

# **LUCY McRAE**

## **BODY ARCHITECT**

### **ARTWORK LABELS**

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# ***Lucy McRae: Body Architect***

Lucy McRae explores realms rarely traversed. A science-fiction artist and speculative designer, she has a finely tuned ability to imagine other ways of being and, crucially, other possibilities for the human body, which sees her speculate on how it could evolve. She considers how human biology might be augmented by a mixture of physical design, modification of emotions, molecular biology and technology.

McRae's practice, fundamentally, is about the future of the human race: how we build resilience, how we respond to extreme conditions. McRae does not champion 'non-humanity'; instead, she believes in designing in concert with human traits, characteristics and vulnerabilities, rather than stifling or rejecting them. McRae's future is fleshy and feminine, and in her vision technology is a creative, social movement in which individuals and communities participate. Her approach is to work by instinct, intuition; to learn, to discover. This is the essence of creative research practice, and of McRae, arguably the world's first 'body architect'.

This exhibition illuminates McRae's creative path and work over the first thirteen years of her career. Her unique perspective on how humanity might move through the world in the future is explored through the mediums of photography, video and installation.

# Sensing more

An alumna of Interior Design at RMIT University in Melbourne, Lucy McRae's career as both an artist and designer was profoundly influenced by time spent in London in the mid 2000s. Here, her childhood passions of ballet and athletics converged with her curiosity about design and science. In 2004 McRae established an experimental fashion label, Lu-DiX (*Lu-Di-cross*, 2004–05), with fashion designer Di Mainstone, where she designed and created unorthodox garments that explored how textiles move on the human body. This led to a coveted position as a research consultant in the Skin Probe program in the Innovation Design Studio at Philips Design, Eindhoven, the Netherlands, where she worked between 2006 and 2008.

One of the earliest future-focused research and design programs at a consumer electronics company, the Skin Probe program offered McRae a unique opportunity to speculate fifteen to twenty years into the future, imagining possible scenarios for emerging technologies and how they might be applied. The research and design team conducted groundbreaking experiments in the emergent field of wearable technology.

It was during her time at Philips Design that McRae came up with the term 'body architect' to describe her work. This title is now synonymous with her creative research practice.

Clockwise from bottom

**Lucy McRae** body architect,  
research consultant

England born 1979, arrived Australia 1982, lived in England  
and the Netherlands 2001–19, United States 2019–

**Philips Design, Innovation Design  
Studio, Skin Probe program,  
Eindhoven** design studio and  
manufacturer

the Netherlands est. 1891

**Daniel Sannwald** photographer

Germany born 1979

**Bubelle**

2006

colour digital image

Philips Design, Innovation Design Studio, Skin Probe program team – senior director: Clive van Heerden; creative director: Jack Mama; fashion director: Nancy Tilbury; research and design consultants: Sita Fisher, Rachel Wingfield, Matthias Gmachl, Philippa Wagner, Oliver Gondorf; garment maker: Ollie Niemi; engineers: Stijn Ossefort, Bram Ossefort

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Formed in 2003, the Skin Probe program within the Innovation Design Studio at Philips Design comprised research and design consultants from around the world, including the young Lucy McRae. The program explored the concept of sensitive technology. Conducting experiments with electronic sensors, fibre-optic thread, LED lighting and projectors, the program team aimed to sense and track human emotions and glean insights into potential uses for responsive and intuitive technology. One of the program's most noted projects, *Bubelle* is a dress that visualises the biometrics of the body. When the wearer is excited, nervous or stressed, the outer textile of the dress signals these emotions through light, pattern and colours.

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research consultant

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**Frisson**

2006

colour digital image

Philips Design, Innovation Design Studio, Skin Probe program team – senior director: Clive van Heerden; creative director: Jack Mama; fashion director: Nancy Tilbury; research and design consultants: Sita Fisher, Rachel Wingfield, Matthias Gmachl, Philippa Wagner; garment maker: Ollie Niemi; engineers: Stijn Osserfort, Bram Osserfort

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At Philips Design, design teams worked across three 'horizons' (divisions). Horizon one developed consumer electronic products for the established market; Horizon two designed and prototyped next-generation models; and Horizon three investigated far-future technologies and products. McRae's role in Horizon three saw her bring together numerous aspects of research and development to deliver functioning experimental prototypes. Composed of conductive thread and LEDs, *Frisson* is an interactive bodysuit that mimics the piloerection reflex, commonly understood as goosebumps and the hair standing on end. By blowing into a handheld sensor, the wearer activates a lightshow on and around the bodysuit.

