

Stranger Than Fiction: Jeff VanderMeer's Supernatural Cities and Amazon's Smart Cities

Natalie Wall, University of Liverpool

Introduction

Jeff VanderMeer's 'New Weird' novels are consistently in dialogue with the changing face of the Anthropocene and his city novels, *City of Saints and Madmen* (2004), *Borne* (2017), and *Dead Astronauts* (2019), explore how cities can develop into supernatural entities. These novels explore the colonisation of urban spaces as they are irrevocably changed by aggressive agents of what Anna Tsing has called the 'plantationocene', a term for 'capitalist colonialism's conversion of indigenous peoples and ecosystems into bio-resources' (Tsing et al 2017: G3). VanderMeer pushes developments and catastrophes in technology and ecology to their extremes to create supernatural metropolises that are rooted in our familiar world. Indeed, the hostile bioengineering corporation in *Borne* and *Dead Astronauts* mirrors the current corporate movement towards so-called 'Smart Cities', which aim to 'both uncover and enhance an immanent urban intelligence, and [...] generate circumstances beneficial to ecological stability' through 'ubiquitous digital infrastructure' (Coley 2021: 148). Amazon Web Services promises the 'ultimate upgrade' to the public sector (Idu 2021) in return for seemingly unlimited access to the population of these cities. By drawing parallels between Amazon's proposed Smart Cities and VanderMeer's supernatural cities this paper will explore how the urban could be reconfigured as a supernatural space through its corporate and technological augmentation.

What is a Smart City and How Are They Supernatural?

In the twenty-first century humans officially became a majority urban species and it is predicted that by 2050 two thirds of the total population will live in cities (Coley 2021: 147). Smart cities appear as the next stage of city development, with some cities already undergoing a 'smartening' and other new cities or zones of existing cities being built with a 'smart from the start' approach (Halegoua 2020: 18). While there is some agreement among

architectural, geographic, and sociological literature about the features and purpose of smart cities, Grossi & Painezzi point out that there is ‘as yet no common definition’ (2017: 79). According to IBM, a smart city is an ‘interconnected, instrumented and intelligent’ city, with these qualities coming from the multitude of sensor objects embedded in ‘its architecture, its transport, its street furniture, the pockets and wrists of citizens themselves’ (Grossi & Pianezi 2017: 79; Coley 2021: 149). The ‘positive vision’ of the smart city is that the ubiquity of digital infrastructure ‘promises to enhance urban life’ and ‘generate circumstances beneficial to ecological stability’ (Coley 2021:148). This is accomplished through the generation of vast swathes of data about the city by and through its ubiquitous sensor objects, allowing leaders and, ideally, citizens to enjoy a more sustainable and safe quality of life as this data supports, monitors and improves infrastructures such as ‘transportation, waste management, energy consumption and emergency response’ (Halegoua 2020: 5).

Edward Glaeser argues ‘we must free ourselves from our tendency to see cities as their buildings, and remember that the real city is made of flesh, not concrete’ (2011: 15). While this is intended to praise the supposed power and transformative potential of the human, Glaeser’s dehumanising description of ‘flesh, not concrete’ is precisely the kind of ‘human resource’ rhetoric that features in many works of dystopian or speculative fiction and is increasingly concerning given the corporate colonisation of cities. ‘Corporate colonisation’ can be understood in multiple ways, the first is the more literal ‘land grab[s]’ as companies make large-scale land acquisitions in fertile rural areas of Africa and South America with the purpose of agricultural development (Zoomers 2010: 430–431). A second way of understanding the term is the more abstract ways that ‘corporate meanings, instrumental logics, and managerial values dominate the ways we understand, think, and act in everyday life’, with both meanings illustrating an increasing corporate and capitalist domination of both land and life (McClellan et al 2017: 1). In the case of the smart city, corporations perform a mixture of both literal and more abstract colonisation: obtaining the space of the city to mine for its resources (which in this case are its inhabitants, their capital and their data) and fundamentally changing how a city is perceived and experienced by leaders, investors and citizens. While it may seem like the human ‘flesh’ is still at the heart of the smart city, it is in fact the interaction and augmentation of the human with corporate technology that is central to the new ‘media ecologies’ in these cities (Coley 2021:149). Halegoua argues that ‘[a]t present, the smart city concept and even the term itself are almost

inseparable from corporate visions of what digital media, data, and urban space might be' (2020: 2).

