Towards an Understanding of Drone Fiction

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Since the end of the twentieth century, strike-capable military drones have rapidly evolved from an ominous near-future technology, seldom discussed outside of science fiction or top-secret military contexts, to a burgeoning multi-billion dollar international industry at the centre of public scrutiny and interest. Meanwhile, the figure of the drone has saturated Western public consciousness to the point that it can be described as a trope. Sparking the interest of artists, writers, and filmmakers, drone warfare has begun to feature in a wide range of films, books, and art installations, and this flood of drone-related media seems unlikely to peter out. To date, however, little academic work has looked in depth at cultural interpretations of drones and the role they serve in fictional(ized) narratives. What is urgently needed to better our understanding of the drone, we argue, is a cultural studies perspective that is able to assess the drone as a fictional, narrative construct, while still taking account of its very real, material consequences for both pilots and victims. This article aims to introduce readers to the nascent field of drone fiction, providing a jumping-off point for future research into the figure of the drone. Here, we explore how drone warfare is mediated through three different drone-fictional works: the semi-autobiographical book *The Drone Eats with Me* by Atef Abu Saif, the experimental video game *Unmanned* by Molleindustria, and the short film *5,000 Feet Is the Best* by Omer Fast. Through close readings of these varied works, we draw attention to what each particular mode of mediation reveals about the effects of drones on those who work with or live around them.

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> We know what a drone is. But at the same time, we don't.
> Adam Rothstein, *Object Lessons: Drone* (2015)

Since the end of the twentieth century, strike-capable military drones have rapidly evolved from an ominous near-future technology, seldom discussed outside of science fiction or top-secret military contexts, to a burgeoning multi-billion dollar international industry at the centre of public scrutiny and interest. The most iconic image of the modern UAV (unmanned aerial vehicle) has become that of the bulbous-nosed General Atomics Predator drone, created as a reconnaissance tool in 1995 and weaponized under the George W. Bush presidency for use in Iraq and Afghanistan. Under Barack Obama's administration, UAVs quickly became one of the primary means through which the US military projects its power overseas, and—along with smart bombs and surgical strikes—one of the most visible tools of so-called virtuous war, a PR-oriented military project that harnesses high technology with the aim of minimizing civilian casualties and limiting risk to military personnel (Der Derian, 2009). Although strikes by US military drones have slowed down in recent years, the international proliferation of drones and the ever-increasing sophistication and deadliness of their design show no signs of abating.[1]

Inevitably, military use of UAVs has generated a great deal of criticism with regard to the ethics of drone warfare and the morality of extrajudicial killings (Chamayou, 2015). Much of the public, journalistic discourse around drones centres on the issue of collateral damage (i.e. civilian deaths) caused by drone strikes (Benjamin, 2013; Pilkington, 2013), the psychological effects of piloting drones through virtual interfaces (Chatterjee, 2015), and the trauma of living beneath them (Cavallaro et al., 2012). In addition, the last few years have raised concern that drone technology currently used abroad could be repurposed by police forces and governments in order to monitor and detain citizens of the US and other Western countries (Austin, 2015). Indeed, a recent Reuters report highlights the enthusiasm of the US Border Patrol service to use drones to surveil civilians along the US/Mexico border (Harte, 2016).

Meanwhile, the figure of the drone has so saturated Western public consciousness that, according to Arthur Holland Michel (2015), '[t]he descriptors associated with [it] have […] emerged with sufficient repetitiveness to be approximating the condition of trope.' Sparking the interest of artists, writers, and filmmakers, drone warfare has begun to feature in a range of films, books, and art installations (Croome, 2012; Fast, 2011; Schei, 2014; and George Barber [see Kholeif, 2013], to name just a few), and this flood of drone-related media seems unlikely to peter out. In early 2013, author Teju Cole (2013) tweeted out 'Seven Short Stories about Drones,' which mashed together classic works of literature with the trope of drone strikes (e.g. '1. Mrs Dalloway said she would buy the flowers herself. Pity. A signature strike levelled the florist's'). This kicked off a debate about the usefulness of fiction in understanding the drone, conducted mainly on blogs and social media, which culminated in Adam Rothstein's (2013) provocatively declaring that

[1] At least in Pakistan, US drone strikes have shown a sharp decrease in the last six years or so (see 'Drone Wars Pakistan: Analysis' (n.d.)).

the drone has always been a fictional concept (as a nearly invisible but omnipresent 'archetype of uncanny and deadly technology,' it is in essence 'a literary character' and hence naturally belongs in fiction), and in Olivia Rosane's (2013) passionate plea for 'More Drone Fiction, Please!'

