

## The Gunning Man: Science Fiction in the Videogames of Eugene Jarvis

### **Abstract**

This paper examines the links and influences between the videogames of Eugene Jarvis and science fiction. Using Edwards' 'closed world' theoretical framework, this paper establishes the between the cinematic and textual science fiction of the 1980s which queried and critiqued the position of the human in relation to new cybernetic technologies and Eugene Jarvis's videogames, many of which are viewed as some of the most influential in the history of the medium. It is found that themes common to 1980s science fiction of improbable odds, hostile environments and media and consumer saturation also run through Jarvis's titles. The net result is the 'gunning man', a character borne of Cold War, closed world, discourses who fights to defend the vestiges of humanity in a world of out-of-control technology.

### **Introduction**

The link between the deployment of computer science during the Cold War and the birth of the videogame, particularly in the United States, is well established (see e.g. Haddon, 1988; Kent, 2001; Kline et al, 2003). Arguably as influential are the narratives found in science fiction cinema, comics and books, which were significant in positioning the new medium in audio-visual terms, including the design of spaceships in *Spacewar!* (Russell US 1962) action which was underpinned by inspiration from Doc Smith's *Lensman* series. The high and military technologies used for research and development of weapons, tactics and strategies of the Cold War, are termed by Paul N. Edwards (1996) as 'closed world' technologies, which through permeating everyday life, engendered a broad social discourse. If this could be seen in the science fiction of the time, it was equally true of videogames. *Spacewar!* and its contemporaries were designed and played as ludic relief from the imminent threat of nuclear apocalypse, yet their content and subsequent commercial applications did not reflect this. Some of the most popular games of the early ages of videogames carried these messages as a means of attracting people to play and – ultimately fail to – avert the white heat of Armageddon, with *Missile Command* (Atari US 1980) seen in its form and function as an archetype of Cold War technologies underpinned by a closed world discourse from which there was no escape.

Other early games by developers of videogames supposed what would happen at the very end point of these closed world technologies. One of these developers, Eugene Jarvis, is the focus of this paper. His approach of pitting – often solitary – humans in odds against battles with technologies that have pirouetted beyond human oversight lends itself to the 'gunning man' title of this article, a concept explicitly seen in his work including *Robotron 2084*

(1982), *Total Carnage* (1992), *Nex Machina* (2017) and especially *Smash TV* (1990) and implicitly in titles such as *Defender* (1980) and *Narc* (1988).

Exposed to *Spacewar!* while at university, Jarvis's initial work in the coin-operated arcade industry was as a pinball designer, before switching to videogames at the newly formed Williams' Electronics in Chicago. While working with the legacy of Cold War technologies in the form of silicon in amusement arcade videogames, what is most striking is the degree by which Jarvis's games, which are marked as some of the most seminal in the history of videogames, were explicitly swayed by science fiction cinema and television, especially of the late 20<sup>th</sup> century and also how these games in their mechanics if not their content, acted back upon the cinematic sf of the time. These films, from *Blade Runner* (Scott US 1982) to *RoboCop* (Verhoeven US 1986) to *Total Recall* (Verhoeven US 1990) build worlds where cultural discourses of the 1980s such as consumerism, autonomous technologies, the war on drugs and environmental catastrophe reach their omega point, resulting in arenas which are increasingly inhospitable to human beings, to the point where they are required to put on Factor 5000 sun cream to go sun-bathing (*RoboCop*) or use an advanced form of emotional intelligence testing to discern if an individual is human (*Blade Runner*).

The indifference of these societies to the value of human life perhaps reaches its apex in *The Running Man* (Glaser US 1987). While the film borrows the title from the eponymous Stephen King (writing as Richard Bachman) book, the primacy of games, as central to the narrative and as a method of building the world around Arnold Schwarzenegger is often overlooked in discussion of the film. While it is acknowledged that the *The Running Man* film's use of games is different to that used in videogames, it is still essential element of the exposition of the cinematic and narrative variations. This is addressed in this paper, especially with reference to the closed world technologies deployed in *The Running Man* and its contemporaries, which result in environs which, while inhabitable to conventional humans can be navigated by those with the techniques, technologies and tactics to live, thrive and survive: Ben Richards in *The Running Man* inverts the loaded game on itself, triumphing in a one-man battle against a corporation that broadcasts images and prints money based on television media promises of social mobility and progress, itself an outmoded concept in the 1980s.

The improbable odds, closed world technologies and hostile environs which mark the hard-boiled cinematic sf of the 1980s lend themselves to the creation of the 'gunning man', a character central to the mechanics and narratives of Eugene Jarvis's games from the early 1980s to the present day and especially prevalent in the 'twin-stick shooters' – perhaps Jarvis's most crucial legacy for videogames – of *Robotron 2084* (Williams US 1982) and *Smash TV* (Williams US 1990). Through reference to literature of and about the time and recourse to extensive interviews available in the public domain with Eugene Jarvis, this paper demonstrates how sf, and specifically the brutalised urban worlds realised in the films of Glaser, Scott and Verhoeven not only have a lasting impression on Jarvis's titles but are

themselves influential on these discourses.. Unlike the space opera utopias of *Buck Rogers* (US 1939), *Star Trek* (Roddenberry US 1966) and even *Star Wars* (Lucas US 1977), they envision a future event horizon of closed world technologies before ruminating on the effects of these technologies as they begin to become commonplace in everyday life. In spite of the inevitable rise of the robots seen in *Robotron 2084* and concluding with *Nex Machina* (Housemarque Finland 2017) Jarvis's games, like much sf, do not blanch bleak and cynical, but are insistent that the physical presence of the human, especially in the form of the gunning man, offer hope for the future of the world and humanity's place within it.

