging field of Composed Theatre allows for.

Like climate change, Composed Theatre is complex, it disrupts the narrative and dismisses the concept of assumed knowledge, a new experience and new space for thought often 'leaving the audience with more questions than answers.'

But if we are to truly move people to act, perhaps we need to take it a step further than just disrupting or destabilising pre-existing knowledge. While Roesner notes that the musical element of Composed Theatre lends itself well to stirring emotion or facilitating reflection on the audience's part, the challenge is developing enough of an emotional investment or connection

that will live in inside people even after the performance is done.

Some thoughts on art-based knowledge translation

Roesner's visit provided insight into the strengths of theatre as a means of conveying the complexity of an issue such as climate crisis, but it also highlighted the limitation of art-based knowledge translation as it is currently understood.

As an art-maker and theorist, Rosener and other collaborators on the project noted the restrictions placed upon the 'maker' in the process of arts-based translation. The term 'translation' suggests that the artist or translator is merely a vessel used to re-communicate an academic message in an 'artistic' form, negating the agency of the creator and their own artistic interpretation. This understanding of the artist's role threatens to impact the integrity of the work and in doing so undermine its ability to be genuinely stimulating.

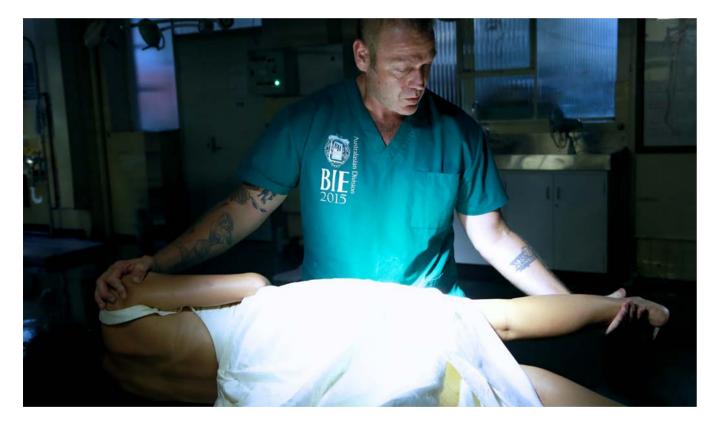
To genuinely transfer knowledge, the preexisting knowledge of the audience must be unsettled, rather than regurgitated through a new medium – the latter negates the value of the art itself. •



Performing Climate Change

By David Roesner
Published 21 February 2018

When Michelle St Anne approached me six months ago, triggered by reading and resonating with my book Composed Theatre (co-edited and co-authored with Matthias Rebstock), I was intrigued by the traces of her work with The Living Room Theatre on their website.



I was, however, unsure how I could be useful to her newest project, since my knowledge on climate change is that of an averagely informed newspaper reader.

Reading, by her recommendation, the excellent sociological study *Heat Wave* by Eric Klinenberg, I became more and more fascinated. Klinenberg's study and the subsequent second major inspiration for Michelle's work, Kari Norgaard's *Living in Denial*, which focused on a Norwegian community's absence of a response to the dramatic changes it faces, deal with an invisible killer (heat), an absence (of snow), of a lack of appropriate responses (denial by communities, individuals, local and national governments).

Theatre is all about showing, telling, making visible and audible: how would theatre as a medium be able to communicate some of the ideas and experiences, which the academic studies have put so expertly into words? Would it need to become a lecture, like British director Katie Mitchell's production 2071 or a kind of interactive game, hosted by actual climate scientist, which cast the audience as all the nations which were represented at the 2016 Paris climate conference, as the German theatre collective Rimini Protokoll staged it?

In rehearsal for 'Lola stayed too long' Photo Michelle St Anne



On arriving in Sydney on January 4, our first task as collaborators was to find a common language, to create a space, in which we could meaningfully interact.

It turned out quickly that two factors helped in speeding that process along: not being precious about one's work or ego, and a sense of humour! (It also helped that Michelle very tactfully refrained from forcing my jet-lagged self into a dark rehearsal space on the first day. We spent it lunching at the Harbour and riding a ferry up and down the glorious Sydney bay.)

A next step was to establish some reference points: works and thoughts by other artists, who would allow us both to see her work – she had already developed a number of scenes and shown them at an open rehearsal, of which I had seen a video) – with a distance.

Given the paradox outlined above (the invisibility of heat, the inaction of denial as material for a theatre performance), German composer and director Heiner Goebbels seemed an appropriate person to look at. His most recent book is called: Aesthetic of Absence! Despite different performative outcomes (and budgets!) his and Michelle's work share some similarities: both refrain from telling a straightforward story, both work collaboratively, but also rely on their own artistic 'voice' uncompromisingly, both create experiences for the audience and leave them with open questions and enigmatic images, refusing to tell them what to feel or think.

In the two weeks of working together – with Michelle directing and me functioning as a kind of dramaturg/ outside eye – there were a few themes and questions that became important: what can an image, a gesture, a sound communicate, without being overly didactic and 'on the nose,' but without being completely cryptic either? How to create enough context for a scene to resonate on more than one level with the audience?

How to hold the piece together, when its dramaturgy is not predetermined by a story and character we can identify with? And how to direct performers, whose wordless tasks on stage may be quite formal but cannot be mechanical?

