Libby Heaney

Selected works 2019-2021

ent -

CLASSES

The Last Judgement

FIGURES, £igur€$, go figure!?

Figures in Limbo

Agency is the Ability to Act

touch is response-ability

The Whole Earth Chanting

Cephalopod Aliens

Ent -

2021-2022, 360 video installation with
quantum computing and audio,
unreal engine 4 app,
15min loop

After entering the black box the viewers find themselves
in a multilayered immersive experience of parallel
worlds, encountering pulsating, wave- & partcle-like,
hybrid fantastical creatures. Throughout the piece, the
whole scene collapses, simulating the destruction of
entanglement and superposition that are created inside
quantum computers when being measured or disturbed.

Set within a quantum interpretation of the central panel
of Hieronymus Bosch's triptych The Garden of Earthly
Delights (1490/1500), the hybrid quantum creatures
– all of which are quantum manipulations of Heaney's
wet-on-wet paintings – are situated on the edge
between paradise and hell. The artist speculates about
the multiple potential future uses of quantum computing
and on how this new technology will develop and what
impact it might have on the world & society.
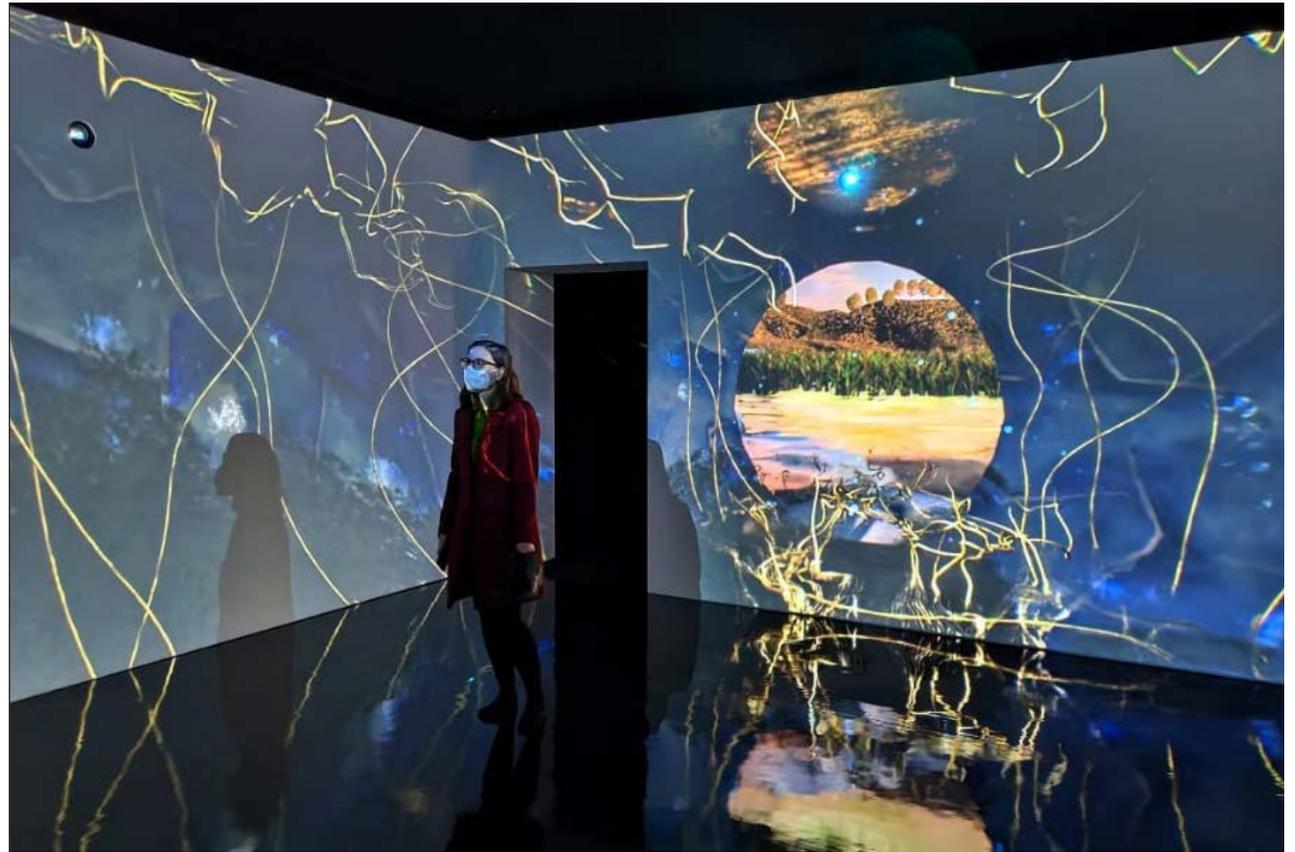
Installation view of Ent- at
ZKM, Germany, 2021.

Ent - has been commissioned by Light Art Space (LAS) and
will be presented at Schering Stiftung, Berlin with LAS in
February 2022. The first chapter of the work will be presented
at ZKM's BioMedia exhibition Dec 2021.

CLASSES

2021, HD digital video with audio,
15min loop

CLASSES is a video essay exploring the entanglements between machine learning classification and social class(ification). The exhibit takes place in a simulated model of a London council estate, where the artist lives, inviting the audiences to examine their own biases around the stereotypical housing of the (lower) working class in the UK. The drone photography and photogrammetry sometimes resulted in glitches and distortions in the 3D models, which are visible from only certain perspectives, highlighting the difficulties in capturing a true representation of the world from all viewpoints.

