

# Controlling Drones in Contemporary Science Fiction

Jill Walker Rettberg (@jilltxt)

This paper explores the complex adversarial yet complicit relationship between drones and humans in sociotechnical imaginaries of contemporary culture ((Jasanoff and Kim 2015; Serafinelli 2022)) by analysing representations of drones in video games, digital art, and science fiction novels and movies.

## 1. Seeing like a drone

There is a scene in the Norwegian TV series *Beforeigners* (2019) where the camera suddenly shifts from following Navn as he hunts a rabbit in the woods, cutting to a view from above.

The new image is green-tinged and has a cross-hatch in the centre, marking Navn, who is looking up at the camera. He is naked, carrying nothing but the stone he intends to use to kill the rabbit. The drone camera remains steady as we see Navn peppered by bullets, his body staggering as he falls to the ground.



Figure 1: Screenshot from the NRK series *Beforeigners*, s01e03 (2019).

The *Beforeigners* scene is reminiscent of many movies and video games: the camera's point of view shifts to the drone, aligning the viewer with the drone.

Seeing as the drone, we watch as it targets and kills its victim.

In this paper, I want to explore the messy assemblages that drones and humans enter into. I'm basing my exploration on a dataset we collected

## 2. The Database of Machine Vision in Art, Games and Narratives

This paper combines qualitative analysis with analysis of the Database of Machine Vision in Art, Games and Narratives, which documents and analyses representations of machine vision technologies in 500 creative works, including digital artworks, video games and science fiction novels and movies. (<http://machine-vision.no>.)

We have also exported the dataset as a set of csv files for data analysis and visualisation (Rettberg et al. 2022a), and have published a data paper documenting the dataset (Rettberg et al. 2022b)

Among the 797 machine vision situations (that is, scenes involving machine vision technologies) that we identified in these works, drones were involved in 79.

## 3. What do drones do in machine vision situations?

Drones take part in 259 individual actions in these situations. The most common actions are shown in Table 1. Percentages show the distribution – 6,2% of all actions taken by drones are “Recording”, and 2,2% of all actions taken by any machine vision tech is “Recording”.

Table 1: Most frequent actions taken by drones.

Action	Drones	All tech
Recording	6,2%	2,2%
Killing	4,2%	0,8%
Scanning	3,9%	4,0%
Transmitting	3,1%	0,7%
Identifying	3,1%	3,8%
Targeting	3,1%	0,6%
Controlled	2,7%	0,7%
Revealing	2,7%	4,4%
Flying	2,3%	0,2%

Drones are more likely to record, kill, transmit, target, fly and be controlled than other machine vision.

These verbs suggest drones are represented as *tools* that humans control. A more qualitative reading of individual situations, such as Navn's murder in *Beforeigners*, shows a more complex picture, as I'll return to below.

## 4. Drones as tools, enemies or collaborators?

Figure 2 shows the overall attitude the works express towards machine vision technologies.

While machine vision overall is portrayed as more helpful than hostile in the 500 works we surveyed, drones stand out, alongside facial recognition and surveillance cameras, as more hostile than technologies like holograms, augmented reality, general AI and devices that display the non-visible spectrum (see Figure 1).

Drones are mostly featured in works dealing with topics like surveillance, dystopias, AI, conflict, physical violence, but we also see that companionship and free will are common topics.

Companionship and free will are topics that connect to ideas about human agency – do we control drones? Are we complicit in their killing?

Even when drones appear to be presented as simple tools, a closer look at some of the situations they appear in shows a more complex relationship.