Consequently, there were two main levels of feedback I could offer: first, what kinds of meaning and what associations I felt presented themselves in the often slow, ritualistic and evocative images Michelle invents: a women (Alicia Gonzales) slowly sliding out of a blouse, which had tied her to a chair, another woman with an Elephant mask (Lian Loke) dancing to Barry Manilow's Copacabana. a dissection room full of tape recorders playing testimonies on the impact of heat on Sydney communities. Second, paying attention to what we called 'sonic coherence' as shorthand (which sometimes turned into the misremembered but also guite significant: sonic cohesion!). In other words, discussing with Michelle and her excellent sound designer Alex Spence over whether the piece made sense on a compositional level, for example by using different kinds of white noise as a motif in several permutations: a TV set with no reception, the wave-like noises of a tarpaulin, a few laboured final breaths, the low rumbles and hisses of an ice shelf breaking away.

I was fascinated by the simplicity and slowness of Michelle's work on the one hand, and its complexity on the other: her piece will, I am sure, offer a powerful echo chamber for communal and personal resonances of climate change and its societal impact on our lives: in Chicago, Norway, Sydney, or anywhere else. •

To Escape Overheating

By Glenn Shea Lecture given as part of the performance

Mammals, including humans, use metabolic energy derived from food to maintain a stable body temperature.

This allows them to maintain functionality across a wide range of environmental temperatures, but also has negative consequences in terms of surviving in extremely variable environments, where food resources may not be continuously available.

Reptiles, on the other hand, use environmental heat sources, such as the sun's rays or warm patches on the ground, to raise their body temperature towards and around a relatively narrow range of preferred temperatures. For many reptiles, the preferred body temperatures are similar to, or only a little below, mammalian body temperatures.

Because of this, they have advantages over mammals in extremely variable environments. They don't require a constant food intake to continue to maintain body heat, so are better suited than mammals to environments where food sources are infrequent.

Similarly, reptiles have a number of adaptations for water conservation that give them advantages over mammals in extreme environments. They lack glands in their skin, so don't lose water by that route. Their infrequent food intake means infrequent defaecation, so they lose water less rapidly by that route. They excrete their nitrogenous waste products as uric acid, an insoluble paste, rather than as urea, that requires large amounts of water to be excreted in urine to dilute it. And in snakes and many lizard species, the eyes are covered by a clear scale, so that water isn't lost through evaporation of tears.

However, again, these adaptations to water conservation come with a cost for reptiles in terms of thermal physiology. In very hot conditions, reptiles cannot sweat to reduce their body temperature, as they lack sweat glands. Only a few lizard species have developed an ability to pant, to allow evaporative cooling from the mouth.

The result is that reptiles have to escape overheating by seeking shaded places that are cooler than their body temperature. Ground temperatures are often much hotter than air temperatures, and so unless shade is nearby, reptiles can readily overheat before they reach shade.



Above the preferred body temperature, is a temperature that the physiologists term the critical thermal maximum – this is the body temperature at which the reptile is no longer functionally able to coordinate its movements and move to shade. And

For some of the small desert lizards, it's only a couple of degrees between the preferred body temperature and the critical thermal maximum – these species could be said to be always living just a few steps from heat death.

above that again is the lethal temperature, at which

'Lola stayed too long' Photo Nathaniel Fay



This work was inspired by Kari Norgaard's book 'Living in Denial' and research undertaken by the Sydney Environment Institute.

Lola stayed too long

Performance 1 – 10 March 2018



It wove two seemingly unconnected stories.

One, which occurred during the heatwave of
January 2017 in a Sydney suburb and the other
in a fictionally named rural community in Western
Norway where the snow came two months late.

These stories were told through portraits and sound recordings, and attempted to reconcile the personal with the epic. The fear, the guilt, the anxiety of an ageing mother with the unimaginable denial of a warming world.

The first in the performance series, Lola stayed too long premiered within the rooms, corridors and clinics of the Vet School. Traversing theses terrains, the audience experienced the varied landscapes which embodied research, stories and community sentiments about heat in a Sydney Suburbs and its implications as far as Norway in a non-linear narrative.

Partners

The Living Room Theatre
School of Performance Studies
Sydney School Of Veterinary Science,

More Details

Event

http://sydney.edu.au/environment-institute/events/lola-stayed-long

'Lola stayed too long' Photo Nathaniel Fay



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Erasing Lines and Unsettling Truths: Lola stayed too long

By Alana Mann Published 16 August 2018

Try drawing a line around the 'social' and the 'natural' in the cultivation and consumption of food. In a rice paddy or a wheat field, in a cattle feedlot or on our dinner table, where does the natural process end, and the social process begin?¹

In politics and the media climate change is granted all the malevolence of the grim reaper. It is a violent, unstoppable force unleashed on a helpless multitude. This follows the familiar dichotomy between nature and society as two distinct systems that enables us to interpret the world; to make sense of calamity, improbability, and change on a scale we cannot otherwise imagine.

In following the experience and death of an elderly woman in a heat wave, Michelle St Anne's haunting and brilliant example of composed theatre *Lola stayed too long* dissolves this false separation. By bringing the elephant in the room out of the shadows – literally – St Anne exposes climate change adaptation as a socially constructed notion with its roots in historical tradition.

