Flash Art

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1. Despite being trained in Fine Art, you have moved on to incorporate machine learning into your artistic practice. What are the reasons that motivated you in pursuing this path?

Whilst having a traditional Fine Art training at the historic Slade School Fine of Art I was always interested in pushing the boundaries of media art and working with systems and technologies. During my time there I was one of the few people using computer code as my medium, although there were some excellent new media and conceptual artists who pushed me to consider what I was doing beyond the technology involved. In 2016 I discovered the potential for using Machine Learning at the School of Machines, Making and Make-Believe in Berlin by being introduced to it by the artist and educator, Gene Kogan. Having worked with creative software and creating coding for many years I was blown away by the conceptual underpinning of machine learning, both the technical, philosophical and political implications it posed. Ever since then a major theme in my work has been to use machine learning techniques and by doing so critically and poetically examining the field of artificial intelligence.

2. Harold Cohen's early programme, AARON, was to a great extent an extension of his career as a painter, which followed a highly modernist logic. Are you conscious of your art returning to the same problems of codes, languages and media that often characterised modernist debate or do you find this to be an unhelpful analogy?

Absolutely, I think it's important for artists working in technology not to create work in a void. Many of my favourite artists come from conceptualism or structuralism - artists such as John Cage, Nam June Paik and John Smith. Harold Cohen was in fact an alumni from the Slade and very much started many of the conversations surrounding computer art, raising debates around agency and creativity when using computer code. Although I do find the some of the systems art and generative art this led onto can become a very cold and disconnected way of making work, although other times can be poetic and beautiful to look at. I'm also aware that this is quite a white male canon, which in the early days of computer art and conceptual art it was, although more recently there are many more voices and perspectives who also influence me, from digital media and queer theorists such as Hito Steyerl, James Bridle and Zach Blas, to artists researching bias and the technology behind these systems such as Joy Buolamwini, Libby Heaney & Kate Crawford.

In my work I'm very aware of these conversations and perhaps initially, like the early computer artists, I also wanted to create work to challenge what it means to create and to have artistic agency using black-box machine learning technology as your process. The convolutional neural networks I was using are capable of creating emergence in a far more complex way than Duchamp, John Cage or Harold

Cohen could have imagined. This was my focus for Closed Loop (2017), setting up a system where the audience could spectate two machine learning models having a back and forth conversation with each other, one interpreting in words, the other interpreting with generated images. I never controlled or curated the outputs, and it was fascinating to see the two networks branching off and misinterpreting each other. By seeing if I could remove my human agency I wanted to challenge what it could mean for a computer to make a creative move (and by extension for the system to 'think' or 'dream'). Although I realised this sort of philosophical enquiry can also be dangerously misleading for the audience adding to an already often misunderstood, mystified and anthropomorphised understanding of artificial intelligence. In the work the mistakes, and misunderstanding of the network were due to the limitations of the training of the network, at no point is the system truly autonomous. Humans built the systems, chose the parameters, chose the datasets to feed it and displayed the output. I like to also use my work to consider how to bring back the poetry or humour, and perhaps give more relevance to society, such as Machine Learning Porn (2016), Dada da ta (2016) or The Zizi Project (2019 - Ongoing).

3. Your works up to this point are striking for their heterogeneity, as though working with AI is a process of critiquing biases and traditions of digital representation using the most appropriate approach for a given problem. How would you define the envelope within which you work?

Absolutely, machine learning creates systems which reflect the biases of the people who build them & the systems they're a part off, however these same techniques allow us to reflect on and illustrate the problems in the way the machine learning models were trained and by extension the problems that need addressing in our material world societies and structures. Currently in my work I'm trying to use machine learning systems to reflect back their flaws and capabilities, for instance to illustrate the limits of standardised public datasets and state of the art computer vision algorithms being used increasingly by government and private companies. In these works I'm interested in appropriating as well as exemplifying existing datasets and techniques. However I'm also interested in how creating our own data and systems (in art but also more broadly) can empower us to consider what's included or who's identities are represented, as well as demystifying artificial intelligence research.

