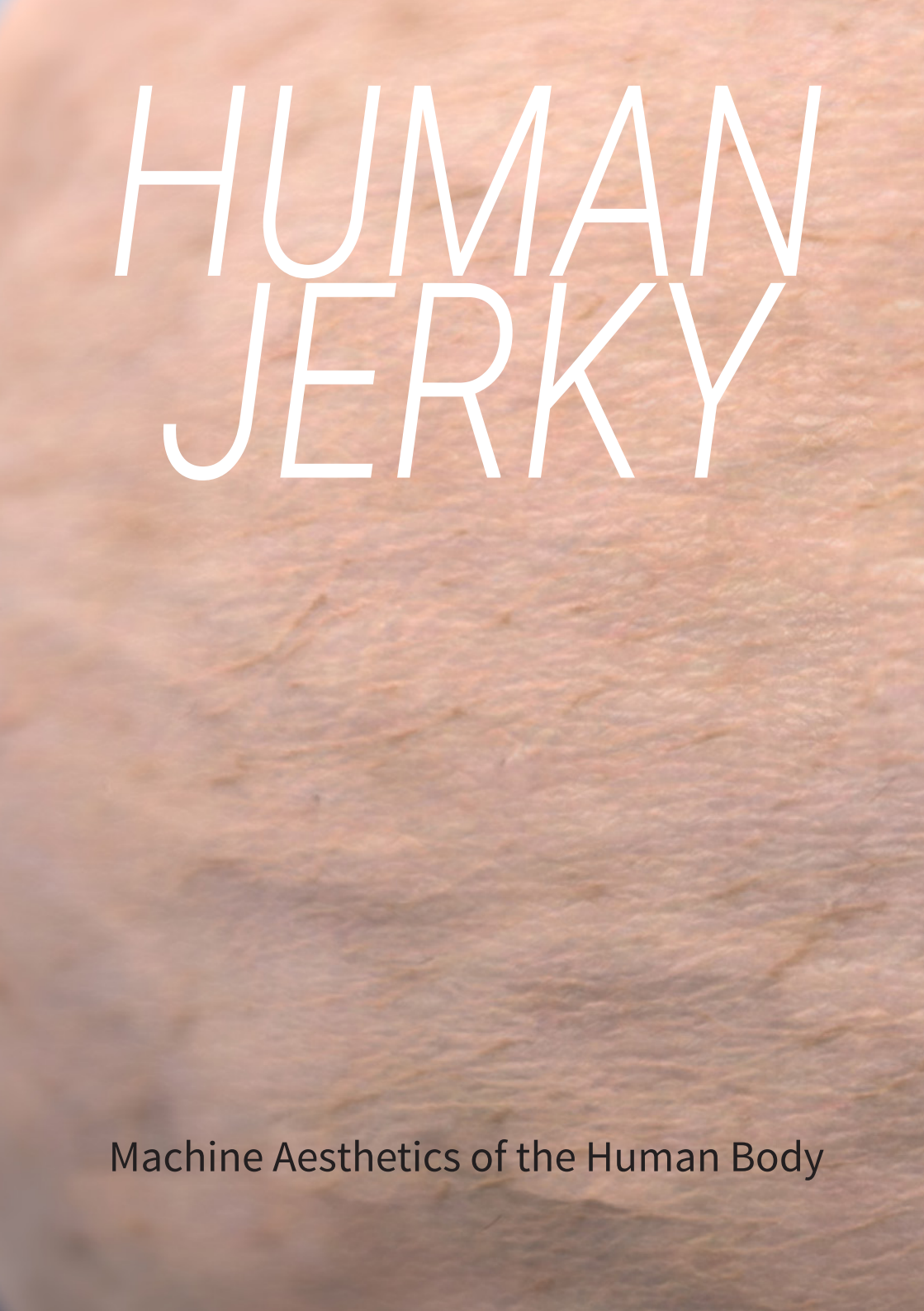
HUMAN
JERKY
Machine Aesthetics of the Human Body

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MACHINE AESTHETICS OF THE HUMAN BODY