Through a combination of recorded witness accounts, mesmerising musical compositions, and unsettling improvisations the Living Room Theatre ensemble provoke us to question the social, political, and cultural dynamics at work in the construction of vulnerability.

For the impacts of climate change will be disproportionately felt by those already marginalised – by those affected by over- and under-nutrition, by poverty, by statelessness, by age and infirmity.

Adaptation discourses themselves tend to limit and depoliticise the forms of power that are produced and reproduced depending on one's ability 'to influence, profit from and find security,' says Marcus Taylor, author of *The Political Ecology of Climate Change Adaptation (2015)*.

In his analysis of agrarian livelihoods in Pakistan, India and Mongolia, Taylor defines adaptation less as a 'valid analytical tool' than a 'politically constructed concept' that erases difference in highly unequal contexts.

Climate change needs to be addressed on a global scale, yes, through co-ordinated and cooperative efforts to limit emissions and mitigate impacts. But vulnerability will continue to be produced and reproduced in specific ways in different places unless we, as a species, acknowledge the

relationships between local vulnerabilities and established structures of power and privilege.

Without this recognition, adaptation is reduced to an 'abstract appeal to defend communities from external environmental disturbances and threats' that denies the complexity of socio-cultural and economic difference.

Accordingly, climate change is not a demon unleashed on hapless humanity but a clarion call to consider how the living conditions of individuals, already highly unequal, are masked by the urgency to adapt as a species.

For how does one adapt when one is already a victim of dispossession through the accumulation of others?

Amitav Ghosh goes beyond the accumulation thesis to identify the role of empire and imperialism as the foundation of vulnerabilities across the globe.

In The Great Derangement: Climate Change and the Unthinkable (2016) he marks out Asia, where the Bengal, Irrawaddy, Indus, and Mekong Deltas are submerging faster than oceans are rising while the activities that accelerate this process - dambuilding and extraction of gas, oil and groundwater - continue apage.

Half a billion lives are at risk in these regions, the sites of global cities established under colonial rule like Chennai, Mumbai, and Kolkata.

In reading a World Bank report that Kolkata, his home city, is particularly vulnerable to damaging floods Ghosh fears for his elderly mother's safety. She believes Ghosh is crazy to suggest that these wild scenarios, developed from impenetrable data sets, are grounds to leave the family home.

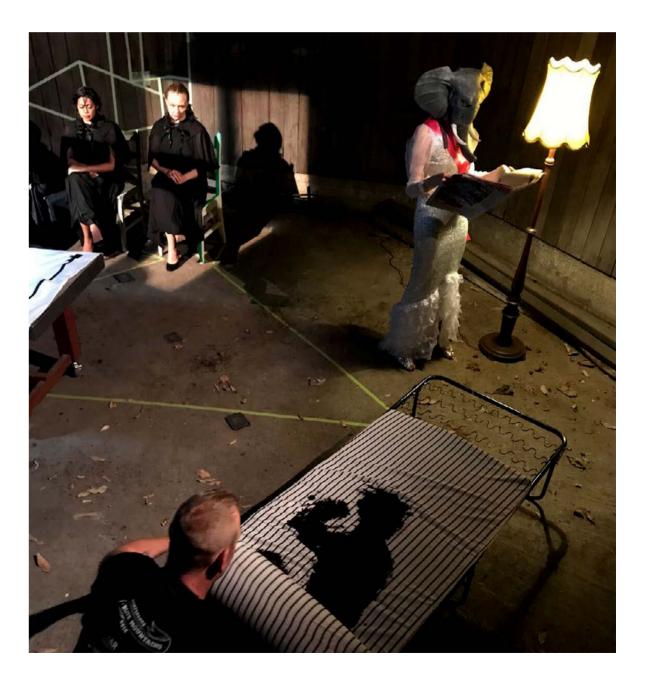
And indeed, how do we leave the places where our memories and attachments give our lives structure and meaning, even in the face of terrible threats?

Ghosh realises an important human truth in this exchange... 'my life is not guided by reason; it is ruled, rather, by the inertia of habitual motion.' He resolves that if we are all to 'adapt' to the oncoming

¹ Jason Moore, 2013 cited in Taylor, 2015. p.12 flood, decisions must be made collectively, and implemented by international institutions.

Lola stayed too long provides audiences with access to the lived experience of those most affected by existing inequalities - the poor, the elderly, the disabled, the landless, and the homeless. Those without the resources to adapt themselves, or their local environments, to climate change.

But most resounding are its silences, echoing the global governing bodies responsible for a failed development model that has left the most vulnerable exposed to an even more uncertain future. • 'Lola stayed too long' Photo Dagmar Reinhardt



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Heat: The Silent Killer

By Ben Lang Published 16 July 2018

The design aims to provoke the realisation of a limited - yet crucial - sense of agency and responsibility in the form of minor interventions for adaptation to unprecedented climatic conditions.