### **Closing Worlds**

In his study of the influence of computers on the development of political discourse in Cold War America, Paul N. Edwards notes that the closed world is marked by 'displays of technology, particularly military and other high technology' (307). For those working on the space programmes of the 1950s and 1960s, locked in a seething technological and propaganda battle with the Soviet Union, scientists at the Massachusetts Institute of Technology and beyond were instrumental in the development of computer science as a discipline, a position enabled by the provision of minicomputers by private military contractors. Following from their involvement in model railroad clubs and sf, these 'hackers' at MIT played with the computers as 'if they were toys' (Haddon 55), bringing a playful aspect to computers which eventually led to the creation of *Spacewar!* in 1962(1). The title and aim of the game reflected the discourse from which *Spacewar!* originated. A two-player game where two ships orbited a celestial body with a simulated gravitational field, the objective was to destroy the other ship by shooting at it. Similarly, the space programmes of the 1960s on both sides of the Iron Curtain sought to launch satellites into orbit around Earth to generate a 'world surrounded by a swarm of communications and photographic satellites [where] no movement would go undetected' (Edwards 145) a global surveillance aim which was ultimately, if abstractedly, realised in the US's 1980s space-based Strategic Defence Initiative ('Star Wars') programme where computer-guided laser technology would provide western nations with a parasol to protect from nuclear missile attack.

The closed world discourse, focussed as it is on computers and their use in games of war are inexorably drawn towards 'enclosed artificial environments such as buildings, cities, underground rooms or space stations' (Edwards 307). These are sites which protect machines from nuclear attack during the Cold War and remain the venues where server farms are located to this day. The bunker, so often a metaphor for civilian life in the Cold War, extends to encompass environments where games, both as war simulation and as leisure, can take place with maximum commutation of technology and the minimum potential for interruption to the human actors. For example, amusement arcades, where many people were exposed to computers in everyday life for the first time in the form of videogames during the 1970s and 1980s, were darkened, eerily lit and even sometimes

physically located underground, spaces. If these spaces were enclosed and separate in their form, then their content was highly instructive of the closed world. In his study, Edwards notes how the Cold War is understood in terms of discourses that embrace a 'quintessentially semiotic space existing in models, language, iconography and metaphor' which 'connect technology, strategy and culture' (120). The games that were situated and played in the bunkers of amusement arcades are the terminal manifestation of this discourse. The aim in Atari's *Missile Command* is to protect cities from nuclear attack, by using an anti-ballistic missile system to prevent warheads from falling on cities. The player's interaction with this apocalyptic space is represented by a cross-hair, which is a functional reduction (Wolf 2003 50) of the player to a tool that is universally used in war to target an enemy. In its functionality it at once reduces the player's surrogacy in the game and brings the semiotics of the closed world into stark relief, which, as this article spotlights in its later discussion is a key conceit of weapons used in videogames and the first Gulf War. When the inevitable loss of all cities occurs, the white heat of Armageddon is emblazoned with 'THE END' in flashing letters on the screen. In games such as *Missile Command* and *Battlezone* (Atari US 1980) simulations of the amusement arcade interred the ideals of the closed world so that they became 'more real than the reality itself, as the nuclear standoff evolved into an entirely abstract war of position . . . computer models, war games, statistical analyses, discourses of nuclear strategy . . . had more political significance and more cultural impact than the weapons that could not be used' (Edwards 14).

### **The Gunning Man**

A punchcard version of *Spacewar!* was the first videogame Eugene Jarvis played while he was a student at University College Berkeley in the mid-1970s. In recounting his experience, Jarvis accentuates the *physical* aspect of the games 'it wasn't a stress-free experience, you'd have to power it up and down, kick the circuit boards'. The roots of this physicality are found in Jarvis's first exposure to coin-operated games of pinball in the closed worlds of amusement arcades and midways, where the ultimate aim was 'beating the machine, beating it anyway you could, tilt(2) it, try to move it around, beat on it, bang on it, try to kick the coin door a few a times to get an extra play' (Jarvis cited in *The Retro Hour* 2017). The duality of this physicality, where the fragility of the human body confronts the cold form of technology is an emergent theme of Jarvis's videogames – alongside sf from *Frankenstein* to *Robocop* – as film and games in variant forms influence each other throughout the 1980s. The development of pinball, which Jarvis worked on at Atari from 1977 onwards, is well established as holding considerable sway on the development of the content of videogames (Wolf, 2012; DeLeon, 2014) and are noted by Jarvis as paradigmatic to the closed world game *Space Invaders* (Jarvis cited in Heineman 2015: 57) where the player aims to protect bases from incessant alien attack. For Jarvis then, the physical, corporeal relationships between pinball, player and videogames are vital to the construction of the one screen closed world of games where there is no ending and no escape such as *Pac-Man* (Namco Japan 1980) and *Space Invaders* (Taito Japan 1979). These frontier-less dystopias where

space and time fold in on themselves in the form of *Pac-Man's* warp tunnels and *Space Invaders'* ardent aliens which speed up as the gamer progresses were rejected by Jarvis in his release of *Defender* as he saw 'screens as boring' and wanted a game that would 'let you scroll through the world' (Jarvis cited in Heineman 2015: 60). Yet Jarvis's most transformative innovation and enduring legacy, the twin-stick shooting mechanic, first seen in *Robotron 2084*, was borne of the closed world, single screen game. This enabled the player to radiate exorbitant firepower around the screen, giving rise to the gunning man in its current guise as a method of eradicating enemies with illiberal and immediate effect, a theme seen throughout the sf of the 1980s where hostile environments were cleansed by men in human, android or cybernetic form with oversized weaponry, spritely agility and steroidal strength.