Machine and human voices narrate aspects of Heaney's in-depth research into accented speech recognition, natural language processing* and public space surveillance, to understand how historical and cultural biases around social class are being translated into code and how this affects people's material conditions.

To offer an alternative, towards the end of the video, Heaney takes inspiration from the community gardening on her estate to propose a rewilded AI. Through a poetic narrative & the liquid visuals, she suggests creating an AI without vertical categories & without powerful humans at the centre, but rather an AI that builds & strengthens connections across all ecosystems.

CLASSES was commissioned by the Science Gallery Dublin.

*GPT-J, Facebook's Fasttext and the GloVe word model.
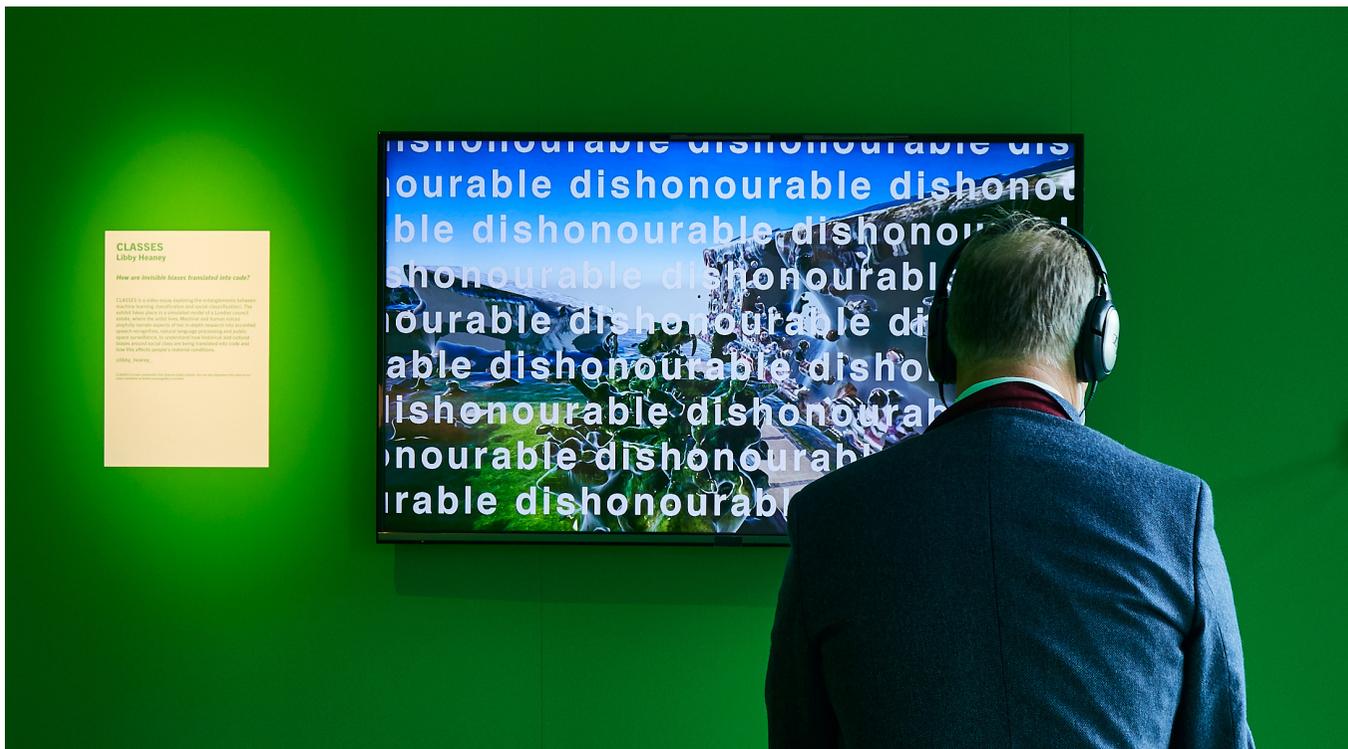
Above: Installation view of CLASSES at the Science Gallery, Dublin.
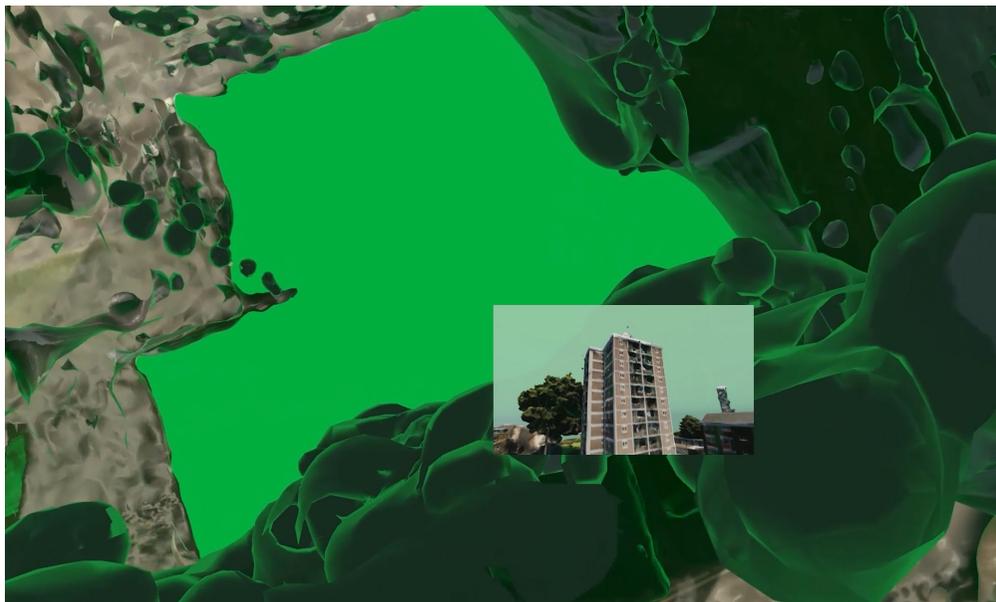
Left: Still from CLASSES, 2021.