Ben Lang, Master of Interaction Design and Electronic Arts Candidate talks about his interactive art project, The Silent Killer, and how he was inspired by SEI's SSSHARC funded Pop-Up Research Lab project titled 'The Anastasia Project: Communicating heat & climate vulnerability through performance.' The 'Anastasia Project' explored the real-life impacts of heatwaves as well as the theoretical problems which come from communicating academic research of shock climate events to non-academic audiences such as policy makers, community organisations, and the general population.

My project aims to highlight perspiration and evaporation as the body's most vital cooling mechanism. It takes inspiration from recent research by Dr Ollie Jay and the Thermal Ergonomics Laboratory that reveals a complexity of risk-factors in predicting the potential for heat-related stress. Tackling the misconception that temperature is the only indicator, the research sought to reveal practical and potentially lifesaving techniques, and shows that increasing evaporative potential - by using a fan to increase air flow, or by wetting the skin's surface - is often the most effective way to avoid heat-related stress. This is especially relevant as heat waves will increase in severity due to climate change. The death toll related to heat waves is often underestimated, provoking the title, 'The Silent Killer,' borrowed from a 2016 report by the Climate Council

The interactive artwork has been designed as an immersive experience for both exhibition and as part of a performance. It operates as an imaginative model to reveal invisible processes, humbling the participant as they are positioned within a complex and chaotic system that is somewhat beyond their control. The design aims to provoke the realisation of a limited - yet crucial - sense of agency and responsibility in the form of minor interventions for adaptation to unprecedented climatic conditions. The 'messenger' then, in the words of performance theorist Carl Lavery, takes the form of '...a sensation, a materiality... a participatory play of movement and light, through a corporeal gesture, a type of thinking, then, done by, between and on bodies.'2

The body and our senses are here framed as an integral aspect of our cognition, supporting knowledge through direct experience.

A key piece of aesthetic inspiration was Schlieren imaging, a technique using parabolic mirrors to refocus light for the study of aerodynamic effects. The artwork is thus a projection that embeds the effect as an ambient or environmental constant in the same world as the participant, drawing upon the particular qualities of the performance context as a space that promotes reflection and focus. It is the mix of the real and the fantasy which evokes 'something which is neither theatre nor film, but partakes of the evanescent reality of dreams.'3

The first iteration of the project utilised a particle system built in Processing, spawning from a real-time silhouette produced with the Microsoft Kinect. A 'boundary layer' was modelled as a force on the skin's surface, affected by ambient temperature and air flow. The water or sweat 'particles' undergo a state change from liquid to vapor, releasing energy as 'heat' as they '[diffuse] across the boundary layer and into the surrounding air.' 4

The research project then drew insights from participant's subjective experiences, revealing how the aesthetic outcomes influence interpretations. Further development of the prototype is intended for its inclusion in the 'Anastasia project' later this year, in collaboration with Michelle St Anne, Artistic Director of the Living Room Theatre. In this context, it will further explore a blurring of the boundaries between observer and participant, extending the existing nature of the Living Room Theatre's interactive, intimate, and spatially dynamic productions. •

Ben Lang is an emerging artist and interaction designer. He completed his Honours in Visual Arts at Sydney College of Arts in 2013, where he developed an interest in the emergent patterns of nature, complex systems and generative art. This year, he will complete his Masters in Interaction Design and Electronic Arts. He was invited to join the Anastasia project as part of his capstone research project.

- ¹ Climate Council of Australia. (2016) The silent killer: Climate change and the health impacts of extreme heat https://goo.gl/LDxiMT
- ² Lavery, C. (2016). Participation, Ecology, Cosmos, Reframina Immersive Theatre: The Politics and Pragmatics of Participatory Performance. London: Palgrave Macmillan, p. 310.
- ³ Virmaux, (1966). Cited in; Dixon, S. (2007). Digital Performance: A History of New Media in Theater, Dance, Performance Art, and Installation, Cambridge, MA: MIT Press. Cited in Dixon, 2007, p. 337).
- ⁴Cramer, M. N., & Jay, O. (2016). Biophysical aspects of human thermoregulation during heat stress. Autonomic Neuroscience, 196, 3-13.

Image has its own sound

By Michelle St Anne, Theatrical Artist



to the academic process. By contrast, in the arts required to take on additional (remunerative) tasks that impinge upon the time needed for careful consideration when you are making art.

The long timelines allowed me to contemplate and therefore flesh out the different stages that I had curated with each researcher from the initial showing of 'Requiem for Anastasia'. This preliminary showing of elements I had created through my work alongside Ollie Jav and with the Penrith focus group transcripts became the "riff" from which each collaborator built. I saw each researcher as one of the instruments playing within the orchestral work in book Composed Theatre. It was this book that had 6 movements that I eventually created

The process started with my engagement with Ollie Jay's work, which ultimately set the tone of the final work as well as the research. His openness to my needs as an artist and his intrigue with my methodology allowed for catalysing conversations where I learned not only about the Thermal Ergonomics Lab but how he as a person arrived at this research. I got to know him as a person and from there was able to think about his research with a certain frequency of sonic tone.

When you work from an embodied practice your senses become sponge-like. Although your mind is absorbing the information, your body is drinking in the idiosyncrasies. Put these together and I dream myself into a circumstance. And it was these dream-like circumstances that gave me the entry point into the final work. Each becoming an element of research that contributed as a whole to the circumstance of climate change, of the forgotten, for being reduced to data.