Meanwhile, Jarvis's side scrolling videogames, such as *Defender* and *Narc*, used complicated button inputs to navigate through the world. While adhering to the gunning man ethos of protection and prohibition respectively, the games that grant greater freedom of movement curtail access to superhumanly explosive characteristics. These are worlds which, unlike the gleaming metallic sheen of *Smash TV* or moribund murkiness of *Robotron*, are instantly recognisable as our own. *Defender* charges the player with protecting the planet from alien invasion, while *Narc's* ostensible setting is Washington DC, the centre of the USA's executive, legislative and political power. For Edwards, these recognisable environments are closer in form to what he terms 'green worlds' the characteristics of which are a 'lateral movement [and] flow of action between natural, urban locations', in opposition to closed worlds whose movement is 'among nested enclosures' (1996: 310) as seen in the, single screen, twin-stick shooters of Jarvis's oeuvre.

The overloaded firepower found in the gunning man of *Robotron* was prototypical in its innovation upon its release in 1982. It becomes more fully realised in sf as the games and films of the 1980s progress and as the threat of the Cold War interfuses all domains of everyday life. Washington DC's politicians, operating at the nexus of US military power, contracted out funding of the 'Contra' revolutionaries in Nicaragua via bypassing arms embargoes to Iran. Ultimately, the revolutionaries' moniker lent itself to the *Contra* (Konami Japan 1987) series, with its 'run-and-gun' mechanic of joystick and fire buttons allowing the player to jump and scroll horizontally through the world. The adroitly punned *Rush n' Attack* (known as *Green Beret* in Europe and Japan) (Japan Konami 1985) continued Konami's run-and-gun propaganda drive, wresting the player with rescuing Americans who were imprisoned in gulags in Siberia following the Vietnam War.

Ultimately, the run-and-gun proselytism of Konami's joystick and fire buttons is deftly but definitively different to the gunning man who traverses Jarvis's closed worlds in *Robotron*, *Smash TV* and *Total Carnage*. While Konami's games reveal some elements of green world scenarios, in their unrelenting but natural environments, it is the *underpowered* arsenal of the green beret of *Rush 'n Attack* who defaults to a hand-knife and not an outsized twin-

stick hand cannon which demarcates the gunning man from the run-and-gun. The gunning man's aim is to fight against closed world enemies whose technology has stretched beyond the omega point, the odds so stacked that humanity's only chance is to automate part or all of the kill-chain process. For the run-and-gun merchant, however, recourse remains to tools that, even in the most extreme of environments, allow difficult, but never impossible, odds to be evened.

The films of the time, some of which come to be explicitly referenced in Jarvis's games illustrate the rise of the gunning man in sf. *Robocop*, the 'future of law enforcement' exists within the cybernetically closed world of the fragility of the human with the form of technology, which is only part man and part machine, even if it is all cop. The human body of Murphy who forms the meatware basis of the cyborg is gleefully mutilated by thugs at the beginning of the film, before being provided with cybernetic and armoury upgrades to counter the threat posed by the paramilitary technology deployed within the neo-corporate Delta City, whose investment in regentrification is contingent on the introduction of military hardware to the streets of Detroit in the form of Robocop and the 209 series Enforcement Droid 'ED-209'. The Motor City of Detroit, where automation was brought to the production line process of automobile manufacture in the 1960s, can only be saved by Robocop, a cyborg which follows processes in its prime directives, doesn't go on strike and hoovers up the scum of a city that has been devastated by a lack of industry and employment. These themes are taken to their logical conclusion in the videogame *Detroit: Become Human* (Quantic Dream France 2018), where The Motor City becomes The Android City with accordant positive and negative effects, a social, political and economic unfolding equivalent to its introduction of production line processes in automobile manufacture. Unlike the closed world conclusions of *Robocop*, the branching narratives and innate hope for human and technological harmony rely less on gunning men and more on the restoration of 'cosmic order and community' (Edwards 1996: 310) familiar to green world dramas.

Androids in the future city of Los Angeles are the source of identity blurring in *Blade Runner*. While the Blade Runner cop charged with protecting the citizens of Los Angeles is partially successful in his task, he cannot stop the rain, or the cultural imperialism of a resurgent Japan affecting the quality of life on the Western seaboard. *Total Recall* (1990), another Philip K. Dick screenplay which, with *Blade Runner*, bookends 1980s sf, portrays an idealistic life for Quaid, until a triple identity – possibly more - of revolutionary and secret agent is unveiled and the core human, Christian, liberal value of free will is questioned and violated at the altar of predestination and the unreliability of human memory.

*Blade Runner's* ambience is one of its notable predicates. The inclusion of Atari and the neon luminosity of its famous logo - a reimagining of Mount Fuji in Japan –sloshed across sodden skyscrapers was a sign of the eminence of home and arcade videogames in 1982(3). Yet it but is by no means the only closed world drama which pays homage to videogames.