The smart city vision of understanding and improving a city through data raises questions about who the smart city is for. The average inhabitant of a smart city does not have access to or means of interpreting much of the data they produce. This ubiquity of corporate controlled and capital-driven smart city plans reveal the ethical qualms at the heart of smart city political economy. Even as they might strive towards safe, optimised, sustainable and interconnected spaces, smart cities cannot escape from their position as what Halegoua calls 'neoliberal, corporate controlled, undemocratic non-places', undemocratic because, aside from city or municipal officials, often the corporate actors within the creation and governance of a smart city are not democratically elected (2020: xv). The 'extreme privatisation, deregulation of public-private exchanges, and the ways in which market economies and advanced capitalism have shaped smart cities' means it is 'difficult' to imagine them outside of a 'neoliberal political economy' (Halegoua 2020: 18; Greenfield 2013: 58). In the smart city, not only is a citizen's labour a capitalist commodity, but so is their very existence within the city as the data they generate through their daily routine, walking past surveillance cameras, taking public transportation, connecting to public WIFI etc., is all valuable to the corporate leadership of the city. This physical manifestation of the disintegration of the public-private divide denotes the privileging of capital over inhabitants in the smart city.

While the gothic or the supernatural and the technological at first may appear at odds, there is a history of connecting the supernatural and emerging technology. Roger Luckhurst points out that because of the 'new Victorian technologies of telegraphs [...] telephones [...] or X-rays. The dead started to travel down wires, and ghosts flare in the spectrum visible only to cameras or wave detectors in laboratories' (2020: 85). Indeed, this phenomenon of the supernatural mingling with technology is still evident today: 'people experience spirits through mobile phones, for instance, or see them in polaroid photographs, or "hear" aliens through radios; or indeed, that they immerse themselves within the spectral dimensions of meteorology, quantum physics, or biology.' (Hunter & Santo 2021: 1). This gothic legacy entangled with technological advancements is evident in the smart city through obvious connections like the ability of autonomous or networked tech objects to appear sentient or haunted in their seemingly independent actions but also the Victorian gothic anxiety about the metropolis returning due to efforts of smart city technology. These anxieties originated, as

Alexandra Warwick suggests, with concerns about ‘the existence of the self in the modern urban landscape and the relation of the self to the others who inhabit it’ (2007: 36). Ljubica Matek expands on this to speak about possibilities of concealment in cities: ‘people can easily hide or get lost in a large city because the multitude of the city dwellers seem to be largely unconcerned about the others’ lives or destinies’ (2020: 17). Indeed, ‘[i]ssues of duality – split personalities, physical transformations, mistaken identities, doppelgängers – were found to be manifested in the social, geographical and architectural schisms of the modern city’, exemplified in Robert Louis Stevenson’s *The Strange Case of Dr Jekyll and Mr Hyde* (1886) (Dryden 2003: 19). The Victorian idea of the city as an ‘alienating and dangerous’ place domesticated Gothic spaces and themes to ‘locate its horrors within the world of the contemporary reader’ (Matek 2020:17). This method is also utilised by contemporary writers who interrogate the weird and gothic potential of cities as they develop towards desired ‘smartness’ such as Jeff VanderMeer, China Miéville and N. K. Jemison. Victorian gothic concerns about concealment, disorientation, or losing one’s way in the metropolis are almost comically reversed in the smart city to become a hyper-awareness of one’s own position in the city through the ubiquity of surveillance capitalism. However, this knowledge is not necessarily for or accessible to the average citizen, instead produced for and controlled by corporate or technocratic powers. Therefore, this new urban technogothic reimagines the spatially disorientating metropolis to examine anxieties about one’s place as both physical inhabitant and spectral data-point whose identity and labour-value is tied up in their ability to function in both physical and digital space simultaneously.

The reimagining of the city space as a space of pure data, where citizens are no longer viewed as embodied participants but as agents of data production, both encapsulates the extreme alienation of the human in the neoliberal smart city but also the relegation of citizens to ghostly remnants of the city. Data becomes more ‘real’ and important to ruling corporate powers than the citizens who generate it, their digital selves exist more concretely in the systems of governance than their flesh and blood. Indeed, this reflects the notion that ‘the reduction of life to that which can be programmed and assessed by machine, as Gothic has always known, is a process of the monstrous’ (Byron & Punter 1999: 8). Similarly, Antoine Picon’s statement that smart cities are imagined as ‘sentient or “sensitised cities” that gain a heightened awareness of the world and of themselves through data and technology use’ also speaks towards the supernatural space of the smart city through its personification (2015: 16). Furthermore, claims of ‘heightened awareness’ and ‘sensitis[ation]’ reflect a movement

beyond the strictly observable world, with the language of the extrasensory, mystical, or supernatural applied to the often unfathomable, unseen, and intangible world of Big Data.

