For release: 28 Feb 2019

AI: More than Human
16 May–26 Aug 2019, Barbican Centre
Media View: 15 May 2019, 10am –1pm
www.barbican.org.uk/morethanhuman
#morethanhuman @barbicancentre
An exhibition conceived and curated by **Barbican International Enterprises**
Co-produced with **Groninger Forum**
Lead Sponsor Bupa Global
With additional support from Japan Centre
Media Partners: Dazed Media and Time Out

Opening in May 2019, the Barbican presents a major new exhibition: *AI: More than Human* – an unprecedented survey of creative and scientific developments in artificial intelligence, exploring the evolution of the relationship between humans and technology.

Part of *Life Rewired*, the Barbican's 2019 season exploring what it means to be human when technology is changing everything, *AI: More than Human* tells the rapidly developing story of AI, from its extraordinary ancient roots in Japanese Shintoism and Ada Lovelace and Charles Babbage's early experiments in computing, to AI's major developmental leaps from the 1940s to the present day to show how an age-old dream of creating intelligence has already become today's reality. Told through some of the most prominent and cutting-edge research projects, from **DeepMind, Jigsaw, Massachusetts Institute of Technology Computer Science Artificial Intelligence Laboratory (MIT CSAIL), IBM, Sony Computer Science Laboratories, Google Arts and Culture, Google PAIR, Affectiva, Lichtman Lab at Harvard, Eyewire, Wake Forest Institute for Regenerative Medicine, Wyss Institute** and **Emulate Inc.**

The exhibition presents commissions and projects by, artists, researchers and scientists **Memo Akten, Joy Buolamwini, Certain Measures (Andrew Witt & Tobias Nolte), Es Devlin, Stephanie Dinkins, Justine Emard, Alexandra Daisy Ginsberg, Stefan Hurtig & Detlef Weitz, Hiroshi Ishiguro & Takashi Ikegami, Mario Klingemann, Kode 9, Lawrence Lek, Daito Manabe & Yukiyasu Kamitani, Massive Attack & Mick Grierson, Lauren McCarthy, Yoichi Ochiai, Neri Oxman, Qosmo, Anna Ridler, Chris Salter, Sam Twidale and Marija Avramovic, teamLab** and **Universal Everything.**

With digital media, immersive art installations and a chance for visitors to interact directly with exhibits to experience AI's capabilities first-hand, this festival-style exhibition takes place all over the Centre to examine the subject from multiple, global perspectives and give visitors the tools to decide for themselves how to navigate our evolving world. It will ask the big questions: What does it mean to be human? What is consciousness? Will machines ever outsmart a human? And how can humans and machines work collaboratively?

Section 1. The Dream of AI

The exhibition charts the human desire to bring the inanimate to life right back to ancient times, from the religious traditions of Shintoism and Judaism to the mystical science of alchemy.

Artist and electronic musician **Kode9** presents a newly commissioned sound installation on the golem. A mythical creature from Jewish folklore, the golem has influenced art, literature and film for centuries from *Frankenstein* to *Blade Runner*. Kode9's audio essay adapts and samples from many of these stories of unruly artificial entities to create an eerie starting point to the exhibition. **Stefan Hurtig & Detlef Weitz** also look at the golem as well as other artificial life forms and how they are imagined in film and television.

This section explores Japanese animism philosophy, including Shinto food ceremonies and a selection of ancient anthropomorphic Japanese cooking tools, shown for the first time outside Japan. **Sam Twidale** and **Marija Avramovic** also look at AI through the lens of Japanese Shinto beliefs to explore notions of animism and techno-animism in *Sunshowers.*

Doraemon – one of the best known Japanese manga animations - will also be on display, exploring its influence on the philosophy of robotics and technology development.

Section 2. Mind Machines

This section explains how AI has developed through history from the early innovators who tried to convert rational thought into code, to the creation of the first neural network in the 1940s, which copied the brain's own processes and developed into machine learning – when an AI is able to learn, respond and improve by itself.

