"Intelligence is not enough"

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Creative AI meet-up, The Photographers Gallery,
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***CIPHER* (2017) K. Beales**

CIPHER comes out of my ongoing research in internet addiction, information overload and ideas of a technological sublime. I'm interested in webspace as a psychotic environment, an equivalent to the nursery in Charlotte Perkins Gillman's novella 'The Yellow Wallpaper'[1] a site of surveillance and control. Webspace enables the virtual propagation of global inequalities – far removed from the dreams of the early net pioneers. Online, we actively participate in our own exploitation, knowingly complicit in algorithmic systems of control, always at work for an Other.
Gillman's protagonist enables her own descent into psychosis by submitting to the administration of the rest cure; despite knowing it is causing her mental health problems. She is unable to resist the cultural and social forces around her. Similarly, we are unable to resist what Franco Bifo Berardi terms "the constant mental electrocution of the Infosphere"[2], as we are increasingly submerged within the seductive beauty and endless imagery of online space.

CIPHER is an ephemeral, haunting figure of a woman, a semi-translucent, impermanent figure. *CIPHER*'s movements are based on a 1934 film[3] from the Wellcome Collection moving image library showing female acrobats performing various contortions for the male medical gaze – it's a film

1 https://www.nlm.nih.gov/exhibition/theliteratureofprescription/exhibitionAssets/digitalDocs/The-Yellow-Wall-Paper.pdf
2 https://mitpress.mit.edu/books/soul-work
3 https://archive.org/details/Fourfemaleacrobats-wellcome

produced by a professor of anatomy. It crosses between medical & voyeristic. Instead of the sequined bikini worn by the acrobats, the surface of *CIPHER*'s body is a morphing pattern, generated by using a variation of Google's DeepDream artificial neural network. In CIPHER – the activity of the DeepDream programme can be understood as another iteration of the male gaze at work on the female body. **Technologies are not neutral – they embodied the ideologies and politics of their makers.** In this new industrial revolution, many of the same inequalities are being further entrenched. Women make up just 31% of Google's overall workforce (only 21% of leadership positions held by women and only 17% of technology-specific jobs held by women) and face extreme gender pay discrimination according to the US labour department[4]. Sillicon Valley's widespread tech bro culture is rampantly misogynist and rascist. Sillicon Valley culture is now global culture – facebook alone in the fourth quarter of 2016 had 1.86 billion monthly active users.

Owen Williams writes "The order of words in a sentence can drastically alter its meaning, but a computer can't intuitively know why that's the case. Neural networks address that by allowing computers to make sense of the world by training themselves in what they see."[5]

BUT WHAT DO COMPUTERS SEE?
Are we a healthy data set?

Already there are so many examples of AI recreating bias – particularly in areas like facial recognition or rascist bots. One of the most infamous examples is Microsoft's TAY bot which has to be shut down in 16 hours – it went from 0 to likening feminism to cancer and being a Holocaust denier. Microsoft's only reply was "some of its responses are inappropriate and indicative of the types of interactions some people are having with it."

Technology reflects us. We are living in a shift in the historical moment with the rise of neo-fascism to dominate public discourse again. Do we want to train neural nets on this?

Mireille Hildebrandt
"we are now increasingly confronted with ***mindless agents of our own making***, capable of observing us and adapting their behaviour to the feedback they gain from ours. It is not merely that we use these machines, for instance to help us to learn faster or more efficiently, ***they also use us*** to improve their performance." [6]

The goal of much artificial intelligence seems to be to recreate human intelligence – but human intelligence seems to be understood only as positives. Part of the problem is the widespread preponderance in information theory, computer science, cognitive neuroscience etc that our brains are essentially a computer. But the brain emphatically is not – memories are not stored anywhere in the brain – relationships between sets of neurons trigger memories in a way that neuroscientists

[4] https://www.theguardian.com/technology/2017/apr/07/google-pay-disparities-women-labor-department-lawsuit
[5] https://medium.com/conversational-interfaces/how-voice-assistants-seemingly-came-from-nowhere-33747876b91f space10 IKEA

[6] Mireille Hildebrandt in 'Learning as a machine: crossovers between humans and machines' Jan 2017

still don't completely understand. When I made *CIPHER* I didn't know what I was doing – I was feeling in the dark, that's how much of what I do feels like. That's learning. It comes with cycles of self-doubt, fear, failure – that's because it involves risk. But what could machines risk?

Hildebrandt warns ***"cyber-physical systems that integrate ML have nothing to lose; they cannot suffer or fear their own death.*** They can probably simulate all that and more, based on synthetic emotions and affective computing; but simulation is not the same as what is simulated."
Putting this in human terms – could you trust someone who never knew fear? They would be a sociopath. Yet AI systems are already involved in many aspects of our lives – and we are expected to trust them implicitly.