I took these pieces and created landscapes inside everyday spaces and used sound and light to instil a dream like logic.

I appreciated the luxury of time that is imperative Following this initial stage, was Kari Norgaard's visit, which took me out of the studio and into long, deep in Australia, we often make work under duress, with conversations about her book 'Living in Denial' and little financial support, which leads to artists being what her research meant to me. To me as a person, not an artist. We simply walked through the streets of Chippendale, visiting arts spaces in Redfern and I felt she very gently entered my being. She awakened a sensibility in me that I eventually crafted into a scene. Inspired by the image from the classic Norwegian postcard, I layered additional images over the top, allowing a seemingly simple image to be read through several lenses of meaning.

> There was then space. Space that I filled with fear as I prepared for the arrival of David Roesner, a researcher I had long admired due to his co-edited filled me with validation. In it, I had found my family, and although I would not have the privilege of meeting them, I had a sense of belonging. So, the man who had documented these practitioners was making me very nervous. Could I stand alongside these people? Would he think that my work had the same amount of rigor as my contemporaries on the other side of the world?

Without ego, we both found ourselves in a common language, a shared knowledge, a shared idea of practice and how my work exists as part of an international movement. My new-found family gave me a renewed confidence which allowed me to trust my instincts when I was on the floor.

The collaboration between us surprised me. I would have thought that we would have worked dramaturgically with the visual form. But we found a shared corridor - an aural one where he advised through his work in sonic coherence. This framework afforded me a new decision making process and a new lens to make from. Images have a sound, and I hadn't recognised this before. My previous body of work had always been about building image from sound. But here the research evoked an image, and through the collaboration between Roesner and myself I came to realise that these images, each had a unique sound.

Artist Statement

Image has its own sound



Art is not a mirror held up to reality but a hammer with which to shape it.

- Bertolt Brecht

allowed me time to work through it. My instinct was saying no, and he didn't mind. I allowed myself time to come to the true sound. So yes, images have sound but they are different to everyone. My job as the artist is to chisel my way through the image, navigate its energy lines and listen to her. Listen to the shape that reveals itself to me and in doing so listen to the sound she makes, in space, in time, in

I enjoyed our even relationship - no master and apprentice, but rather colleagues coming together to make something larger and more interesting than ourselves. The process within the project revealed that I am not a knowledge translator; that is not what I do, nor what motivates me. I would even shy away from knowledge dissemination. I embody ideas, make visible and craft a new conversation using the academy as a catalyst.

The value of the academy is the depth of research, breadth of stimulus and variety of viewpoints around a certain topic. Working in the academic context gave me the capacity to have conversations with academics to further unpack their work, and in turn, they allowed me the freedom to do what I wished with their work.

When Roesner offered a sound suggestion he I was useful to the academy, as through this process, academics came to understand that, while they might have previously only imagined one single representation of their work, through working alongside my process, they came to see other forms as equally 'true' to their research -although the outcomes and forms were very different. They recognised that I was able to reveal the emotional intelligence of their work.

> This was evident in the conversations with the postperformance focus group, where people spoke strongly about the visual and aural elements; the work as sensory experience. It left them with an understanding beyond the cerebral. Beyond the text and language derived from lectures and focus group transcripts that had informed the theatrical production. The work moved beyond words and I was able to tap into their emotional landscape, rather than their cognitive processes.

> You could read a journal article, or in this case read Norgaard's book, but then to actually feel it - that creates a true empathy.

— Conclusion Lola stayed too long

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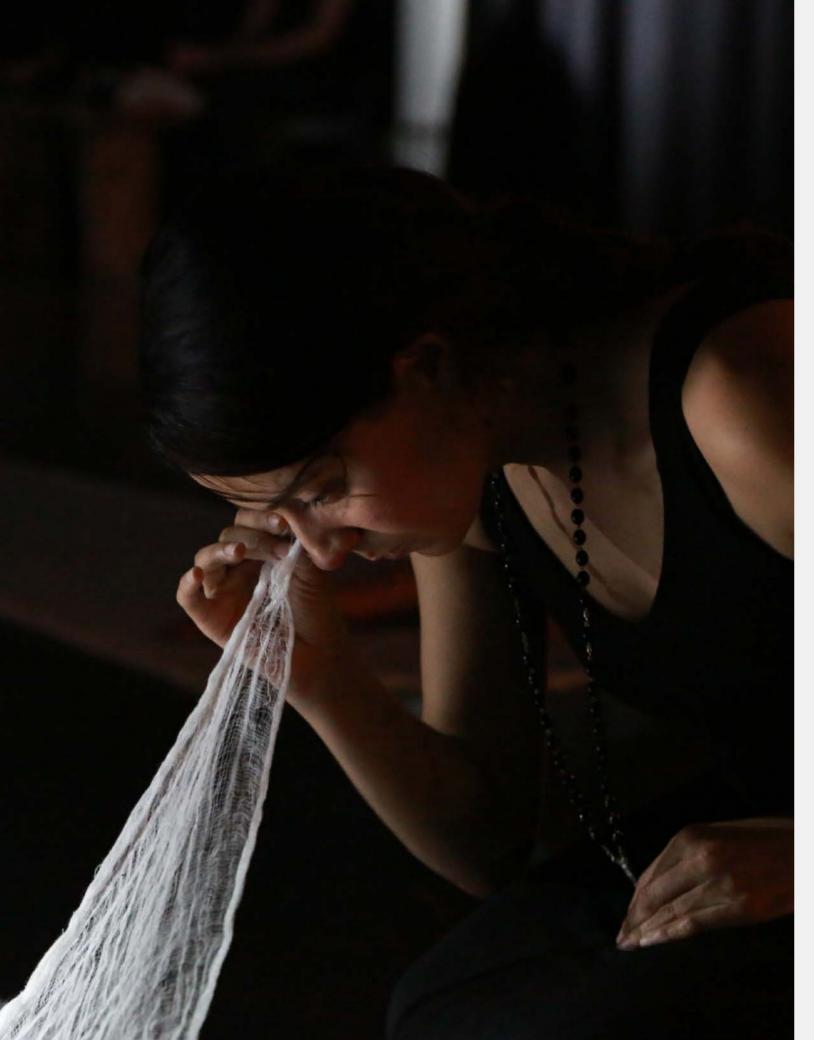
For Further **Discussion**