It includes some of the most exciting and important moments and figures in AI's history: computing pioneers Ada Lovelace and Charles Babbage; Claude Shannon's experimental games; Alan Turing's groundbreaking efforts to decipher code in World War II; Deep Blue vs chess champion Garry Kasparov; IBM's Watson, who beat a human on US gameshow, *Jeopardy!* in 2011; DeepMind's AlphaGo, which became the first computer to defeat a professional in the complex Chinese strategy game Go in 2016, including an in-depth explanation of the surprising Move 37 – a turning point in the history of AI, that shocked the world.

This section also looks at how AI sees images, understands language and moves, as artificial intelligence developed beyond the brain to the body. Projects on display include MIT CSAIL's SoFi - a robotic fish that can independently swim alongside real fish in the sea and Sony's 2018 robot puppy, aibo, who uses its database of memories and experiences to develop its own personality. Google PAIR's project *Waterfall of Meaning* is a poetic glimpse into the interior of an AI, showing how a machine absorbs human associations between words.

Artist **Mario Klingemann's** piece *Circuit Training* invites visitors to take part in teaching a neural network to create a piece of art. Visitors will first help create the data set by allowing the AI to capture their image, then select from the visuals produced by the network, to teach it what they find interesting. The machine is constantly learning from this human interaction to create an evolving piece of live art.

In *Myriad (Tulips),* artist **Anna Ridler** looks at the politics and process of using large datasets to produce a piece of art. Inspired by 'tulip-mania' - the financial craze for tulip bulbs that swept across the Netherlands in the 1630s, she took 10,000 photographs of tulips and categorised them by hand, revealing the human aspect that sits behind machine learning. Her second piece *Mosaic Virus* uses this data set to create a video work generated by an AI, which shows a tulip blooming, an updated version of a Dutch still life for the 21st Century.

Section 3. Data Worlds

At the heart of the main exhibition in The Curve is Data Worlds. This section examines AI's capability to improve commerce, change society and enhance our personal lives. It looks at AI's real-life application in fields such as healthcare, journalism and retail. **Affectiva**, the leader in Human Perception AI, will demonstrate how AI can improve road safety and the transportation experience, through a driving arcade game during which Affectiva's AI will track drivers' emotions and reactions as they encounter different situations. In **Sony CSL's** *Kreyon City*, visitors plan and build their own city out of LEGO and learn how the combination of human creativity and AI could represent a promising tool in major architecture and infrastructure decisions.

Lauren McCarthy's experiment to become a human version of a smart home intelligence system explores the tensions between intimacy vs privacy, convenience vs the agency they present, and the role of human labour in the future of automation. **Qosmo's** sound artwork creates a dialogue between human and machine by inviting visitors to make music together with AI.

Nexus Studios have produced a series of interactive works that demonstrate how AI works. Visitors can opt to be classified by an AI, revealing how the computer interprets their image. Nexus Studios have collaborated with artist **Memo Akten** to present *Learning to See,* which allows visitors to manipulate everyday objects to illustrate how a neural network trained on a specific data set can be fooled into seeing the world as a painting. It can see only what it already knows, just like us.

Data Worlds also addresses important ethical issues such as bias, control, truth and privacy. Scientist, activist and founder of the Algorithmic Justice League, **Joy Buolamwini** examines racial and gender bias in facial analysis software. As a graduate student, Joy found an AI system detected her better when she was wearing a white mask, prompting her research project Gender Shades. This project uncovered the bias built in to commercial AI in gender classification showing that facial analysis technology AI has a heavy bias towards white males. In parallel to this, Joy wrote *AI, Ain't I A Woman*- a spoken word piece that highlights the ways in which artificial intelligence can misinterpret the images of iconic black women.

Section 4. Endless Evolution

This final section of the exhibition looks at the future of our species and also envisions the creation of a new species, reflecting on the laws of 'nature' and how artificial forms of life fit into this. A newly commissioned set of interviews will discuss themes of the future through the eyes of visionary thinkers.

Massive Attack mark the 20th anniversary of their landmark album *Mezzanine* by encoding the album in strands of synthetic DNA in a spraypaint can – a nod towards founding member and visual artist **Robert del Naja's** roots as the pioneer of the Bristol Graffiti scene. Each spray can contains around one million copies of *Mezzanine*-encoded ink. The project highlights the need to find alternative storage solutions in a data-driven world, with DNA as a real possibility to store large quantities of data in the future.