VanderMeer explores a possible trajectory of the hyper-capitalist and technological augmentation of the city, where the human becomes part of the resources of the city, its ‘native’ species, to be exploited for capital. While VanderMeer’s cities are undoubtedly supernatural, in the sense that they ‘[depart] from what is usual or normal especially so as to appear to transcend the laws of nature’, Amazon’s plans for their second headquarters (HQ2) and the proposals submitted by the cities competing to host the corporation have distinct parallels with VanderMeer’s depictions of urban colonisation and techno autocracy (Merriam Webster 2023). By turning to fictional accounts, we ‘confront something dark and weird about the smart city, something that [...] usually remains undetected’ (Coley 2021:149). We can glean some concrete details from New York City’s, ultimately abandoned, proposal for HQ2 and the technological inventions of Amazon, as well as the historical process of colonisation, but we cannot know the true effects of smart cities until one is fully realised. Therefore, the depictions and aesthetics of technological cities in speculative, dystopian, and science fiction remain an important source for imagining smart cities.

VanderMeer’s Colonial Explorers and Amazon’s Contemporary Colonisation

VanderMeer’s *City of Saints and Madmen* is a selection of early published work, collected into a metafictional and epistolary account of the city of Ambergris, following various rulers and inhabitants. This compendium of some of VanderMeer’s earliest writing introduces the interest in the makings of a city and the theme of colonisation in his work. Whilst we see Ambergris in many different phases and ages throughout the novel, it is not a city overrun by technology, unlike the futuristic cities of *Borne* and *Dead Astronauts*. Instead, the colonisation depicted is more historically familiar. This colonisation is most clearly shown in the fictional history book titled *The Hoegbotton Guide to the Early History of the City of Ambergris* by Duncan Shriek, which charts the early rulers of the city, starting with the ‘whaler-cum-pirate’ Cappan John Manzikert who landed ‘on the site of what would soon be Ambergris’ named for ‘the most secret and valuable part of the whale’ (VanderMeer 2018:103,109,121). However, the site of Ambergris is not free land. Instead, ‘it was occupied by a people [...] christened “gray caps,” known today as “mushroom dwellers”’, who called the city ‘Cinsorium’ (109,114). What follows in the ensuing chapters of this fictional guide is

a narrative of how Manzikert and his successors colonised Ambergris and suppressed the gray caps, mirroring the actions and rhetoric familiar to scholars of European colonial imperialism. Upon seeing that the buildings of Cinsorium appear to be covered in gold, Manzikert and his wife are in a ‘slavering delight’, which immediately turns to disappointment when said gold is revealed to be a kind of lichen the gray caps trained to grow in decorative patterns: ‘[N]ot only was it not gold, it wasn’t even edible’ (113, italics in original). This immediate impulse to appraise the material wealth of the city is reminiscent of the exploitation of natural resources and native inhabitants for the benefit of the imperial centres in European colonialism.

This blueprint of colonial expansion is continued in Shriek’s account of Cappan Manzikert’s treatment of the gray caps as, soon after arriving at Cinsorium, ‘the Cappan was already attempting to dehumanize them, and thus create a justification, a rationalization, for depriving them of life and property’ (110). When it is found that ‘[t]he gray caps maintained it [a mechanical golden tree sculpture] in perfect working condition, but had no appreciation for its beauty’, they are characterised as just ‘clockwork parts in some vast machine’ (119). This attempt to dehumanise them, if the term can be used for beings that are not human, and liken them to emotionless machines is meant to justify their colonisation: ‘[i]n their ignorance of the beauty of their own city [...] they had become unfit to rule over it’ (119). The founding of Ambergris through a brutal imperial colonisation paves the way for the more subtle future colonisation of the city by the company Hoegbotton & Sons, ‘the largest importer and exporter in all of lawless Ambergris’, as it appears that a city founded through colonisation will continually return to that pattern and power structure (7). Later in the novel, in a section titled ‘The Transformation of Martin Lake’ we hear that the ‘senior Hoegbotton [...] stood the best chance of replacing Bender [prominent and adored composer in Ambergris] as unofficial ruler of the city’, highlighting the power the company comes to have over the city despite its humble beginnings (269). While *City of Saints and Madmen* is less explicitly about the effects of corporations on a city than *Borne* and *Dead Astronauts*, the novel charts the insidious nature of colonisation and how colonial power structures can be repeated throughout history. This provides an interesting parallel to Amazon’s colonisation of its potential new host city, as the abandoned site in New York and the approved site in Virginia both have extensive colonial histories from the sixteenth century onwards and are now experiencing this neo-colonial and technocratic rule (Bolton 1920: 222,187; Elliot 2006: 29, 32, 43; Clark 2022: 56).