**Lucy McRae** body architect,  
research consultant

England born 1979, arrived Australia 1982, lived in England  
and the Netherlands 2001–19, United States 2019–

**Philips Design, Innovation Design  
Studio, Skin Probe program,  
Eindhoven** design studio and  
manufacturer

the Netherlands est. 1891

## **Electronic tattoo**

2008

colour digital image

Philips Design, Innovation Design Studio, Skin Probe program team – senior director: Clive van Heerden; creative director: Jack Mama; animation: Bart Hess; protagonists: Harm Rensink, Pomme van Hof; design research: Gwendolyn Floyd; fashion designer: Sita Fisher; tattoo artwork: Henk Schiffmacher; camera: Sebnem Elings

McRae worked on the *Electronic tattoo* project with fellow member of the Philips Design Skin Probe team and textile designer, Bart Hess. The concept revolves around a subcutaneous ink that electronically changes its colour and intensity, making the surface of the body responsive, dynamic and highly expressive. Going beyond decoration and expression and sensitive to human emotion, the *Electronic tattoo* is a design concept for intra-body signalling whereby the body communicates biological processes in a real-time visual display.



# On the body

Evolution is now not only the result of natural selection; technology and human choices also play a role in how we evolve.

In a time when technology is always developing and DNA is sequenced, spliced and replicated, we can predetermine how we communicate and interact, or move and look. But is there a darker side to all of this? If we could intervene and redesign bodies, what would we do, and to whom? Will technology cause human evolution to accelerate in particular directions and, if it does, who will benefit most and what side effects could there be?

These are the questions Lucy McRae and her colleague in the Skin Probe program at Philips Design, textile designer Bart Hess, asked themselves. Their discussions ignited a collaboration between the two. Using their bodies as sites of speculation and working with modest everyday materials, such as soap foam, balloons, pantyhose and toothpicks, they created a series of low-tech experiments to convey how the body might be transformed in the future. Each experiment resulted in a story on the body, and an image.

# Lucy McRae

England born 1979, arrived Australia 1982, lived in England and the Netherlands 2001–19, United States 2019–

# Bart Hess

the Netherlands born 1984

## Hook and eyes

2008

colour digital image

Collection of the artists

Thinking about the aesthetic, physiological and psychological consequences of redesigning the body, McRae and Hess focused on issues of beauty and plastic surgery in their early collaborative images. In *Hook and eyes*, McRae and Hess comment on the concept of the 'perfect face'. We see McRae's lips, eyes and cheeks stretched, lifted and tucked with the aid of hook-and-loop fasteners, sewing thread and glue. McRae and Hess ask: if more people chose to revamp their faces in the future, will everyone start to look the same and, if so, will the idea of beauty change in the future to reflect more exotic and distinguishable features?

# Lucy McRae

England born 1979, arrived Australia 1982, lived in England and the Netherlands 2001–19, United States 2019–

# Bart Hess

the Netherlands born 1984

# Brush

2007

colour digital image

Collection of the artists

In the first collaborative images produced by Lucy McRae and Bart Hess we see the artists-designers perform simple interventions on the body with string, toilet rolls and a dust brush. These items are conceived as stand-ins for potential apparatus, entities and networks that interact with the living system of the body, delivering both effect and function. Using photography to document their experiments and generate ideas, McRae and Hess's collaborative creative practice combines observational research with speculation, in search of new relationships for the body with technology.

# Lucy McRae

England born 1979, arrived Australia 1982, lived in England and the Netherlands 2001–19, United States 2019–

# Bart Hess

the Netherlands born 1984

# Ape

2007

colour digital image

Collection of the artists

# **Lucy McRae**

England born 1979, arrived Australia 1982, lived in England and the Netherlands 2001–19, United States 2019–

# **Bart Hess**

the Netherlands born 1984

# **Star gazing**

2007

colour digital image

Collection of the artists

## For kids

Have you ever worn sunglasses to shield your eyes from the bright daylight, earphones to make music sound clear and loud in your ears, or a coat to keep your body warm in the cold?