Mezzanine will also be at the centre of a new sound composition – a co-production between Massive Attack and machine. Robert Del Naja is working with Mick Grierson at the Creative Computing Institute at University of the Arts London (UAL), students from UAL and Goldsmith's College, and Andrew Melchior of the Third Space Agency to create a unique piece of art that highlights the remarkable possibilities when music and technology collide. The album will be fed into a neural network and visitors will be able to affect its sound by their actions and movements, with the output returned in high definition.

This section includes Alter 3, created by roboticist **Hiroshi Ishiguro** and **Kohei Ogawa** with artificial life researcher **Takashi Ikegami** and **Itsuki Doi.** With a body of a bare machine and a genderless, ageless face, Alter learns and matures through an interplay with the surrounding world. **Justine Emard's** piece *Co(AI)xistence* explores a communication between different forms of intelligences: human and machine. Through signals, body movements and spoken language, she created the interaction between Alter and Mirai Moriyama, a Japanese performer. Using a deep learning system, Alter learns from his experiences and the two try to define new perspectives of co-existence in the world.

Stephanie Dinkins's new work *Not The Only One* is the multigenerational memoir of one black American family with which visitors can have conversations and ask questions, continuing her ongoing dialogue around AI and race, gender and aging. As society becomes more reliant on

artificial intelligence, many voices are left out of the creation of these systems and bias and discrimination can be encoded in AI systems. In *Not The Only One*, the AI is trained with the needs and ideals of races which are underrepresented in the tech sector.

Architect, designer and MIT Professor **Neri Oxman** presents ongoing projects from her research lab, The Mediated Matter Group at MIT.

The Synthetic Apiary explores the possibility of a controlled space in which seasonal honeybees can produce honey all year round. A large scale investigation into the cultivation of bees and their behaviour has huge implications for the future of the human race, due to the massive decline in bees worldwide over recent years.

In an era when we can engineer genomes and design life, ***Vespers***, explores what it means to design (with) life. From the relic of the ancient death mask to the design and digital fabrication of an adaptive and responsive living mask, the project points towards an imminent future where wearable interfaces and building skins are customised not only to fit a particular shape, but also a specific material, chemical and even genetic make-up, tailoring the wearable to both the body and the environment which it inhabits.

For the first time in the UK, Japanese media artist **Yoichi Ochiai** presents projects from his research lab, *Digital Nature*, including an artificial butterfly. *Resurrecting The Sublime* by **Christina Agapakis** of Ginkgo Bioworks, **Alexandra Daisy Ginsberg**, and **Sissel Tolaas**, brings back the smell of flowers made extinct through human activity. The creation of these smells asks questions about our relationship with nature and the decisions we make as a species.

Japanese art and technology specialist **Daito Manabe** from **Rhizomatiks** and neuroscientist **Yukiyasu Kamitani** present *Dissonant Imaginary*, a research art project that investigates the relationship between sound and images. Using brain decoding technology facilitated by fMRI (functional magnetic resonance imaging) to generate imagery visualised from brain activity data that changes according to sound, the project seeks to recreate the vivid emotional imagery that can be conjured when listening to a film soundtrack or nostalgic music and foresees a future in which music and visuals may directly interact with the brain as a new medium.

Massachusetts Institute of Technology (MIT), Woods Hole Oceanographic Institute (WHOI), Australian Center for Field Robotics, and **NASA** present pioneering research that took place in Costa Rican waters on Schmidt Ocean Institute's Research Vessel Falkor, using the deep sea as a testbed for exploration of Europa – one of Jupiter's moons.

This section also looks at the research labs using AI to revolutionise healthcare. **Lichtman Lab at Harvard** and **Eyewire** both look at mapping the brain in their research projects and the implications this could have for our health. **Wake Forest Institute for Regenerative Medicine** is engineering tissues and organs made from human cells in the lab. **Wyss Institute** and **Emulate, Inc.** present their human Organs-on-Chips technology that contain tiny hollow channels lined with living human cells and tissues, opening up new understanding of how different diseases, medicines, chemicals, and foods affect human health and potentially changing the way drugs are developed forever.