Economides and Shackelford argue that the ‘terrible beauty of VanderMeer’s haunted eco-scapes is that they enable us to perceive Anthropocene realities [...] as through a glass darkly’ whilst also suggesting that ‘aesthetic distance is no longer an adequate response to the sublime monsters we are creating’ (2021: 12). In the case of the supernatural cities in VanderMeer’s fiction and the proposed Smart Cities, the ‘sublime monsters’ live side by side with the human, whether they are made from flesh or technology. Therefore, aesthetic distance is not only impossible, but unwise as it ignores the relations and networks across species that define the breakdown of the modernist dualisms, ‘human/nonhuman, the semiotic/material, the artificial/natural, the global/local, and human history/earth history’, in the Anthropocene (Economides & Shackelford 2021:2). Donna Haraway calls the present an ‘age of entanglement’ where the complex relations within contemporary ecologies between human and more-than-human life and their embeddedness within political economies and computational infrastructure is unavoidable (1997:273). The city is a setting primed for this interrelationality as, like other ecosystems with complex structures of power, reliance and symbiosis, the city relies on the relationship of the human, environmental, technological, economic, and infrastructural processes for life to thrive. VanderMeer’s fiction mirrors Haraway’s call for

new ways of thinking which involve others and our entanglement with those others [that] will help us understand the challenges of the 21st century better [...] including... our relationships within this planet’s ecology [...] with the unfolding virtual and cyborg worlds, with our own diverse inner worlds, and with our own bodies (1997: 273).

However, the ‘understanding’ is lacking as the inhabitants of these supernatural cities are often isolated precisely because of their inability to comprehend the nature of the changes happening. It is only when they leave behind human constructions of intelligence, relationships, and ways of being that the cities appear more legible. In the case of smart cities, the entanglement of the human and non-human is technological in nature, with the corporate behemoths that drive the technological augmentation of the city forcing this entanglement on the inhabitants, not only Amazon and New York City, but other smart city investors such as AT&T, Cisco, and IBM, to name a few companies operating worldwide

(Poon 2021; Nath Sur et al 2021:22). Coley's notion of 'urban intelligence', of the city becoming in some way sentient, infiltrating and aligning itself with its human inhabitants through the ubiquity and wearability of technology is what transforms a city from merely technologically advanced, to supernatural: the distinctions between the inhabitant and infrastructure become blurred and the 'monstrous' process of reducing life to that which is able to be 'programmed and assessed by machine' is furthered (Byron & Punter 1999:8). Furthermore, Haraway's more utopian ideal 'entanglements' with 'virtual and cyborg worlds' is complicated by the inability of the average smart city citizen to access, comprehend, and benefit from the intangible world of Big Data they are entangled with.

Amazon's search for HQ2 typifies its position as an urban colonising force. While the plans for HQ2 in New York are now forgotten in favour of Arlington, Virginia, New York's proposal provides the most comprehensive look at Amazon's desire to augment city life. Priya Gupta explores the incentives offered by New York, Amazon's own demands, and the 'diverse voices of protest' these raised (2019: 98). Some incentives that sparked concern were the 'massive outlay of public funds' promised to a company which already has a market capitalisation of \$1 trillion as of September 2018 (Goodman 2018); bypassing the usual land use re-designation process; disruption that HQ2 would cause to a city which already has a housing crisis, strained transport system (Rosenthal & Goodman 2017), and massive inequality (New York City Independent Budget Office 2017); and the poor working conditions and negative environmental effects of Amazon's way of business (Gupta 2019). Both Amazon and New York City governor Andrew Cuomo and mayor William de Blasio have smart city ambitions, which fed into the willingness to allow Amazon access to everything from education curricula to land usage and development quotas (Gupta 2019, 101, 99). These interests already illustrate characteristics of a colonising force unconcerned with the 'native' population's current way of life and environment. However, the full account of services rendered by the City of New York to Amazon in the process of the HQ2 bid suggest a company intent on taking over every aspect of metropolitan life and illustrates how the lines between a smart city and a corporate colonisation can easily become blurred.

Gupta's characterisation of Amazon's proposed move to New York is like that of an invasion or colonisation, with New York officials wanting to facilitate a 'frictionless landing' into an area advertised as a 'nearly blank canvas' for Amazon to utilise (2019:112). The area in Long Island City was identified as somewhere that 'through land use changes [...] could deliver over 6 million square feet of new commercial or mixed-use development', illustrating

a willingness to change land-usage designation ‘almost casually’ for Amazon (Gupta 2019:112). Whilst it is not uncommon for cities to amend land use designation in response to company requests, the significance here is Amazon’s inquiry into whether ‘all or a portion of [the proposed site] will be made available at no or a reduced cost to the Project’ to which the city responded opaquely (Gupta 2019:113). This apparent entitlement to significant space in a major city mirrors the expansion and plunder of land characteristic of imperial conquest. What is different is New York’s eagerness for this colonisation because of the industry and wealth Amazon could bring to the city, even at the expense of the city’s existing culture, inhabitants, and environment, illustrating that the driving force of colonialism is still capital today.