There are many objects that are designed to interact with the human body. Often, these objects engage with the body's five senses: sight, hearing, smell, taste and touch. Through these senses you experience the world around you. In this image, artist Lucy McRae has put cardboard toilet rolls on her eyes to imagine an object for seeing things differently. Can you imagine what she might see?

# Lucy McRae

England born 1979, arrived Australia 1982, lived in England and the Netherlands 2001–19, United States 2019–

# Bart Hess

the Netherlands born 1984

## Exploded view #2

2008

colour digital image

Collection of the artists

In *Exploded view #2* McRae and Hess wonder if, in the future, the human body could mimic the shapeshifting ability of superhero characters in science fiction. Could biotechnology reduce body movement into an explosion of pixels or shards? Using only paper and wig glue, the artists have crafted the effect on McRae's skin; the body appears as if in motion. McRae and Hess imagine how science and design might allow the programming of the human body at a cellular level to change its appearance.

# Lucy McRae

England born 1979, arrived Australia 1982, lived in England and the Netherlands 2001–19, United States 2019–

# Bart Hess

the Netherlands born 1984

## Evolution

2008

colour digital image

Collection of the artists

In *Evolution*, McRae and Hess imagine the evolution of the female species. Party balloons and pantyhose have been used to transform McRae's upper body, creating giant biceps and muscles along her spine. She appears more alien than human. Here, McRae and Hess consider a point in the future when gender stereotypes could fall away. Could the muscle fibre of the female species be genetically enhanced? What would this new female body look like? Could the very concept of gender evolve as a consequence?



# Lucy McRae

England born 1979, arrived Australia 1982, lived in England and the Netherlands 2001–19, United States 2019–

# Bart Hess

the Netherlands born 1984

## Grow on you #1

2008

colour digital image

Collection of the artists

When working together at Philips Design, Lucy McRae and Bart Hess would often talk about the idea of technology taking the form of a living organism. When pursuing their creative collaborative practice outside of Philips they explored this idea and others, using low-cost everyday materials. *Grow on you #1* conceals McRae's body in a haze of dishwashing foam mixed with blue food dye. Making the familiar unfamiliar, the foam is suggestive of a gas-like substance emanating from the body itself, raising the question: in what circumstances could this effect be useful?

# **Lucy McRae**

England born 1979, arrived Australia 1982, lived in England and the Netherlands 2001–19, United States 2019–

# **Bart Hess**

the Netherlands born 1984

# **Grow on you**

2008

colour digital image

Collection of the artists

# Lucy McRae

England born 1979, arrived Australia 1982, lived in England and the Netherlands 2001–19, United States 2019–

# Bart Hess

the Netherlands born 1984

# Grow on you #3

2008

colour digital image

Collection of the artists

# Lucy McRae

England born 1979, arrived Australia 1982, lived in England and the Netherlands 2001–19, United States 2019–

# Bart Hess

the Netherlands born 1984

## Germination day 1

2008

colour digital image

Collection of the artists

What if the pores of your skin could grow living textiles? Lucy McRae and Bart Hess explore this concept in images *Germination day 1* and *Germination day 8*, using organic materials to simulate the stages of growing matter. Stuffing pantyhose with sawdust and grass seeds, McRae and Hess constructed a living suit for Hess to wear over eight days and two photo shoots. In *Germination day 8* the suit is mature, with long, lush grass giving the appearance of living hair. The *Germination* images allude to the field of biomimetics, which uses new technologies inspired by nature to solve design and engineering problems associated with healing, resilience and energy.

# **Lucy McRae**

England born 1979, arrived Australia 1982, lived in England and the Netherlands 2001–19, United States 2019–

# **Bart Hess**

the Netherlands born 1984

# **Germination day 8**

2008

colour digital image

Collection of the artists

# **Lucy McRae**

England born 1979, arrived Australia 1982, lived in England and the Netherlands 2001–19, United States 2019–

# **Bart Hess**

the Netherlands born 1984

# **Dripping colour #1**

2010

colour digital image

Collection of the artists

## For kids

Did you know that there are some animals that can change the colour of their skin? Chameleons are lizards that can change colour for different reasons, including when they are hot or cold. By changing colour, a chameleon can adjust its body temperature.