The Pit: teamLab

In the Pit, art collective teamLab will display their interactive digital installation *What a Loving and Beautiful World*, creating an immersive, ever-changing environment populated with Chinese characters and natural phenomena triggered by visitors.

When a visitor's shadow touches a character, the world contained inside that character unfolds, intermingling with the worlds released from the other characters to create an entirely new world, in which no two moments are ever the same.

An interdisciplinary group of professional artists, programmers, engineers, CG animators, mathematicians, and architects, teamLab aims to explore a new borderless relationship between humans and nature, and between oneself and the world through art by navigating the confluence of art, science, technology, and the natural world.

Level G

A series of new commissions will run across the Barbican's Level G spaces throughout the exhibition.

Digital art and design collective **Universal Everything** will take over the Barbican's main Silk Street entrance hall to create a new installation, *Mimic*, where visitors can interact with an AI version of themselves. Large digital avatars mimic visitors' movements onscreen. When the exhibition opens, the character begins in primitive, childlike form and evolves throughout the exhibition's run, as it learns new ergonomic abilities.

Chris Salter's piece *Totem* is a large-scale, dynamic installation that uses sensing and machine learning to inform its patterns, rhythm and behaviour that will give the installation a feeling of a living, breathing entity.

Lawrence Lek's open-world video game *2065* is set in a speculative future, when advanced automation means that people no longer have to work and can spend all day playing video games and art is indistinguishable from gaming. Integrating the architecture of the Barbican Curve into the virtual world, players are invited to play the role of an AI to imagine what life might be like in future years.

Artist and designer **Es Devlin's** *PoemPortraits* is a social sculpture that brings together art, design, poetry and machine learning; it has been created in collaboration with Google Arts and Culture and Ross Goodwin.

Each visitor will be invited to donate a single word to the piece. This word will be instantly incorporated into a two-line poem generated by an algorithm trained on 20 million words of poetry. This poem will form the photographic flash that illuminates each unique PoemPortrait.

The work is cumulative; each poem will also include a word donated by another visitor. At the end of the exhibition, a collective PoemPortrait will be generated from everyone's contributions: a trace of this transient social sculpture.

Inspired by Raymond Scott's Electronium machine, **Yuri Suzuki's** *Digital Electronium* gives visitors the chance to input sounds to create a changing soundscape through AI and algorithms.

A Machine View of London, a video work by **Certain Measures** (**Andrew Witt** and **Tobias Nolte**), presents an AI categorising and mapping the shapes of the one million buildings in London. This project is one of their series of FormMaps, an ongoing architectural research project that aims to compare and create a complete catalogue of building patterns from cities around the world.

Neil McConnon, Head of Barbican International Enterprises, said:
'*Artificial Intelligence is a key marker of the zeitgeist and we are thrilled to be exploring the subject, both as a motive for scientific progress and a stimulus for creativity. We hope that innovation in science will inspire and encourage discourse around this phenomenon and give a fresh perspective on the world in which we live. This exhibition looks at the journey to date and*

the potential to collaborate as we evolve together. We hope it will be an enlightening and dynamic experience, relevant to anyone invested in the future.'

Curated by guest curators Dr Suzanne Livingston and Maholo Uchida, the show is created and produced by Barbican International Enterprises – the Barbican's touring arm, which creates a dynamic mix of groundbreaking contemporary art and popular culture, architecture, design, fashion and photography exhibitions, taking them all over the world. Previous shows by the team include ***Into the Unknown: A Journey through Science Fiction*** (2017), ***Digital Revolution*** (2014), which became the Barbican's most visited show, attracting 93,000 visitors to the Centre and ***Designing 007: Fifty Years of Bond Style*** (2012). Co-produced by Groninger Forum, Netherlands, *AI: More than Human* will embark on an international tour after its run at the Barbican.

RELATED EVENTS

Further details on the accompanying events programme to be announced.

