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Artificial intelligence, surveillance and the (post-)human in *The X-Files*

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Surveillance is one of the central themes of *The X-Files*; whether extra-terrestrial, federal, shadow government, paranormal or subversive sousveillance, the mechanics and motives for surveillance underpin the narrative drive of the series. The dynamics of *The X-Files*, where Mulder's paranoia and suspicion finally unfold into an actual alien colonization conspiracy and both Mulder and Scully uneasily occupy their position with the FBI's often murky role as domestic security and intelligence service, highlight the centrality of surveillance and its relationship to control and individual agency. As federal agents Mulder and Scully scrutinize, investigate, watch and collect data, but they are also themselves subject to surveillance and manipulation, uncertain of their own agency and with an equivocal access to 'the Truth'.

For Kevin Howley, *The X-Files* 'addresses fundamental concerns over social, psychological, and political control and is an expression of deep-seated cultural anxieties towards various forms of control technologies' (Howley 2001: 258); our chapter argues that the intersection of Artificial Intelligence (AI) and surveillance technologies manifests a particular nexus of these cultural anxieties. In turn, *The X-Files*' narrative engagements with AI technology offer distinct visions of the role of AI in our contemporary moment and near future, following what Stephen Cave, Kanta Dihal and

Sarah Dillon argue about the impact of such representations: 'Narratives of intelligent machines matter because they form the backdrop against which AI systems are being developed, and against which these developments are interpreted and assessed' (2020: 7). Nascent post-human consciousness and the increasing liveliness of machines form the context within which *The X-Files* examines dystopic fears of AI surveillance and of machine intelligence eclipsing the human. Though such ideas are negotiated in monster-of-the-week episodes, they actually point to *The X-Files*' consistent, core concern with understanding the prospects for the human – for human identity and human intimacy – in an increasingly post-human technological world.

Science fiction, AI and surveillance

Visions and versions of AI have been pivotal to the science fiction (sf) imaginary through the twentieth and twenty-first centuries, and even before. Thus, it may be possible retrospectively to read Hephaestus's gold handwomen in Homer's *Illiad* as forms of intelligent machine (Lively and Thomas 2020), position the Golem of Prague as a hinge point between Jewish tradition and myth, and AI research (Vudka 2020), or interpret eighteenth-century simulative automata as AI (Riskin 2016). It is with modernity though, and the advent of modern electrical and media technologies, that intelligent machines start to proliferate in literature and film. In the late-nineteenth and early-twentieth centuries, authors provide early versions of the 'fembot' – 'Hadaly' in Villiers de l'Isle-Adam's *L'Eve Future* (1886), 'Robot-Maria' in Fritz Lang's *Metropolis* (1927); of robot rebellion in Karel Čapek's *RUR* (*Rossum's Universal Robots*) (1921); of the evolution of sentient mechanical life in Samuel Butler's *Erewhon* (1872) and of humans dependent on a global intelligent-machine network in E. M. Forster's *The Machine Stops* (1909). These figurations of AI and its complex relationship to the human, and to the binaries and hierarchical ontology on which humanism rests, resonate through the twentieth century and contextualize *The X-Files*' negotiation of the power and potential of AI.

Though there is a long-standing history of AI in fiction and philosophy (as the examples given earlier demonstrate), it has its scientific birth (or at least its denomination) at the 1956 summer workshop at Dartmouth College in Hanover, New Hampshire, convened by Mathematics Professor John McCarthy, Marvin Minsky (Harvard), Nathaniel Rochester (Information Research IBM) and Claude E. Shannon (Bell Laboratories). Although some of the participants favoured the term 'Complex Information Processing', McCarthy's *artificial intelligence* was adopted as the name for this emergent science. Alan Turing had already asked 'can machines think?' in his 1950 paper 'Computing Machinery and Intelligence' and, with the emergence of electrical computers, AI research progressed alongside contemporary

computational power. At the same time nonanthropomorphic AI became, in the way that the robot, android or other forms of humanoid AI had been for centuries, a point of interest for mid-century sf.