In this image, artists Lucy McRae and Bart Hess imagine a person with the ability to ooze colour from their skin. To explore this idea, they have covered Bart's body in purple, blue and green party balloons, which look full of colour. Can you think of any reasons why it would be useful to turn your body green, purple or blue?

# **Lucy McRae**

England born 1979, arrived Australia 1982, lived in England and the Netherlands 2001–19, United States 2019–

# **Bart Hess**

the Netherlands born 1984

# **Pic of sticks**

2009

colour digital image

Collection of the artists



## For kids

Have you ever wondered why some animals have shells, hard scales or sharp spikes on their body? These different surfaces protect the animals from predators. They can also help the animal to camouflage itself in its surroundings or next to plants and rocks.

In this image, artists Lucy McRae and Bart Hess imagine a person with spikes all over their body, like a porcupine with quills. If you look hard, you can see that toothpicks imitate the long, needle-like quills. It would be a good idea to avoid a prickly encounter with a person covered in spikes.

# Lucy McRae

England born 1979, arrived Australia 1982, lived in England and the Netherlands 2001–19, United States 2019–

## Transnatural #1

2009

colour digital image

Collection of the artist

Considering how human biology and technology might co-evolve and converge, McRae here creates evocative imagery to communicate a vision of humanity in the future, using pantyhose, glue and plastic. In response to the well-worn concept of the cyborg, McRae proposes an enhanced future human made of flesh, and in doing so advocates for the augmentation of human cognition and biology at a cellular level. McRae maintains that the traits and characteristics that make each human unique should not be erased. *Transnatural #1* and *Transnatural #2* lead us through the emotional and aesthetic transformations of the human body through narratives of fear, struggle and protection.

# Lucy McRae

England born 1979, arrived Australia 1982, lived in England and the Netherlands 2001–19, United States 2019–

## Transnatural #2

2009

colour digital image

Collection of the artist

# Lucy McRae artist and director

England born 1979, arrived Australia 1982, lived in England and the Netherlands 2001–19, United States 2019–

## Chlorophyll skin

2009

colour digital video, sound, 2 min 46 sec (looped)

protagonist: Mandy Smith

Collection of the artist

Moving away from the still image, McRae embraced video to consider potential new technologies for enhancing the skin. *Chlorophyll skin* is McRae's first foray into video and saw the artist-designer tape hundreds of cotton tips to her body and spray food dye to the homemade textile. The video shows the dye move through the textile, filling up the cotton tips until they drip colour. Intended as an artwork, the video documents a low-tech prototype for a future human biology inspired by chameleon species able to change their skin colouration.

# Popular science

Having seen Lucy McRae's unique blend of theatre, fashion, art, design and science, musicians and their managers began to contact her. In her work with bands, she turned her attention to costume design, set design and art direction.

McRae's music videos bring issues of science and technology to the pop industry and, in a simple way, make science popular. Promoting ideas of citizen science, experimentation and DIY science, each music video presents a potential tomorrow where cloning, biohacking and genetic engineering draws into focus the possible implications of scientific discoveries.

In McRae's music video *Fat monk*, 2011, for Australian dance band Rat vs Possum, we see choreographed dance scenes in colourful lab-like environments; technology is soft and fluid, with not a computer or machine part in sight. In *Technology puppets*, 2012, for Danish pop band Reptile Youth, the bodies of the band members are composed from a menu and different features are tweaked and adjusted. *The biological bakery*, for Australian pop band Architecture in Helsinki, hints at how synthetic biology could develop in the home, but also at how the biggest biotech breakthroughs in recent decades, like CRISPR [specialised stretches of DNA], were the result of an accident.