Amazon’s information requests go much further than just space and infrastructure, they are also interested in the ‘knowledge potential’ they would have access to, with New York willing to share data usually reserved for public regulator rather than private businesses (Gupta 2019:103). The extent to which Amazon views the city and its inhabitants as a resource pool is evident when asking about ‘specialized tech talent availability and growth’ and ‘the curriculum offered, how it is determined, how often it is reviewed and how long it takes to change the curriculum’ in the city (Gupta 2019:104,107). In response, New York supplied graduation statistics for undergraduate and postgraduate programmes of every university in the city in computer science; chemical, civil, electrical, mechanical, industrial, and materials engineering; and other engineering technologies degrees (Gupta 2019:104). Furthermore, the Proposal provides detailed information on universities in New York: including research specialties relevant to HQ2, ‘number of students graduating each year and companies at which they are working’ and ‘percentage of graduates migrating out of [the] community’ (Gupta 2019:107). Significantly, the interest in curricula offered, how they are determined, frequency of review and how long they take to change implies an interest in adapting higher education towards skills needed by Amazon and suggests the possibility for a college-to-Amazon employment pipeline.

Amazon’s interest in the curriculum of its HQ2 host city is a perfect example of Tsing’s ‘salvage accumulation’, which she sees as key to capitalism’s dominance and continued growth (2015:63). ‘Salvage’ is ‘taking advantage of value produced without capitalist control’ and ‘salvage accumulation’ is the process through which ‘firms amass capital without controlling the conditions under which commodities are produced’ (Tsing 2015: 63). Amazon, currently, have no financial impact on the curriculum and therefore it

functions outside of its dominion, unlike the products and services they sell or the workers they pay. Tsing cites the example of Mexican garment assembly factories where workers are ‘expected to know how to sew before they begin their jobs’, therefore we see ‘noncapitalist and capitalist economic forms working together’ as the women learn to sew at home and then take that skill into the factories to be used for profit (2015:66). Similarly, Amazon’s interest in and potential influence over curriculum means the company can accumulate salvage from its host city through school and university production of graduates able to slot into Amazon employment with a decreased need for company training and begin creating capital for the company more quickly. In this way, Amazon appears as a neophyte of the monstrous Company in *Borne* and *Dead Astronauts* which literally salvages the bodies and minds of its employees and city inhabitants for biotech. Amazon’s desire to reach even further into the lives and infrastructure of its host cities displays its movement towards the supernatural through the smart city blueprint of ubiquitous technology and surveillance towards city rife with spectral and gothic doubling: the physical brick-and-mortar city and its technological equivalent understood through computation analysis of its data.

Amazon’s Cities and Their Preternatural Potential

The unnamed city in *Borne* has been ravaged by the Company, a mysterious and all-powerful corporate entity which trades in ‘biotech’ (altered human and animal beings), yet the Company has become a ruin and devastated the city in the process. Early in the novel, VanderMeer makes it clear the city is an environmental and sociological disaster as protagonist Rachel remarks that ‘for a moment there was no ruined city around me, no search for food and water, no roving gangs and escaped, altered creatures of unknown origin and intent. No mutilated, burned bodies dangling from broken streetlamps’ when she finds the titular biotech creature, Borne (VanderMeer 2017:3). The city is ringed by a ‘poisonous river [...] a stew of heavy metals and oil and waste that generated a toxic mist, reminding us that we would likely die from cancer or worse’, emphasising the environmental destruction in the ‘city turned into a vast laboratory’ (8–9). This recalls Mo Katibeh, Senior Vice President of AT&T Network Infrastructure and Build, who stated that he would ‘love’ to see Amazon’s new host city ‘become a living lab of innovation’ (Poon 2021). While it may seem extreme to compare Amazon to a company experimenting and augmenting living beings, *Borne*’s Company, like Amazon, were doing something new and therefore largely unchecked, just as

we have seen in Amazon's development of Artificial Intelligence (AI), Internet of Things (IoT), and facial recognition technology.