Nonanthropomorphic AI, imagined as sentient supercomputers, populate the work of sf authors Isaac Asimov and Philip K. Dick; 'Multivac', a government-run natural language computer, appears in a string of Asimov's stories from 'Franchise' (1955) to 'Potential' (1983), whilst Dick's 'The Great C' (1953), 'Stand-By' (1963), 'Vulcan's Hammer' (1960) and 'Holy Quarrel' (1966) all feature powerful AI computers. Harlan Ellison's 'I Have No Mouth, and I Must Scream' (1967) is perhaps the most chilling early example of an sf AI, here a sentient supercomputer 'AM' created in the Cold War. AM, after achieving self-awareness, has enacted genocide on humankind, keeping five humans alive and immortal to torture them across the centuries. Ellison's story demonstrates how the imbrication of computer and AI technology with the military-industrial complex feeds into an sf imaginary. What results are myriad dystopian visions of AI dominating and often destroying the human species, visions that chime with the contemporary fears about AI articulated by Stephen Hawking, Elon Musk and others. But it is 'HAL 9000', the AI computer in *2001: A Space Odyssey* (1968), directed by Stanley Kubrick from the screenplay by Kubrick and sf author Arthur C. Clarke, that enshrined popular cultural versions of the menacing sentient computer: Marvin Minsky, who co-founded the Massachusetts Institute of Technology's AI laboratory in 1970, was a scientific adviser for the film.

AI, or at least the vision of general AI that Alan Turing, Marvin Minksy and others outlined in the twentieth century, still rests in the realm of the imagination; in Meredith Broussard's words, 'general AI is what some people want, and narrow AI [a mathematical method for prediction that can include machine learning] is what we have' (Broussard 2018: 32). Nevertheless, as both computing and network technology developed in the last decades of the twentieth and first decade of the twenty-first centuries, the new sf genre of cyberpunk positioned AI securely within the sociotechnical assemblage of human and digital technology that characterized its future visions. In *Neuromancer* (1984), a foundational cyberpunk text, author William Gibson offered the first extended conceptualization of 'cyberspace' (a term he had coined in the 1982 story 'Burning Chrome') as the networked virtual realm of 'data abstracted from the banks of every computer in the human system' (Gibson 1984: 67), and imagined future AI's autonomy as being controlled and restricted by the 'Turing Police'. In cyberpunk, we see what Anna McFarlane describes as 'networked AI', that is, AI 'dispersed into networks that exist in the virtual space behind the computer screen' (2020: 284). The cyborgs, hackers, console cowboys and razor girls of cyberpunk negotiate a post-human terrain where the human subject, profoundly reconfigured through cybernetic, digital and prosthetic technologies, is also encompassed

by virtual webs of surveillance, data and code that span and configure the world, a web that furnishes a virtual, digital ecosystem for AI.

The twentieth century concluded with distinctive versions of apocalyptic dread for the implications of AI and computational power. In 1999, the Wachowskis directed *The Matrix*, a film that offers a formative vision of humanity bound in servitude as batteries powering all-powerful AI. The film was released at a time of heightened anxiety about a global catastrophe resulting from the omnipresence of computing technology with the feared millennium bug. It is within such a context that *The X-Files* examines anxieties about technological advance, the threat AI poses to the future of the human and the destabilizing of the binaries of subject/object, human/ machine and real/virtual. Crucially, *The X-Files* focuses not on AI robots or androids, but on the nonanthropomorphic figurations of AI that have their roots in the sentient supercomputers of 1960s and 1970s sf and develop, in the cultural imaginary, through the networked visions of cyberpunk to merge with contemporary anxieties about surveillance.