**Lucy McRae** conceptual artist, creative director and director

England born 1979, arrived Australia 1982, lived in England and the Netherlands 2001–19, United States 2019–

**Architecture in Helsinki, Melbourne**  
band

Australia est. 2000

**Channel 4, London** commissioning network

England est. 1981

**The biological bakery**

music video for 'Dream a Little Crazy'

2014

colour digital video, sound, 3 min 9 sec (looped)

art director: Rachel Wingfield; producer: Loop.pH, London; technical director: Mathias Gmachl; technologist and futurist: Thomas Ermacora, Lime Wharf, London

## For kids

Have you ever tried experimenting with cooking, and mixing different ingredients together to find out what will happen? It can get pretty messy, but sometimes you can make something wonderful by accident. Like the artist Lucy McRae, scientists also experiment with different materials and equipment to test their ideas. This artwork is a music video that pictures a bakery like a scientific lab. What kind of experiments could you imagine cooking up in a bakery designed for play?

**Lucy McRae** conceptual artist, creative director and director

England born 1979, arrived Australia 1982, lived in England and the Netherlands 2001–19, United States 2019–

**Reptile Youth, Aarhus** band

Denmark est. 2009

**Hyper Island, Stockholm**

commissioning education company

Sweden est. 1996

**Technology puppets**

music video for 'My Yoko Ono'

2012

colour digital video, sound, 4 min 12 sec (looped)

producer: Leandro Santini; editor: Dorrit Anderson; colour grading: Larsen VFX, Denmark; post-production: Norman Nisbit

Lucy McRae wishes to acknowledge members of the larger project team from Hyper Island's 2013 motion graphic class in Stockholm.



# **Lucy McRae** conceptual artist, creative director and director

England born 1979, arrived Australia 1982, lived in England and the Netherlands 2001–19, United States 2019–

## **Rat vs Possum, Melbourne** band

Australia est. 2007

## **Fat monk**

music video for 'Fat Monk'

2011

colour digital video, sound, 3 min 9 sec (looped)

cinematographer: Katie Milwright; production designer: Barnaby Monk; first assistant director: Laetitia Miglore; co-producer: Laetitia Miglore and Emma Pisani; editor: Ine van den Elsen; choreographer: Bobilee Shahine; costume designers: Cassandra Wheat, Adele Varcoe; audio visual artist: Kit Webster; performers: Bobilee Shahine, Natalie Shahine, Kristiarne Anthony, Kathleen Skipp, Maggie Bradley; prop production: Kevin O'Connor; production assistants and performers: Alex Peters, Eli Ghias, Hugh Westland, Hannah Brasier, Janice Liyanage, K-Buzza, Kate Corke, Maya LaCroix, Megan Kiantos, Melissa Edwards, Michael Raymond, Molly Shelton, Simone Ling, Phoebe Baker-Gabb.

Lucy McRae wishes to acknowledge the Interior Design program, RMIT University; VESKI, Melbourne; and PostPanic, Amsterdam, for generously supporting the production of this work.

## **Lucy McRae** artist and body architect

England born 1979, arrived Australia 1982, lived in England and the Netherlands 2001–19, United States 2019–

## **Robyn** commissioning musician

Sweden born 1979

## **Body Talk, album cover image**

2010

inkjet print

record label: Konichiwa Records, Sweden; art director: Mary Fagot, Sandberg & Timonen, Sweden; photographer: Johan Renck

Collection of the artist

In 2010, Lucy McRae presented wearable liquid textile experiments to a small audience of creative professionals at Hyper Island school in Stockholm. In the audience was the creative director for Swedish pop star Robyn, who initiated a meeting between the two. Having independently explored relationships between human emotions and the digital world, McRae and Robyn entered into a partnership, working on music videos and album covers. The cover image for Robyn's album *Body Talk* alludes to ideas of dissolving the body. Clad in paper, fishing wire, coathangers and lycra, Robyn is reduced to a bitmap [a computer graphics image consisting of rows and columns of dots], to communicate ideas of visibility and resolution in relation to affairs of the heart.

# *The Future Is Fleshy*

When asked to imagine a human future where science and biology combine, many imagine man-machine hybrids, cyborgs and bioengineered androids. In this conception of the future, humanity and technology combine in the realm of hardware and artificial intelligence, transforming the human condition beyond the scope of nature.