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— Introduction and Methods

By Elsher Lawson-Boyd, Report Author

The experimental performance 'Lola stayed too long' is a collaborative project between the University of Sydney's School of Social and Political Sciences, the Sydney Environment Institute, and The Living Room Theatre.

It was funded by SSSHARC in the Faculty of Arts and Social Sciences, The Living Room Theatre, and the City of Sydney. The piece brings together two seemingly disparate narratives: one which occurs during the heatwave of January 2017 in a Sydney suburb, and the other in a fictionally named rural community in Western Norway where the snow is two months late. Told through portraits and sound recordings, this work attempts to reconcile the personal with the epic; the fear, the guilt, the anxiety of an ageing mother, with the unimaginable denial of a warming world.

The objective of this report is to articulate how the performance piece impacted on its audience. It is specifically concerned with the achievement of the objective of instilling a sense of engagement with the issues in the audience and affecting their actions in relation to climate change.

Approximately 3 months after the performance had taken place, semistructured qualitative interviews (one focus group, one one-on-one phone interview) were conducted. Audience members was asked at the time of the performance if they would be interested in providing feedback several weeks after their experience of 'Lola'. Participants were those who had indicated that they did wish to do so and were available, The data collection was held some weeks after the performance to allow for audience members to 'digest' the experience and also to allow for some evaluation of the effect beyond the immediate experience.

This method of evaluation was chosen over the post-performance survey-style evaluation that is common in the evaluation of artistic experience for two main reasons. First, it was felt that participating in such a survey can interfere with the experience and impede the impact it seeks to achieve. Second, the data that surveys produce tends to be thin and unreliable.

The sample size for the evaluation was small (7 participants), and those who participated volunteered and thus may not be a fully representative sample. As such, the data needs to be read cautiously. Nevertheless, the indepth qualitative data does provide some useful indications of the type of impact of the performance. The subsequent analysis of the data outlines and summarises four core themes. The themes are as follows: theatre, affect and the senses: making the invisible visible: climate change entanglements; and connections, community and care. Though these four themes are distinct, they build on each other in terms of their content, meaning and significance. The final section briefly considers some issues not fully covered in the

themes listed, but were nonetheless

project and thinking towards future

significant in evaluating the

developments.

Elsher Lawson-Boyd has recently completed a Master of Arts (research) at the University of Sydney and will soon be commencing a PhD at Deakin University. Coming from a Science and Technologies Studies background, her work so far has focussed on nutritional discourses and social eating practices. In her PhD, she will be contributing to a research project on the effects of epigenetic science in the Global South.

'The Requiem for Anastasia' Photo Nathaniel Fay

— Theme 1 Theatre, Affect and The Senses

This theme concerns the affective impact of 'Lola', which was frequently described as a deeply affective experience by interviewees. The use of the term affect, references Fox's (2015) definition of affects as that which causes action and change, particularly in terms of subjective, emotional responses.

When 'immersed' in a multisensory theatrical space that guided them through the narrative, many engaged with the performance on a personal and intimate level. Some explained that they were 'confronted' with the sounds and images of the environment to the point of discomfort, a factor that made a significant impact on them. For example, Alice pointed out:

For me, I think the biggest ...or the thing that was the most impressing upon me was the glacier and watching the glacier melt over time and the dance when there's the visual impact on that and then having the auditory sounds of, you know, cracking ice. You know, that's something we always hear about – melting glaciers and that sort of thing, but it feels very remote and so having that put in your physical space and having to confront it very close was very moving for me.

Similarly, Karen explained:

Well, I felt like, you know, conceptual theatre asks you to imagine, you know, an abstracted scene and put it into your own experience, but I felt like in that one, there was so much – I don't know if it's because we know a lot about climate or because it's a performance or the whole thing together, but I felt like it was just really easy to be absorbed in it and to really feel it and be really moved by it without trying very hard at all.

Another clear example of this experience was provided by interviewee Sarah, who said:

You know how sometimes you sort of experience theatre and you're just in one seat and you just sometimes can get caught by some tangential moment and you get distracted?

