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Chapter 12

Insect Technics: War Vision Machines

Fabienne Collignon

> No one would have believed in the last years of the nineteenth century that this world was being watched keenly and closely by intelligences greater than man's and yet as mortal as his own; that as men busied themselves about their various concerns they were scrutinised and studied, perhaps almost as narrowly as a man with a microscope might scrutinise the transient creatures that swarm and multiply in a drop of water. With infinite complacency men went to and fro over this globe about their little affairs, serene in their assurance of their empire over matter. It is possible that the infusoria under the microscope do the same. (Wells 1993: 5)

H.G. Wells' *The War of the Worlds* (1898) begins with 'man' as a 'transient creature' observed under a microscope, 'swarm[ing] and multiply[ing] in a drop of water': a fantasy or *Schwärmerei* of total control that is wielded, from above, by the other. The 'human', by contrast, is like 'infusoria', a unicellular, sedentary organism seen only through a magnification of lenses. The Martians are fungoid, glistening, tentacular: 'thin black whips […] like the arms of an octopus' rise up towards 'a circular disc [spinning] with a wobbling motion'; their 'strange [bodies]' are at once metallic and abjectly organic (Wells 1993: 21, 44). What the invasion of Earth reveals, more than anything, is 'our' own abjection, the disgusting softness of 'our' being as a 'disintegrating organism' (Wells 1993: 84). The novel ends,

like *The Island of Dr. Moreau* (1896), with a perspective that engulfs the narrator who, in London, notices the 'busy multitudes' that 'are but the ghosts of the past, haunting the streets that [he has] seen silent and wretched, going to and fro, phantasms in a dead city, the mockery of life in a galvanised body' (Wells 1993: 171, 172). The presiding image of 'the human', in *The War of the Worlds*, is that of an unassimilable, undifferentiated mass of (un)deadness.

The sovereign view from above that Wells' Martian perspective encourages, according to Christopher Hollingsworth in his discussion of the 'poetics of the hive', 'a particular sort of abstraction' that opposes the individual to the collective understood as a mere mass (2001: ix, 3). What I am concerned with here is a militarised 'logistics of perception' that renders its targets insectile even as perception itself has taken the form of insect 'eye-pearls' (Connor 2006: 82) that appear at once as radically alien while realising the other as alien. In other words, I focus on a mechanics of 'seeing' that occurs by way of a war machine whose mode of 'vision' or detection aesthetically resembles the facets of an insect eye, most notably that of the fly. The notion of 'sight', however, works as metaphor and is accomplished through means other than eyes—radar, pulses of radio waves, microwaves emitted from objects. The 'viewing subject', then, is a machine that 'sees' past the limits of sight; as such, I will consider the aesthetics of the 'fly eye' in relation to the North Dakota anti-missile missile installation known as Safeguard (Figure 1.) that was briefly operational in 1975. I take Safeguard as a ruined but not dead Cold War precursor to the increasingly weird and disturbing insect technics of contemporary military

technofuturism.

Figure 1. Safeguard [caption and credit required]

Deep and Dead

Project Safeguard was developed in the late 1960s as a two-layer defensive system, meaning that it relied on two types of ballistic missiles—long and short range, Spartan and Sprint—to intercept enemy rockets. The complex is a 'truncated pyramid' intended to protect an adjacent Minuteman missile field and accommodated antennas, each of circular shape, 13 feet in diameter and consisting of 5000 phased-array elements, for the missile site radar (Baucom 1992: 91). Taken together, these elements resemble a 'gigantic, multi-lensed insect eye' (Baucom 1992: 91), whose persistent stare is repeated on the four sides

of the building. Bug-eyed radar, easily a target itself and working in conjunction with diverse types of missiles—Spartan and Sprint that are electronically blind without their accompanying detection and guidance system—form 'a hedge against the uncertainties of the future', as Major General Robert C. Marshall, the Army's Ballistic Missile Defence Program Manager, stated at the Senate Hearings on Federal Year 1977 (quoted in Baucom 1992: 98). Though Safeguard was by then decommissioned, the Ballistic Missile Defence Research and Development program, investigating not just radar but also optics, data processing and software development alongside interceptors and discrimination—the latter concerned with the isolation of decoys from warheads—maintained the quest for national closure on the basis of a scopic regime that is also occult, obscene, effectuated from the vantage point of weird sight machines.