This human technology interface is a media-fuelled, often masculine mode privileging strength and intelligence, narrated through dark stories of conflict and dystopia in which science is weaponised and humans must become machines or be destroyed by them.

In contrast, Lucy McRae's research imagines that the future is fleshy and feminine, and that if technology is to be embraced to enhance human nature, it is genetic engineering and design at a cellular level that will make us most capable of flourishing in an increasingly complex world.

Informed by emerging scientific research and considering possible scenarios around interstellar travel and off-planet living, McRae asks whether it is in fact our weaknesses, empathy, and sensory and emotional worlds that hold the greatest potential for the future of humanity and the planet. Could our vulnerabilities help us evolve and make us more resilient as a species?

# Lucy McRae artist and director

England born 1979, arrived Australia 1982, lived in England and the Netherlands 2001–19, United States 2019–

## Swallowable parfum, trailer

2009

colour digital video, sound, 45 sec (looped)

production designer: Barnaby Monk; producer: Emma Pisani; editor: Ine van den Elsen; sound design and composition: Dylan Galletly; brand identity: Amie Norman and Lobke Hulzink; compositor: Vincent Goodsell; voice over: Lotje Sodderland; model: Shona Lee

Collection of the artist

Where does the body end and the near environment start? For Lucy McRae, this question precipitated an investigation into human smell and pheromone excretion. By focusing on the bio-matter generated through the skin, including sweat, scent and acids, she turned her attention to liquid technology, with the idea of digesting it to interact with the body's own chemistry. After asking a synthetic biologist: 'If, when you sweat, it's the scent of your immune system oxidising, is it possible to target the immune system to sweat a biologically enhanced fragrance?', McRae decided to make this fictional perfume campaign to prototype the concept of a swallowable perfume.

# **Lucy McRae** artist and director

England born 1979, arrived Australia 1982, lived in England and the Netherlands 2001–19, United States 2019–

# **Vimeo, New York** commissioning agent

United States est. 2004

# **Swallowable parfum, live lab**

2014

colour digital video, sound, 1 min (looped)

executive producer: Amy Silver; co-director and producer: Giuseppe Demaio; cinematographer: Jon Mark Oldmeadow; costume design: Cassandra Wheat and Lou Pannell; production design: Simon Glaister; second camera: Becky Freeman; graphic design: Matthew Angel; score composer: Charlotte Hatherley; art department: Phoebe Baker, Andrea Benyi, Hannah Brasier, Lauren Delacca, Izzy Huang, Freya Robinson, Lauren Siemonsma, Simone Steel, Sarah Xie; costume assistants: Lauren Cray, Clementine Day, Elizabeth Douglas, Michelle Drury, Esther Gauntlett, Jessie Kiely, Freyja Ronngard; protagonist: Rachel Coulson, Phoebe Baker, Andrea Benyi

Lucy McRae wishes to acknowledge Tony McRae, PinUp project space, Melbourne, and RMIT University, Melbourne, for generously supporting the production of this work.

Collection of the artist

# Lucy McRae artist and director

England born 1979, arrived Australia 1982, lived in England and the Netherlands 2001–19, United States 2019–

## Aesop, Melbourne commissioning agent

Australia est. 1987

## Morphe

2012

colour digital video, sound, 3 min (looped)

producer: Holly Krueger; production designer: Barnaby Monk; assistant art director: Maaïke Fransen; editor: Ine van den Elsen; score composer: Noia; line producer and first assistant director: Laetitia Migliore; costume designer: Janneke Verhoeven; project manager: Dan Honey; agent: Lou Weis; art department: Maya LaCroix, Frank Verkade and James Teng; protagonist: Cara To

Collection of the artist

In this work, commissioned by the Australian luxury skincare brand Aesop, Lucy McRae focuses on the highly commercialised arena of the cosmetics and beauty industry. An imaginative take on the future of the beauty industry, depicting super-sensory beauty treatments for the human body, *Morphe* sees McRae investigate new application methods for transdermal products using spray-on membranes and compression therapies. She imagines ways we might engage with skincare ten to twenty years in the future. Shown in department stores alongside Aesop products, *Morphe* is also used as part of Aesop staff training.