It's almost like you kind of couldn't. You were sort of forced to be in the moment, but it was almost like for me, I thought it's like a somnabulation. You're walking in someone else's sort of vision, but you're being carried along by it and there's a sort of a swarm of people with you and there's an intimacy to it, but there's something sort of dreamlike about it as well because of the nature of the artwork and what it's asking you to engage in.

Reflecting on these findings in the context of the literature from sensory studies, there is a substantial amount of evidence to suggest that learning processes are mediated by sensory perceptions. As French philosopher Merleau-Ponty (1962) argued, humans experience and make sense of the world through their senses. Moreover, sensory experiences are always relational. In other words, we experience reality as 'fleshy bodies, via the sensations and emotions configured through and by our bodies as they relate to other bodies and to material objects and spaces' (Lupton 2017, p. 1601).

For many interviewees, their sense of 'being' in space proved to be a novel and emotional means of communicating the 'social disorder' created by climate change. Using theatre to explore such a highly politicised issue was impactful precisely because it engaged their bodies and embodied knowledge in tandem. This was illustrated by Karen, who explained that:

[The performance] puts you in that very kind of like half sleeping, kind of dazed sensorial mode... So you feel that way. Literally, they go together. If it's really, really cold and you're over – stimulus overload, or if it's really hot and you're just like wiped out, so I really felt that way. I felt like I could totally relate to it because of the way it was done.

Pseudonyms have been used to protect the identity of participants.

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Theme 2Rendering The Invisible Visible

The second theme refers to invisible social and political issues that were rendered visible in 'Lola'. For many interviewees, the implications of climate change for elderly people in the community is an absent and neglected part of common discourse. Though interviewees had varying degrees of knowledge and awareness about climate change, as well as a concern about the social isolation experienced by elderly people, many believed that the performance exposed the connection between these issues in a unique, evocative and direct way.

Rebecca, for example expressed the way in which the performance allowed her to encounter Lola's experience of physical discomfort, loneliness, vulnerability, abandonment and death, and explained that this had a significant impact on her knowledge of the issues raised. As she pointed out:

I was very, very moved by that performance because of [Lola's] inclusion, because you don't see older people in theatre very often and in quite that way and certainly not when you're talking about an issue like death and extreme weather. But then for sort of Lola on campus, it was the body upstairs on the, you know, on the gurney, the mortuary slab, you know, lying alone in bed, however we want to sort of imagine the body, but yeah, it's someone alone, you know. Deceased. It was just heart-wrenching for me.

Furthermore, she stated:

I think for me, I sort of, you know, the sort of popular discourse of climate change is lived at the level of the environment. We don't think about – well, I don't think the popular discourse is about elderly people dying at home on their own and having no one to support them. So what I felt that it left me with as someone whose own research is about death, it kind of sort of slapped me in the face where I thought, 'Oh, God' – it brought it right down to the level of the social for me, you know, which could be sort of your own neighbourhood.

Not only did interviewees realise the connections between two seemingly separate issues, but they articulated that these critical matters (i.e. social isolation and climate change) are paid little attention to in public discourse. This was illustrated by Louise when she explained:

One minute [Lola] was not there, and the next minute she was there. I think a lot of aged people are like that invisible factor. People don't see them, whether they are on the street or in nursing home. People don't see them and ... I find that part of for the ageing population a really sad thing. They are not really seen and they are not valued and for them that creates a terrible feeling of worthlessness ... at one point of their life they would have been great contributors.

This kind of social and political neglect was also pointed out by Alice, specifically in regard to climate change:

I also remember the woman who had the elephant mask on and I don't know if Michelle meant for it to be interpreted this way, but what I got from that was that it was sort of the elephant in the room and that she would come up really into your very personal space and at one point, she was right behind my shoulder and for me it was kind of like, it just feels - when she came up to me, we were in that room with the crackling, where she put the microphone into the beakers and I don't know, all of that imagery together made me sort of think, 'Oh, wow, this is sort of like maybe a commentary on scientists and no matter how many tests we run to talk about climate change and how it's a reality, what its effects will be, the elephant in the room is the fact that we haven't done anything really, that it's still' - like, we could run all the tests we want, all the experiments we want, all the research we can do and yet we still haven't made real concerted efforts to try and curb emissions or some things. So I thought that was very, very moving and a really great way to illustrate that.

These responses indicate that Lola brought the audience's attention to the vast, invisible and local effects of climate change, especially for those who are most vulnerable in the community, while also interrogating the political and structural dimensions that shape climate change debates.

Pseudonyms have been used to protect the identity of participants.

Theme 3Climate Change Entanglements

The third theme concerns the way in which Lola led audience members to recognise climate change as not simply an environmental issue, but as a complex entanglement of personal, social, political and economic issues, from a local to a global scale.

For example, Michael felt that the performance's combination of both global and local factors was memorable and necessary:

The thing that I got out of it when I was - looking at it from the other extreme as one of the actors in the thing was that there was that – the two extremes were covered. There was the local, which is what people feel, and there were a variety of scenes, vignettes, within in which covered more than just the local. They covered a worldwide perspective. You had sort of the ice up in Norway. You had sort of the deserts, you had a range of different venues, if you like, that were being put into people's minds as well as that personal perspective on things. So, you're getting people to think not just of their local view on it, but also this is a worldwide phenomenon.