While so many of Amazon's proposed actions in New York and prospective host cities are alarming, they only border on the supernatural and technogothic. The supernatural lies more in the potential of what Amazon could do to a city, either on purpose or as collateral damage, with their smart city technological infrastructure. New York's proposal offered support for the technological as well as commercial and logistical aspects of Amazon as HQ2 would bring numerous products from 'Amazon Web Services' (AWS) that begin to build a smart city: 'from sensors to track transport, air pollution, and traffic patterns, to the software needed to gather the data from those sensors to [...] facial recognition software' (E. Weise 2018). Amazon also offer the consumer goods necessary to live 'a daily life embedded in a smart city': such as smart phones, doorbell cameras, fitness trackers, and its own smart personal assistant 'Alexa' (Gupta 2019:118). AWS also have a separate section dedicated to the IoT, the 'emerging placement of networked data sensors on previously non-networked items such as toasters, lights, refrigerators' as well as larger-scale sensors for things such as transport and air pollution (Gupta 2019:118). Amazon's place in the IoT market includes a guide to educate public sector bodies about the possibilities of data-gathering and a 'marketplace' that offers everything from 'business intelligence' software to machine learning packages (Gupta 2019:118). This network of devices, sensors, and software native to the smart city has potential to create a new kind of city life, where inhabitants live integrated with the technology which surveys, governs, and facilitates the city existence. This notion of 'embeddedness' in the Smart City, for both people and tech, emphasises the point where a city stops being technological and becomes potentially supernatural. The human becomes irrevocably entangled with the more-than-human, the technological and computational, through their imposition of autonomous tech objects and data collection, relegating its citizens to spectral creators of data for the city's corporate leaders. Citizens are entangled with, often autonomous, tech in such a way that it commodifies and absorbs their entire lives as the ubiquity of smart technology means they cannot easily or meaningfully opt out of existing in this dual state of physical and incorporeal citizenship – they cannot function apart.

The dangers of Amazon's emergence into the IoT are more visible in their obfuscation around their production and use of facial recognition technology. In 2019 Amazon's shareholders voted down activist proposals that would have pushed the company to reconsider its societal impact and reveal 'how the company sells surveillance technologies

to governments’, which would mean producing a public report (K. Weise 2019). One proposal specified an ‘independent study’ looking at Amazon’s facial recognition technology (‘Rekognition’) and whether it is used to ‘unfairly or disproportionately target or surveil [sic] people of colour, immigrants and activists in the United States’ and whether it sold to authoritarian governments abroad (K. Weise 2019). Whilst such proposals were rejected, top advisory firm Institutional Shareholder Services admitted that Amazon ‘may be lagging behind its peers’ because it has ‘not developed rules for bidding on government contracts [and] has not formed an Artificial Intelligence ethics committees’ (K. Weise 2019). This is a concerning oversight given that AI and facial recognition technology are some of the largest ethical concerns of the present day. Furthermore, the example of ‘Ring’, an independent doorbell camera company now owned by Amazon, illustrates the ability of smart city tech to increase the surveillance. While Ring doorbells have worked to prevent burglaries in some cases, their record of data sharing with law enforcement and police forces in the UK and US raises ethical questions. Similarly, Ring’s 2018 app which allowed neighbourhoods to receive notifications when a Ring camera saw ‘suspicious activity’ lacks transparency around what constitutes ‘suspicious’ and the autonomous reporting of such events to residents, and potentially law enforcement, illustrates the increased automation and dehumanisation of city life (Burgess 2019). This means that Ring cameras are one of the closest examples of Haraway’s entanglement with computational infrastructure that currently exists. However, unlike Haraway’s more positive interpretation of this entanglement to ‘help us understand the challenges of the 21st century better’, current examples from Amazon’s IoT and smart city plans seems to suggest only an increase in surveillance. The lack of ethical procedures and concern for the potential uses of their own technology by governments, law enforcement, and corporations illustrates Amazon’s indifference towards the human resources necessary to their smart city vision, populating spaces with monstrous technology to further police inhabitants and increasingly mirroring VanderMeerian technocratic metropolises.

Who Rules the Smart City?

In *Borne* the Company came to the city ‘unbidden’ when it was ‘already failing and had no defences against the intruder [...] the Company must have seemed a saviour to the city and its people [...] the prospect of jobs alone must have been enough’ (VanderMeer 2017:24). Whilst neither New York, Arlington, or any other cities that submitted HQ2 proposals are ‘failing’ cities, indeed they are economically prosperous enough to create competitive

applications for HQ2, many do have extensive problems with homelessness, inequality, and housing, which could be fixed by a corporate capital injection (Wingfield 2018; Farha 2017: 10, 18). However, as is clear from Amazon's requests and track record in Seattle, Amazon will also mine the city's human, social, and physical resources for its own ends and exacerbate or cause more problems in its wake, like the Company in *Borne*: 'the white engorged tick on the city's flank, the place that has robbed us of resources and created chaos' (26). Indeed, the concerns around the use of Rekognition means that the resources 'robbed' from HQ2 and smart cities are potentially the images of the citizens themselves which, alongside the other technological augmentations of the city and inhabitants, is what pushes the Amazon smart city into supernaturally exploitative territory.