ESSAY
JOSH HARLE

ARTISTS
TULLY ARNOT
JOSH HARLE
JASON PHU
BRENTON ALEXANDER SMITH
JASON WING
LOUISE ZHANG

COVER
JOSH HARLE & TULLY ARNOT

SYDNEY SCIENCE FESTIVAL

VERGE GALLERY

NSW GOVERNMENT

This project is supported by the NSW Government through Create NSW

Image: Pepper, an emotionally responsive robot developed by SoftBank Robotics Corp. and Aldebaran Robotics SAS

It's natural for us to see through a human lens. When we look out into the world we see it populated by the familiar; animals and devices imbued with human emotion and agency. With the rapid development and adoption of artificial intelligence and autonomous robotics, their humanoid faces may give us comfort, but beneath the facade they look back with a machine perspective. While we anthropomorphise them, they are 'mechanomorphising' us – seeing us as machines.

As technologies emerge that allow computational systems to move beyond abstract operation, into more direct engagement with the physical world and the human body (e.g. robots), domain-specific models of the human body are being created to help them to do this. These technologies are fundamentally carnal – tasked with managing the needs, desires, value, threats, and vulnerabilities of human flesh. From surgical robot models, and crash simulations, to automated battlefield drones and the ethics algorithms of self-driving cars, machines uniquely perceive humans according to their own internal aesthetics. These aesthetics are unrecognisable, looking nothing like our image of ourselves:

They are alien, monstrous, and frightening, and should be.

Human Jerky is a continuation of the art-technology research explored in the 2015 Firstdraft show *A Robot Attempts to Eat a Chicken Nugget*, featuring Tully Arnot, Josh Harle, Jason Phu, and Louise Zhang, and curated by Luke Letourneau. In this show we looked at aspects of the human that are often seen as diametrically opposed to technology: seepage, leakage, capriciousness, and irrationality. In the titular work for the show, I created a robot to pick up, masticate, and digest (through a bioreactor) many kilograms of chicken nuggets. By choosing the ridiculous challenge of recreating a banal (and fairly disgusting) human activity, I was interested in showing the messy, irrational human motives behind the development of technology: wilfulness, ego, fashion, profit, exploitation. *Human Jerky* looks at technology from the other direction: a human endeavour that none-the-less produces logics, value-propositions, and aesthetics that are profoundly alien.

Our broader aim is to show that art can provide a valuable and timely contribution to research, rather than being relegated to the realm of “visual communication”. Through the exhibition and talk, the skills and knowledge fundamental to each artists’ practice (as experts in diverse forms of representation, and their consequences) are utilised to meaningfully engage with complex systems, giving the audience a provocation towards a more critical perspective on the future of these technologies.

Contributing artists offer works which explore a non-human aesthetic of the body in very different ways: Louise Zhang’s sculptures express the seductive horror of alienated flesh; Josh Harle investigates FLIR computer vision pipelines as a significant form of digital representation in military applications; Jason Wing questions the politics behind police filming and face-recognition; Breton Alexander Smith articulates the physical vulnerability of the virtual body-as-machine through car-crash simulation tools; Jason Phu poetically interprets the banality of technologies and ad-hoc creation of new meaning; Tully Arnot explores digital abstraction of skin, and emotion and physical needs abstracted through technology.

Across the works in the show, we engage with a broad survey of emerging technologies: **Psychometric and social/connection profiles**, **gestural tracking models**, **Artificial Intelligence and Evolutionary Algorithms** (and their heuristic models), **computer vision tracking systems**, and **Deep Learning and Convolutional Neural Networks**.

“Human Jerky” (with thanks for the suggested title to artist Ainsley Wilcock) emphasises that the same dispassionate, mechanical process that we use to manage livestock are reproduced in the operational logic with which autonomous technologies perceive us. Computational systems require pragmatic abstractions, which by necessity reduce the complexity of human life to a simplified series of data-points.

This should be concerning to everyone, but these problems impact under-represented groups in particular. Regardless of intent, through the ‘baking-in’ of the world-views and implicit bias of their creators, or simply a disinterest in testing with diverse users, these systems have shown they disadvantage minority groups. These emerging machine aesthetics are screaming to be interrogated and critiqued as sites of current and future dehumanisation and discrimination.

These functional models are developed at the convergence-site of military strategy, politics, and business logic: **their goal is management, regulation, and exploitation at best, and targeted elimination at worst**.