The Last Judgement

2020-2021, 8 drawings, pencil on paper,
26 x 36cm (unframed)
4 books, pencil on paper, 43 x 30cm (open)

The eight drawings are Heaney's interpretation of Hieronymus Bosch's The Last Judgement, updated by the artist with bodies from mostly western art history - typically white, young, fit and able - caught in the whirlwind of techno-capitalism, where invisibility is the disciplining power.

Each body has been processed by the OpenPose computer vision algorithm - the visible, acceptable bodies are the ones overlaid with a coloured 'data skeletons' and are the same, 'acceptable' bodies from western art history.

By drawing parallels between machine learning and art history, the piece highlights how cultural and historical biases are now being translated into code, and explores the current capitalist context of emerging technologies, comparing it to religious and enlightenment contexts of canonical artworks.

Each drawing is accompanied by a lyrical verse playfully exploring the themes & research behind each drawing. The verses are illustrated and presented in accounting notebooks - a present day version of the illuminated manuscripts.
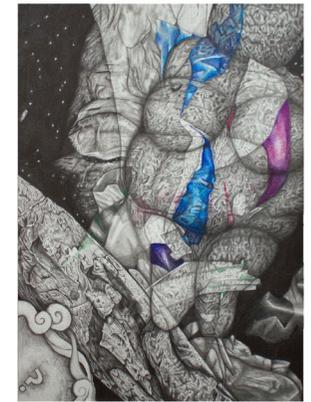
Above: Eight drawings from The Last Judgement, 2020-2021.

Right/Below: Installation views from BIAS at Science Gallery Dublin, 2021.

FIGURES, £igur€$, go figure?!

2020, HD digital video with audio
15min loop

FIGURES, £igur€$, go figure?! is a video essay investigating representations of the human body in computer vision & machine learning datasets and parallels in (mostly) western art history. Machine and human voices narrate aspects of Heaney's in-depth research.

The work starts by dealing with the insufficiencies of masculine, rational frames of representation and then eventually transforms to reconceptualise the body as boundary-less and form-less through the lens of quantum physics. Heaney uses quantum computing algorithms* here to reconfigure images of the body from art history.

The point of this is to highlight the constructed nature of the categorical systems we currently live within and to show that other alternatives are possible. Here the reconceptualised, plural body evades the machine gaze and therefore digital modes of surveillance and control.

Above: Still from FIGURES, £igur€$, go figure?! 2020.

Left: Still from FIGURES, £igur€$, go figure?!, 2020.

* Heaney writes her own code for IBM's quantum computing systems and uses data from various entangled states to distort the digital images.

FIGURES, £igur€$, go figure?! was commissioned by Somerset House Studios from their Amplify programme of online events, 2020.

Figures in Limbo

2020, HD digital video with audio
9min loop

Figures in Limbo is a video animation exploring representations of the body in computer vision & datasets and parallels in western art history. The title Figures in Limbo refers to the central panel of Bosch's triptych The Last Judgement.

The video starts as 3D render of an infinite display of smart phones, iPads, and laptops, all with their screens showing this same green backdrop and white figure. The work takes as its launching point the figure of Vitruvian man, and quickly transforms into a looping narration that deals with the capacities of the body; of its movement, and of its representation. It begins as something akin to a video essay on the insufficiencies of representation, eventually transforms into a playing of and with language; into a series of poetic deconstructions that work to break things down, break them apart, see what else might be possible.