The Artist and the Machine
Level G
Sun 26 May 2019

A Level G programme of activity for visitors of all ages, exploring human creativity in the context of technological change. Inspired by the *AI: More than Human* exhibition, the programme will ask: how do machines augment our creative abilities? How does technology support creativity? While also exploring ownership in the context of human and machine created work. This event will include a mix of demonstrations, talks and hands-on activity that includes everything from 3D printing to slime mould. As part of the event, work will be showcased by partners Crafts Council and the Institute of Making at UCL.

Dazed Weekender
Life Rewired Hub, Level G
Sat 3 & Sun 4 Aug 2019

Media Partner Dazed take over the Life Rewired Hub on Level G for a weekend of AI inspired proceedings. Further details to be announced

CINEMA

AlphaGo (#) + Presentation by Thore Graepel
Tue 18 June, Cinema 2
(USA 2017, dir Greg Kohs, 90mins)

Greg Kohs' documentary *AlphaGo*, follows the first formal match of the computer programme, AlphaGo, against the European Champion Fan Hui to its landmark win against the legendary player Lee Sedol playing the ancient Chinese game of Go, a feat previously thought to be at least a decade away. Following the screening, **Thore Graepel**, principal research scientist at DeepMind, the world's leading AI research organisation and member of the team that developed the computer programme will explain how its inventive winning moves overturned conventional wisdom about this ancient game and what they might mean for the future of artificial intelligence.

WIRED Pulse: AI at the Barbican
Saturday 15 June, Barbican Centre
http://wired.uk/ai-event

WIRED Pulse: AI at the Barbican is a one-day event exploring the future of artificial intelligence and its impact on human experience. Curated by the award-winning WIRED editorial team and co-hosted by the Barbican Centre, the event features 8 high-level keynotes from thought-provoking disruptors and a Test Lab dedicated to AI demos.

This year's speakers include **Marcus du Sautoy**, mathematician and author of *The Creativity Code*, who will talk about AI's impact on creativity; lawyer and AI researcher **Sandra Wachter** from the Oxford Internet Institute, who will discuss the fascinating way algorithms make decisions – and the ethics behind it; and **Vishal Chatrath**, the Founder of Prowler.io, the startup taking decision-making into the virtual hands of artificial intelligence.

Taking place at the end of London Tech Week as the festival's official headline consumer event, **WIRED Pulse: AI at the Barbican** will attract over 400 attendees interested in the human aspect of artificial intelligence, how it impacts the way we live now, and how we could in the future. Set during the course of the Barbican's *AI: More than Human* exhibition and created from WIRED's engaging and trusted perspective, the event is uniquely positioned to offer audience members a multi-layered and memorable experience.

Special tickets are available for young people aged 16-19, and groups of students and concessions, ranging from £49-£129, and which also provide access to *AI: More than Human*

For more details email wiredevents@condenast.co.uk or book tickets online at http://wired.uk/ai-tickets.

ENDS

Notes to Editors

For further information, images or to arrange interviews, please contact:
Anna Dabrowski, Senior Communications Manager
020 7638 4141 ext: 8178
07921 219144
anna.dabrowski@barbican.org.uk

Exhibition details
The exhibition is created and produced by Barbican International Enterprises with guest curators Dr Suzanne Livingston and Maholo Uchida, with support from advisors: Ramon Amaro, Paola Antonelli, Natalia Fuchs, Hiroshi Ishiguro, Kenric McDowell, Murray Shanahan and Anders Sandberg.

The exhibition will be designed by Tonkin Liu, with additional media design by The Workers and graphic design by Mother Design. Lead Sponsor Bupa Global, With additional support from Japan Centre and AI: Summit. Media Partners: Dazed Media and Time Out.

Life Rewired **at the Barbican 2019**
Life Rewired is the Barbican's year-long arts and learning season exploring what it means to be human when technology is changing everything. Running throughout 2019, the season investigates the impact of the pace and extent of technological change on our culture and society, looking at how we can grasp and respond to the seismic shifts these advances will bring about.