TOUCH

Tully Arnot's practice explores the intangible relationships we have with everyday items. His work plays with **touch and gesture**; the contrast between their place in human intimacy, and their use as part of mobile technologies such as touch screens. Arnot's work, *Lonely Sculpture*, highlights the disconnect between these; where point-of-touch becomes part of an operation devoid of intimacy and the search for partners a mechanical process.

Lonely Sculpture allows the audience to reflect on the mechanization of humans' search for intimacy, and the inherent self-defeating nature of the mobilization of rationalized technological processes in this search, but it also helps illustrate the way our mobile devices perceive us. Themes of virtualised experience and simulation feature strongly in Arnot's practice, and his use of faux-skin cast silicon body parts echoes the simulated genitals of sex toys he also makes use of in his practice. For the phone's operating system, the human is understood through touch and gestures, and the lump of electrically-grounded silicon effectively simulates human contact – it's a sex-toy for technology.

The codification of human gestures into archetypes, by which digital systems can perceive human intent, has required their formalization and regulation. This is a necessary part of the process of translation, but also part of an Intellectual Property land-grab related to the development of proprietary interfaces. What started as organic, culturally-specific, expressive actions, and intended as an intuitive form of human-computer interaction, has become a set of formal actions: something that needs to be practised and performed accurately.[2]

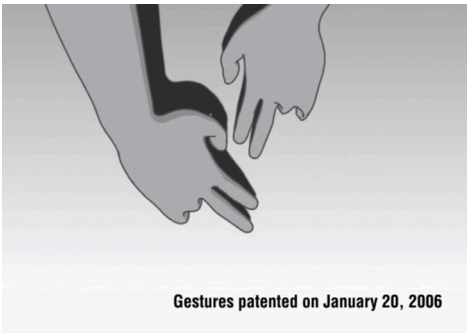
Beneath the interface, dating apps and social platforms distil these now regulated touches and gestures into a mathematical model for profiling the human user. The intimacy of these is abstracted into networks of weighted social connections. In the digital realm, furtive glances across a room and flirtatious body-language, are replaced by a tranche of tracked data related to every interaction: your late-night, drunken stalk of an ex's profile page is recorded, wistful visits to your crush's profile page used to tweak the parameters of an derived digital simulacrum of you.

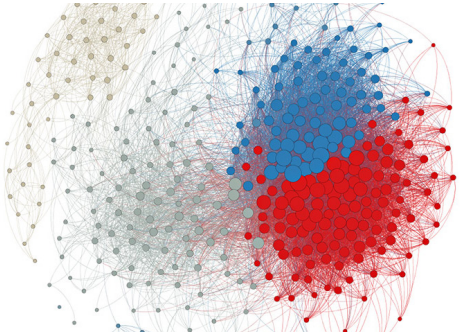
With Tinder, the gesture of swiping left or right is abstracted down to the most basic of binary operations – a 1 or 0, true or false, yes or no. The mathematical logic of Tinder couldn't

image: Tully Arnot, *Lonely Sculpturer*, 2014

be simpler: 1 + 1 = 2. Other online dating sites utilize more sophisticated matching algorithms, integrating data of user behaviour that has not been consciously provided (e.g. OkCupid's "Special Blend" match)[3], with the goal of providing an experience optimized for 'satisfying user interactions'.

In their push to develop more 'user satisfaction' (and in particular keep their user base), technology companies deliberately co-opt human needs and desires in their design of product Facebook games our desire for social engagement, relying on a dynamic of reward and reliance tied to the neurotransmitter Oxytocin,[4] and video-games provide a supernature sense of achievement, tweaking our Dopamine reward system with the satisfaction of continually saving the world. These have both been identified as addictions, with psychologists offering treatment regimes.[5]





With the growth in research of socially and emotionally engaging AI[6] extending unsurprisingly to research in sex robots, Arnot's investigation of touch, gesture, simulation, and intimacy is timely. Digital technology is progressively abstracting the Human from our search for intimacy and contact, and replacing it with an industrialised process borrowed from logistical data management. In its place we get simulated experiences – customised according to psychometric profiling generated from observed behaviour – that to some are far more rewarding than the 'real thing'.

It's possible that in these systems ability to respond to our desire for emotional and physical intimacy, we may be content with the results.