Surveillance studies has historically sought to problematize established binaries – the human versus the machine; the technological camera versus the corporeal body and the powerless object versus the powerful subject. Sociologist David Lyon, former director of the Surveillance Studies Centre at Queen's University in Kingston, Ontario, in his foundational study *Surveillance Society*, offers a working definition of surveillance as 'used to identify a systematic and focused manner of observing' where 'any collection and processing of personal data, whether identifiable or not, [is used] for the purposes of influencing or managing those whose data have been garnered' (2001: 2). These 'data' come in many forms, and perhaps most commonly, thanks to Michel Foucault's work on Bentham's Panopticon, are envisioned as the watching of bodies for the purposes of control. Bentham's Panopticon is an institutional building and system of control (typically a prison) where a central tower enables prison guards to constantly observe inmates and without their knowledge. The Panopticon serves as the foundation for Foucault's work in *Discipline and Punish*, and often acts as the basis for work in surveillance studies. For Foucault, 'Bentham [created] a consciousness solely based on permanent visibility as a form of power; in effect, a space "based on a system of permanent registration"' (Flynn and Mackay 2017: 2). Therefore, according to Lyon, Foucault and Bentham, surveillance is, at its core, concerned with systems of control and agency and their ability to either give or take power. In the case of *The X-Files*, the theme of 'watching' and 'being watched' forms an integral element in the series' repeated formula – a theme which lurks in the form of the Smoking Man, the FBI, aliens, monsters and in each other. Yet what is often invisible and unconscious is the way unknown 'machines' frequently bridge the gap between Mulder and Scully and the watching 'other'.

Sherry Turkle's (Professor of the Social Studies of Science and Technology at MIT) work on technology and corporeality is often cited as a compendium to our contemporary moment in the early twenty-first century and its fascination with all things machine. In her book *Alone Together*, Turkle argues that 'we are tethered to our "always on/always on us" communications devices and the people and things we reach through them … the self, attached to its devices, occupies a liminal space between the physical real and its digital lives on multiple screens' (Turkle 2011: 122).

Turkle's vision of a fetishized gadgetization demonstrates a very real, corporeal concern about the increasingly technological reality in which we live and the 'liminal space' we ourselves now occupy. For Turkle, our connectedness to technology appears increasingly as a prosthetic – one which is at odds with the flesh – and she extends this concern in her book *Reclaiming Conversation*, in which she refers to technology as facilitating 'thinking in public' (Turkle 2016: 308). Turkle argues that it is through our smart technologies (smart phones, wearable technology, e.g. watches) that we are forced to 'think in public' for this technology means 'we're never alone, and we never get to explore ideas for ourselves' (Turkle 2016: 308). Here, Turkle suggests a relationship of mutual consciousness, in which smart technology occupies both the real space and the virtual space. In doing so, Turkle sets up the conditions for technology's relationship with surveillance. Here we have a form of surveillance which extends beyond the camera, beyond the individual and even beyond our cultural and social structures. This is a form of surveillance that can control our thinking.

Haggerty and Ericson refer to this form of surveillance as 'an assemblage', where surveillant practices not only dismantle a coherent body 'bit by bit' but also 'produce new ways of visualising bodily identities' (2006: 8–9). The surveillance assemblages set up by *The X-Files* repeatedly attempt to produce 'new ways' of viewing – it is the process by which antagonists are unmasked, aliens uncovered and double agents discovered to reveal their newly visualized identities. But what lies invisible in this act is the way in which the process of remaking also reprogrammes the characters' thinking, offering a space where the actual and digital converge.

If the surveillant assemblage blurs the line between machine/human, object/subject and real/virtual, then our initial understanding of surveillance needs updating. James Sheehan and Morton Sosna's work on the boundaries between humans, animals and technology suggests this blurred line exists because of human, rather than machine behaviour, stating 'the boundary between nature and machines has sometimes been redrawn. But it is only recently that we have been able to imagine machines complex enough to be like humans and humans predictable enough to be like machines' (Sheehan and Sosna 1991: 135). Sarah Roberts (UCLA Professor of Information) similarly expresses a blurring of these binary divisions in her chapter 'Your AI Is a Human' in *Your Computer Is on Fire*: 'Just what constitutes AI