Life Rewired demonstrates how artists are finding imaginative ways to communicate the human impact of unprecedented technological shifts and scientific advances, as well as finding creative new uses for Artificial Intelligence, big data, algorithms and virtual reality.
barbican.org.uk/liferewired

Exhibition guest curators

Dr Suzanne Livingston

Dr Suzanne Livingston has spent her career researching and questioning the entwined relationship between humans, culture and technology and the philosophical consequences emerging from that. Taking a multidisciplinary approach, Suzanne has worked across sectors in technology, arts, museums, education and business markets. As Global Principal at Wolff Olins, Suzanne develops strategy and exhibitions internationally with museum organisations such as the V&A, Whitney, ICA Boston, Qatar Museums and Southbank Centre and also with technology businesses including Sony Worldwide, Playstation and Ericsson. Suzanne received her PhD in Philosophy from Warwick University and is a founding member of the influential Cybernetic Culture Research Unit (CCRU). She continues to write collaboratively on technology, belief systems, innovation and evolution.

Maholo Uchida

Maholo Uchida's curatorial research focuses on the relationships between art and science. As senior curator at Miraikan (National Museum of Emerging Science and Technology), Tokyo, Maholo has developed exhibitions including *TIME! TIME! TIME!* (2003), a series of collaborations between artists and scientists exploring our relationship to time, as well as *LOVE STORIES - Why You Are Not Alone* (2005), an investigation into the history of human love. Throughout her career, Maholo has commissioned internationally acclaimed artists including Björk, Ingo Günther and Jeff Mills. She was also a member of the jury for the Prix Ars Electronica in 2013 and has received Masters degrees in Media and Governance from Keio University in Tokyo, and in Scenography from Zurich University of the Arts.

Exhibition advisers

Dr Ramon Amaro is a Lecturer in the Department of Visual Cultures and in the Centre for Research Architecture at Goldsmiths, University of London. Previously he was Research Fellow in Digital Culture at Het Nieuwe Instituut in Rotterdam and visiting tutor in Media Theory at the Royal Academy of Art, The Hague, NL (KABK). Ramon completed his PhD in Philosophy, a Masters degree in Sociological Research and a BSe in Mechanical Engineering. He has worked as Assistant Editor for the SAGE open access journal *Big Data & Society*; quality design engineer for General Motors; and programmes manager for the American Society of Mechanical Engineers.

Paola Antonelli is Senior Curator of Architecture and Design and Director of Research and Development at the Museum of Modern Art, New York, where she recently programmed the salon AI - Artificial Imperfection. Paola is curator of the upcoming XXII Triennale di Milano, titled Broken Nature, and has served on several international architecture and design juries. She previously lectured at the University of California, Los Angeles, and taught design history and theory at the Harvard Graduate School of Design and at the School of Visual Arts in New York. Paola trained in Architecture at the Polytechnic of Milan and has also been awarded Honorary Doctorate degrees from the Royal College of Art, Kingston University, London, the Art Center College of Design, Pasadena, and Pratt Institute in New York.

Natalia Fuchs is a new media researcher, art historian and international curator. She graduated from the University of Manchester (MA Cultural Management) and from the Danube University (MA Media Art Histories) in Austria. She has founded the art relations practice ARTYPICAL, worked as a curator at the Polytechnic Museum in Moscow and as the deputy director of the National Centre for Contemporary Arts Moscow. Since 2017 Natalia has been teaching Media Art History at the Moscow State University in the World Art History department. Natalia also produces her own AV performances and video artwork, in addition to advising arts institutions.

Hiroshi Ishiguro is Professor of Department of Systems Innovation in the Graduate School of Engineering Science at Osaka University, and Director of Hiroshi Ishiguro Laboratories at the Advanced Telecommunications Research Institute. His research interests include distributed sensor systems, interactive robotics, and android science. He has developed many humanoids and androids and has received the 'Best Humanoid Award' four times at the RoboCup competition.

Kenric McDowell has worked at the intersection of culture and technology for twenty years having worked for R/GA, Nike, Focus Features, HTC Innovation and Google. Kenric currently leads the Artists + Machine Intelligence programme at Google Research, where he facilitates collaboration between Google AI researchers, artists and cultural institutions. He is a regular speaker at conferences and has spoken about art and interdisciplinary collaboration.