Disney's *Tron* (Lisberger US 1982) twines the cinematic relationship yet further, immersing its characters deep within a videogame which comes to resemble an amusement arcade with its 'Cartesian grid dominated by neon colours and abstract geometric forms' (Edwards 331), before being turned into a videogame itself by Bally Midway in the same year. *WarGames*, (Badham US 1983) places a hacker, whose skills are honed in amusement arcades and on home computers, in a zero-sum battle with an artificial intelligence ('WOPR') which is charged with the responsibility of controlling the non-/launch of the US's nuclear arsenal. Similarly, it is another sf vehicle featuring Arnold Schwarzenegger, *The Running Man* which places deadly games at the crux of its plot with Ben Richards forced to take part in a game show where the star – the only – prize is survival. In both its textual (King 2011) and cinematic form, *The Running Man* is symptomatic of games played in a closed world. In the novel, Richards signs up to the show run by 'The Games Network' to help with medical bills for his gravely ill daughter; his wife is on the game to help pay the bills as Richards cannot find gainful employment and, in a neat piece of user generated content, viewers receive cash prizes from the Network for informing on the whereabouts of the contestant.

Texter (2007) is critical of the film version for its vapid vacuousness, joining a line of films consonant with the late Cold War ethic propagated by second term Reagan neoliberalism which serve to promote a one-man war against oppressive forces(4) from Angola to Zimbabwe, thereby conforming and confirming the gunning man hypothesis where the only escape is by through exponentially graphic violence preferably beamed to as many viewers as possible Mann (2017) offers a more recent rejoinder to the film which suggests that Richards can only survive with the help of an underground network who can take down ICS, the film's version of the Games Network. This collusion – manifest in different ways in both the film and text version - situates Richards in cahoots with the proletariat who have been disenfranchised by decades of conservative and erosive US social policy. The result is an underclass who are ravaged by drug, television and gambling addiction, with no social safety net to propel them towards the social mobility that is only promised in game shows such as 'Climbing for Dollars', 'Dig Your Own Grave', or 'The Running Man' and recombinant in works such as *Narc* and *Become Human* In addition, the blunt force trauma of the Vietnam war, located as the first televisual war and transmitted into living quarters at family mealtimes, clearly influences the writing and was a source of disgust for King 'by the fact that such horrifying images had become increasingly stripped of their meaning' (Mann 2017). While Texter apportions the book with anticipating and unpacking the ideological/repressive state apparatus of reality TV shows of twenty years hence, it is Mann's isolation of the doctored footage of Richards' role in the Bakersfield massacre which appears most prescient now with the germination and dispersal of fabricated news and highly selective editing, a criterion as evident in the reality TV of *The Running Man* or *Smash TV* as the presentation of war in the first Persian Gulf War or *Total Carnage*.

Given the centrality of games to *The Running Man* and wider postmodern texts in general (Lyotard, 1984), it is interesting that the centrality of games to the film's exposition is

not analysed in greater detail. This is important to this article, because, as seen below, *The Running Man* film is an overt and acknowledged influence on Jarvis's later games, especially *Smash TV* while his earlier games are a precursor to the dystopian message, evinced from the book. In its setting, *The Running Man* game show takes place in an 'enclosed area away from the general public' (Texter 66), a maze reclaimed from a zone ravaged by earthquake in the desert city of Los Angeles. The underground maze has been a location for play from the antiquity of the Minotaur of Athens to the computerised chase of *Pac-Man*. (It is a classic closed world location which, in its illumination by sheer spotlights and pinking fluorescents serves only to penlight its claustrophobic qualities. Given that closed worlds of amusement arcades and NORAD are where the one-screen, one-player, zero-sum battles of *Robotron*, *Missile Command* and *WarGames* take place, it is a logical step to see the closed world of *The Running Man* as a solo battle against the odds, where the frontier becomes ubiquitous television and the show is beamed onto every screen, in every building. It is even on every street, where crowds gather in a game of gambling on the odds on the next kill, a dramatic theme which turns when Richards is betted on to oust the celebrity stalkers who are charged with chasing and killing Richards. In a neat reversal of the earliest videogames where the iconography derived from cinema The characters themselves are inspired by games. The first battle with Subzero is played out on an ice-hockey rink with the executed stalker, a hockey player is shovelled into the net by Richards; the robustly ironic character Captain Freedom (played by then professional wrestler Jesse Ventura) an aging stalker in semi-retirement justifies his position on the show by torturing viewers via a TV exercise-show, while Master of Ceremonies Damon Killian is played by professional game-show host Richard Dawson, riling the audience and willing the stalkers and runners to ever greater extra-human achievements of strength, endurance and gratuitousness through a host of one-liners of which any Running / Gunning Man would be proud.

Games are also used here as a form of critique of the decomposition of society in *The Running Man*, chiefly caused by the corrosion of consumption a theme explicit to the archetypal gunning man videogame, *Smash TV*. While the underclass on the streets hyperactively bet on death, the warm and well-fed audience in the studio are themselves asked to guess at the identity of the next victim, while skyscrapers of consumer items are laden onto them. These include a board game version of *The Running Man* to play at home. While those out on the streets cannot rid themselves of what they don't have fast enough, those in the studio are overloaded with objects they don't need and didn't ask for. In placing games at the centre of the narrative *The Running Man* is able to observe the effects of forcing individuals into situations within a closed world where greed outweighs need. One man is watched by the many via ubiquitous screens at the frontier between the immovable object of the urban maze of the closed world and the irresistible force of TV technology. The city itself, too dangerous for the studio consumers, becomes a dead zone, viewed, like a war, only through screens, simultaneously distancing and projecting the viewer from the source of conflict, their calls for the next stalker strangely reminiscent of



the computers of the US's Igloo White weapons programme during the Vietnam war 'directing the destruction of men and equipment as if playing a videogame . . . wiring explosives on the Ho Chi Minh trail like a drugstore pinball machine, and we plug it in every night' (Edwards 4). The individual components of war, television, games and consumption, growing in power throughout the Cold War are fused into the narrative of *The Running Man*, where in common with the individual operating at the frontier of human fortitude, must use the weapons of the media back against themselves, a tactic that would be used to great effect in the September 2001 attack on the US, which the end of *The Running Man* book eerily anticipates.