As the language breaks down so too does the image. The screens and the classical imagery — not just Da Vinci's formulas, but also sections that angrily mock the historically 'appropriate' place for the woman's body in the classical canon — are replaced with abstract, digitally composited fields of empty space, with fiery phenomena hanging and burning in the air, with floating debris and mythic bodies and other imagery bordering on fantasy. Eventually these break down completely and we are left with swirling abstractions: a final and formally absolute decomposition, and a space, at least in theory (if we are able to take sufficient ownership the language needed to articulate it), of generative possibility.
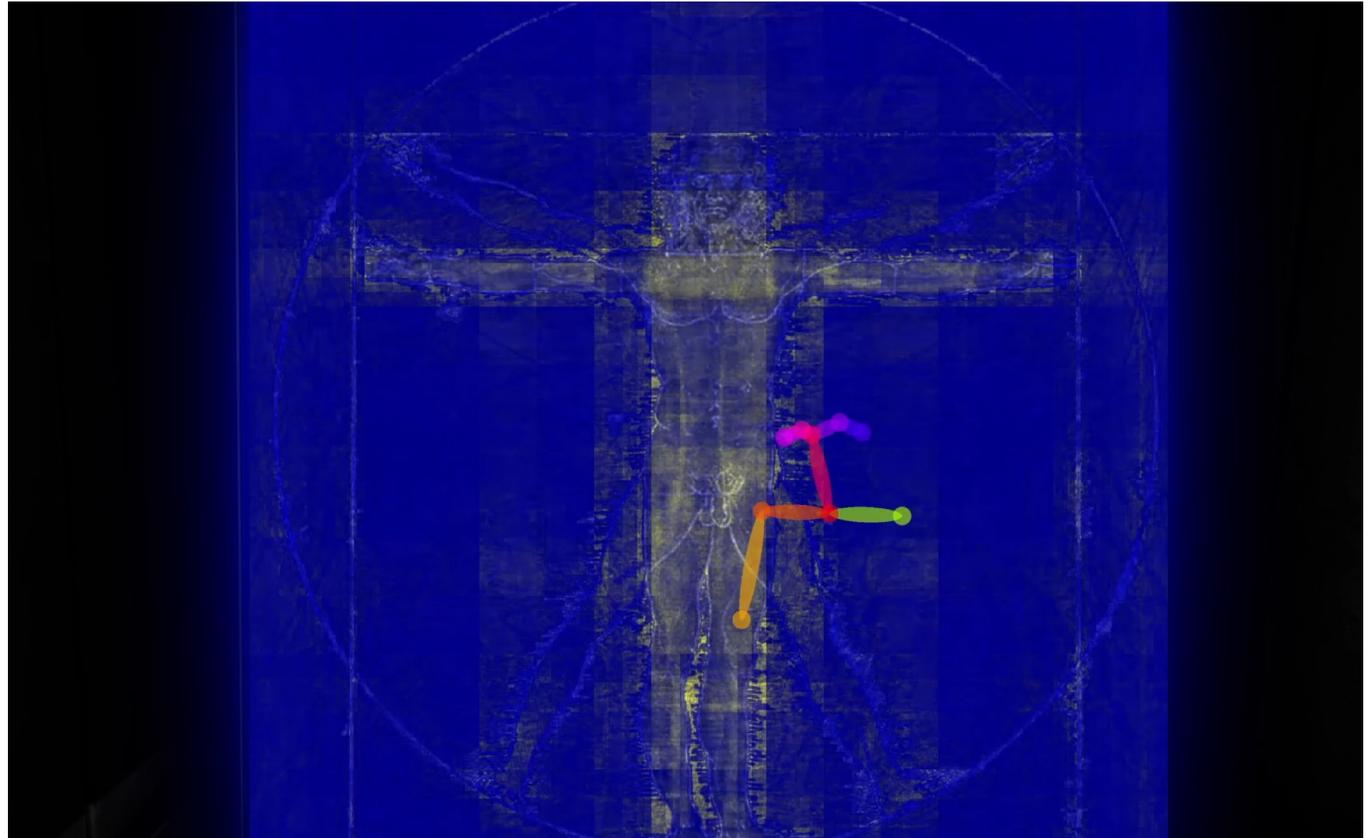
Above: Still from Figures in Limbo, 2020.

Left: Still from Figures in Limbo, 2020.

Agency is the Ability to Act

2021, Instagram Stories interactive animation,
2 durational performances of 24hrs,
200 still images, 1080 x 1920 pixels

Agency is the Ability to Act came out of the need to exhibit online during the Covid lockdowns and from Heaney's desire to use the materiality of digital platforms like Instagram as both the subject and object of her work. In this piece, the participant's touch controls the movement of frames on Instagram stories, like a digital version of a flickpad animation

The work existed as two durational performances on Holden Gallery's Instagram Stories for 24 hours on the 3rd and 10th of Feb 2021. Each performance examined the ebb and flow of agency between the viewer and the app itself. The work asks how an app like Instagram might be seen as a simple organism with the intrinsic goal of keeping users continuously engaged (and therefore shedding data and clicking on ever more targeted ads). As part of her process, Heaney used quantum computing algorithms to animate watercolour paintings of unicellular organisms, creating uncanny delocalised creatures that viewers encounter occupying the black-box of their phone.

The title comes from Karen Barad's theory of agential reality where human and non-human entanglements create new intra-active phenomena.

Agency is the Ability to Act 2021 was commissioned by Holden Gallery, Manchester.