Images: still from Julien Prévieux, *What Shall We Do Next?*, 2013
Facebook network visualisation[7]

HORROR

Louise Zhang's practice uses the the genre of **body-horror** to investigate anxiety, and as a site of the paradoxical intersection of attraction and repulsion. Through an adept coercion of chemical processes (utilising resins, polyurethane, silicone, plastic, acrylic, oil, and foam clay) Zhang creates visceral, disconcertingly ambiguous forms which resemble the melted and fused bodies of horror. With a vivid candy palette and delicate embellishment combined with seeping fluids and degenerated forms, her sculptures and paintings produce a mix of emotions. Often incorporating Chinese traditional symbolism, there is a subtle allusion to the attitude of the West to the 'Exotic East': seduction and fear. Conceptually, Zhang adopts Horror theorist Noel Carroll's belief that social and cultural anxieties are reflected and indirectly manifested in horror.[8]

Many will be familiar with the aesthetic of 'DeepDream';[9] everyday images transformed into dreamlike, hallucinatory, scenes reproducing motifs such as eyes or dog faces in cascades of fractal detail. These images were created with a tool originally designed to 'debug' the machine learning image classifiers being developed by companies such as Google, by effectively running the recognition process 'backwards' to amplify the features being recognised in the output image. Zhang's aesthetic is strikingly similar to the experimental Deep Dream output of one particular image classifier.

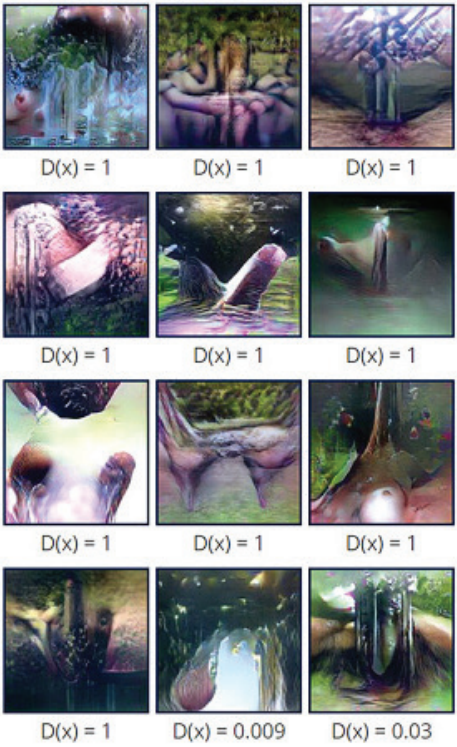
The project "Open NSFW model", a image classifier developed by Yahoo, is a deep neural network designed to identify images of pornography. In a series of experiments, machine learning researcher Gabriel Goh utilised the 'DeepDream' approach to amplify features the system considered pornographic in otherwise innocuous landscapes.[10] On further inspection, he realised that the NSFW filter was applying a second classification to the images: a qualifier for beauty or 'artistic value', to help deliberate on the classic "porn or art" choice. Results from an activation of both NSFW and artistic beauty features resulted in the images overleaf.

Convolutional Neural Networks are opaque. By design, the approach leaves the decision making to the neural network: the researchers don't tell it what is important, or give it an existing structure to work within besides the format of the input being designed and the 'heuristic' criteria used for checking success. The intent of the processes is to go beyond the structural world-view of human designers, who may be able to describe a mechanical process of perceiving

image: Louise Zhang, *Pinky*, 2015

the world, but have little insight into the underlying processes that happen at an unconscious level. Neural networks are able to produce incredible results, but the process through which they achieve them is hidden. All the 'structure' of the solution is embodied in set of connection weights which, taken as a whole, are the necessary and sufficient conditions for achieving the outcome.

Given that the ways neural networks produce their results is hidden to developers, Deep Dreaming is used to give insight into the 'intuition' (logic is the wrong word here) the system follows. The approach amplifies and feeds-back the internal identification process to give insight into what is going on under the hood, by helping to understand the emergent structure of the neural network.



This process sounds like Carroll's description of horror: the subconscious anxieties that manifest through horror are similar to the properties of concern that are activated in a neural network such as the Open NSFW model, and that when amplified through Deep Dreaming produce nightmarish results.