The function of one individual at the frontier of technology, despairingly fighting hordes of enemies who are programmed to destroy the contestant by any means necessary are themes that run throughout early videogames. Eugene Jarvis's games were often especially cruel exemplars of this, with the difficulty of the games beyond the ken of even the most skilled arcade operator at the time. Often, the battle is dire, one character with three lives would be given a weapon to defeat hordes of enemies which monomaniacally seek to destroy the player's surrogate which would not stop until the player gives up or the power to the machine is switched off. Yet that battle between and in humans and technology, the manipulation of extermination and extirpation that the twin-stick shooter automates in the closed world battles between and in humans and technology becomes increasingly honed as his work matures and is evident in wider sf of the time. Elements of the gunning man sf introduced in the first part of this paper, so vital to the formation of early videogames, are charted below through Jarvis's videogames including his innovative twin-stick shooters *Robotron 2084*, *Smash TV* (Williams US 1990), *Total Carnage* (Williams US 1992) and *Nex Machina*. All contain constituents of the 'gunning man' operating within green or closed worlds, a sensation and trope which becomes more cloying and claustrophobic as the media saturated world of the 1990s catches up with the gunning men of the 1980s. Yet, , as the almost anomalous release of *Cruis'n USA* (Midway US 1994) demonstrates *The Running Man* offers the hope that one person can make a difference and that ultimately humans will prevail over the cybernetics that in the past, present and future direct and govern so much of contemporary existence.

### *Robotron 2084*

*Robotron 2084*'s station was antithetical to Jarvis's earlier horizontally scrolling release, *Defender*. Instead of a lateral horizon, the game was limited to a single screen. Replacing the joystick and five buttons were two joysticks, one to control the onscreen avatar and the other to train the direction of fire. As outlined above, using a joystick for firing was of greater influence on the legacy of videogames than any of *Defender*'s graphical spectacles, siring the twin-stick shooter and germinating the gunning man. Once again, Jarvis foregrounded physicality in its design 'it's for people who want a super-athletic experience, like super testosterone charged types. You have these two sticks and there's a real physical

element to them' (Jarvis cited in Sellers, 2001: 53). The traditions found in the histories of pinball and *Spacewar!* are hardwired into the hardware of coin-operated games. Emotional, corporeal, responses such as 'kicking coin doors and beating on the glass' are the 'last resort of humanity, the machine can't kick you back' (Jarvis cited in Sellers 53)

The physicality of human versus machine is but one element of the gunning man found in *Robotron*. Realising that the world presaged by Orwell in *1984* had not (yet) come to pass, Jarvis shifted the game a century into the future where the player controls an avatar who is charged with protecting the last human family of civilisation, simultaneously echoing Ben Richards' care for his family in the *The Running Man* novel and introducing a trope that would continue throughout gunning men sf typology *Robotron* takes place in a closed world surrounded by omega-point technology: robots have heaved off the manacles of enslavement and risen and rebelled against their human masters. Again, small and big screen dramas are the chief influence on the setting of *Robotron*. For Jarvis, videogames enabled a rebellion against the 'Big Brother' of television, a model which in its form and content literally programmed the masses, 'TV had always been this top-down, broadcast medium, not participatory, the kind of *1984* model where the masses are being programmed by the cognoscenti,' whereas videogames 'play around with TV' (Jarvis cited in Kohler). *Robotron* takes this to its logical conclusion, postulating the omega point where videogames themselves – that ultimate playing around with TV - results in a totalitarianism where technology can no longer be controlled, either by the physical violence of a fist crashing into a cabinet or the symbolic (semiotic?) violence of those who programmed them.

With the gunning man of *Robotron* trapped in a closed world of technology of confinement and intensity (Jarvis, 2014), it draws on the canon of sf concerning the ethical veracity of creators and their control of creations at the frontier of knowledge and technology. Given the ineffectuality of the gunning man in *Robotron*, controlled by someone who will never beat the machine ,as it theoretically continues forever, or at least until the character, player or machine runs out of money or energy, hostility and aggression turned towards the machine is a perfectly human - and natural - response to a civilisation which in its artistic and scientific creations seems to be obsessed with its own destruction and disappearance. During the Cold War machines were used to simulate wars that cannot be won, or even initiated. In the first decades of the 21<sup>st</sup> century, the rise of the robots threatens the social and economic fortitude of humanity reifying the possibilities posed in *The Running Man* of unemployed masses shivering on the streets while a cosy 20% luxuriate in consumer goodies in the studio.