I intend to align the notion of Safeguard's 'insect technics' with the concept of the 'weird': the insectile devices I am interested in are not the mites, tiny bionic aircraft resembling flies imagined as arriving from some military-technological dream of the future,[1] but, rather, the immense and obsolescent fly eyes of the Cold War. Installations like Safeguard anticipate the networked, invisible swarming connectivity more often associated with contemporary electronic systems. The idea of the swarm, following Bruno Latour, helps describe the coming into being of technologies and systems; it also suggests the functioning of a networked machine, where information depends on sub-systems, on 'colonial outposts', as it were, to the metropolitan brain (Pynchon 2013: 340). The networked entity is not purely technological but approximates

[1] This description comes from Tom Hillenbrand's futurist crime thriller *Drohnenland* (2014), 87.

the biological in its capacity to, swarmlike, gather and disseminate across the field of its influence.

Insect technics is 'weird' in China Miéville's sense of weirdness as an abject, indeterminate, yet 'radicalised uncanny' (2011). According to Freud, the uncanny is associated with returns and the compulsion to repeat—'the prefix "*un*"', he writes, is the token of repression' (Freud 2001: 245). Miéville's 'high weird', on the other hand, 'is not the return of any repressed' but 'back-projects' an event's 'radical unremembered alterity into history' (2011). For Miéville, the 'monsters of high Weird' are 'indescribable and formless *as well as being* and/or *although they are* and/or *in so far as they are* described with an excess of specificity, an accursed share of impossible somatic precision' (2011). Safeguard is insectile, then, because of its insect eyes, and it is weird because of its inscrutability and the mutable formlessness of its networked powers. While the installation is not necessarily unthinkably abject, Safeguard nonetheless represents an incomprehensible strangeness; the structure somehow exists beyond the horizon of the known—it 'sees' precisely past the horizon, senses the presence of still invisible objects. A case can, as such, be made that positions Safeguard as a thing that 'en-Weirds' (Miéville 2011) history/ontology through, yet also apart from, its weirdly insectile techno-biological machinery.

Miéville's definition of the weird informs my reading of the opening paragraph of *The War of the Worlds* in terms of an incursion that somehow pertains not only to the microscopic but also to the insectile or, at any rate, to swarms, though the latter is 'us', not the Martians, snake-like Things with faces that are not faces, masks of another order of being. It is through Miéville's insectile and cephalopodic weird, a notion that 'demand[s] a rethinking of philosophy' (ontology in

particular) (Miéville 2011), that I will approach Safeguard: as a defensive formation which, as Paul Virilio notes in his analysis of the bunkers of the Atlantic Wall, resembles 'certain works of fiction[,] a spacecraft parked in the middle of an avenue announcing the war of the worlds' (Virilio 1994: 12). The otherworldly materiality of military installations — too much of this world but also weirdly extra-terrestrial — positions them metaphorically and operationally as points of convergence in the weird system that combines, following Eugene Thacker, models of technological (networks), biological (swarms) and political (multitudes) organisations of the body politic (see Thacker 2004). Such overlapping models form a techno-bio-political ontology that is 'inherently dynamic, undergoing constant and variable changes' (Thacker 2004). In this essay, concepts of network and swarm behave as figures of speech for what Sebastian Vehlken calls 'the coordination processes of an engineered present' (2013: 112) machinated into pure war.

To think of a massive, unmoving concrete thing like Safeguard as a dynamic collective or a part of a 'living' system seems, at first glance, entirely wrong. Nonetheless, the Safeguard building forms a remnant and outpost of a technologized order that not only progressively disappears, but that also 'proliferates' and incessantly 'improves' its processes. The endless upgrading of weapons of war also demands a constant enhancement of 'protective' installations — to safeguard the retaliatory force—that then rapidly become obsolete: ruins of fictions that keep being surpassed. Safeguard, then, is never a dead technology but a sloughed skin that reminds us to remain alert to the processes of technological development, constantly moving, as Bruno Latour argues, from 'signs to things', from paper to matter, and from matter back (and forth, to and fro) to discourse (2002: 80). The