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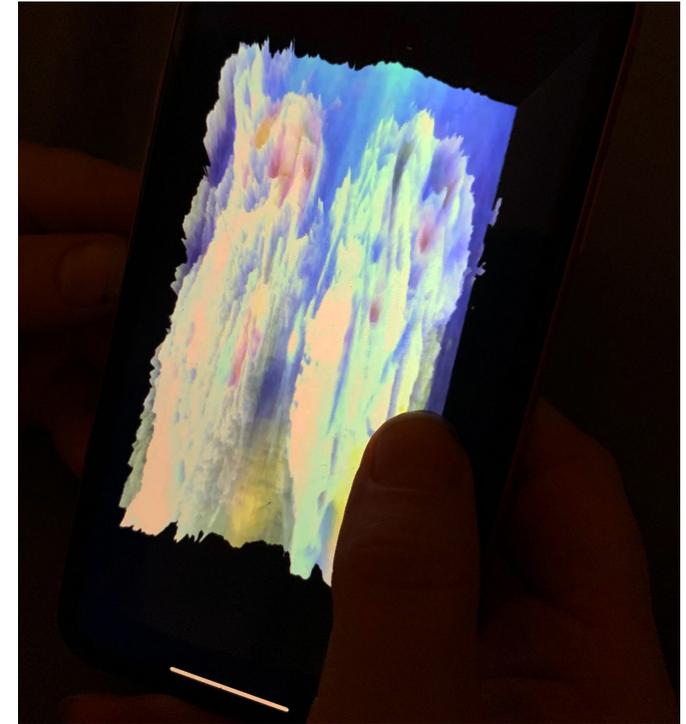
Above: Instagram stories view of Agency is the Ability to Act, 2021.

Left: Still from Agency is the Ability to Act, 2021

touch is response-ability

2020, Instagram Stories interactive animation,
2 durational performances of 24hrs,
200 still images, 2048 x 2048 pixels

'touch is reponse-ability' came out of the need to exhibit
online during the Covid lockdowns and from Heaney's
desire to use the materiality of digital platforms like
Instagram as both the subject and object of the work.
The participant's touch controls the movement of frames
on Instagram stories, like a digital version of a flickpad
animation

The work existed as two durational performances that
invited viewers to activate the animation through the
action of touch. Each performance lasted for 24 hours
on LUX Instagram.

The first and last stills in each performance were
created by Heaney based on extensive research into
representations of the body in computer vision and
AI and parallels in art history, highlighting the biases
in which bodies are seen and neglected in both. The
subsequent frames in the animation were generated by
passing the initial frame through IBM's quantum
computing systems, which through entangled pixels,
fragments and inverts the image.

In every frame the body from the initial image always
exists but the quantum computing algorithm enables us
to see it from alternative, multiple perspectives –
boundary-less and form-less. The stills are watched
by a computer vision algorithm typical for social media
platforms which loses track of the body as it is released
from its encoded shackles.

The title of the work comes from Barad's essay On
Touching - the Inhuman That Therefore I Am.
The piece questions the responsibiliy of interacting with
digital platforms.
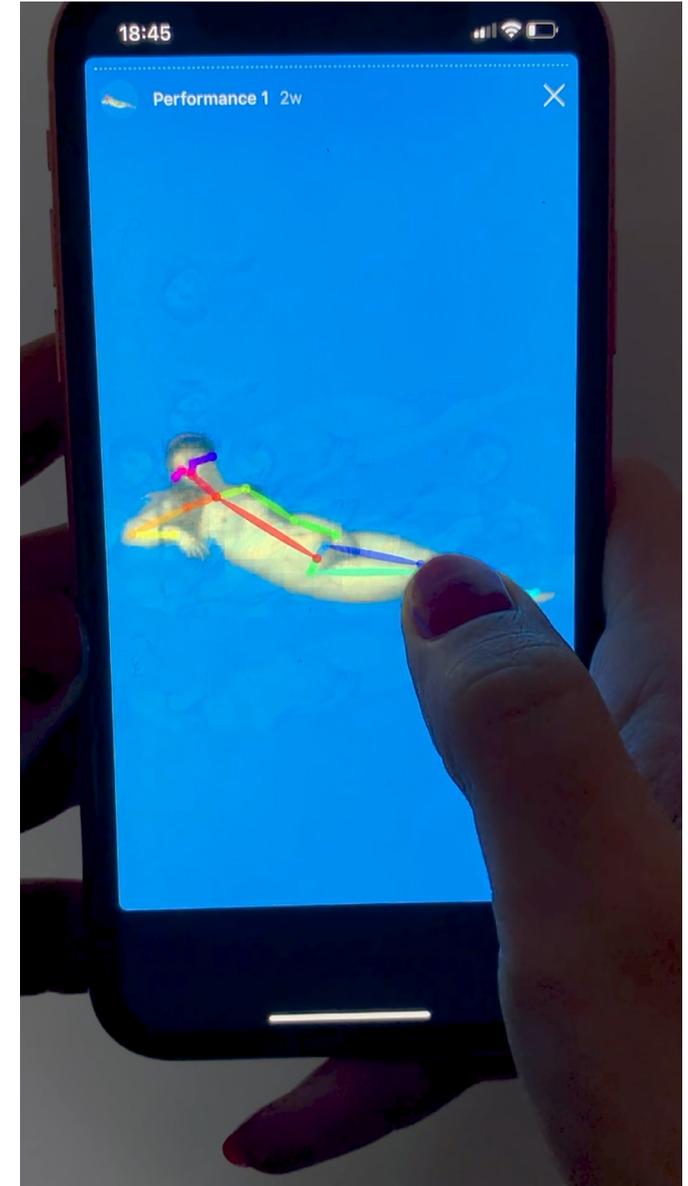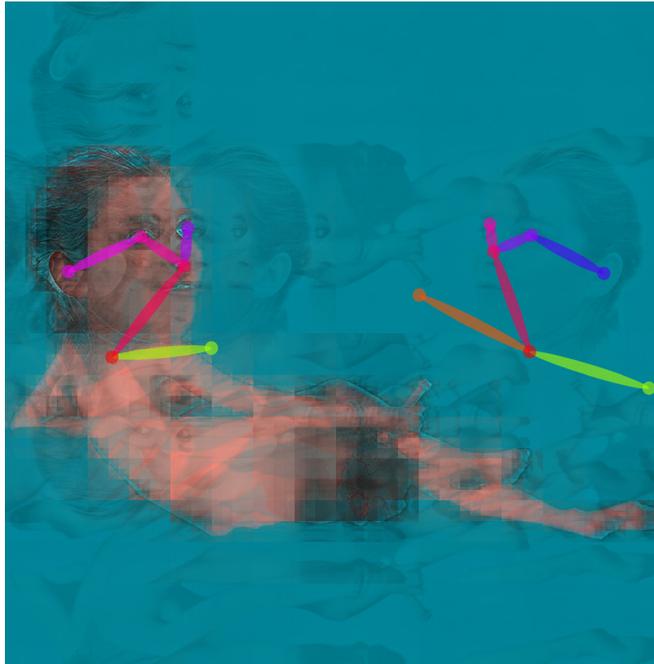
Above: Instagram stories views of touch is response-ability,
2020