### *Narc and Smash TV*

*Narc* saw Jarvis return to the horizontal scrolling format made famous in *Defender* with the player's characters (Max Force and Hit Man) cleansing the putrefying streets of urban America, a theme paralleled in action cinema of the time such as *Cobra* (Cosmatos US

1988). The ultimate aim of *Narc* is the elimination of a drugs tycoon, 'Mr Big', protected by an endless procession of blade-brandishing apparatchiks, who could be killed in a spectrum of creative ways including being set on fire via a rocket launcher or run over by a sports car. The anti-drugs message and arbitrary violence resulted in one of the most notorious games in arcade videogame history. While closer in exposition to the green world scenario of *Defender* in its wanton content, Jarvis's inspiration remained steady as he once again looked to cinema and its closed worlds during the design of the game. In using the recent technological innovation of digitisation to place 'green-screen characters on tough urban backgrounds' (Jarvis, cited in *The Retro Hour*, 2017), *Narc*'s first level enemy closely resembled Clarence Boddicker from *RoboCop*. The new technology ensured that the physical aspect of Jarvis's games remained with the crushing, flailing, flaming corporeality of on-screen bodies complementing the innate physicality of arcade game play.

*Narc* keys into the 'Just say no' campaign made popular by the Reagan - and specifically the First Lady Nancy Reagan - Administration during the 1980s, simultaneously reflecting the violent interventions the US made on streets and communities at home and overseas and the Contras links to drug trafficking into the USA, which were indirectly funded by the Reagan US administration (Reed and Cummings 1994). Given the prevalence of young peoples' drug use and with arcades being one of the key areas where young people congregated, it was inevitable the discourse would eventually enter into amusement arcades. An FBI public service announcement splash screen 'Winners Don't Use Drugs' became part of videogame parlance following its introduction to attract modes on videogames around this time. *Narc*'s high score table at the end of the game evolves this message to one more palatable to the prevailing social policy of the time 'say no to drugs but yes to mass murder' as the victorious player is encouraged to contact the Drug Enforcement Agency to explore recruitment possibilities. The final score itself, measured in dollars, drugs and gold seized is presented as an 'evidence' count, irrespective of the hundreds of digitised crooks who lay prone at the hot metal of the dual-wielding run-and-gun mechanic. Yet ultimately the theme of *Narc*'s urban dystopia, which unlike the majority of Jarvis's games, takes place in the present day, penlights a shift in pitch from Jarvis. Here it is not enslavement by the closed world of high technology gone wrong, but of human nature gone wrong: addiction to drugs is out-of-control consumption, the riotous inner cities of the US and central America quelled by paramilitary and para-arbitrary intervention, a corruption of the purities of the green world embodied in the American Dream.

Evolving the one-screen twin-stick shooter first seen in *Robotron* by placing two individual characters on a winner takes all game show, *Smash TV* takes the consumer society to its logical conclusion. Unlike *Narc*, *Smash TV* is set in the near future of 1999. Where many of Jarvis's games feature the functional reduction of onscreen avatars such as the ship in *Defender* or motorcycle-helmet attired state-sanctioned neoliberal vigilantes of *Narc*, the gunning men in *Smash TV*, while unreservedly generic, are identifiable as steroidal, but physically fragile human beings. Explicitly inspired by *The Running Man* (Jarvis cited in *The*

*Retro Hour*), the game follows from *Narc* in its satire of contemporary society, showing how the future, once envisaged by Jarvis as being too far ahead in *Robotron* for the *fin de siècle* is now catching up with the present. The ultimate prize in *Smash TV* is survival. In the meantime, consumerism salves the terror of a society mainlining on death-infused TV ratings. While the player is awarded points for destroying opponents, the real prizes on offer, like the collection of 'evidence' in *Narc*, are the collectibles cast around the TV studio. VCRs, sleek 1999 roadsters, 2600" TVs and toasters are the incentive for adeptly balancing risk and reward where the acquisition of material goods, rather than the protection of humans, is central to success, summed up in the MC's plea for 'Big money! Big prizes! I love it!' The difference in moral tone, where violence is justified in the eradication of a toxic enemy which was evident as recently as *Narc* is wholly removed from *Smash TV*'s impermeable television studios. It therefore falls closer to *The Running Man* film rather the book. Where the former's death-games such as Climbing for Dollars provide material prizes, the latter's cumulative carnage serves a higher purpose of paying Richards' daughter's medical bills.

Given Jarvis's overt influence by cinema and television, the change in tone is not unexpected. The MC of *Smash TV*, who sartorially – and physically – emulates Damon Killian from *The Running Man* film uses the line 'I'd buy that for a dollar' from the game show of the same name in *RoboCop*. Both MCs from *Smash TV* and *RoboCop* game shows are flanked by fawning blonde women who flick their eyelashes alluringly at the camera; while both MCs from *Smash TV* and *The Running Man* film end up being a victim of their particular running / gunning men in the pertinent climaxes. In the cinematic sf of the 1980s viewers were introduced to the cybernetically closed worlds of replicants and cyborgs, yet they also refracted the sheen of the consumer society, which, during the 1980s was reaching its apogee of excess. In the case of *RoboCop*'s almost slapstick satire, adverts following the 'media breaks' include the 6000 SUX automobile ('8.2 MPG: A great American Tradition') and the Nukem home wargame ('Get them before they get you: Another quality home game from the Butler Brothers') are a clear influence on the award architecture of *Smash TV*. The implicit assumption that the Cold War would remain a geopolitical fixture, driven by the (neo)liberal values found in *Narc* and *Smash TV* is also evident with the end-of-decade sf showcasing the apotheosis of the gunning man. Alongside *Smash TV* and *The Running Man*, *Robocop 2's* (Kershner US 1990) narrative focuses on the corruption of a (mostly young) urban population by the designer drug 'Nuke', suggesting a final use for all of the unused fissile materials of the Cold War is through illicit consumption of a narcotic of the same name. Early in the film *Robocop* invades an amusement arcade to disperse the drug-induced delirium. As a *Robocop* (Data East Japan 1988) arcade machine falls to the floor in the melee the unification between NARC and narcotics, gunning men and sf completes its circle of consumption, with the only problem remaining how to use all of the gleaming military hardware stockpiled through 40 years of spending resulting in the 'colossal financial hangover of post Cold-War American politics' (Edwards 1996: 356).