Anders Sandberg is a senior research fellow at the Future of Humanity Institute at Oxford University and research associate to the Oxford Uehiro Centre for Practical Ethics, and the Oxford Centre for Neuroethics. He is on the advisory boards of multiple organizations and often debates science and ethics in international media. Anders has a background in computer science, neuroscience and medical engineering. He obtained his PhD for work on neural network modelling of human memory.

Murray Shanahan is Professor of Cognitive Robotics at Imperial College London and a Senior Research Scientist at DeepMind. His publications span artificial intelligence, robotics, logic, dynamical systems, computational neuroscience, and philosophy of mind. His book *Embodiment and the Inner Life* was a significant influence on the film Ex Machina, for which he was a scientific adviser. His following book *The Technological Singularity* was published in 2015.

Public information
16 May–26 Aug 2019
Box office: 0845 120 7511 www.barbican.org.uk/morethanhuman
Opening times: Sun–Wed 10am–6pm; Thu–Fri 10am–9pm; Bank Holiday 12pm–6pm
Tickets: Mon-Fri £15, Sat , Sun & Bank Holidays £17(Concs/Students/14-17/Art Fund £10-£15); Young Barbican £10, Under 14s go free

Exhibition Catalogue
The *AI: More than Human* catalogue will be the first publication to consider the philosophical, scientific and artistic approaches to artificial intelligence, exploring and expanding on the themes and content of the exhibition. With 250 pages of illustrated content, the catalogue features introductions by the exhibition's curators, and essays and conversations from key figures and thinkers in the field.

Key features include **Margaret Atwood's** essay 'Are Humans Necessary?' tracing the history of robots in literature and culture; a fictional piece written by the late cultural theorist **Mark Fisher** in collaboration co-curator Suzanne Livingston; xenopoet **Amy Ireland** and computer generated 3D poems/ 'modules' that pose a challenge to the limitations of human language and **Demis Hassabis**, co-founder of Google DeepMind, and professional Go player, **Fan Hui**, describe how their experience of the Alpha Go program changed their perceptions of human vs artificial intelligence.

The catalogue is designed by London based studio the Bon Ton, who have commissioned a generative typeface for the catalogue, which uses a coded script to artificially reinterpret Digi Grotesk - widely considered the first digital typeface created by Rudolf Hell in 1968. The role of the machine in this new version is to redraw the letterforms in an unexpected way, foregrounding the evolutionary condition of type design.
Retail price £29 ISBN 978-1-5272-3345-4

Barbican Shop

In addition to the official exhibition catalogue the Barbican Shop also features a wide selection of books, gifts and more. The best of the Barbican Shop ranges can be found online at www.barbican.org.uk/shop

Barbican newsroom

All Barbican Centre press releases, news announcements and the Media Relations team's contact details are listed on our website at www.barbican.org.uk/news/home

About the Barbican

A world-class arts and learning organisation, the Barbican pushes the boundaries of all major art forms including dance, film, music, theatre and visual arts. Its creative learning programme further underpins everything it does. Over 1.1 million people attend events annually, hundreds of artists and performers are featured, and more than 300 staff work onsite. The architecturally renowned centre opened in 1982 and comprises the Barbican Hall, the Barbican Theatre, The Pit, Cinemas One, Two and Three, Barbican Art Gallery, a second gallery The Curve, foyers and public spaces, a library, Lakeside Terrace, a glasshouse conservatory, conference facilities and three restaurants. The City of London Corporation is the founder and principal funder of the Barbican Centre.

The Barbican is home to Resident Orchestra, London Symphony Orchestra; Associate Orchestra, BBC Symphony Orchestra; Associate Ensembles the Academy of Ancient Music and Britten Sinfonia, Associate Producer Serious, and Artistic Partner Create. Our Artistic Associates include Boy Blue, Cheek by Jowl, Deborah Warner, Drum Works and Michael Clark Company. The Los Angeles Philharmonic are the Barbican's International Orchestral Partner, the Australian Chamber Orchestra are International Associate Ensemble at Milton Court and Jazz at Lincoln Center Orchestra are International Associate Ensemble.

Find us on Facebook | Twitter | Instagram | YouTube | Spotify