Above left: Still from touch is response-ability 2020.

touch is reponse-ability, 2020, was commissioned by
Hervisions at LUX as part of their OUT of TOUCH programme.

The Whole Earth Chanting
in collaboration with Nabihah Iqbal

2019-present, AV performance with AI chanting and AI visuals played live, 45min

The Whole Earth Chanting is a dreamlike performance of interspecies chanting, haunting vocals, saturated colours and hypnotic visuals.

To make the work, the artist & quantum physicist Libby Heaney recorded various human and non-human 'chants', including voices that are historically neglected from the archives. Heaney then trained an AI programme to produce its own chants including hybrid combinations of the originals. Recordings of the originals and AI-generated chants were passed to her collaborator, fellow Somerset House resident & musician Nabihah Iqbal who has woven them into a 45 minute work for live performance, initially in a church through Resonant Sounds dub soundsystem.

In the work, Heaney and Iqbal open the AI up to new modes of experience and relation through the power of voice, sound and music. The Whole Earth Chanting generate forms of belonging and collective identity between humans and non-humans physically and sonically present in the space: a post-human spiritualism in which human perception is entangled with the material world. As religious chants blur with football fans' singing, birds and Iqbal's voice, the boundaries of categories through which we usually understand the world are dissolved, creating space for a transcendental journey enabling the 'other' to enter and transform.