## *Total Carnage*

The answer to Richards' question is partly addressed by Jarvis's 1992 twin-stick shooter *Total Carnage*. If *Narc* and *Smash TV* show the future catching up with the actual and fictional present in Jarvis's games then *Total Carnage* sees the vision sliding into history through a re-enactment of past events. The title of the game is reclaimed from *Smash TV*'s MC's slogan 'Total carnage: I love it!'. With the game set in the same 1999 universe as *Smash TV*, the ultimate endeavour is to access the Pleasure Dome where characters from *Smash TV* await. To reach this consumption omega-point, the gunning men (Major Mayhem and Captain Carnage) must liberate the desert state of Kookistan from the grasp of Captain Akhboob, who has annexed a baby-milk factory and poisoned its production processes. The game's geographical setting is matched in importance by its temporality, with *Total Carnage* explicitly drawing on the first Gulf War of 1991 for its inspiration (Turmell, 2009). The discourse extends to Major Mayhem and Captain Carnage being rewarded for rescuing journalists and camera operators from the sun-scarred and explosive-charred desert: the use of international news broadcasters and journalists a key tactic of information management by the Allies in a theatre of schlock and gore, themes subsequently explored cinematically and cynically in *Three Kings* (Russell US 1999) and an extension of the use of military hardware in law enforcement with 'the formidable arsenal built for global war would now be turned to local police work' (Richards 1996 355)

Given that the first Gulf War is notorious in its deployment of the West's unused Cold War technology, as well as its selective televisual reportage it is, in common with the frontiers of the desert, a testing ground for atrocious and catastrophic weapons. This detonation of weapons and simultaneous capturing of their effects on camera, to be broadcast on screens around the globe results in an implosion of the image between war and entertainment (Baudrillard 113), the next step in the stripping away of images that repulsed Stephen King into writing *The Running Man*. One infamous example widely reported on at the time, were 'smart' weapons (Richards 1996 355), so called as they were able to target military installations and leave civilian areas unharmed. In fact, they more closely resembled the smart bombs of the founding age of videogames found in *Spacewar!* and *Defender* which indiscriminately eliminated everything on the screen (Crogan 1), apart from the gunning men. This recalls the images of the first Gulf War, which would show a missile closing in on its target – replete with the functional reduction of the crosshairs – before fracturing in waves of static and blankness: the enemy clinically eliminated, the gunning men triumphant in their technology. If, as Edwards contends, the Vietnam War was the first television war, then the 1991 Gulf War was the first videogame war 'the Pentagon's careful management of the imagery of suffering made the war seem virtually bloodless, a sort of virtual reality video game' (Richards 1996: 355) In common with the sf which bookends the 1980s, from *Robotron* to *Total Carnage*, *Blade Runner* to *Total Recall* it was possible, perhaps inevitable, that victory in war was contingent on spending vast amounts of money on closed world

technologies to reach the Pleasure Dome of the post-Cold War end of history and the last (gunning) man

### **Conclusion: *Nex Machina***

The pure elation of high tech military power, which ensured the Cold War gave way to the hot peace of the 1990s is ludicrously enshrined in Jarvis's turn towards driving games and especially *Crusin USA* where the player traverses American blacktop highways in a celebration of the core elements of American freedom: the automobile, the highway and the opportunity to set one's own compass through life, chasing a never-setting neon sun. All are achieved *without* another of those great American freedoms, the right to bear arms, to be an overpowered gunning man, grating teeth upgraded against an overwhelming enemy. If this was a conscious movement away from the oppressive design of previous games it was a celebration of the green world that a post-Cold War America promised the world: peace and harmony, trade and consumerism, profit and loss.

Yet the gunning man, like all superheroes, would not be consigned to the silos of the past. In 2014 veteran Finnish developers Housemarque met with Eugene Jarvis and invited him to be creative consultant on their new game with the tentative working title *The Jarvis Project*. Inspired by the arcade games of Eugene Jarvis in the 1980s and 1990s, the game refined the twin-stick mechanics of earlier titles focussing on battling legions of technologically mutated enemies in a confined space who would be hosed down with hyperspace, smart bombs and rocket launchers. Coupled with the twin stick shooter design which had evolved in games such as *Geometry Wars* (Bizarre Creations UK 2003), the game advanced the premise of *Robotron* and *Total Carnage* tasking the single player gunning man with saving humans. The key difference in the narrative is that the ensuing technological enslavement narrative is entirely self-inflicted by humanity. Even though Jarvis had envisaged that videogames would be a way of freeing individuals from the enslavement of programming via TV, society is so transfixed by screens that the technological singularity has occurred with zero enlightenment or realisation from those using them, with the result that humans are utterly riveted by their devices, irrespective of negative effects. The eventual title of the game, *Nex Machina*, translated as 'death machine', reflects this state of unawareness, ironically caused by machines which can and do connect across all plains of consciousness, communication, command and control. Reflecting the totalitarian takeover, the levels of the game traverse green and closed world environments which are in thrall to the technologies of screen machines, twisting through trees and mountain ranges, laboratories and caverns before ending up on a space station, the natural environment for entities which do not require any atmosphere to exist.