## **Lucy McRae** artist and director

England born 1979, arrived Australia 1982, lived in England and the Netherlands 2001–19, United States 2019–

## **MissChu, Sydney** commissioning agent

Australia est. 2007

## **Make your maker**

2012

colour digital video, sound, 3 min (looped)

edition 1 of 4

executive director: Lou Weis; producer: Beatriz de Rijke; cinematography: Christian Paulussen; editor: Phil Currie, Stitch Editing, London; protagonist: Rolien Zonneveld; score composer: James O'Connell; assistant art director: Maaïke Fransen; art department: Jeffrey Heiligers, Malou van Dijck, Alexandra Stück, Lisa van den Heuvel, Charlotte Jonckheer; colourist: Norman Nisbet

Collection of the National Gallery of Victoria

*Make your maker* explores the inseparability of the human body from reproduction and consumption. In a laboratory setting, jellies and organic materials interact with human bodies, blurring the line between specimen and subject, with food cast in the shapes of bodies and faces. Through this concept, the work addresses eating and genetic engineering, and ideas of evolution and renewal. Commissioned by Sydney restaurateur Nahji Chu, *Make your maker* envisages a future where biological augmentation and cloning will occur in the kitchen. More challenging is McRae's proposition that we will eat our cloned and technologically enhanced selves.

## **Lucy McRae** artist and director

England born 1979, arrived Australia 1982, lived in England and the Netherlands 2001–19, United States 2019–

## **Allure, Moscow**, commissioning agent

Russia est. 2012

## **Prepping the body for space vol. 2**

2014

colour digital video, sound, 2 min 30 sec (looped)

executive producer: Pollyanna Whitman; producer: Valtteri Laihanen; cinematography and editor: La Familia, London; score composer: Zelig Sound, London; vacuum chamber fabricator: James Tattersall; director's assistant: Lesley Ann Daly; performers: Katie Dawkins and Jodie Cowie, Olympic synchronised swimmers, London; technical assistant: Thomas Duggan

Collection of the artist

*Prepping the body for space vol. 2* captures the outcome of an installation staged by Lucy McRae for the *Frontiers* exhibition on the future of mobility for the 2014 London Design Festival. The installation proposed a method for making the body more resilient to zero gravity. In zero gravity the body's circulation decreases, negatively affecting the blood, fluid, muscles, skeletal system and hormones. McRae created a chamber made from a strong, thin silver polyester film and lined with lycra. Air was slowly expelled, creating a shrink-wrap around the body, with the compression creating a calming, pleasurable sensation by increasing blood flow.



## **Lucy McRae** artist and director

England born 1979, arrived Australia 1982, lived in England and the Netherlands 2001–19, United States 2019–

## **Inventor Lab, New York**

co-commissioning agent

United States est. 2014

## **Qualcomm, San Diego**

co-commissioning agent

United States est. 1985

## **Future day spa**

2015

colour digital video, sound, 2 min 32 sec (looped)

producer: Pollyanna Whitman and Inventor Lab, New York City; curator and co-producer: Aaron Duffy; scriptwriter: Chloe Corner; score composer: James O'Connell; fabricator: Machine Histories, Los Angeles; graphic design: Thomas Cester with Two Create, London; cinematographer: Drew Aiello; protagonists: Carl and Kevin Wolfenden, Ciara and Tiara Jackson

Collection of the artist

This video captures an installation mounted by McRae at the Recode conference in Los Angeles in 2015. McRae's intention with *Future day spa* was to prototype a body isolation test. The 'spa' provided participants with a 'synthesised hug' from an object resembling a giant silver balloon, then measured how the embrace affected them. McRae captured the participants' biometric data via a pulse oximeter before and after their experience. The experiment generated intense reactions in some participants.

## **Lucy McRae** artist and director

England born 1979, arrived Australia 1982, lived in England and the Netherlands 2001–19, United States 2019–

## **Dr Niels Wouters** research lead

Belgium born 1984, arrived Australia 2014, lived in Portugal and Austria 2005–09

## **Science Gallery Melbourne**

commissioning agent

Australia est. 2017

## **Biometric mirror**

2018

interactive video algorithm, LCD monitor

AI developer: Interaction Design Lab, The University of Melbourne; software developer: Sandpit, Melbourne; producer: Alice Parker; lighting designer: Luke McMahon; light fabricator: Boom Studios, Melbourne

Lucy McRae wishes to acknowledge The University of Melbourne for commissioning the production of this work.