swarming, as dynamic phenomenon, refers to what Latour calls 'fiction[s] with a variable geometry', this 'capacity of a text' (or a technology) 'to weigh itself down with reality, or, on the contrary, to lighten its load of reality' in a course of coming into being that happens by degrees, and which never fully arrives at a stage beyond this 'variable-ontology world'(2002: 24, 173). Texts/technologies, fictional 'hybrid beings' (Latour 2002: 174), are then never stable, but curiously vital; Miéville's law of genre is, as such, affected by this difficult admission or impurity, let in, or just kept at bay, at the edges, or that, following Jacques Derrida, occupies the very heart of generic conventions (see Derrida 1980). This density of concrete — Safeguard as an object that has been left behind (Virilio 1994: 12) — does not strictly adhere to the law but cites it by proxy, in a 'sort of participation without belonging' (Derrida 1980: 59). In 'The Law of Genre', Derrida sees this curious 'taking part in without being part of' in terms of an 'internal pocket', an 'invagination', that harbours the 'principle of contamination' within the law itself (59, 65). Although he concentrates on the 'mark' of participation as itself—in the 'blink of an eye' (65) — preventing total belonging, total taxonomic certainty, I want to suggest that Safeguard, in a sense, functions as this pocket in Miéville's definition: its unblinking eye is a reminder that the weird unfolds and holds within itself the uncanny, the law and counter-law participating in the same 'text'.

In Safeguard — its insect eyes acting as a manifestation of the otherwise invisible swarming metaphor, all the while offering a 'vision' that seeks to make visible what remains unseen — the limits of weird are passed over: definitely uncanny, a monument to world wars, this object is simultaneously placed within and outwith the 'parasitical economy' (Derrida

1980: 59) of a weird fictional/generic order. It puts to the test all boundary markers, bearing in mind the unperceived, unstable ontologies that constitute its swarming existence: (always already) outdated, this im/mobile formation gestures towards the relentless modernization process that defined the Cold War, defines the 'war on terror' as/and (the psychopathology of) everyday living. It further functioned as one node in a networked system of defence that itself integrates so-called human and non/in-human actors interpreting the world through command grids conceptualised as tentacular: Thomas Pynchon, for one, in *Gravity's Rainbow* (first published 1973), frequently refers to military and/or consumer capitalist strategies as cephalopodic ('octopus IG'), plastic, rubbery, yielding a 'culture of mucous' (Pynchon 2013: 339, 275).

Safeguard, then, is an iteration of the weird war machine that, post-Cold War, has mutated increasingly closer to the model of an insect technics: the titanic and concrete giving way to micro-robots, moon insects, and glass bees indicative of an economy and, in Virilio's terms, an aesthetics of disappearance.[2] Even before the techniques of the microscopic and atomic—resulting in sublime, hypnotic devices like those in Ernst Jünger's novel *Gläserne Bienen* (1957)—associated with nuclear weapons, cinema had already, according to Virilio, caused the the physical universe to disappear in the 'special effects of communication machines' that project the world through and as light (Virilio 1989: 60). The optic of exposure and concealment begins, for Virilio, with the soldier's 'hiding from sight in order to see', which leads to the retreat underground and from there to remote sensing and radar technology, whose installations exist at 'scattered points', where they receive and radiate information 'back into their own, defined universe'

[2] In terms of moon insects and glass bees, see Jünger 1960: 89.

(Virilio 1989: 63, 65). The ultimate objective is, of course, total transparency, a landscape of glass – Virilio cites Jünger's most famous book in this instance, *In Stahlgewittern* ([1920] translated as *Storm of Steel* [2004]), where binoculars 'distort' the field of vision. Never mind the nostalgia at work – the function of the naked eye, as if truthful, is deranged by '*Glas*' – these optical illusions point towards that derealisation of the world, rendered as spectral images by sighting and tracking arrangements as well and as spaceships: light passing through a space made translucent.

If Safeguard is, in the end, insectile largely due to its bug-eyes and capacity to plug into the network-swarm, its contemporary descendent, the drone, extrapolates in its entire body the potentialities of the insect organisation of military technologies. A detached 'soul' forming part of a larger organism, like Safeguard the drone is another sight machine, a surveillance imaging device. The drone is also a synecdoche – it implies others, in its wake, beyond the horizon—and a fantasy vehicle for 'pure', that is, precise, clean, calibrated war.[3] In contrast to the physical immobility of Safeguard, the drone exemplifies rapid deployment by small tactical units connected to command centres and media environments. There is no drone without Safeguard, however, since the ideology underpinning drone war – total surveillance capability enabled by integrated systems – has as part of its DNA the weird and mutant 'thing' (Derrida 2003: 92) of the Cold War. The perpetuation of techno-strategic operations and military-industrial governance is a continuation of Cold War thinking, articulated according to the same security myths that comprise (elsewhere and away)

[3] Hollingsworth talks about the bee as 'synecdoche for social perfection'; the lone bee always provokes questions about the rest of them (2001: 23, 7).

systematic, extra-judicial killings and (everywhere) the erosion of civil liberties, the suspension of laws: the *innere Notstand* as paradigm of state (see Agamben 2005).