Unlike *Total Carnage* and even *Smash TV*, the narrative interposition in *Nex Machina* is minimal, with a static screen at the end of the game showing a plug being unsocketed, ultimately destroying the machines. Electricity is immediately restored and the singular human watching the scene lazily bows his head in somnambular affirmation back towards

his device. Yet this is quite a different audiovisual experience to earlier Jarvis games. Gone are the bright, vivid colours of other titles, replaced by the clean sheen of a metal mechanical world. The humanism of *Robotron* and the satirism of *Narc*, which revel in their bodily and graphical physicality are substituted by a grim desperation: the humans who need saving are of questionable quality. As in other Jarvis titles, they remain helpless, but are obese, obscene and abjectly resigned to their fate, resembling the humans from the space station in *Wall-E* (2008) who are provided with their every need with and by, through and behind a screen. Yet the inspiration for the lustre of the game remains the same, with Housemarque describing Jarvis as 'one of these 70s guys - he's got a California attitude, and he always brings up these crazy references to dirty 80s sci-fi' (Robinson).

Ultimately, poor sales of *Nex Machina*, convinced Housemarque to abandon future projects that were based around the template of Cold War, closed world arcade games of the 1980s and move onto new projects. The legacy of Jarvis's games lives on with his own company Raw Thrills which continues to design and develop arcade videogames, with *Terminator: Salvation* (Raw Thrills US 2009) a release tying directly into the cybernetic sf of the 1980s bringing a neat circularity to Eugene Jarvis's inspiration by Arnold Schwarzenegger films through featuring him directly in one of his games.

Beginning with a demonstration of the interconnection of Cold War 'closed world' technologies, this paper showed how narratives from a particular brand of sf, where rotting cities imbued with skyscrapers of trash and vehicles on rotting axles are bridled by gunning men whose military hardware and superhuman upgrades are the stuff of Cold War, closed world technologies. – Eugene Jarvis's arcade games offered a playable version of the futures envisioned in narratives from 1984 to *The Running Man* and as the closed world technologies seeped into the globes of the quotidian, became part of the sf discourse of the 1980s. The difficulty level of Jarvis's games, coupled with the lone figure battling impossible odds in hi-tech, low-empathy locations is symptomatic of 1980s cinema, which pose the question of the value of the human to society: from the cybernetic reassigning of the corpse of a loyal Catholic police officer in *RoboCop*, the reduction of human life to a price in *The Running Man* and the question of human nature itself in *Total Recall* and *Blade Runner*. While assimilating and disseminating these discourses, Jarvis's game mechanics and themes deliberately place the player's gunning man in environments with impossible odds, with a paradoxical feeling of omnipotence imbued by the automation of firepower in the twin-stick shooter. Feelings of helplessness and loss are compounded by the physicality of the player's experience. With the hyper-violent rendering of death and mayhem, Jarvis ensures that his games remain human in their aim with the protection of humanity from uncertain futures and man-made disasters the central endeavour, motivations which stem from the confusion wrought by technology which has gone off-the-reservation. This can be seen most literally in the desert-states of *Total Carnage* and the Gulf War, but is also evident in the hyper-competitive modes of urban consumption of *Smash TV*, *Narc*, *RoboCop* and *The Running Man* and the invasion by advanced, off-world technology seen in *Defender* and

*Blade Runner*. In placing the human at the centre of the game, Jarvis accentuates the physical interaction between the player and the arcade game, a lineage derived from pinball. While the closed world technologies of the Cold War attempt to elide the human by hyper-real equations of megadeaths and zero sums, the videogames that arise from this time, complemented by sf narrative, form and function, continue to place the human front and centre to the aim and role of the gunning man: the protection and continuation of human life at any price. Ultimately, this price is paid by the player dropping money into the arcade cabinet's coin slot to trigger one more life of the gunning man, for Eugene Jarvis the 'lastman standing' (Heineman 2015: 55) of the closed worlds of Cold War arcade sci-fi.

## Notes

(1) *Spacewar!* is written both with and without an exclamation mark. Neither version is correct or incorrect, but in a recent interview, Steve Russell revealed that the exclamation mark was added 'at the end [of development] when it was working well enough to demonstrate!' (Russell cited in Drury, 2019: 16)

(2) 'Tilting' is a technique where the pinball player attempts to move the machine to manipulate the trajectory of the ball on the table in order to gain an advantage. Pinball machines have a 'tilt' mechanism built in where if the machine senses undue movement, it locks the player out of the game. See Trapunski, (1979: 155) for extended discussion.

(3) Yet to experience the 1982 crash that would ultimately re-order and re-orientate the industry, Atari's closed world productions of *Missile Command* and *Battlezone*, were in their ascendancy at this time. In the 2018 sequel, Atari as a games-making entity was defunct and is seemingly included due to the odd phenomenon of the so-called '*Blade Runner* curse', where commercial giants of the industrial age failed following their inclusion in the original film (Sammon, 1996).

(4) This is perhaps best evidenced in the strange intersection between the end of Bachman's *The Running Man*, where Richards flies an airliner into the Games Network Tower and *Rambo III*, where John Rambo repels Soviet aggressors in Afghanistan, with the film ending with an eventual dedication to the citizens of Afghanistan.

(5) Before this, Jarvis had worked on three tables for Williams' pinball division including *Gorgar* which was the first electronic game to feature synthesized speech.

(6) As an explicit admission of the transmediality of space in popular culture, the home computer conversions of *Defender* released by Atari included the DC Comic *Atari Comic* which is less than loosely based on *Star Wars*.



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