4. Your work with Roland Arnoldt *Auto-Encoded Buddha* (2016) pays tribute to Nam June Paik's *TV Buddha* (1974). This implies that you are conscious of working within a long lineage of artists exploring the relationship between art and technology. However, your strategies seem to confront largely contemporary problems. How useful is it to speak of genealogies in your field?

Well I suppose you can do both. Today we have a different set of issues facing us which cant be overlooked when making work with and about technology. Nam June Paik himself was fascinated by the technological capabilities of his

time as well as looking forward, (such as when he predicted the internet). Although I think it's important to be aware of how artists in the past have worked and create work which hopefully will still have something to say in the future.

I said before about computer art being a bubble and more diverse artists now (restructure?)
Feel like maybe they're getting at something else here I'm not picking up here?

5. A work like *Zizi - Queering the Dataset* (2019) not only calls into question the binary gendering of training datasets but also the insidious nature of deep fake technology. Do you think terms like 'realism' and 'abstraction' are still relevant to the discourse surrounding AI and art or are they too antiquated?

I think realism and abstraction are useful concepts for talking about imagery generated by artificial intelligence but also needs some unpicking. I don't find it so useful when talking about my deep fake drag character Zizi as that work for me is more looking at bias and limitations of datasets and deep fake training.

In my work 'Latent Space' 2019 however, I play on the idea of what it means for a machine learning model to create 'abstraction' in a more conventional sense. I took a machine learning model built to generate hyper realistic fake images, which had been trained on ImageNet (a public dataset containing 14 million images of all sorts of things). Instead of making it create the most realistic image it could of any one object (as it was made to do), I created a video of it floating though the space of everything it had learnt without aiming for representation. It had learnt the colours and basic compositions from the dataset and the results did had striking similarities to abstract expressionism, although as it was a machine it was still deriving this information from our humanly inputted photographic datasets, but perhaps painters are doing something similar, only reflecting on a much larger dataset of visual material, memories and sensations.

Zizi - Queering the Dataset (2019) was created by queering an existing machine learning model for creating hyper realistic fake faces, although the dataset of real faces it had been originally trained on was homogenous and contained western bias. My idea was to inject this dataset with a thousand images of drag kings and queens (drag being a way of challenging genre and exploring otherness). This causes the network to generate queerer, more ambiguous and fluid faces and identities. I am fascinated by what happens when these faces start to break down completely as if the inclusion of drag has broken the system (and I suppose you could argue this is a form of abstraction).

In the most recent iteration of the Zizi project I'm creating deep fakes of multiple London drag performers to question the ethics of deep fake technology. Deep fakes are being used to create fake news of people in positions of power, or as amusing instagram filters. The Zizi project critically examines these techniques using a dataset of drag performers. While the bodies do regularly break

down, in this work I don't see it so much as abstraction vs representation but more as the artefacts from the machine learning model due to the limits of the training data.

6. In *Zizi and Me* you open the black box to understand how these artificial intelligence systems work. In particular you manipulate the original dataset and use deep fake technology to create the world's first deep fake drag queen. What can you tell about your findings and why you have chosen to convey your message through a cabaret performance?

Zizi & Me is a double act between the internationally acclaimed drag queen - '*Me'*, and a deep fake clone of '*Me'*. We aim to use cabaret as a fun, accessible and entertaining way to explore and challenge narratives surrounding A.I and society. In the video preview we used the musical theatre classic 'Anything You Can Do I Can Do Better' (1946) as a tongue and cheek way of commenting on job automation, with A.I. certainly not replacing the job of a drag queen any time soon.

7. Could we have a chance to create a better world through the arts and artificial intelligence? What can AI do for the arts and vice versa?

I'm quite optimistic and believe A.I. can be used as a way to learn about our societies and our brains, as well as being the most effective when being used as a tool to aid human creativity, although of course this will also bring many societal and economic issues to solve. I'm working with a research group at Edinburgh Futures Institute call 'Experiential AI' at the moment who are looking at precisely this. We're looking at how artistic works can make AI systems more transparent so audiences can understand and critique their reasoning. I think artists and their work are in a unique position of being able to keep a distance and offer unique perspectives. I think more artists and researchers working in interdisciplinary ways is vital to allow for this sort of experimentation and creativity, which I believe can definitely shape the way these technologies are then developed.