These myths, as structures or machines—swarm-like in their internal disposition as well as in their outward workings—operate as networked objects, linked up to models of organisation that are equally connected, acting through constant negotiations, as movement (despite, paradoxically, the physical monumentality of those older technologies), by way of a distributed logic of control. Their functioning therefore suggests an openness or process of 'knotting into' (as Pynchon would say) between, for example, 'body' and environment, neither of which functions as a discrete entity. The network, in short, connects, but the question is whether — despite the objective of total control that comes form the God's-eye view — there is room for radical resistance inside this connectivity.

In itself, connectivity does not lead to political radicalism, as Eugene Thacker recognises when he asks whether as 'mutation in the body politic' (Thacker 2004), connectivity might bring with it, automatically as it were, a collectivity. From the start, though, Thacker acknowledges that such 'mutations are structurally innovative, but politically ambivalent'. As an expression of a state of emergency, a networked model is never anything but conservative; it generates a collectivity which is not defined through autonomous movement but instead directed towards sovereignty or, in other words, centralized command and control: a super-organism whose objective consists in preserving 'democracy' through its suspension—this form of government operates solely to freeze the status quo. If these phenomena continue to execute the powers of the sovereign—as part of the 'machine of command' (Hardt and

Negri 2000: 393) — another tension emerges: between the dynamism of the swarm and a world frozen in its Cold War image.

The War of the Worlds ends with an imagination besieged by total death: 'And strangest of all it is to hold my wife's hand again, and to think that I have counted her, and that she has counted me, among the dead' (Wells 1993: 172). This sentiment occurs after an extraordinary passage in which the narrator describes the death-infestation of his dreams (shrouded bodies; 'distortions of humanity' [171]) that 'gutters' into waking life: 'we' so-called humans, 'busy multitudes' mocking life, are 'among the dead'. Wells' novel is less concerned, in the end, with what might invade from outside and more interested in 'our' insect-becoming and becoming-dead, which he articulates as a disintegration: 'losing coherency, losing shape and efficiency, […] running at last in that swift liquefaction of the social body'(85). Insects, of course, function as *memento mori*; in Matthias Grünewald's painting *Dead Lovers*, for example, the corpses are 'visited' by insects that, in Nicky Coutts' reading, are invading forces that 'represent the act of breaking the body down, […] causing the desired unity and wholeness of the body to fragment' (2006: 301). The insects are, in and of themselves, agents of chaos and impurity that assault codes of coherence and thereby also threaten 'our' ontological status as 'humans', premised, precisely, on myths of separation and integrity. 'We' are always caught in a process of metamorphosis that reveals 'our' impending formlessness and 'our' deadness; the insectile is about the recurring/returning impressions of thresholds crossed (over), an interiority—secret bones[4] or secret

[4] In 'The Order of Insects,' William Gass writes of a woman getting progressively enthralled by dead bugs she finds in her carpet: she collects them, enshrines them, leading her to thinking about her own corporeality which only in death reveals

liquefaction—that gradually becomes visible, just as much as it is indicative of a momentum towards death which is at the same time always already present, within me, around me: I am among the dead.

Swarms and swarming are also occurrences associated with falling beyond borders; they are 'always living', always 'in process' (Thacker 2004). Thacker argues that these mutations 'create affects', which Jussi Parikka describes as a 'thinking beyond the signifier and the body as only an individualized entity', instead 'grasp[ing] the interconnected nature of bodies of various kinds' (2010: xxii). Affects, Parikka continues, 'are transitions, gateways, and passages between dimensions' (xxvi). Though separate, the individual units within a swarm work as autonomous wholes, as 'intelligent' systems that function in terms of temporal relations and affective assemblages. These 'living' or life-like networks 'intensify' or 'deintensify', 'understand' their surroundings: their engagements are variable as well as detached from a singular agent (Thacker 2004). Yet, this affective energy is also deeply uncanny and/or weird — because linked to softening (to recall Wells), to clotting into a mass, crossing over into other orders of being — so that the transitions and gateways that Parikka mentions also open up passages into the world of the dead. In this vein, Vehlken argues that '[s]warms should be understood as *zootechnologies*', deriving

> less from *bios*, the concept of 'animated' life, then they do from *zoe*, the unanimated life of the swarm. *Zoe* manifests itself as a particular type of 'vivacity', for instance as

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her bones, 'showing last', when everything else has already decayed. Bugs, though, decay from the inside out: the shell remains, perfectly preserved, dries out, light (1969: 166).