A key symbol in *Borne* is the 'salvage' from the city, which Rachel and her partner Wick use, consume, and trade to survive. VanderMeer's urban setting means that the corporate origins of the salvageable materials, as well as the sociological and environmental collapse of the city are clear. In the final chapters it is revealed that the Company came from 'elsewhere', an unspecified place which sent 'supplies' to make biotech but 'took and took from the city' in this unequal exchange of goods (VanderMeer 2017:294). The Magician (another salvage hunter in the city and ex-employee of the Company) shows Rachel a now-defunct portal in the ruins of the Company building, stating '[t]hat's where it all went. What it was all for' (294). Projected on the screen, Rachel sees 'a place undamaged by war, untouched by ruination [...] I could tell it was whole and functional and rich, all of the other things our city was not and might never be' (294). Although the exact nature of this 'elsewhere' remains unclear, Economides frames it in terms familiar to our own capitalist world: 'corporate headquarters located in a developed, first-world area that is benefitting from salvage accumulation, or production that has been outsourced to a developing nation with minimal labour and ecological regulations' (2021:35-36). Therefore, this final revelation of the Company's purpose appears anticlimactic as the supernatural and technological aspects of the city and Company are shown to be much more familiar to readers than they first seemed and mirror the actions of many corporations in the western metropolitan centres which exploit the labour and resources of developing countries from afar. As Tsing states: '[s]alvage is not an ornament on ordinary capitalist processes; it is a feature of how capitalism works' (2015: 63). By viewing the Company as a colonising force, producing biotech commodities for the benefit of a metropole 'elsewhere', this explains how the

Company made locals ‘dependent on them’ for employment while ‘taking away colonial subjects’ ability to govern [themselves]’ (Economides 2021: 36).

The process of overtaking and exploiting the city’s physical and human resources for the comfortable occupants of the bucolic ‘elsewhere’ is reminiscent of Amazon’s colonisation. The artistic rendering of what HQ2 could have looked like in New York was a building shaped like a stack of boxes, representative of the millions of Amazon boxes delivered around the world each day, with the phrase ‘priming us to never leave the house’ written across its façade, a reference to the ‘Amazon Prime’ service (Gupta 2019:110). Gupta argues that

there could perhaps be no clearer expression of what is lost in city life by the core of Amazon’s business [...] “leaving the house” is, of course, the essence of city life, as observed by numerous urban sociologists, cultural theorists, essayists, poets, novelists, and artists over time (2019:110).

This claim by Amazon, while perhaps intended to be humorous, cannot divest itself from the implication that the company will replace or significantly impact every aspect of city life: a destruction of city vibrancy in favour of corporate monoculture. Considering Amazon’s disregard for improving quality of life in its host cities or addressing environmental or ethical concerns with its business practices, the claim to impose further into homes appears as an ominously crass brag. The boom in online ordering and reliance on home-delivery during the COVID-19 pandemic made clear that the safety of staying inside amid disaster is not available to Amazon’s delivery and warehouse workers, as well as other low-wage or gig-economy workers given costs of delivery and Prime memberships as well as the fact many low-wage jobs necessitate in-person work, such as cleaners, drivers, carers, sanitation workers etc. This illustrates the population Amazon works for in the city: those already with economic capital. Amazon’s vision of a Smart City is therefore one of economic and social stratification, where the wealthy live detached from both the lower classes and the wider community through their ability to stay physically and socially apart from the modes of production and labour in the city. Neither Amazon’s future Smart Cities nor VanderMeer’s supernatural metropolises can fundamentally restructure the modern industrial city, as Frederic Engels wrote that “poverty often dwells in hidden alleys close to the palaces of the rich; but, in general, a separate territory has been assigned to it, where, removed from the

sight of the happier classes, it may struggle along as it can” (2010 [1845]: 26). This highlights parallels between the speculative aesthetics of Amazon and VanderMeer’s imagined futures, that neither can fully imagine a world without the spatial divisions of class and capital. Therefore, it is expected that Amazon’s first forays into the supernaturally augmented city would have these familiar hallmarks of past and present urban zoning. It is this that contributes to the uncanny nature of Amazon’s Smart City aspirations: they are both alien and, by design, disconcertingly familiar. They reflect an updated version of the Victorian gothic city and its exploration of anxieties about class, concealment and doubling, with VanderMeer’s fiction exploring the extreme end of technological and human entanglement.