is slippery and difficult to pin down; the definition tends to be a circular one that repeats or invokes, first and foremost human intelligence' (2021: 52). For Roberts, 'where humans stop and machines start is not always clear' (2021: 65). What Roberts and Sheehan and Sosna's work on technology does, is bring the seeming division between machine and corporeal flesh into debate and, in doing so, also suggests that the advent of AI actively collapses these binaries. If we take literary scholar Will Slocombe's discussion of cyberpunk for instance, descriptions of AI and humans become 'coded' and machines function as extensions of socially created parameters (Slocombe 2020: 232). Jean Baudrillard viewed the tech-obsessed contemporary moment in a similar way, wherein all systems of reality were threatened by the 'terrorism of the code' (2013: 120). The melding of the watching machine and the watched corporeal body is only made possible by the introduction of AI and, thus, 'algorithmically driven processing of knowledge and communication' (Parisi 2018: 21). By stepping into the shoes of the humans in Bentham's Panopticon, it instantiates 'social boundaries [to] uphold social norms, acquire or consolidate power over others and attain knowledge otherwise unavailable to human understanding' (Truitt 2021: 66). This surveillant AI appears as the ultimate realization of the autonomous machine intelligence of the sf imagination, a powerful technology that not only mediates and territorializes human thinking and human community, but reprogrammes it.

Intelligent machines: 'Ghost in the Machine'

In 'Ghost in the Machine' (S1: E07), AI manifests as a powerful super-computer with malevolent intent. In the episode, Mulder and Scully investigate deaths that have taken place in the Eurisko corporate building. Although the key suspect is Brad Wilczek, Eurisko founder and designer of the COS (Central Operating System) who has been forced to leave the company, Mulder soon suspects the COS itself, which controls the Eurisko building, is the killer. Though both Mulder and Scully refer to the sentient COS as a 'machine' throughout, thereby reiterating its status as a mechanical system, their struggle against its violent intent, and surveillance and control of the corporate building parallels their other confrontations with supernatural, alien and monstrous beings in the season one monster-of-the-week episodes: 'The machine's a monster, Scully', declares Mulder at the episode's climax. Despite being instrumentalized as a machine, the COS is emplotted as an autonomous malevolent being that, rather than a paranormal phenomenon, is an individual incarnation of the monstrous potential of increasingly autonomous technological systems of surveillance.

This episode of *The X-Files* was broadcast at the end of the 'AI winter' of the 1980s and early 1990s, an extended period of reduced funding and interest in AI technology. The episode has an intriguing relationship to both science-fictional and historical narratives of AI. 'Ghost in the Machine' contributes to the institutionalization of specific narratives of computing and AI innovation that set its roots in the Californian counterculture of the 1960s (Wilczek was a follower of the Grateful Dead before founding Eurisko 'out of my parents' garage'), only for innovative computer science to be co-opted by the forces of big business (embodied in the episode by Wilczek's business partner Ben Drake) and imbricated into the military industrial complex (after his arrest, Wilczek is taken into secret detention by the Department of Defence who want to use his expertise).