Collection of the artist

...continued overleaf

*Biometric mirror* uses artificial intelligence (AI) technology in a two-stage process. Stage one maps certain biometrics, or physical characteristics, to attempt to ascertain non-physical attributes, such as demographic or psychological information. Stage two constructs a 'perfect face', mapping the image using the Marquardt Beauty Mask, a data-derived mathematical model for facial perfection developed by a Hollywood plastic surgeon. The artwork prompts viewers to consider the complexities of AI technologies, ranging from questions about how results are determined, the source of the data that informs the algorithm and the accuracy of the results, to the potential uses or misuses of such technology in the quest for physical perfection or in broader society.

# ***The institute of isolation***

*The institute of isolation* brings together the threads of McRae's inquiry and experimentation over many years. In this work, McRae proposes that our future biology will most likely be augmented by a mixture of physical design, emotional reconditioning, molecular biology and technology. It also asks us to consider, beyond the technological challenges, whether humans could in fact psychologically and physically endure in space.

Informed by conversations about the exploration of Mars and off-planet living, propounded by some as a strategy to prolong human existence should earth no longer be able to support life, this fictional documentary charts the process of a female astronaut preparing for the physical and mental isolation of prolonged space travel.

Set in a near-future reality, this fictional research and training ground is designed to condition fundamental aspects of human biology. McRae, the astronaut protagonist, progresses through a series of sensory chambers, including a microgravity trainer, a surgical clinic for biological adjustment, and an anechoic [echo-free] chamber.

These fictional locations reveal the possible role of architecture and spaces in altering human biology, while also speculating of some of the systems we may need to enhance a person's psychological resilience so they might navigate profound loneliness, silence and

# **Lucy McRae** artist, director, producer and writer

England born 1979, arrived Australia 1982, lived in England  
and the Netherlands 2001–19, United States 2019–

## **Ars Electronica, Linz**

co-commissioning agent

Austria est. 1996

## **Sparks, Brussels**

co-commissioning agent

Belgium est. 2015

## **The institute of isolation**

2016

colour digital video, sound, 9 min 38 sec (looped)

edition of 6

co-writer and cinematographer: Lotje Sodderland; co-producer: Claudia Schnugg; editor: Domenico Favata; original score: Bizarre Rituals, United Kingdom; microgravity trainer fabricator: Daniel Gower; micro gravity trainer welder: Oliver Robinson; science narrative advisor: Dr Steve Dorney, Juan Enriquez, Prof. Emmanuele A. Jannini, Prof. Nicolas Rose, Brad Sanderson; costume design: Rombaut, Takato Sato, Mark Ruffs, Wanpei Lee; art department: Tamara Hoogeweegen, Britt Berden, Agusta Arnardottir, Luke Hart, Alexandra Lucas, Froya Crabtree, Ross Edwards, John Macken; visual effects supervisor: Glen Holbrook; visual effects compositor: Michael Mayr, Andreas Jalsovec, Marc Castellvi; production assistant: Janneke Verhoeven; locations: Ricardo Bofill La Fábrica, Barcelona; Royal Botanic Gardens Kew, Palm House and Treetop, UK; University of Southampton Anechoic Chamber and Psychoacoustics Lab, UK; LKH-Universitätsklinikum Thoracic Clinic and Hyperbaric Surgery, Graz; La Sainte Union Catholic School, UK; University of Southampton Towing Tank, UK; Fischauer Thermalbath, Graz; GSK Human Performance Lab, UK

Collection of the artist

## For kids

Did you know that before an astronaut can fly to space they need to train and prepare their body? Being in space is very different to living on Earth. In space there is no gravity to keep your feet on the ground and no oxygen to breathe. Wearing a spacesuit, an astronaut must learn to breathe and move their body as if floating in water. In this film by artist Lucy McRae, a female astronaut is in training. A big part of her training is also learning to be content and calm when being alone, because it can be lonely in space.