Dead Astronauts is an experimental sequel-of-sorts to *Borne*, but does not follow Rachel, Wick and Borne, instead focusing on the other ‘monstrous humans who wield biotechnological power and their chimeric creations’ that populate the city and Company reminiscent of Haraway’s trans-species kinship networks which may emerge in the attempt to survive in a post-apocalyptic environment (Economides & Shackelford 2021:12; Haraway 2016:2). In *Borne*, VanderMeer ‘deconstructs the phallogocentric kinship structures that support colonialist capitalism as he replaces the nuclear family with Rachel (a climate refugee), Wick (an android), and Borne (polymorphic biotech) (Economides 2021:33). Similarly, in *Dead Astronauts*, the protagonists are anthropomorphic but not human, cyborgs ‘bound not by the “love” they develop for each other’ (Economides 34) but by the common aim to destroy the Company. While Chen, Moss and Grayson are often humanoid in presentation they frequently slip free of human expectations, becoming the web of sentient moss or displaying the computational powers and reliance on ‘equations’ which reminds readers of their technological origins. Economides remarks that in *Dead Astronauts*, trans-species entanglement ‘is an even more radical mode of resistance to the Company’s increasingly oppressive attempts to control and exploit’ as ‘[t]he Company had tick-engorged itself across all timelines’, attempting to colonise time as well as space (Economides 2021:42; VanderMeer 2019:33). The trio rely on inter-species alliances, signals, and conflicts in their attempts to rid the city of the Company and, like in *Borne*, resist the human-centric and restrictive tendency to read non-humans as categorically different as all are exploited under the Company. VanderMeer shows that moss can take the shape of the human, cyborgs can feel love, they can dedicate their ‘lives’ to fighting against colonisation, and engineered biotech can be ‘a person. Just like you, Rachel. Just like you’ (2019: 42). In some ways, VanderMeer’s inter-species entanglements appear to be a representation of Haraway’s

‘multispecies care’ and *Borne* ‘makes a case for an anthropomorphic empathy which amplifies rather than simplifies the affective possibilities of human-other-than-human relationships’ (Economides 2021:68). VanderMeer makes trans-species relationships part of what will save humanity and the city against the Company: an alliance between what the Company creates and what it seeks to colonise. However, what separates the inter-species relationships in VanderMeer’s fiction from the possible technological inter-species relationships in Amazon’s smart cities is the presence of capital. Whilst profit and capital are lurking in the background of the Company’s exploits in *Borne* and *Dead Astronauts*, they are never forefront concerns. Furthermore, the biotech and other-than-human entities are presented as having an agency of their own separate from the Company, whereas the technology, AI, and augmented reality of the Smart City is always concerned with capital and lacks any goal or agency separate from this no matter how anthropomorphised it gets, like Amazon’s Alexa. It resists the radical reconciliation of non-human ways of being and perspectives that VanderMeer explores in his fiction, always driven to colonise and exploit the resources of the city, and therefore falls short of the ultimate supernatural quality of VanderMeer’s cities. In light of this, smart cities force us to reconsider what is ultimately ‘supernatural’ about them, they are not beset by flesh-and-blood monsters or amorphous spectres, instead it is the way in which they are technologically augmented that allows them to morph into supernatural spaces. Through this technological augmentation the corporate and the digital entangle with the human to create a space which looks toward a more-than-human or supernatural future but is ultimately not there yet.

Conclusion

VanderMeer’s fiction illustrates how the native species of cities can become prized resources, the raw material that corporations can use to further their own capitalistic exploits. While Amazon is currently interested in utilising knowledge potential and employee power of cities, their expansion into IoT development demonstrates the supernatural potential of their Smart City approach. By exploring Amazon’s expansion through VanderMeer’s speculative aesthetics we can more clearly see the supernatural capabilities of the smart city and the way in which urban neo-colonisation is enacting negative version of Haraway’s entanglement. The nature of human-technology entanglement in an Amazon smart city is removed from Haraway’s hope of understanding and solving the big problems of the twenty-first century, instead ignoring current urban issues of housing crises, homelessness, cost of living, and

eschewing ethical concerns in their use of AI and facial recognition software. In doing so, Amazon operate in ways similar to the salvaging force of the Company in *Borne* and *Dead Astronauts*, not salvaging physical fragments of the city and its inhabitants but instead the established ecosystem of the city, augmenting every aspect of existing city life and gaining unprecedented access to its population. This access, through housing, employment, integrated urban, domestic, and wearable sensor technology, education, and surveillance, is how the Smart City has the potential to become a supernatural space as the power of corporate technocracy invades all aspects of city life.

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