Right: Heaney and Iqbal perform at the STARTS AI & Music day at Sonar CCCB, Barcelona, 2021.
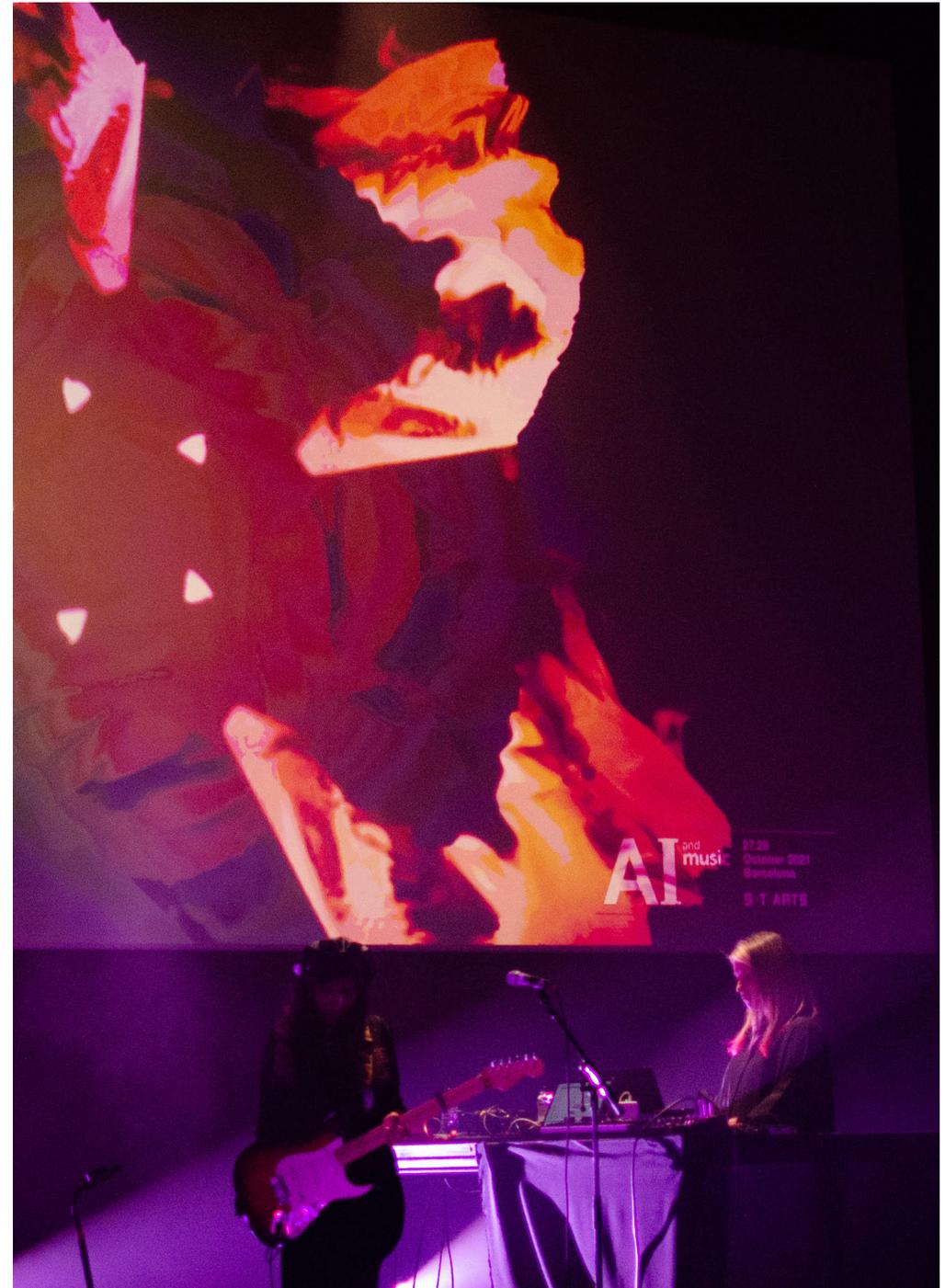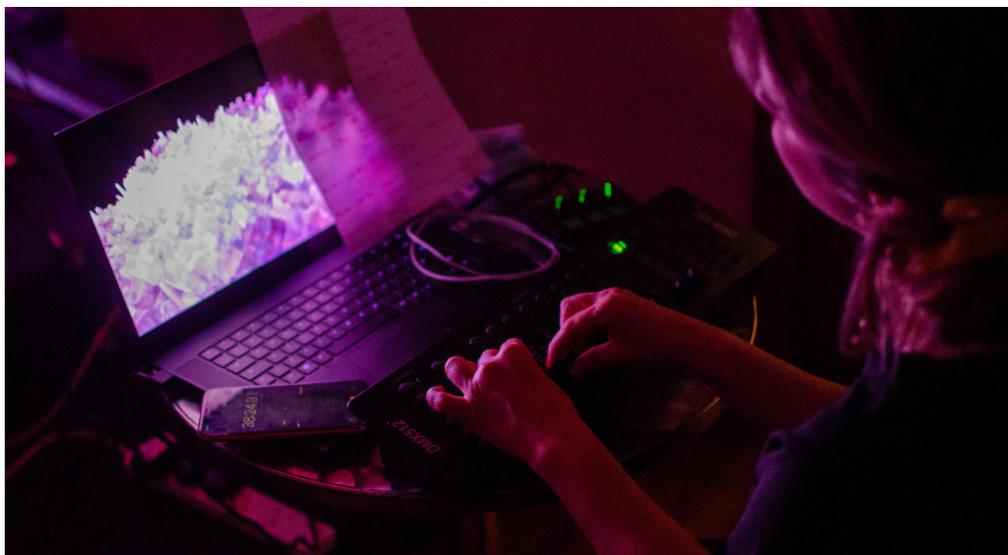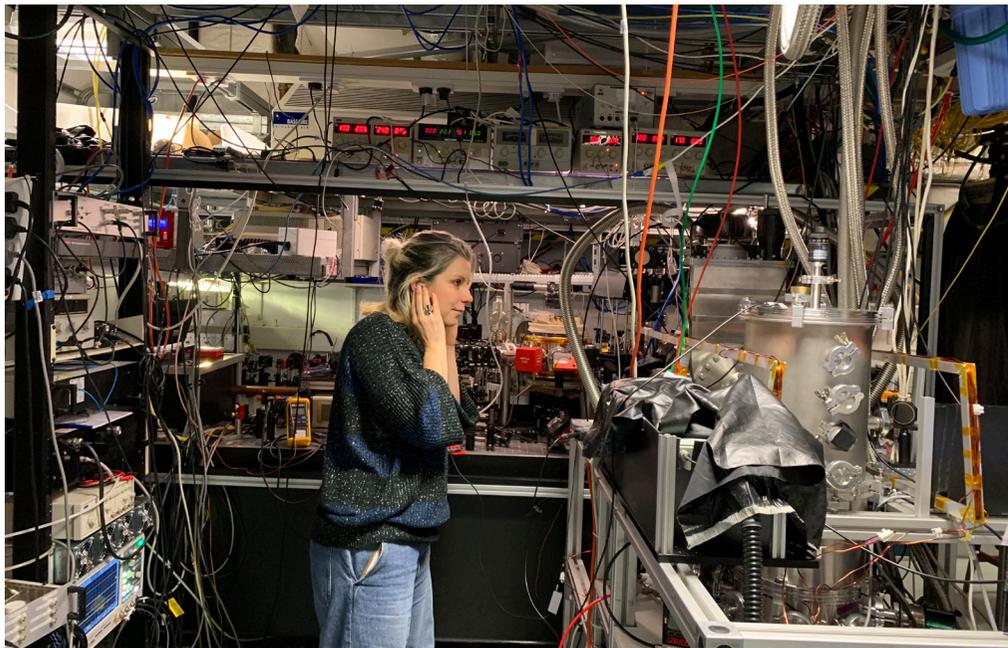
Top: Heaney recording the vibrations of a quantum physics lab at Imperial College London.