> the dynamic flurry of swarming individuals. It is a vivacity that lends itself to technological implementation, for it can be rendered just as well into ordered or disorderly movement. This capacity, in turn, is based on rules of motion and interaction that, once programmed and processed by computer technology, can produce seemingly lifelike behaviour among artificial agents. (Vehlken 2013: 113)

Following Vehlken, and also bearing in mind Laurence A. Rickels' work in *The Vampire Lectures*, I tend to see the undead everywhere and as central: techno-culture conceals a death cult, whose 'vivacity' really only ever means death-transfiguration (Pynchon 2013: 197; Rickels 1999). If, then, swarming as a biological and/or techno-cultural/ontological phenomenon carries with it such attributes regardless of what it is associated with, this trajectory towards death—what Wells' narrator calls a 'mockery of life'—becomes even more evident in the context of networked war machines with which empire (that is, Pynchon's 'Deathkingdom' [857]) sustains itself. In *Gravity's Rainbow*, it is, weirdly, Walter Rathenau, the 'prophet and architect of the cartelized state', who elaborates on the notion of the death cult:

> You think you'd rather hear about what you call 'life': the growing, organic Kartell. But it's only another illusion. A very clever robot. The more dynamic it seems to you, the more deep and dead, in reality, it grows. […] The persistence […] of structures favouring death. Death converted into more death. (198)

Though linked to polymerization and the 'new cosmic bombs' (198), cartelization nonetheless remains the subject. 'Cartel'

really is just another word for network, for swarming capitalism, whose realizing, derealising movements through space, becoming and breaking apart, clearly function as constituent parts of a totalizing system that, 'deep and dead', propels onward the technologies of market forces and of open-ended warfare. This affective relationship, consequently, between nodes or agents occurs as a '[structure] favouring death', the interconnectedness that Parikka notices as an effort to distribute death along with its dispersion of functioning. In circumstances such as these, Thacker's 'mutation in the body politic', which might imply alternatives – a radicalised political ontology, say – under different conditions, here falls short of arriving at anything other than business as usual: the catastrophe of the status quo (see Benjamin 1999: 473).

As such, and bearing in mind Hollingsworth's argument—the hive as indicative of a 'biology of seeing' (2001: xix) – the insectile here expresses an organisation whose swarm-like being perpetuates acts of violence: see, find, track, target, attack.[5] If, as Parikka argues, 'insect media' might yield a 'weird futurity' that emerges due to modes of perception that are radically other – to 'enter a plane of immanence and open oneself up to durations of animals, insects, stones, matter, technology, etc' (Parikka 2010: 32, 74) – this ontology of enmeshment can, conversely, also function as abdication to, or immersion into, what remains a deep and (un)dead sovereign super power. Such concerns—on the face of it a defence of 'man' against perforations—do not stem from a desire to maintain 'him', impermeable, at the centre of analysis or measure of all things but emerge rather to query these weird assemblages as signs/things of a radically progressive or utopian politics

[5] This description actually applies specifically to the drone; see Chamayou 2013: 71.

arising through other ways of seeing, particularly if these vectors continue to give structure to a deathworld-empire already in existence. In many ways, then, this weirdness is deceptive, in that it is precisely not suggestive of new forms of embodiment: the 'mutations in the body politic' camouflage an unmoving consensus. What Parikka calls a genealogy of the weird in relation to the emergence of technics that, he argues, deterritorialise the 'human' body/eye (24, 18), only obliquely applies to the weapons systems under investigation in this essay. Safeguard—its name a clue to what it does; that is, to keep in a frozen state—executes manoeuvres that do not displace 'man' (despite its weirdness) but correct 'his' shortcomings. While, then, technology might not be 'human', but bestial (xix) — Parikka argues against the anthropocentric, narcissist model of technology as extension of 'man' proposed by Marshall McLuhan — it in this case seeks to create, through its networked systems, a closed world,[6] safeguarded, safeguarding 'man', over on 'this side', as ultimate reference point. Across, below, however—returning to the sovereign perspective that opens *The War of the Worlds* and defines drone warfare—civilians, as 'pre-insurgents', exist in an indeterminate state: they are recognized only as 'patterns of life', have tendencies, 'signatures', a trace that they might be or become members of a terrorist organisation (Chamayou 2013: 70).[7]

The 'logistics of perception', then, that sees, finds, tracks, targets, attacks, is carried out by solid bases and/or

[6] The reference, here, is to Paul N. Edwards' *The Closed World: Computers and the Politics of Discourse in Cold War America* (1996) but also to Marshall McLuhan's *Understanding Media*, where he writes about Narcissus adapting 'to his extension of himself' and becoming a 'closed system' (2010: 45).