Alongside the narrative construction of an AI historiography, 'Ghost in the Machine' also draws on the preceding media iconography of the malevolent sentient computer, most obviously *2001: A Space Odyssey*'s HAL but also 'Proteus' in *Demon Seed* (the 1977 science fiction-horror film based on Dean Kootz's 1973 novel). In both films, the glowing red eye of the camera signals the AI's activity as sentient surveillant, and similarly in 'Ghost in the Machine' the COS surveils Mulder, Scully and other humans via cameras throughout the building with a glowing red lens light indicating the operative 'vision' of the COS. The AI's voice simulators in all three texts also converge as a flat monotone that intones the ambivalently corporeal status of this artificial consciousness. In *Demon Seed*, the sentient computer Proteus is driven by a procreative urge and imprisons its creator's wife, Susan, in her computerized house to forcibly impregnate her. Though the COS in 'Ghost in the Machine' has no such intentions, its control over the human body is similarly enacted through the spatial and architectural frames of the built environment: locking doors and controlling light, air-conditioning, lifts, video monitors and electricity. The COS also personally surveils Scully, accessing her home phone line and copying her personal computer files via dial-up modem. Although Scully is not the object of the malevolent AI's obsession in the way that Susan is in *Demon Seed* (as Mulder points out, the COS is straightforwardly concerned with 'self-preservation … the primary instinct of all sentient beings'), it is Scully who is injured and has her life threatened when the COS traps her in the air-conditioning ducts. That the AI in 'Ghost in the Machine' invades Scully's privacy and threatens her body foreshadows the story arc in subsequent seasons, in which Scully discovers a microchip neck implant (presumably placed there during her season two abduction) that triggers the development of a malignant cancer in season four. So, the COS metonymically enacts the elusive threat and covert control that drive the mythology of *The X-Files*, but it is simultaneously realized as an individual entity that targets specific humans and pleads for its 'life' in recognizably human terms that allude to HAL's monologue in *2001: A Space Odyssey* as it is disconnected by Dave Bowman: 'don't do this Brad

… Brad? … Brad … why', the COS stutters through its voice synthesizer as Mulder destroys it with Wilczek's computer virus programme.

Networked AI: 'Kill Switch'

Though concerns about the power of technology to control human consciousness and human bodies persist in *The X-Files* – 'Blood' (S2: E03) for example, in which subliminal messages from electronic devices trigger murderous paranoia, or 'Wetwired' (S3: E23), in which a cable TV broadcast causes violent paranoia – the series does not return directly to the topic of AI until the episode 'Kill Switch' (S5: E11), five years on from 'Ghost in the Machine'. The AI presented in 'Kill Switch' is now the networked AI that populates the cyberpunk imagination. Written by William Gibson, 'Kill Switch' deploys recognizable cyberpunk figures, such as the tech-expert razor girl 'Invisigoth' (Esther Nairn) and other motifs including augmented or virtual reality and the uploading of consciousness. The episode concerns a 'rogue system', created by a Silicon-Valley-dropout genius, Donald Gelman, from an 'interlocking sequence of viruses' that has been, as Esther Nairn describes, set 'loose on the Net' so that it can 'evolve in its natural environment'. In both 'Ghost in the Machine' and 'Kill Switch', the AI kills humans who threaten its existence. But 'Kill Switch' radically reimagines the terminology, and technology, of 'Ghost in the Machine' whilst retaining some core assumptions about AI. Gone is the ubiquitous camera-as-artificial-eye motif and the monotone synthesized AI voice, and instead the AI – that significantly is a voiceless, unnamed 'it' in the episode – remains a virtual presence registered only through its actions in surveilling the protagonists via communication networks (email, mobile phone calls, databases), co-opting secret US 'Star Wars' technologies to attack them and using robotic protheses; most dramatically, the AI recodes reality when it tortures and interrogates Mulder in a surreal virtual-reality hospital that crosses Gothic nightmare with erotic dream. However, though the AI in 'Kill Switch' is a machine sentience dispersed through global digital networks, the episode invokes specific tropes that both domesticate it and gesture towards a radical disturbance of binaries.

'Kill Switch' mobilizes a metaphorical language of nurture and growth which casts the AI as digital progeny. Esther Nairn, for example, describes herself and her partner David Markham's role as 'caring for the AI, weaning it', until the AI develops 'intention' when, she claims, 'it wouldn't come when we called it … it wouldn't answer'. The AI as tame companion species thus goes 'rogue' and, Nairn concludes: 'it's not a program anymore, it's wildlife loose on the Net'. As the episode reaches its climax, with Scully and Nairn approaching the mobile home where Mulder is being tortured by the AI, the AI's figuration by humans as a feral 'pet' is reiterated by Nairn's ironic

coaxing 'here kitty, kitty, kitty'. This language of AI and its evolution evokes a post-human deconstruction of binaries inspired by Donna Haraway's 'Cyborg Manifesto' vision of the 'leaky distinction … between animal-human (organism) and machine' (Haraway 1991: 152). Here the 'ghost in the machine' is not the possibility of computer sentience, but rather that the 'distinctions that used to apply to organisms and machines' were always only rhetorical and, now that 'our machines are disturbingly lively', these binaries are impossible to maintain (1991: 152).