The implication of Goh's experiments is that Open NSFW model's aesthetic for perceiving porn is effectively the stuff of horror. To this system, the decoherent, melted, spliced, and morphed forms of Zhang's works **look identical to human bodies in coitus**.

image: Gabriel Goh's experimental results of pairing high 'NSWF' scores with high 'artistic value' scores[11]

TARGET

My art practice is informed by the intersection of degrees in Computer Science and Cybernetics, Philosophy, and Fine Art, focussing on how digital technologies are used to make sense of the world. In previous research I've explored how the internal logic and culturally-sited assumptions woven into the digital tools we use (e.g. Google Maps) influence how we conceptualise and relate to the world.

For Human Jerky, the work is more directly related to the digital technology itself. Given the lack of transparency in the development of many autonomous technologies, I wanted to illustrate a significant element of their aesthetic – **computer vision processing of Forward-looking infrared (FLIR) camera data**.[12] This pipeline is used in autonomous robotics systems tasked with tracking 'targets'; whether finding survivors for a search-and-rescue robot, or identifying human 'threats' for battlefield robots.

In *Art Punters Freak Me Out*, a long-wave infrared (thermalgraphic) camera provides the input for a computer vision pipeline, filtering the temperature-range of human skin, and processing the image to identify 'targets'. [13] The resulting view is streamed to YouTube to facilitate a feeling of remote surveillance. Visually, the FLIR video-stream presents a palette of false-colour, high contrast reds, greens, and blues: an aesthetic made famous by the 1987 action film Predator, as the iconic vision of the eponymous alien hunter.

This computer vision approach to seeing the world is designed to detect subjects, isolate them from the background, demarcated them, and track within the environment, and is shared across both peaceful civilian applications and military ones, including the emerging field of autonomous killer robots (or Lethal Autonomous Weapons Systems – LAWS).

Killer robots already abound. Extensive use of 'remote-controlled weapons platforms' has already been made by police and military across the world: the Special Weapons Observation Reconnaissance Direct-action System (SWORDS) was deployed in 2007 Iraq until it was hastily removed after "the gun started moving when it was not intended to move"[14]; the Modular Advanced Armed Robotic System (MAARS) improves on SWORDS with a 50% increase in speed, and more powerful M240B Medium Machine Gun[15]; the General Atomics' Predator drone has been in use since 1995 by the US Air Force and the CIA, with no

image: Josh Harle, *Art Punters Freak Me Out*, 2018

transparent reporting on kills (although during the Obama administration civilian deaths from drone strikes was reported as "between 384 and 807"[16]); in 2016, the 'Dallas shooter' became the first US domestic death via robot, killed by a remote-controlled bomb-disposal robot holding an explosive device.[17]

images: The Samsung SGR-A1
Humans detected and labelled with their IDs and colors[13]

In contrast to human-remote-controlled weapons platforms, autonomous systems must make decisions on their own. LAWS such as the Samsung SGR-A1 (an autonomous gun) can identify and 'engage' a human target entirely without human input, according to pre-programmed rules, although currently in its normal function a human remains "in the loop" and is required to confirm a strike.[18] Their approach to seeing the world lacks the ability to differentiate however, and in consequence the set of rules determining their behaviour are based on the location, size, congregation, and movements of the identified bodies. There is no capacity to differentiate a 'combatant' from a 'non-combatant', with the most significant differentiation the system allows is provided by the mechanism of viewing the world: the use of heat – if a human is no longer alive, their body will no longer be hot and they are no longer perceived by the robot.

In current applications, the location of a target is enough to determine action, for example the SGR-A1 is installed facing the Korean Demilitarized Zone, a strip of land running across the Korean Peninsula, where any human detected is a legitimate target. For the future of autonomous robots, however, the precedent set by the selection criteria for human-controlled drone strikes is worrying: without knowing the identity of human targets or the adequate detail in camera feeds to meaningfully differentiate them, 'signature strikes' are performed based on behaviour considered a signature of terrorist activity. As with the machine aesthetic, location and movement of human bodies becomes abstracted from all other details and used to decide their fate, e.g. moving towards a combat zone, congregating on mass, resting in an area known to be used by Al Qaida. Such asymmetrical warfare continues to result in the death of innocent people.[19]

MACHINE

Brenton Alexander Smith's practice draws animal qualities out of the mechanical, using the car-crash simulation software Beam.NG to creating emergent virtual scenarios that produce a twitching mechanical mess **exhibiting their own agency and animal-like movements**. In *We Are Very Close* his use of the crash-test dummy intentionally draws together the car and proxy-human into a single articulated, mechanical system.