For others, climate change is predominately associated with global contexts, yet less attention is given to the personal and social implications. For Alice, this was a particularly memorable part of 'Lola' as she explained:

I think, [Michelle] really brought it into the living rooms and people's homes and especially coming from an academic perspective or at least in my department, it's always such a macro perspective of climate change and the impacts and the indicators and that sort of thing. We don't really talk about real people and, you know, what the real impact for people's day-to-day lives will be and so, you know, I started thinking about my parents, you know, they're moving out of the state now because they're worried about water. So yeah, I think that was a really good take away.

Similarly, Sarah pointed out that although she was previously aware of the effects of climate change on elderly people, 'Lola' had given her insight into how complex an issue it is:

I was aware of it with my neighbour, but only because she - her husband died and, you know, I knew the sort of story of her loneliness there. But I think I felt, 'Oh, I need to do that more often now.' But, you know, but even the sort of the checking thing is one aspect of it. The other aspect of it is the nature of growing older and your friends dying or you lose your networks or your children move away. You know, just the sort of the inevitable slide of life into a degree of sort of loneliness or a slow death. That's what really affected me, I think. Like how do vou tackle an issue that is not just about climate change? You know, it's a social issue, political,

Pseudonyms have been used to protect the identity of participants.

Theme 4 Connections, Communities and Care

The final theme concerns the way in which 'Lola' evoked an awareness of, and critical reflection on, the idea of community living. For many, the performance brought up memories of caring for their own mothers, and they now felt compelled to extend this care to other elderly neighbours. This theme raises the fundamental importance of care practices, especially within urban community contexts. When using the term 'care' here, references Kittay's (2002) definition of care as a manifestation of labour, emotion, beliefs and values. Moreover, care practices insist on material conditions, as became clear in regard to the necessities for survival in the event of a heat wave (water, air conditioning etc.). As anthropologist Annemarie Mol and her colleagues (2010, p. 1) stated, 'care is central to daily life', and thus the ways in which it manifests (or fails to manifest) is an essential component of this theme.

For Alice, living in an urban setting did not foster connection with her community, yet after seeing 'Lola', she felt compelled to reach out to those in her neighbourhood, as she explained:

I think it would definitely make me want to – I don't know if before I had seen the show. I would have reached out to people who were older that I didn't know. You know, I think especially living in - you know, I live very much in the city and it's such an urban environment, you don't know your neighbours. You don't know the people living above me, but I might make more of an effort now to try to - or if, you know, there was a heatwave to, yeah, knock on doors and be like, "Are you guys okay?" Trying to figure out who is in my community, my immediate community, that sort of thing.

For interviewees like Sophia, 'Lola' illustrated the 'truth' of community disconnection, which was deeply troubling:

I mean, I guess I'm aware of [the danger of isolation] because of my mum, but then I guess the neighbour

upstairs who passed away, that's when – I mean, that was encapsulated in the show and then you just realise – There's a truth to it – how disconnected people can actually be from each other, you know. So, I think that sort of reinforced the whole importance of engaging.

For Karen, although she identified some ambivalences about checking up on her neighbours, this did not deter her from doing so:

Well, we live on a street with a lot of old people, which I love. And they look after each other somewhat, but I think there's a certain amount of pride, and I don't know how open everyone is, but I tend to be really - you know, when I see people, I check on them, 'How are you doing?' and if I haven't seen them in a while. I'll knock on their door and before that, I never would have said, you know, 'If you're getting too warm, you can come over. We have air-conditioning.' But I did do that and I think that that definitely made a difference, just asking people, you know, 'Do you have enough water?' We had the water shut off in our neighbourhood the other night unexpectedly.

Pseudonyms have been used to protect the identity of participants.

Additional findings

This list outlines some findings the data that did not clearly fit into one of the four themes, but are significant for understanding the impact of 'l ola'

- Many interviewees felt that the majority of the Lola's audience was generally 'open minded' and with an academic background. As such, they felt very positive about seeing the project develop in order to make it accessible for a broader audience.
- As mentioned in the fourth theme, many interviewees explained that Lola evoked memories of their own elderly mothers. It is worth considering this point when thinking about who the intended audience, is how representations of kinship operate in experimental projects such as these.
- For many interviewees, combining academic knowledge with experimental theatre was a powerful and innovative way of opening up conversations about the complexities and nuances of climate change.

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— Conclusion

In summary, it was evident from this sample of audience members that the medium of transmission was highly effective in making real some of the more invisible and unrecognised impacts of climate change. The data indicates the value of further development of this type of performative medium for transmitting critical and complex issues and its capacity to achieve a significant impact.

Media

Video

Performance: A Requiem for Anastasia

► https://goo.gl/h1YW3G

Artist Talk:
A Requiem for Anastasia
▶ https://goo.gl/XWYzei

What Lola Heard: Theatrical Sounds From Climate Change Performance

https://goo.gl/bvYiRt

Audio

What Lola Heard: Theatrical Sounds From Climate Change - The Conversation

► https://goo.gl/sHCPAi

Beyond the Climate Elephant:
From Climate Denial to
Public Engagement

https://goo.gl/WBTVXD







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