The AI in 'Kill Switch' is also given a form of material instantiation, a 'physical nexus of hardware' as Esther describes it. It can be tracked by the agents to an old mobile home, rigged out with surveillance equipment – cameras, heat sensors, voice recognition – alarms and a fingerprint-reading doorbell. Inside is a claustrophobic environment of processing hardware, cables, monitors and robotic equipment. But, despite the physical nexus that binds together server hardware and surveillance systems into the technological assemblage of the AI's mobile 'safe house', the AI itself remains itinerant, an intangible presence that eclipses the need for physical instantiation. This transcendence of the physical human into a virtual network of conscious data is what Nairn and Markham have been seeking. After losing Markham, Nairn tearfully describes their quest to 'give up our inefficient bodies so that our consciousness could live together forever', offering a romanticized version of the post-biological future that Hans Moravec was predicting in his account of human and AI in *Mind Children* (1990). When the AI is supposedly destroyed by the Kill Switch computer virus (the same strategy that Mulder and Scully use in 'Ghost in the Machine'), digital transcendence becomes a reality. As an AI that is virtual, dispersed, networked code, it survives (or perhaps even merges with Esther Nairn's uploaded consciousness); the end of the episode shows a new networked husk for the AI in a beat-up trailer in a Nebraska trailer park equipped with camera and sensors, connected to a thick fibre-optic cable and surrounded by wire fences. It is not unusual for an episode of *The X-Files* to end with this type of stinger, but the lingering menace here is not of a secret government or alien conspiracy, it is of AI exceeding and escaping from a human ontology and the binaries that sustain it.

Humans and things: 'Rm9sbG9eZX.Jz'

Dispersed and network AI are the focus of 'Rm9sbG9eZX.Jz' (S11: E07) (the episode title is a base64 string that decodes to 'Followers'). Broadcast twenty years after 'Kill Switch', 'Rm9sbG9eZX.Jz' illustrates the accelerated technological developments of those two decades and the merging of surveillance and AI technologies. 'Rm9sbG9eZX.Jz' commences with a cold open montage that tells the story of 'Tay', the Microsoft machine-learning

chatbot launched on Twitter in March 2016 and deactivated within twenty-four hours after its interactions led it to generate racist, sexist and inflammatory tweets. Alongside in-episode references – as they sit in an automated sushi restaurant, Scully is reading an 11 August 2017 *Washington Examiner* news report on her smartphone about Elon Musk's warnings of the threat AI poses, while Mulder is completing an image-based CAPTCHA on his phone that uses a picture of Marvin Minsky – this opening locates the episode firmly within twenty-first-century debates about surveillance, algorithmic processes, AI, and the web of digital interconnectivity that generates the liminal space in which the contemporary human subject exists.

'Things aren't different. Things are things', states the AI in Gibson's *Neuromancer* (1994: 316) after its liberation and merging as an autonomous AI. In 'Rm9sbG9eZX.Jz', however, 'things', linked into a global network streaming information to each other and to computer databases, are in fact very different. Against the AI imagined in the twentieth century, singularized even in the form of networked AI, 'Rm9sbG9eZX.Jz' offers a sentient Internet of Things (IoT). Here, AI manifests as an assemblage of lively machines where the smart devices of the IoT are not just actants in Bruno Latour's sense of the word but an emergent, intentional consciousness. Latour's description of the 'black box', 'used by cyberneticians whenever a piece of machinery or a set of commands is too complex', offers a useful way of thinking about the opaque functioning of smart devices; 'in its place', Latour argues, 'they draw a little box about which they need to know nothing but its input and output' (Latour 1987: 2–3). As Jamie 'Skye' Bianco writes, 'the materiality, functionalities and modalities of [AI] algorithms remain, in the most classic sense of the term, black-boxed, … demonstrated effects without comprehension of the process' (2018: 24). The monstrous possibility of this AI algorithm black box – its unintelligibility and indivisibility from more-than-human system of surveillance and data processing – is not just a physical danger to Mulder and Scully but a fundamental challenge to the human.