While Smith explores the echoes of animal agency of living creatures in the mechanical simulation, his work also illustrates the converse; showing how technologies such as the simulation engine model the human body as a (fragile) articulated machine. In Beam.NG there is no separate logic for understanding the car and the dummy.

It demonstrates a broad approach to understanding the body used in physical modelling: the human body abstracted to a simple mechanical machine – an assemblage of parts and joints – with the necessary shock sensors responding to G-forces to gauge survivability.

Video games have spent considerable effort developing models of the physical dynamics of the human body. The use of 'ragdoll' physics has been refined in game engines such as the Grand Theft Auto franchise to allow for realistic simulation of bodies faced with a violent death from the player.

Currently most of the motion of characters in video games are created through motion capture of real people, performing gestures and actions which are sequenced together into a (fairly) coherent stream. The internal model for this motion is abstracted to a basic skeleton (called a 'rig') of bones and joints, allowing the same recorded motion to be applied to many different character models (with different shapes, sizes, and looks) sharing the same rig.

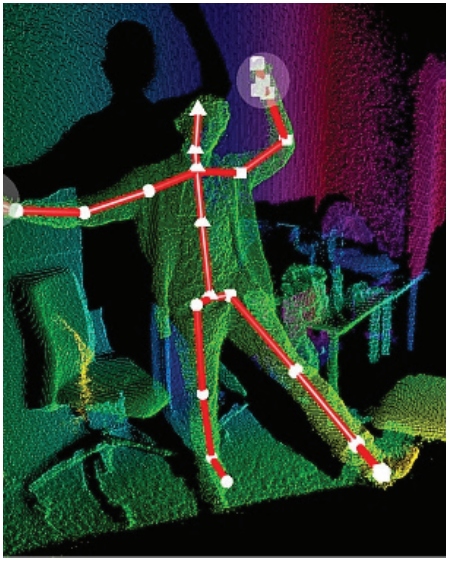
Ragdoll physics is needed for emergent physics, the accurate simulated behaviour of an object under the influence of gravity and other forces, such as when a character dies. Recreating the motion of a body falling down a stairwell after being shot – arms and legs limp and flailing, as the body tumbles down steps – is a fairly complicated task. The rig constrains joints to move in realistic ways, such as knees bending only backwards, so that the body appears to respond realistically.

Human gestural tracking systems

image: Brenton Alexander Smith, *We are very close*, 2018

similarly rely on a model of a basic skeleton to understand a figure performing in front of it. Technologies such as the Microsoft Xbox Kinect use a depth camera, and more recent solutions a simple webcam, to differentiate bodies in space, and estimate the position of the underlying skeleton.

The consequence of the widespread use of a standard 'rig' is that they fail to perceive non-normative bodies such as people in wheelchairs, amputees or those who otherwise don't fit the uniform skeleton model.



images: GTA 5 PC: REALISTIC DEATHS 60FPS (EUPHORIA RAGDOLL OVERHAUL) #30[20]
Example of skeleton tracking with the Kinect[21]

POINTS

Jason Phu's practice reflects on contemporary life, weaving assemblages of found objects with a poetic new meaning. Creating his installations with an **irreverent disregard for their original use and intent**, the results are an exciting, often alarming juxtaposition of elements. With his work, *in the future this is how we will pray and we won't recognise ourselves*, Phu re-purposes cheap, practically throwaway, novelty devices to explore the impact of technology in our lives.

The constituent technologies of his work provide a barely noticed service to their human owners. Each taken in isolation, they are the banal, unremarkable: a side-effect of an economic landscape of cheap manufacturing processes that have managed to find their niche of survivability by satisfying a desire long enough to justify purchase. Phu's refusal to take them at face value illuminates an ongoing difficulty in the creation of machine learning systems: how to translate human value-systems into something that can be mathematically calculated and evaluated, optimised for min/max outcomes, i.e. a point system.

