"TRAINING HUMANS", AN EXHIBITION BY KATE CRAWFORD AND TREVOR PAGLEN, AT OSSERVATORIO FONDAZIONE PRADA IN MILAN, FROM 12 SEPTEMBER 2019 TO 24 FEBRUARY 2020

Milan, 10 July 2019 – Fondazione Prada presents "Training Humans", a landmark exhibition conceived by Kate Crawford, AI researcher, artist and professor, and Trevor Paglen, artist and researcher at its Osservatorio venue from 12 September 2019 to 24 February 2020. The press preview will take place on 11 September.

"Training Humans" is the first major photography exhibition devoted to training images: the collections of photos used to train artificial intelligence (AI) systems in how to "see" and categorize the world. In this exhibition, Crawford and Paglen reveal the evolution of training image sets from the 1960s to today. Their work highlights how vernacular and functional images are being harvested as the raw material for facial recognition and human tracking by both the government and commercial sectors.

As stated by the artists, "when we first started conceptualizing this exhibition over two years ago, we wanted to tell a story about the history of images used to 'recognize' humans in computer vision and AI systems. We weren't interested in either the hyped, marketing version of AI nor the tales of dystopian robot futures. Rather, we wanted to engage with the materiality of AI, and to take those everyday images seriously as a part of a rapidly evolving machinic visual culture. That required us to open up the black boxes and look at how these engines of seeing currently operate".

The project questions the present status of the image in artificial intelligence and algorithmic systems, from education and healthcare to military surveillance, from law enforcement and hiring, to the criminal justice system. "Training Humans" explores two fundamental issues in particular: how humans are represented, interpreted and codified through training datasets, and how technological systems harvest, label and use this material. As the classifications of humans by AI systems becomes more invasive and complex, their biases and politics become apparent. Within computer vision and AI systems, forms of measurement easily – but surreptitiously – turn into moral judgments.

The exhibition is structured as an historical interrogation that begins with the images that were used in the first computerized facial recognition lab experiments funded by the Central Intelligence Agency (CIA) in the U.S. from 1963 onward. In the 1990s, a more advanced generation of computer vision systems was developed by the U.S. Department of Defense Counterdrug Technology Development Program Office. For a database known as Face Recognition Technology (FERET), they created a collection of portraits of 1,199 people, for a total of 14,126 images, in order to have a "standard benchmark" – which allows researchers to develop algorithms on a common database of images.

The popularisation of the internet and social media brought with it an explosion of images. AI researchers moved from using government-owned collections, such as FBI mugshots of deceased criminals, to gathering photographs from the web. This practice quickly became normalized, and many people in the AI field began harvesting millions of publicly-available images without asking permission or consent from the photographers or subjects of the photos. The application of labels to these images - often done in labs or by Amazon Mechanical Turk workers - produces a regime of classifications, with people tagged by race, gender, age, emotion, and sometimes personal character. This process of classification has clear and durable political implications, as it continues a dark history of post-colonial and racist systems of population segmentation.

Of import to Crawford and Paglen are classificatory taxonomies related to human affect and emotions. Based on the heavily criticized theories of psychologist Paul Ekman, who claimed that the breadth of the human feeling could be boiled down to six universal emotions, AI systems are now measuring people's facial expressions to assess everything from mental health, whether someone should be hired, to whether a person is going to commit a crime.

These kinds of systems of classification reach their apogee in the training data set called ImageNet (2009) – described by its creators as an effort to "map out the entire world of objects." By looking at the images in this collection, and see how people's personal photographs have been labeled, raises two essential questions: where are the boundaries between science, history, politics, prejudice and ideology in artificial intelligence? And who has the power to build and benefit from these systems?

As underlined by the artists, "a stark power asymmetry lies at the heart of these tools. What we hope is that 'Training Humans' gives us at least a moment to start to look back at these systems, and understand, in a more forensic way, how they see and categorize us."

The exhibition will be accompanied by an illustrated publication in the Quaderni series, published by Fondazione Prada, including a conversation between Kate Crawford and Trevor Paglen on the complex topics addressed in their project.

Biographical notes

Kate Crawford is a leading researcher, academic and artist who has spent 15 years studying the social and political implications of large-scale data and artificial intelligence. Her work centers on the need to resituate our understanding of artificial intelligence in the wider context of history, politics, labor, and the environment.

Kate Crawford is a Distinguished Research Professor at New York University, where she co-founded the AI Now Institute – the world's first institute dedicated to the broader impacts of AI. She is also a Principal Researcher at Microsoft Research, and is the inaugural Visiting Chair in AI and Justice at the École Normale Supérieure in Paris.

Her research has appeared in *Nature*, *The New York Times*, *The Washington Post*, *The New Yorker*, and *Harper's Magazine*. She has advised policy makers in the United Nations, the European Union, and the White House, and she has participated in AI policy processes for the French and German governments.

In 2018, Kate was awarded the Richard von Weizsäcker Fellowship in Germany, and she currently serves on France's 3IA scientific advisory jury. Her installation work Anatomy of an AI System, with Vladan Joler, is part of this year's La Triennale di Milano. She has a new book called Atlas of AI, forthcoming with Yale University Press (2020).

Trevor Paglen is an artist whose work spans image-making, sculpture, investigative journalism, writing, engineering, and numerous other disciplines. Among his chief concerns are learning how to see the historical moment we live in and developing the means to imagine alternative futures.

Trevor Paglen's work is included in the collections of the Metropolitan Museum of Art; the San Francisco Museum of Modern Art; the Smithsonian American Art Museum; the Whitney Museum of American Art; Berkeley Art Museum; the Solomon R. Guggenheim Museum; Victoria and Albert Museum; and the Nevada Museum of Art. He has launched an artwork into distant orbit around Earth in collaboration with Creative Time and MIT, contributed research and cinematography to the Academy Award-winning film Citizenfour, and created a radioactive public sculpture for the exclusion zone in Fukushima, Japan.

He is the author of several books and numerous articles on subjects including experimental geography, state secrecy, military symbology, photography, and visuality. Paglen's work has been profiled in *The New York Times*, *The New Yorker*, *The Economist* and *Artforum*.

He has received numerous awards, including the 2018 Nam June Paik Art Center Prize and the 2017 MacArthur Fellowship, among others.

Paglen holds a B.A. from U.C. Berkeley, an MFA from the Art Institute of Chicago, and a Ph.D. in Geography from U.C. Berkeley.