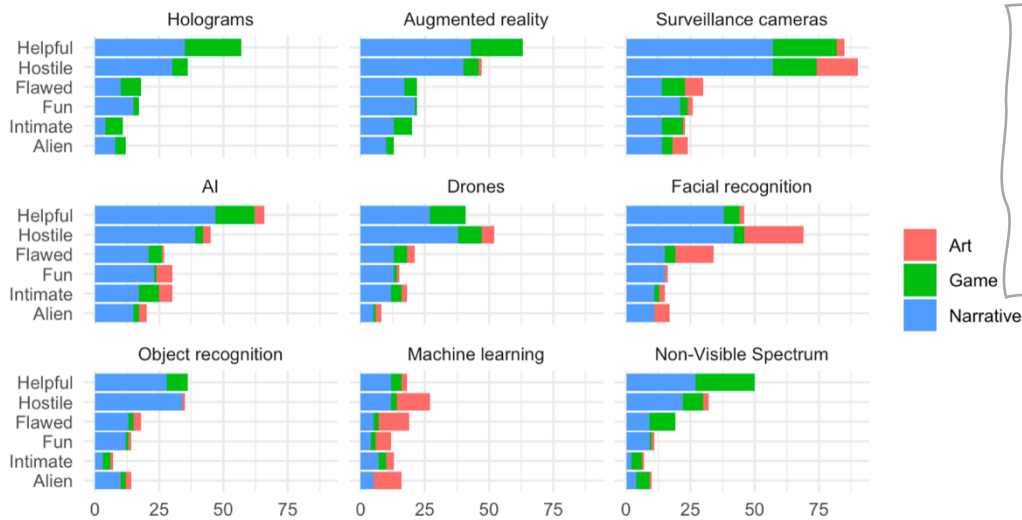


Figure 2: The overall attitude towards machine vision technologies in 500 words, sorted by which technologies are represented in the works.

«Something explodes next to them, the crowd nearly knocking him off his feet as they make room for something heavy that's fallen from the sky, a failed police drone smashed to fragments of plastic and silicone as it impacts the asphalt.»  
Maughan, *Infinite Detail*.

No sign of those three Mercers. Not yet. Every image processor we have is running cranked up far beyond sanity. We're overfitting on everything. Once a spider flagged the shadows of two trees as a threat, and I attacked it furiously for a few minutes. But better this than unaware. (*The Salvage Crew*, p. 204)

## 5. Embodying the weapon

Any murder portrayed on screen situates the **viewers as witnesses**.

When the point of view is that of the weapon itself, our (i.e. the viewers) role as silent bystanders becomes more complex. We are **positioned as the killer, not simply as a witness**. But we have no agency – we can only watch.

In video games, we pull the trigger ourselves. The combination of distanced and unemotional murder with our own **embodied complicity as we see with the drone** (see Solberg 2022 on cyborg vision) is a paradox that seems to both disturb and delight us.

The machine is our enemy, and yet we are (or imagine being) the machine.

Drones offer the promise of control and overview, as has been discussed by many scholars, frequently building on Donna Haraway (1988). It is this promise that has made the “eye in the sky” so popular among US police departments and the military.

Scenes like the murder of Navn in *Beforeigners* show us that drones make us complicit – we become the drone.

### 1. Human-drone assemblages

Despite the examples of drones being controlled (see Table 1), contemporary science fiction and video games also emphasise the *lack of control* inherent to drones.

Police drones are countered by drones belonging to protesters in Cory Doctorow's *Little Brother* (2008) and Tim Maughan's *Infinite Detail* (2018), and so the police drones lose control, or at least have to fight for it.

In Nadar Assor's art film *Lessons on Leaving Your Body* (2014) footage shot by the drone is chaotic, wobbly, and the drone crashes. The shots composed by the human director stand in stark contrast: visually balanced, calm and beautiful.

In Yudhanjaya's Wijeratne's *The Salvage Crew* (2020) the ship AI, who is also the novel's narrator, uses drones and spiders to be able to explore the planet with the ship crew, but their visuals glitch and the overfitting makes their image recognition “paranoid”; the drones and spiders break and are lost.

By analysing these examples in more detail, I plan to explore the tensions between our imaginaries of drones as simple tools that allow us distance and control, and our experiences of drones as uncontrollable and messy technologies that muddle the distinctions between human and technology, emphasising instead how both humans and technologies adapt to each other as part of ever-changing assemblages.

## 2. References

- Haraway, Donna. 1988. 'Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective'. *Feminist Studies* 14 (3): 575–99.
- Jasanoff, S, and Sang-Hyun Kim, eds. 2015. *Dreamscapes of Modernity: Sociotechnical Imaginaries and the Fabrication of Power*. Chicago: University Of Chicago Press.
- Rettberg, Jill Walker, Linda Kronman, Ragnhild Solberg, Marianne Gunderson, Stein Magne Bjørklund, Linn Heidi Stokkedal, Gabriele de Seta, Kurdin Jacob, and Annette Markham. 2022a. 'A Dataset Documenting Representations of Machine Vision Technologies in Artworks, Games and Narratives'. *DataverseNO*. <https://doi.org/10.18710/2G0XKN>.
- . 2022b. 'Representations of Machine Vision Technologies in Artworks, Games and Narratives: Documentation of a Dataset'. *Data in Brief* 42. <https://doi.org/10.1016/j.dib.2022.108319>.
- Serafinelli, Elisa. 2022. 'Imagining the Social Future of Drones'. *Convergence: The International Journal of Research into New Media Technologies*, March, 135485652110549. <https://doi.org/10.1177/13548565211054904>.
- Solberg, Ragnhild. 2022. '(Always) Playing the Camera: Cyborg Vision and Embodied Surveillance in Digital Games'. *Surveillance & Society* 20 (2). <https://doi.org/10.24908/ss.v20i2.14517>.