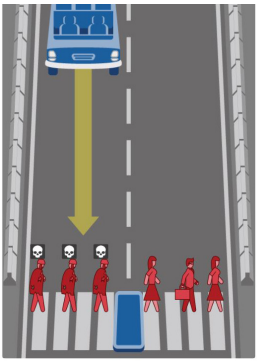
Value systems are required in two technologies: Autonomous systems (that may physically impact humans) need well-defined, structured 'utilitarian calculators'[22] that perform ethical calculations, while machine learning approaches such as neural networks and evolutionary algorithms require 'heuristic' feedback to evaluate the relative success of a particular approach to solving a problem.

Self-driving cars are an obvious candidate for the application of 'utilitarian calculators'. In a recent research project run by MIT, Moral Machines asks participants to help refine a value-system for self-driving cars via an online quiz.[23] This project is provocative and speculative. Self-driving cars currently lack the capacity to distinguish between different types of people, though it will be functionally necessary for them to differentiate between a human (which should be avoided at some cost to the car and driver) and a small mammal or light obstacle (which should not elicit an abrupt manoeuvrer that would jeopardise the safety of the passengers) before they are released for use.

Many argue that it is unethical to even consider an 'ethical calculator' based on a hierarchical system of value judgements which assigns 'points' to

image: Jason Phu, *in the future this is how we will pray and we won't recognise ourselves*, 2018

different 'categories' of humans. A pragmatic approach to developing an ethical decision-making process could simply assign a value of 1 to any person, successfully handling the often-cited example of a self-driving car's single passenger facing a bus full of children on a mountain pass. The thought that your car may sacrifice you to save others makes some uneasy however, and it's reasonable to imagine that a company developing self-driving cars would want them to both i) behave in a way that reflects a common ethical value system, and ii) minimise the risk of financial liability. As the subversive performance troupe The Yes Men suggested through deadpan satire posing as Dow Chemicals representatives at a risk assessment conference: "We can't put a monetary value on human life, but thankfully the market does it for us",[24] and the control units of future self-driving cars may well factor in this market value.



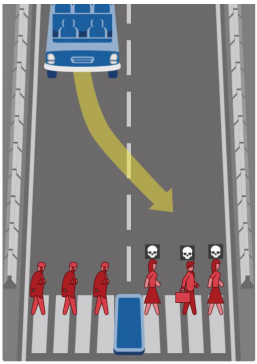


image: Moral Machine example quiz question[23]

In both 'utilitarian calculators' and heuristics, the gap between the complexity of human values and a points-based system can lead to unexpected and/or undesired outcomes. In learning to successfully fulfil their tasks according to optimisation of achieved 'score', the technologies have no understanding of the intention of the designers. They can game the system.

In one example, Facebook researchers developing negotiation chatbots that evolved to optimise their communication create own language, outputting sentences such as "balls have zero to me to me to me to me to me to me to me to me to" which were meaningless to the developers, but more effective at the defined task than natural language.[25] While developers may try to articulate what a valuable outcome is, so much of human understanding involves implicit value systems that are more suited to political philosophers to interrogate. The classic utilitarian thought experiment suggests a good way of achieving maximum happiness in the world might be through forced neurochemical intervention. The decisions of artificial intelligence based on its value system may well share this logic.

Phu's ad-hoc, irreverent construction of new meanings may help inform the chaotic process of evolutionary algorithms. Like them, it ignores the supposed 'common sense', given value and meaning of its parts, and generates a meaningful outcome according to its own logic.

METRIC

Jason Wing is an artist of both Chinese and Indigenous heritage, who's work engages with social and political issues impacting his wider community. *Brute Force >> Merge Sort* was inspired by the experience of being filmed by police at an Invation Day march earlier this year. It explores his feelings around the **function of surveillance** to transform those recorded into subjects of analysis, and expand the disparity in power between the recorded and the (effectively anonymous) recorder. As Wing notes, "It's the ultimate act of control",[26] echoing a colonial history in which ethnography was used to classify and analyse according to perceived difference.

Wing's work indexes the use of biometrics as an approach to identifying, classifying, and analysing humans. Through biometric technologies, various biological properties have been chosen to represent each human via a unique, unchangeable identifier – the conceit of these systems is effectively that the human is equivalent to their biometric data.