[7] On the indeterminacy of civilians, see also Anderson 2011.

mobile systems (though the targets are different; Safeguard aims to strike at incoming missiles) is simultaneously weird and 'en-Weirds' or displaces the other, as well as totally conventional, holding fast images, politics, already long familiar. This mode of seeing might well be one of optical detachment – the radical other that '[scurries]' (Tom Englehardt quoted in Gregory 2011: 192) across the field of vision – but it is also one of immersion. To return to the concept of affect, technology as 'realm […] of potentials and energetics' that folds insides and outsides (Parikka 2010: xx, xxv), the subject-operator of these devices, in such terms and with reference to McLuhan, is a gadget lover, integrated with this 'extension of himself' (McLuhan 2010: 45), servo-mechanical angel or insect, wasp-man, Brundle-fly (see David Cronenberg's *The Fly* [1986]). Derek Gregory, commenting on the 'deliberate inculcation of a "warrior culture" among UAV [Unmanned Aerial Vehicles] pilots', discusses a sense of intimacy between the 'pilot' wired to his machine and to the electronic battlefield so frequently compared to the video games utilized in pre-deployment training: 'video games do *not* stage violence as passive spectacle; they are profoundly immersive, drawing players into their virtual worlds' (Gregory 2011: 197, 198). It is the contact with the machine, the close proximity to the warzone—that conversely can lead the gadget lover to experience the embrace as traumatic—which further defines this scopic regime: vision as immersion, technological extension as liquefaction but which hardens the integrated subject into sovereign, terminating being.[8] Insect media/technics, rather than offering up sights beyond the 'human', towards other forms of being, 'patterns of life' with

[8] The reference, here, is to *Terminator 3: The Rise of the Machines* (DVD; Sony Pictures Home Entertainment, 2003).

which ‘we’ fold, here facet the world into ‘our’ angelic perspectives.

Eye, Fly

Jussi Parikka’s *Insect Media* is about possibilities of seeing beyond anthropomorphic mutations of the world: compound eyes that inspire computations, digital design, navigational systems, space exploration. The seeing, or unseeing, non-human eye, though, is also one of armoured vision, even if this logistics of perception is actually blind. The war of the worlds that defensive formations indicate—recall Virilio, who describes a ‘terrific atmospheric pressure’ in *Bunker Archaeology* (39) — is an ‘ecologized war’ that began, according to Peter Sloterdijk, with gas warfare, involving the ‘displacement of destructive action from the “system” (here: the enemy’s body) onto his “environment”’ (Sloterdijk 2009: 20, 22). War becomes about the means to create deadly climates, in more ways than one—environmental but also corporeal—an ‘air force’ or *Luft Waffe* that develops gas extermination, ‘thermo-terrorism’ (the Allied bombings of German cities between 1943 and 1945) and ‘radioterrorism’ inaugurated by the atom bomb (55-57). The latter is simultaneously a weapon of spectacular mass destruction and capable of imperceptible damage in sleeper cells or that gradually manifests itself on the surface of the skin. Such an environment is totally catastrophic, a ‘phenomenal catastrophe’ that is at the same time a ‘catastrophe of the phenomenal’ (59), but which already exists prior to the weapon’s detonation.

In Pynchon’s *Gravity’s Rainbow*, the Nazi *Vergeltungswaffe Zwei* or V2 remains elusive, a clue to ‘how invisible is the act of death’: it is an invading spirit, a ‘ghost in the sky’ which

avoids obstruction once in flight (25, 48). The novel is, in many ways, concerned with programmed commands engineered into the subject or slave—starved, traumatized, shocked, castrated, sent over 'into one of the transmarginal phases, past borders of their waking selves' (48) — in order to try and predict the trajectory of the missile. Slothrop's particular endowment is a hard-on, 'an instrument installed, wired by Them into his body as a colonial outpost' (285); the strategy refers to the humming erections of defensive mechanisms seeking to find shelter, an effort that began by seeking to trace the missile's paraboloid descent to its target. If the 'dawn' of the nuclear age, the Trinity detonation on 16 July 1945, produced an aesthetics linked to glass spheres—at Alamogordo, sand and the remainders of the bomb's metal tower superheated into a dish of green glass—then efforts to raise a defensive perimeter are frequently expressed in those same terms: englobing technologized fictions in which the nuclear device functions at once as weapon and armour. As boundary-breaching devices, nuclear weapons obliterate, amongst other things, the distinctions between offence and defence—over on 'our side', in official discourse, they only ever serve to ward off, not attack— while the visible and invisibility (the bodies they penetrate) exist as a continuum, the domain of the seen haunted by that which eludes it, which lies concealed, threatening to erupt from beyond the horizon.[9]