Do we really want an artificial intelligence modelled on human beings?
After the chaos of 2016 surely we need to rethink that assumption. Christian Villum the Program Director at the Danish Design Centre argues that "the ideal should be to create bots that are distinctly machine like, so that even as they become increasingly more advanced and skilled, they never let us forget that there are in fact artificial."[7]

The problem is with machine learning is that even people with advance computer science degrees, people who are advanced mathematicians – don't actually understand why or how neural networks come to the conclusions they do. We set the parameters and receive outcomes but the process of decision making within the neural network is not understood. There is a complete opaqueness at the centre of this technology, a total lack of explainability. How can we intervene or contest a decision making process that occurs so opaquely?

[That's true of our interactions with people – no one – not even those closest to us are not fully knowable – but we have other indicators to go on – body language for example.]

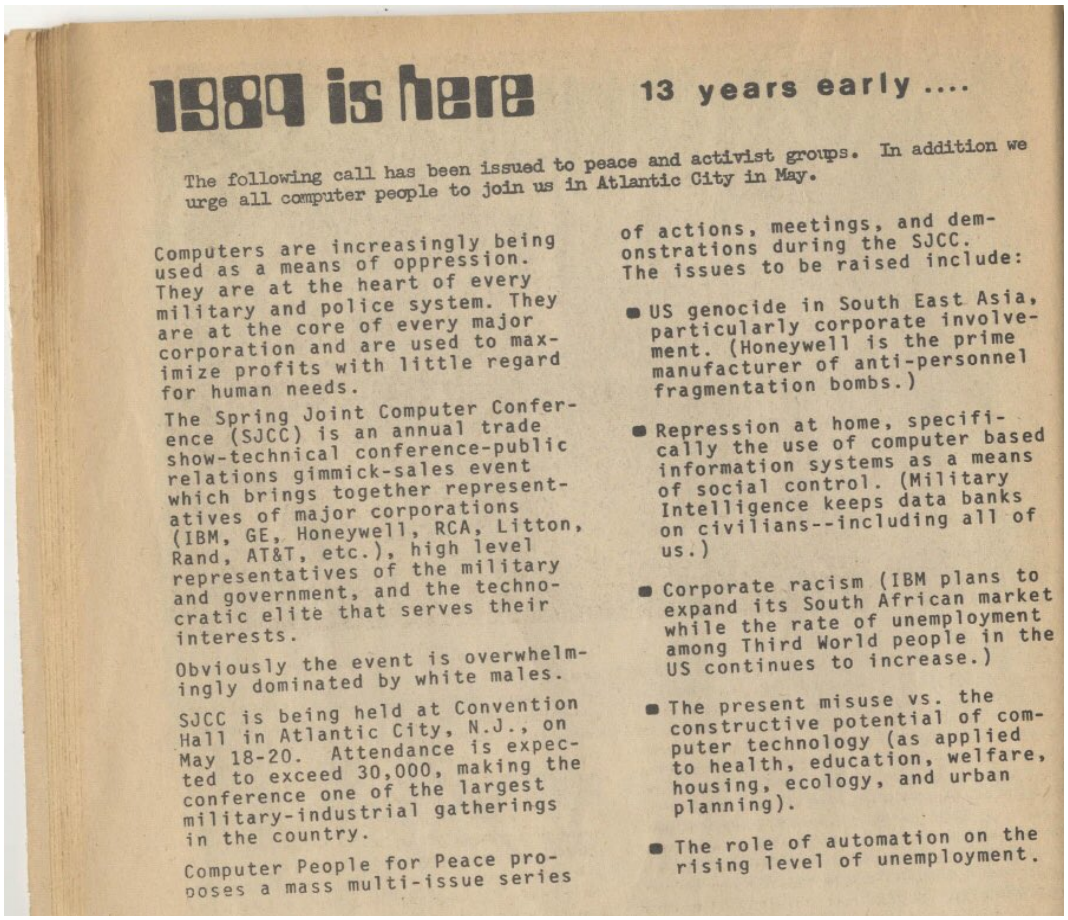
As a result explainability is core to how many companies are trying to develop AI…
"Knowing AI's reasoning is also going to be crucial if the technology is to become a common and useful part of our daily lives… if you receive a restaurant recommendation from Siri, you'll want to know what the reasoning was." Ruslan Salakhutdinov, director of AI research at Apple… sees explainability as the core of the evolving relationship between humans and intelligent machines. "It's going to introduce trust," he says"[8] Understanding how an AI has come to a certain outcome may not be a problem if it's just involved in suggesting restaurants - but highly problematic I would suggest when it's involved in making judgements on credit, debt, healthcare…

As for "trust" **why** do companies such as Apple want us to trust SIRI? Or Amazon Alexa?
It's not just a problem as to who machines are learning from but WHO ARE machines SEEING FOR?
Far from an impartial observer these systems are knowing us on behalf or behest of generally a multinational corporation and or government. Corporations are obviously keen to develop trust with their users as that increases sales. In terms of government – the argument is generally

[7] https://medium.com/@villum/biased-bots-making-artificial-jerks-a643d69a4797
[8] https://www.technologyreview.com/s/604087/the-dark-secret-at-the-heart-of-ai/?utm_campaign=add_this&utm_source=facebook&utm_medium=post

employed that you only have a problem or something to fear if you have done something criminal. Unfortunately the definition of criminal changes with who's in power. Graphically represented by the changes in the attitude to immigrants in the USA between the Trump and Obama administrations.