Biometrics deal with the detectable differences between people, but their development is disproportionately driven by Silicon Valley. Those in the position of power of designing and implementing new biometric technologies are far from representative of diversity of the worlds population; they're WEIRD (White Educated Industrialized Rich Democratic), and as a consequence technologies created to encompass difference fails to accommodate it, or provide equal treatment. The result is 'Algorithmic Bias' – discriminatory behaviour manifested in the operation of algorithms – evident everywhere: in Hewlett Pickard's touted face recognition algorithms that fail to identify Black people[27], Apple's FaceID failure to differentiate between Asian faces[28], or even iPhone's antenna design causing bad reception for left-handed people.[29]

Data-driven models of analysis have been heralded as a way of casting off quasi-science and broken models by building a system of understanding directly from 'the data'. Machine learning is increasingly being applied to the creation of data-driven models, reproducing the observed characteristic of their training data-sets and providing predictions based on new input. But by delegating the responsibility for creating these models to an opaque machine learning

image: Jason Wing, *Brute Force >> Merge Sort*, 2018

process, these systems only obfuscate the process of interrogating their logic, and they are reproducing biases evident in their input data. The data being provided has been created in the context of historical, systemic bias, and the models created from them embody these (i.e. “garbage-in, garbage-out”).

Driven by bad datasets, machine intelligence systems for guiding the conditions of bonds on the likelihood of re-offending are reflecting the historic disproportionate arrest rates across ethnicity[30]; The Google Cloud Natural Language system, learning from a dataset of language usage taken from web forums is evaluating gay and/or Jewish identity as negative[31]; Amazon’s facial recognition system, *Rekognition*, recently matched 28 members of Congress to criminal mugshots[32], disproportionately identifying African-American and Latino lawmakers as known criminals.

In contrast to the other aesthetics explored in this essay, what is most frightening about the machine aesthetic of biometrics and data-driven modelling is not that they are deeply alien, but that **they reflect the familiar biases and discrimination built into Western society.**

Fig. 3. Minutiae location of top 5 partial fingerprints that were selected as MasterPrints from the FingerPass DB7 dataset.

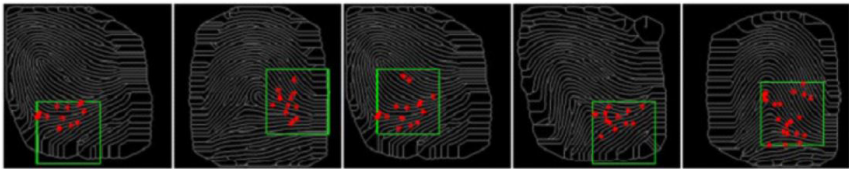


Image: Reoccuring fingerpring patterns used to create a master print[33]

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ARTISTS

Tully Arnot (b.1984) poetically interprets the intangible relationships we have with everyday items and illuminates new ways of thinking and interacting with the world around us. Arnot shifts the intentions of everyday tools and objects interpreting new ways of experiencing these relationships and how they feedback into our own capacity to interact meaningfully with one another.

Josh Harle (n.1980) is a multidisciplinary researcher and new media artist with a background in Computer Science, Philosophy, and Fine Arts. His research investigates the virtual spaces generated by emerging technologies, our encounters with the world through them, and their social and political impacts.

Jason Phu (b.1989) known for his tongue-in-cheek subject matter and playful humour draws inspiration from his mixed-cultural upbringing. Informed by the tradition of Chinese brush and ink painting and with a taste for the two-dollar shop, Phu traces the connections between a traditional and contemporary practice.

Brenton Alexander Smith (b. 1988) explores the point of connection and disconnection between human and machine relationships. His early works were informed by ideas of the cyborg, drawing on Donna Harraway's assertion that we are all cyborgs through our codependence with technology.

Jason Wing (b. 1977) is a Sydney-based artist who strongly identifies with his Chinese and Aboriginal heritage. Wing began as a street artist and has since expanded his practice to incorporate photomedia, installation and painting. Influenced by his bi-cultural upbringing, Wing explores the ongoing challenges that impact his wider community.

Louise Zhang (b.1991) is a multidisciplinary artist whose practice spans painting, sculpture and installation. With an interest in horror cinema, particularly the body horror genre, Zhang is interested in the dynamics between the attractive and repulsive. By exploring how themes of perceived innocence such as prettiness and cuteness can be contrasted with notions of the perverse and monstrous, Zhang explores the intersection of fear, anxiety and a sense of otherness in the construction of identity. She is represented by Artereal Gallery, Sydney.