Mechanised Ecologies
The atmospherics of automation and emergent systems of control

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#AI #Surveillance #MachineVision #Drones #Ethics

ABSTRACT

The machine sees the machine knows but the mechanics are invisible. Algorithms lean into human spaces, mimic conscious thought, adapt modes of seeing and render virtual replications.

Through a post-Snowden prism, are we witnessing the permanent synthetic overlay of corporate, political and government systems of control? Technologies of deep learning, machine vision and automation are no less tools of science as gateways to a new global order of things. The manner in which they intersect with privacy and freedom of movement, with labour and love and with notions of truth and reality are evidence of a new complexity – systems of control that are at once personal and global in their reach. What are the conditions of automation and machine learning that underpin this new black-box version of control?

This paper will seek to unravel this a double-image game of virtuality by unpacking these competing and often messy ecologies that define our emergent datafied society. A society that is seemingly at the mercy of a surveillance apparatus that has become emboldened by a confluence of technical sophistication and political instability.

PRESENTATION OUTLINE

///// 01 :: Background

What do we mean when we talk about the atmospherics of automation?

- Process: technological ecologies / complex systems / enabling conditions
- Location: contested environments / virtual realities / virtual bodies
- Perception: machine vision / interface aesthetics /
- Invasion: remote modes of colonisation / invasive analytics /

These control quadrants foreground a mechanised ecology of things, or what we might call *machine ambience*

///// 02 :: The Territory

Benjamin Bratton (stacks) / Michael Foucault (panopticon)
Manuel Castells (media flows) / Deleuze and Guattari (rhizome)
Peter Sloterdijk (atmospheres) / Bruce Sterling (dark euphoria)
Arthur C. Clark (magic) / Kim Stanley-Robinson (anticipation of strangeness)
Katherine Hayles (co-production / post-humanism) / Judith Butler (permanent grief)

///// 03 :: The Baseline

This pre-supposes that we take certain conditions to be so, (and might be become so):

Economics - relative stagnant economic growth in the West / rampant accelerationism in emergent economies / globalisation of labour markets / the UBI debate intensifies / work hours decrease for some, increase for others / casualisation becomes embedded / increasing scepticism of market driven capitalism / re-appraisal of concepts such as ownership and value …

Climate – discernible change / reduced biodiversity / increased frequency of extreme weather / catastrophic forecasting and increased promotion of climate data (including visualisations) / direct and indirect pollution and food contamination (accidental and intentional) / narrative taken up by artists …

Indigeneity – resisting colonisation / language and cultural preservation / providing a tangible link to country / retooling environmentalism / foregrounding a more human expression of identity …

Politics – hyper-instability / the misreading of populism / the end of binary politics / alternative models would seem possible / inequality and wealth disparity / racial and religious intolerance / conflict, climate and economic refugees / extreme localism intensifies …

Information – commercialized, politicised, mediated, fabricated, contested / information and network cultures mature / the need for informed debate / transparency, traceability and authorship / a return to the foundations of epistemology …

///// 04 :: What time is it?

The Anthropocene

The Machine Age of

- Acceleration
- Big Data
- Algorithms
- Machine Learning
- Drones
- A.I.

The Human Age of

- Amplification / Augmentation
- Anxiety

- Precarity
- Grief
- Anger
- Un-Reason

///// 05 :: The Twelve Atmospherics of Automation

1. **Data embeddedness** – Online tracking and profiling and IoT sensing and reporting (background atmosphere) / data as legacy (bias and historical prejudice)
2. **Machine vision** - as observational technology (confirming reality) / as author, creator, approximator (creating reality)
3. **The double VR effect** - Virtual reality from intoxicant to educator to empathy machine, to duality of consciousness / coupled with extreme machine vision technology / the body without data, data without a body / Kinect particles equation in theatre (the 4D Box)
4. **Ambiguity** -
5. **The falling sky** – GIS "overwatch" and 24/7 battlespace situational awareness / Earth watching, mapping, rendering, simulating / killer robots - from drone to fully autonomous UAV / persistent aerospace - Raytheon's Exoatomospheric Kill Vehicle (EKV), the X-37B Orbital Test Vehicle, Airbus Defense & Space Zephyr S high-altitude pseudo-satellite (HAPS), the Boeing Phantom Eye / Amazon airship base stations (aka airborne warehouses) and unmanned aerial networks (UAN) / Nano-sats (SpaceBees, Doves)
6. **Technological seduction** – "the cloak of magic" of new tech / A.I. assistant as both data gathering seducer and feminised sub-servient entity / "news feed" as consciousness replicator (precursor to brain computer interface)
7. **Corporatization** – the marketing technology / selling the future, (technology utopian PR) / the corporate appropriation of universal services – the IoT, cyber security, modes of access, sites of storage
8. **Violent genealogy** – military & security narrative of technological ecologies / atoms, bombs, rockets and drones
9. **The Drone Effect** - human interface vs. full autonomy (independent, swarm like) / physical, moral and intellectual human labour in the service of the machine
10. **Lack of control** – identity (data mining, algorithmic profiling) post-humanism (A.I., automation) purpose (craft, permanence, connection, future)
11. **Anxiety** – algorithmic bias,
12. **Cultures of change** - a fetish of seduction / mistrust and foreboding / romancing dystopia / the artist (making the invisible, visible)

Reactionary atmospherics

13. Regulation
14. Blockchain
15. Digital literacy

///// 06 :: The Human Equation

- We are **suspicious** because we are vulnerable
- We are **worried** because we are expendable

- We are **fearful** because we have form
- We are **helpless** because we are being colonised

Have we given up on the idea of personal information as something that is to be preserved, to be treasured? In the strange world of corporate control of datafication, memories become experiences, emotions become symbols, friendships become channels.

///// 07 :: The Intersecting Vectors of Human/Machine Agency

- Human Activity
- Data Acquisition
- Data Sets
- Data Algorithm
- Software Automation
- Hardware Automation
- Machine Activity

///// 08 :: Digital Fatalism

Material consequences of automation and digital media that demonstrate an ongoing loss of control

- Cyber-attacks - demonstrate a political point by damaging or manipulating physical assets (Stuxnet)
- Data hacks – demonstrate the ego of the hacker but also the paucity of data security (NHS, Sony).
- "Fake News" and the erosion of trust – US Election, Brexit, Venezuela, Mexico
- Datafication of space - the personal, the urban, the corporate, the military, the government
- Algorithmic bias - presents real-world consequences via algorithmic deduction such as pre-crime heat maps, prison sentencing, health insurance and bank loans predictors
- Internet as gateway - "Dolly" Everett cyber bullying, slender man, pizza-gate, AP White House explosion tweet, domestic abuse via IoT, 3D printed weapons, Stuxnet
- Data as weapon – terrorist kill lists, domestic watch lists, racial profiling (Uyghur minority in Xinjiang province)
- Surveillance pretext – body cams, facial and gait recognition, CCTV, meta-data and GPS tracking
- Vehicle automation – drone operator PTSD, civilian casualties from drone strikes, Wired video of self-driving car hack, Uber and Tesla fatal accidents, automated manufacturing fatalities …
- The Earth as virtual object – from Apollo 11, to interface design, to Google maps