AI WILL ONLY ENTRENCH AND WIDEN INEQUALITY.
Who has access to this technology?
Who understands how it is functioning?
Who can build it?
Closed systems demand compliance without sharing power.



1989 is here **13 years early ....**

The following call has been issued to peace and activist groups. In addition we urge all computer people to join us in Atlantic City in May.

Computers are increasingly being used as a means of oppression. They are at the heart of every military and police system. They are at the core of every major corporation and are used to maximize profits with little regard for human needs.

The Spring Joint Computer Conference (SJCC) is an annual trade show-technical conference-public relations gimmick-sales event which brings together representatives of major corporations (IBM, GE, Honeywell, RCA, Litton, Rand, AT&T, etc.), high level representatives of the military and government, and the technocratic elite that serves their interests.

Obviously the event is overwhelmingly dominated by white males.

SJCC is being held at Convention Hall in Atlantic City, N.J., on May 18-20. Attendance is expected to exceed 30,000, making the conference one of the largest military-industrial gatherings in the country.

Computer People for Peace proposes a mass multi-issue series of actions, meetings, and demonstrations during the SJCC. The issues to be raised include:

- US genocide in South East Asia, particularly corporate involvement. (Honeywell is the prime manufacturer of anti-personnel fragmentation bombs.)
- Repression at home, specifically the use of computer based information systems as a means of social control. (Military Intelligence keeps data banks on civilians--including all of us.)
- Corporate racism (IBM plans to expand its South African market while the rate of unemployment among Third World people in the US continues to increase.)
- The present misuse vs. the constructive potential of computer technology (as applied to health, education, welfare, housing, ecology, and urban planning).
- The role of automation on the rising level of unemployment.

Computers for peace (1971)

"Computers are increasingly being used as a means of oppression. They are at the heart of every military and police system. They are at the core of every major corporation and are used to maximize profits with little regard to human needs."

Kate Crawdord and Hito Steyerl – Data Streams in the New Enquiry: on the fundamental paradox at the moment…

"if you are currently misrecognized by a system, it can mean that you don't get access to housing, you don't get access to credit, you don't get released from jail. So you want this recognition, but, at the same time, the more the systems have accurate training data and the more they have deeper historical knowledge of you, the more you are profoundly captured within these systems…. ***We are being seen with ever greater resolution, but the systems around us are increasingly disappearing into the background."***

Hito Steyerl describes weak AI systems as artificial stupidity – and gives automation as an example – she talks about 10 female cashiers being replaced by one male security guard guarding the self serve checkouts. How intelligent is this as a decision making process? What are the economic and social costs of higher inequality? Hito Steyel suggests that "The more "intelligent" these programs become, the more social fragmentation will increase, and also polarization… a lot of the political turmoil we are already seeing today is due to artificial stupidity."

A 3-month-old baby was barred from a flight from London to Florida on suspicion he was a terrorist. The baby was summoned to the US Embassy in London because his grandfather accidentally checked the wrong box on a visa. Granddad Paul Kenyon checked "yes" next to a box on the form that read: "Do you seek to engage in or have you ever engaged in terrorist activities, espionage, sabotage, or genocide?[9] ***This isn't the grandad being stupid – this is a stupid system.*** If you were a terrorist would you tick a box saying 'yes' I am a terrorist?

So what are we left with? What can we do?

As artists and makers and creatives we urgently need to use emergent technologies like VR, like AI, like machine learning.

We need to widen the discourse around how these technologies are constructed and what ideologies they embody.

[9] http://nypost.com/2017/04/16/baby-mistaken-for-tiny-terrorist-after-grandpa-botches-visa-form/
Image: http://www.bbc.co.uk/news/uk-35519470

CREATE DIRTY DATA!

I think we have an urgent task to deliberately create streams of dirty data.
Refuse to be totally known & muddy the waters of clean data sets.
Fight the correlation dictatorship.
Invisibility by misinformation.
We do this already – who puts their real date of birth on an online form? But we need to start doing this actively. For example - I think every FB user based in the US has a political imperative to miss-tag all their photos of people – as an act of solidarity - so that facial recognition algortihms are ineffective.
We need to actively resist algorithmic systems of control by creating dirty data sets.

Footnote:
Facebook helps advertisers target teens who feel worthless
Facebook's algorithms can determine, and allow advertisers to pinpoint, "moments when young people need a confidence boost." If that phrase isn't clear enough, Facebook's document offers a litany of teen emotional states that the company claims it can estimate based on how teens use the service, including "worthless," "insecure," "defeated," "anxious," "silly," "useless," "stupid," "overwhelmed," "stressed," and "a failure."[10]

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[10] https://arstechnica.co.uk/business/2017/05/facebook-helped-advertisers-target-teens-who-feel-worthless/