The manipulation of air -- and therefore of the conditions of existence -- yields 'death-worlds' that become unliveable: it is the potential destruction of the 'silent' means of life (air)

[9] This discussion is heavily indebted to Ryan Bishop's 'Project "Transparent Earth" and the Autoscopy of Aerial Targeting: The Visual Geopolitics of the Underground' (2011: 270—286; see, in particular, 276-276).

through ‘atmoterrorist’ warfare that leads to a consumption of security in which the state of being can only ever be determined as a ‘being-in’ the world defined by encapsulations—integrity as a closed system (Sloterdijk 2009: 28, 23, 108). This state at once refers to generalized circumstances—life in an atmosphere that still allows breathing but whose silence and innocence can no longer be assumed—as well as to tactics of retreat into privileged, air-conditioned (glass) spheres (see Pynchon 2013: 857) that purport to function as ‘life pods’ whose architectures invariably fold, literally or metaphorically, around the ballistic missile. The art of defensive space-building, Cold War-style, began with the V2, but dream-designs are, in a way, ‘phase spaces’, a term perverted through its usage here. A continual, unbounded, open-ended spatiality, characterized through interdependence and flow (see Jones 2009), phase space becomes in this context a description that refers, yet again, to the momentum of technicity. These shielding projects, technicized spatialities, might stabilize for a while, but never for long—whatever mechanisms of defence are realized (if at all), once operational, they are invariably unable to cope with the latest ‘generation’ of Intercontinental Ballistic Missiles (ICBMs). Each new design ‘restructures’ older technologies; each updated conception is also an archive in which previous incarnations survive: a ‘transparent earth’ approached by ‘Zeus-like’ (Bishop 2011: 280) formations that anticipate (total, dream-like) safeguarding.

In this vein, Nike-Zeus, a ‘three-staged, solid-propellant missile’ that comprises ‘advanced radar equipment and communications links to tie the subsystems together’ (Baucom

1992: 6-7)[10] gave way to Nike-X, a method of layered defence employing a phased-array radar apparatus, which, by the mid-1960s, was modified into Sentinel—all of which exist in terms of technologized networks or cybernetic systems as 'multitudes' of defensive arrangements executing a politics of preservation. Sentinel, to keep guard, is about keeping secret watch but perception really means detection or a vision that is no longer simply biological: the 'catastrophe of the phenomenal' requires extra-sensory, 'synesthetic' tracking devices like radar, seeking to turn everything into surface/glass, though there is, as ever, a paradox at work because a surface is 'de facto […] reliant on some other entity', always out of reach (Bishop 2011: 273, 276). The 'Looking Glass', code name for Strategic Air Command's constantly airborne craft—operational 24 hours a day for 29 years, until 1990—has been replaced by networks of remote sensing, only some of which are visually oriented, yet the articulations of such networks — visions of sealed environments — nonetheless employ metaphors of seeing through weird eye-like organs.

If the rocket, in Pynchon's novel, is an angel of death, then anti-missile missile installations are 'anti-angels', whose impassive figures overlook an illimitable war zone, a field of operations that exists outside the bounds of limited 'human' sensory perceptions: these anti-angels, though, connected as they may be, retain (safeguard) a deadly totality at their centre.

Weapons systems are sighting devices; in *War and Cinema*, Virilio argues that 'a supply of images' functions as the 'equivalent of an ammunition supply' sketching out 'a strategy

[10] Nike-Zeus itself develops out of an earlier program simply titled Zeus, a system intended to obstruct bombers and air-breathing rockets, such as cruise missiles.