Above: Heaney playing the live visuals for The Whole Earth Chanting, Loughborough, 2021.

Right: Iqbal peforming The Whole Earth Chanting, Loughborough, 2021.
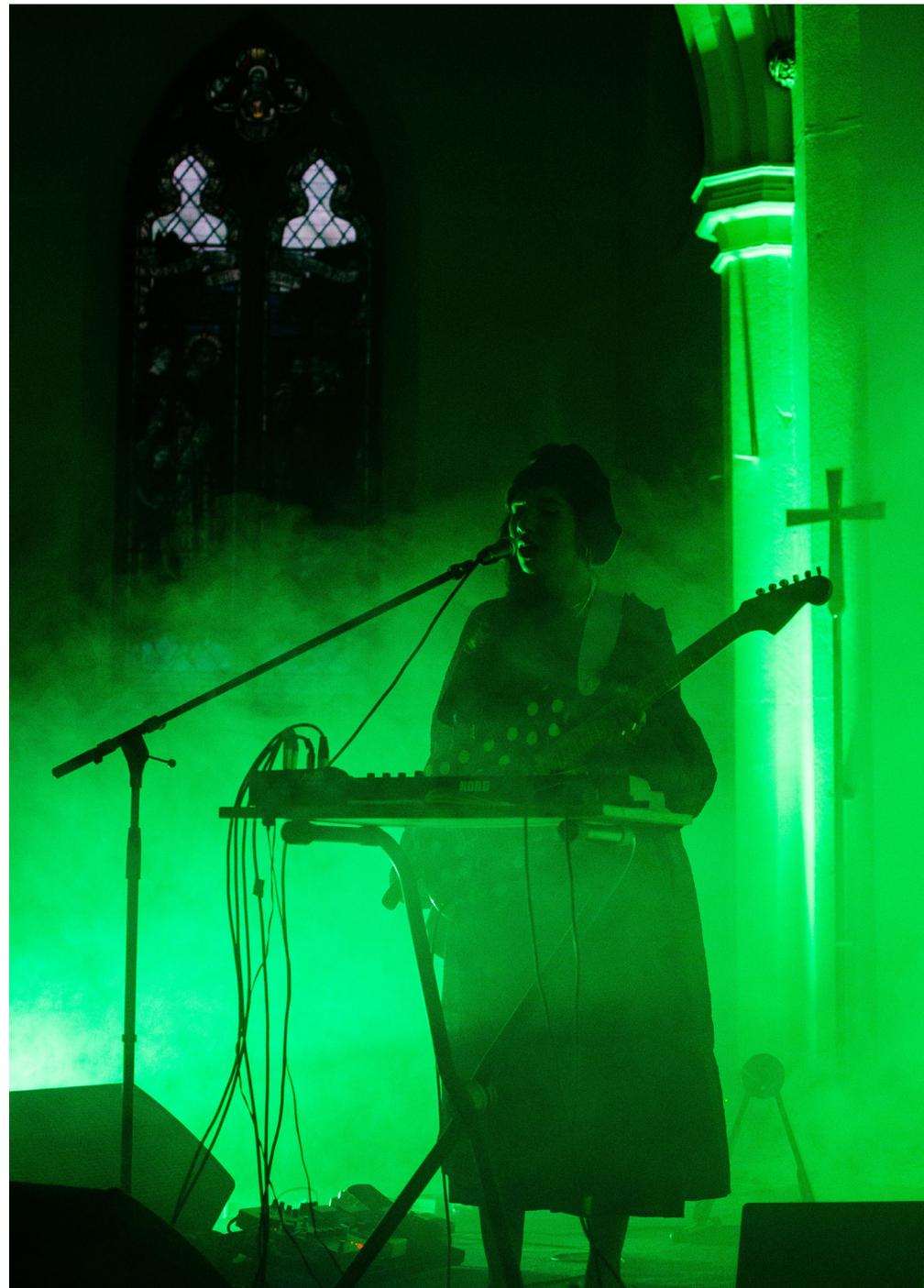
Cephalopod Aliens (studies of tentacular creatures with quantum algorithms)

2019, HD video no audio, 1min30 loop

Likely first video artwork made with IBMs cloud based quantum computing systems*, Cephalopod Aliens is a single screen moving image piece and is also Heaney's first work using IBM's quantum computing systems as her tools.

For the artwork, she created a series of watercolour paintings on a deliberately wet surface so the paint behaved as a wave and interfered with itself - similar to quantum wave-like behaviour within a quantum computer. She then scanned the physical image and parsed it through a quantum algorithm, which through entangled pixels fragmented and inverted the image.

All of the frames besides the initial watercolour images are generated through the quantum effects of superposition and entanglement.

Cephalopod Aliens seeks to question the boundaries of bodies and things, proposing a fluid and formless alternative to the physical limitations of living creatures, highlighting entanglements across space.
Throughout the video the original cephalopod painting always exists, but due to quantum coherences between the pixels it is delocalised across the entire picture frame, accessing previously hidden perspectives of the original image, until it eventually recoheres.

Still from Cephalopod Aliens, 2019.

* Quantum computers process information using the laws of quantum physics, which are very different to the Newtonian physics governing our macroscopic world. Heaney writes her own code for the quantum computing systems with the aim of revealing traces of the underlying quantum pluralities and entanglements.