"NOW OBJECTS PERCEIVE ME": ART THAT INTERROGATES MACHINE VISION

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"Now objects perceive me," the painter Paul Klee wrote in his notebook, according to Paul Virilio in *The Vision Machine* (1994, orig. 1988). With the Internet of Things, objects that perceive us have become reality. In this posthumanist world, the human is no longer automatically the subject who sees.

How do we reconcile this new subject position, this new nonhuman viewpoint on the world, with centuries of humanist culture where we have seen ourselves as the subject that views and acts upon the world around us? Do we see machine vision as other, or as an expansion of our human perception? Computer vision is a massive research field in the sciences, but we have not sufficiently understood the cultural aspects of this technology.

Art is an area in which machine vision is being examined and critiqued in very creative and provocative ways (Greene 2015; Zylinska 2016). This paper analyses three recent works of art that interrogate the relationship between human perception and machine vision: Nadav Assor's art-documentary *Lessons on Leaving Your Body* (2014), Muse's VR music video *Revolt* (2015), and Erica Scourti's *Body Scan* (2015). The goal is to understand how these works present the relationship between human and machine vision. This 1200 word abstract cannot present full analyses, and so simply shows the main points that will be drawn out in each of the works. Theoretical perspectives will include Andrejevic's work on the sensor society and self-droning (Andrejevic and Burdon 2015; Andrejevic 2015), Flusser on the relationship between the human and the *apparatus* of technical images (Flusser 2000), and work on posthumanism (e.g. Hayles 1999; Nayar 2014).

Drones as Alternative Bodies

In artist-filmmaker Nadav Assor's documentary *Lessons on Leaving Your Body* (2014), we see an example of a human using machine vision to see the world and himself from another perspective. The human user, Jake Wells, sees himself as a "fleshpilot" who happens to be temporarily in control of his physical body. He builds and flies drones as alternative bodies, and when he flies them he sits quite still, bowing his head down between his knees as if in prayer, and sees the world only through the camera attached

to the drone that his hands expertly pilot. FPV (First Person View) videos taken from the perspective of drones are commonly uploaded to YouTube.

Wells doesn't use algorithms to analyse the images captured by his drones. He simply wants to see the world from another perspective, from the point of view of a different kind of body. In a sense Wells does not really crave machine vision, he craves human vision from a machine body. For Wells, machine vision is not dangerous or threatening, it is simply an expansion of our perceptual possibilities.

Seeing as a Drone
Even without owning a drone or an Oculus Rift, we can experience new ways of seeing by slipping a smartphone into a cheap or homemade Google Cardboard kit and using a VR app like VRSE to view stereoscopic videos. One of the initial works released for VRSE in 2015 was a VR music video for "Revolt" by Muse. The traditional version of the video uses fisheye lens distortion to give the impression it was recorded by a surveillance camera or a drone, but cuts between these "drone" images and traditional cinematic footage. The VR version is much more consistently seen from the point of view of a drone. As we can view the scene in all directions by turning around, we also feel some agency, almost as though we *are* the drone, or at least its operator.

Even the simple VR experience offered by Google Cardboard is dizzyingly visceral. There is a strong sensation of actually being there, although with somewhat blinkered vision. As the drone swoops down my stomach feels the movement, despite my knowledge that I am standing on the floor of my home.

Positioning the viewer or player as a drone or a machine is a fairly common technique in current digital culture. Games like *République* (2013-16) and *Watch Dogs* (2014) position the player/viewer similarly to an omniscient narrator in a novel – except that machine vision, while shown as vastly superior to the singular human point of view, is still presented as partial and corruptable.

Searching your body
CamFind is an app that allows users to visually search the internet for items captured with the phone's camera. The app is aimed at shoppers, so for instance if you point the camera at a watch the app will identify the brand of watch and point the user to a range of websites where they can purchase similar items. CamFind can identify a surprisingly broad range of objects, and artist and poet Erica Scourti has made use of this feature to create *Bodyscan,* telling a story from a series of images of her body. The video is in portrait layout, like the screen of an iPhone, and shows an edited recording of a session with CamFind app. *Bodyscan* moves faster than the app, cutting away all the lag and cutting between search results at a frenetic pace while Scourti reads aloud the identification text the app produces, adding and revising some of the text.

A photo of breasts fills the mobile-phone shaped screen for a moment, quickly followed by CamFind's result: 'woman breast', then quickly moving on to the search results: breast enlargement, fast enlargement. A quick montage of various male and female body parts follows. "Identifying human, human armpit, human feet.' The merging of the personal, the human, and the consumerist machine algorithm in CamFind is skilfully

mocked. A picture of a foot returns the search result 'Baby' and the voiceover reads 'Baby, I can't wait forever 21', shifting from the human emotion of "I can't wait forever" to shopping as 'forever' is coupled to '21', thus becoming the women's' clothing store chain Forever 21.

Conclusion

These three works see machine vision in three different ways: as an expansion of human perception, as a hostile, controlling force that should be destroyed, and as a commercialised force altering or co-constructing the way we view our own humanity.

In the next few years, our culture and technology are bound to become even more entwined with machine vision. Internet research needs to engage with how this happens and what it means for us. Art is one of several paths to understanding more about this.

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