of *global vision*' that, as much as it is heavily technologized, also refers back to a 'Western gun-duel, where firepower equilibrium is less important than reflex response' in an air war that is conducted as an 'optical, or electro-optical, confrontation' (1989: 1, 2): precise vision – eye-like but eye-less – leading to precision strikes. Virilio notes that 'the act of taking aim is a geometrification of looking, a way of technically aligning ocular perception along an imaginary axis that used to be known in French as the "faith line" (*ligne de foi*)'(3) – which, in time, instigates that 'catastrophe of the phenomenal' in terms of the capacities, and also 'faith', of 'human' perception. Virilio takes this 'faith' in terms of a loss—of 'interpretative subjectivity' (3) in favour of a supposed objectivity. Even in moments like these, however, which are still indicative of his own faith (in a 'human' subject that somehow exists outside/without technologization), Virilio tends to avoid any references to what Nietzsche calls the 'illusory consciousness' of the eye gliding along the surface seeing things then 'enclosed' as 'truth' (Nietzsche 1999: 142). The point is that this 'science of "visionics"' (Virilio 1989: 3) (to see through sound, tele-technology) brings up Sloterdijk's 'new dimension of latency' (Sloterdijk 58) – erupting into view in the aftermath of Hiroshima and Nagasaki – which reveals, but at the same time keeps hidden, the electro-magnetic, radiological conditions of existence and extermination: truth is surface, and surface, as Ryan Bishop notes, 'presumes […] depth' (2011: 272). This crisis of seeing also prompts a crisis of being: a 'living' space can be made unbreathable, imperceptibly; being-in consequently means a 'breathing-onto-death' (Sloterdijk 42), so that half-life needs to be safeguarded by watching machines whose militarized vision is less non-human than it is super-human. 'Anti-angels' supplement a failing 'human' vision

to achieve full spectrum dominance: Safeguard is a concrete expression of a desire to adopt perspectives that surpass the functions of the 'human' eye through the seeing yet simultaneously blind eyes of an anti-missile missile/anti-angel angel system looking out into a world of instantaneous threat. This intensive fly-like gaze—insects and angels form 'gracious' orders, 'wholeness, and divinity', overriding 'our' limitations (Gass 1969: 169; Parikka 2010: 4-6, 38)[11] — effectuated electronically, transposes a compulsion to perceive the latent dimensions of the earth as total vision-field through vantage points that are and aren't alien at the same time. Strange because techno-ontologically weird, that is, insectile, this installation is nevertheless a manifestation of a super-human will to power against an enemy that is, after all, so frequently configured as weird, sub-human, inhuman, formless pod-people only gradually taking on the features, Thing-like, of something strange made almost familiar. Safeguard is not indicative of a becoming-insect; instead, it is the dreaming subject that seeks to extend 'his' failing senses via a technologized vision that, while approximating the 'eye-pearls' (Connor 2006: 82) of insects, is entirely in the service of a cyborg ontology retaining 'man', and ballistic missile, at its heart.

If Safeguard is a sight machine, it remains, now, as a relic of a still (more or less) material techno-culture that is disappearing: war, while conducted under the pretence of unsanctioned nuclear weapons acquisition, is carried out through drone warfare, radiating 'quilted images', 'tiled mosaics' (Gregory 2011: 193)— the art of war—back to command centres defining the universe. A system of illumination, in terms of a light that might not be atomic but stays catastrophic—visibility means death; 'what is perceived is already lost' (Virilio 1989:

[11] For more on insects as anti-angels, see Connor 2006: 15, 166.

5) — drones, like ballistic machinery, are the products of an act of gadget love: an integration with machinery engaged in orgies of war. In *Gravity's Rainbow*, circulations of affect, love and death, yield maps of tenderness and hardness (Latour 2002: 140), but Safeguard, networked as it is, is nonetheless mythic, immense, a monument to a superpower progressively disembodied. The dream of interconnectivity at present—a dream, still, of total war and total vision—is the drone, which designates a remotely piloted aircraft or unmanned aerial vehicle that is, however, not 'unmanned' but functions, as Derek Gregory argues, as an 'interpellation' (Gregory 2011: 197) in which the subject lovingly integrates with the machine and virtual battlefield. The device itself is not passive, but, according to Jordan Crandall, an agent, a description that 'situates [it] in terms of [its] performative functions or roles'; the rescue operation, assembling the drone back together after its crash,

> suggests that what these actors *are* is what they *do* in the context of the environments in which they bond and circulate, and it defines this activity as that of *affiliation*. It describes the relational structures and organizing principles through which actors are coordinated and combined together in affiliations at various scales, magnitudes, speeds, and levels of complexity, such that they gain sufficient stability to be maintained. (Crandall 2011)

As a networked entity, the drone, though 'manned' and operating at a distance (out of the sky), acts in a functional circle of love and death distribution, an 'affiliation' that keeps the guiding/operating 'man' in place, in a loving embrace: the 'weird' futurity is the face/no face of American war machines,

the impassive face of the fly. In Afghanistan, villagers have their own name for Predator drones, *unki*, meaning the buzzing of flies)Karzai 2013), an army of flies for which the proximity, and not the distance, of the enemy/non-combatant — 'obdurately Other' (Gregory 2011: 201) — threatens a world order 'friendly' to United States security principles and swarm capitalism.

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