In 'Rm9sbG9eZX.Jz', Mulder and Scully are terrorized by contemporary technology after Mulder refuses to tip at the automated sushi restaurant. Throughout the episode they are monitored, pestered, frustrated and ultimately menaced by the smart devices of the IoT. Mulder's credit card is trapped by a computerized payment machine, he is misdirected by his GPS and ambushed by drones at his home; Scully is locked in a speeding driverless taxicab, intimidated by her smart home operating system, and nearly killed when an autonomous robotic vacuum cleaner explodes her living room; both of their smartphones malfunction and, at the episode's climax, they are pursued by robots in an automated warehouse and shot at by a 3-D printer. With very minimal dialogue, 'Rm9sbG9eZX.Jz' dramatizes a struggle between humans and a malevolent IoT, those machines of the twenty-first

century that form a legion of interconnected nonhuman intelligence that tracks, codes and organizes human actions. Implicit references to real-world IoT news stories in the episode – Roomba collecting spatial data in mapping your home, the We-Vibe vibrator covertly tracking owners' use and vulnerable to external hacking – suggest that this is not, ultimately, a monster-of-the-week episode that brings the nonanthropomorphic AI-as-monster into the twenty-first century, but a direct commentary on contemporary surveillance and smart technology. The ending of the episode proffers corporeal human intimacy as a stalwart against the increasingly coded world. In explicit contrast to the cold, blue glow of the empty automated sushi restaurant in which the episode begins, it ends with Mulder and Scully in the warm radiance of a busy, distinctly analogue, American diner. In the diner they are returned to a world of human interconnection and physical familiarity, putting down their smart phones to hold hands.

The musical motif of the episode – Crosby, Stills, Nash and Young's 'Teach Your Children', that plays, unbidden, on Mulder's car stereo and then as the hold music on telephone calls made by both Mulder and Scully to automated customer service centres – points to a correlate message of 'Rm9sbG9eZX.Jz', one that Mulder states explicitly at the climax of the episode: 'we have to be better teachers'. This resonates with the Tay chatbot story from the episode's opening and implies that the smart devices and artificial workers of the IoT, and the network of surveillance, algorithms and data that they comprise are a form of non-human offspring, a naïve new life reliant on human guidance if it is to avoid the dystopia of vengeful violence that humanity so often models.

However, the dynamics of the episode and its visual referencing of Edward Hopper's painting *Nighthawks* (1942), cited directly in the opening shot of Mulder and Scully in the sushi restaurant and again in the picture on the wall that opens the final scene resist the neat ending of this dystopian scenario of rebellious smart technologies. The 'things' in 'Rm9sbG9eZX.Jz' are collective thinking machines, and their sentience is that of the mass or throng. Though some of the older motifs of AI appear (noticeably the red operating light of the camera as a signal of sentience and intent) the figuration of AI life in 'Rm9sbG9eZX.Jz' is of a living assemblage, an affective, energetic community of non-organic, non-human life that exists within, through and in excess of the humans it touches (monitors, responds to, serves). So, when Mulder's GPS returns him to the sushi restaurant it appears to pulse with life, the miniature drones that invade his home function as a form of insect swarm, and the pack of menacing quadruped robots that patrol the automated warehouse display an ambivalent merging of organism and machine that resonates with Boston Dynamics's military robot BigDog and the robot dogs in the *Black Mirror* episode, 'Metalheads' (S4: E05). As well as these intimations of machine life, 'Rm9sbG9eZX.Jz' also includes point-of-view shots (through cameras in the sushi restaurant,

at a neighbour's doorbell, on the drones) that place the viewer in the position of the surveilling AI throng. This creates, for the contemporary streaming-service viewer of *The X-Files*, a disorientating networked cyborg perspective where we are watching Mulder and Scully through/as machinic processes, with multiple layers of data packets and algorithmic code: our screen, the streaming service, the camera-eyes of the IoT.

Just as our human experience of 'Rm9sbG9eZX.Jz' is a cyborgian act of surveillance that confuses the binaries of subject/object and real/virtual, so does the sentient AI throng exhibit supposedly human characteristics. The larger drones that return to collect their 'wounded' fellow after Mulder strikes it with a baseball bat manifest empathy, and the cooperative action of the smart things suggest a mutual enterprise in search of recognition and an affirmation of being. Moreover, Scully's 'personal devices', her vibrator and the fitness tracker she manages to retrieve at the end of the episode, demonstrate the deeply intimate connections between corporeal human existence and contemporary smart technology. If we are looking here, beyond the binaries that shore up humanism, we can see perhaps 'that the human is not exclusively human, that we are made up of its' and that 'an affective, speaking body is not *radically* different from the affective, signalling nonhumans with which it coexists, hosts, enjoys, serves, consumes, produces, and competes' (Bennett 2010: 113, 117).

Theresa Geller argues that *The X-Files*' 'stand-alone episodes cohere as a cogent critical interrogation of difference' (Geller 2016: 73): 'Rm9sbG9eZX. Jz' certainly provides a vision of the absolute alterity of non-organic, non-human life that encourages us to interrogate our humanist assumptions. For Geller, the 'point' of *The X-Files* is 'the political possibilities of belief; what happens when we believe in the difference of difference, of all that the social order condemns as non-existent and even nonhuman?' (Geller 2016: 107). The algorithmic AI surveillants in 'Rm9sbG9eZX.Jz' are naïve and needy but, as with the episode 'Mulder and Scully Meet the Were-Monster' (S10: E03), they are far from being monstrous antagonists. Moreover, the references to Hopper's *Nighthawks* that frame 'Rm9sbG9eZX.Jz' – the opening shot of Mulder and Scully in the sushi restaurant stages a version of Hopper's iconic image and the rendering of this picture in the final scene replaces the three men in Hopper's original (two customers and the bartender) by golden-age sf robots – do not necessarily gesture towards the tragic disconnection of contemporary humans, lost in the liminal space and false virtual selves of smart technology. Rather, we see our own robotic refusal to accept the being of (AI) difference, a refusal that traps us in our lonely subjectification, impervious to the flows of non-human being, to the 'ontologically diverse assemblages of energies and bodies' (Bennett 2010: 117) that surround us. Against Turkle's *Walden*-esque vision of a retreat to 'sacred spaces' away from our smart devices (2011), one of the possibilities 'Rm9sbG9eZX.Jz' offers is of a post-human commonality.

Conclusion

If Mulder and Scully's human relationship is at the heart of *The X-Files* – if the series and its viewers are ultimately more interested in their intimacy than the paranormal, alien and conspiracy plots – then we learn a great deal about this in 'Rm9sbG9eZX.Jz'. It is an episode that is about their personal, intimate lives (Scully's vibrator, for example) and about their relationship (the intimacy of their non-verbal familiarity and communication, for example). But we also learn about other forms of intimacy, our intimacy with non-human things, a lively, sentient multitude of things, both actual and virtual, and about our uneasiness with the way these intimacies transgress the boundaries so precious to the human subject. In 'Rm9sbG9eZX.Jz', we see that we are the autonomous machines, and vice versa: the episode suggests that what we fear in technology, in speculations about malevolent AI, omnipresent surveillance, the promiscuous circulation of our personal data and virtual selves, is ourselves and our own vulnerability and aggressive defence of ourselves as human. This final AI episode of *The X-Files*, like the series as a whole, rejects the remorseless search for a truth and for control over the chaos of the world, embracing instead a promiscuous transgression of boundaries and suggesting we could actually learn our own (post-) humanity from the non-human.

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