To date, however, little academic work has looked in depth at cultural interpretations of drones and the role they serve in fictional(ized) narratives.[2] Instead, academic discourse (at least outside of STEM fields) has tended to focus on topics such as the political ramifications of US drone policy (Boyle, 2013), the ethics of killing from afar (Coeckelbergh, 2013; Protevi, 2008), and the unique reconfiguration of subjectivity offered by drone technology (Holmqvist, 2013; Noys, 2015). Scholarship not directly related to drone warfare, but rather to the intertwining of virtual technologies and warfare, tends to mention drones only in passing, or as part of a larger movement towards a high-tech military (Halter, 2006; Mead, 2013; Singer, 2009). While it is useful in terms of understanding the drone as a politically-charged weapons technology, this work does not connect to the current of popular culture, detailed above, which fears the drone even as it is fascinated by it.

What is urgently needed to better our understanding of the drone, we argue, is a cultural studies perspective that is able to assess the drone as a fictional, narrative construct, while still taking account of its very real, material consequences for both pilots and victims. In this article, we explore how drone warfare is mediated through literature, film, and video games, and what the particular mode of mediation reveals about the effects of drones on those who work with or live around them. Because drone fiction is a relatively new phenomenon, and the socio-cultural impact of drone proliferation is yet to be felt in its entirety, we cannot hope to offer a definitive account of the myriad ways that drones are represented in literature and culture in general. Instead, this article aims to introduce readers to the nascent field of drone fiction, and to participate in a critical conversation about drones that is only just beginning to take place, providing a jumping-off point for future research into the figure of the drone. To do this, we examine three primary texts—Palestinian author Atef Abu Saif's *The Drone Eats with Me* (2015), the video game *Unmanned* by Molleindustria (2012), and Israeli artist Omer Fast's cinematic video work *5,000 Feet Is the Best* (2011)—that allow us to illuminate different aspects of the contemporary cultural imagination of the drone.

In 'Drone Fiction: An Expansion,' Sunny Moraine (2013) notes that 'humanizing and personalizing the casualties of drone attacks' might be the most important goal of drone fiction. She argues in favour of bringing raw emotion into representations of drone attacks in order to break out of the 'numbing realm of numbers and news reports.' That is, she posits a problematic disconnect between the filtered, sterilized style of news reporting and official press releases on the one hand, and the daily

[2]Rare examples include Matt Delmont's 'Drone Encounters: Noor Behram, Omer Fast, and Visual Critiques of Drone Warfare' (2013), Sunny Moraine's 'Drone Fiction: An Expansion' (2013), Mignon Nixon's 'Louise Lawler: *No Drones*' (2014), and Dorothy Butchard's 'Drones and Dissociation in Contemporary Fiction' (2015).

reality of those living beneath (and suffering from the effects of) drone strikes on the other. Dorothy Butchard makes a similar argument in 'Drones and Dissociation in Contemporary Fiction' (2015), drawing on Cole's notion of the 'empathy gap' in order to demonstrate how drone fiction—which '[e]schew[s] demands for data and caution'—might allow readers to empathize more fully with victims and survivors of UAV attacks. Saif's collection of diaries *The Drone Eats with Me* provides an interesting and powerful example of this approach. While Saif's diaries are not fictional per se—he actually suffered through the Israeli attacks on Gaza in 2014—, they are nevertheless highly subjective in style, and packed with the type of raw, emotive language that Moraine calls for.

In the same article, Moraine points towards the necessity of understanding the lives and perspectives of drone pilots:

> The fictional entity of 'drone' is often imagined *sans* operator; it has its own mysterious agency. Drone fiction needs to recognize that and then move past it. Who are these people? What is it like to experience war through their eyes? What is the relationship between the operator and the drone? The operator and the rest of us?

Although some former US drone operators are beginning to speak out about their work and the tremendous psychological pressures that it exerted on them (Pilkington, 2015), there is relatively little fiction exploring the lives of active drone pilots. Molleindustria's *Unmanned*, a video game that casts the player as a drone operator in an attempt to convey the bizarre mixture of boredom, brutality, and depersonalization inherent to the job of drone pilot, does just that. In this section, we pay particular heed to how idiosyncrasies of the video game format allow *Unmanned* to effectively put the player in the pilot's shoes. We will also briefly look at another compelling exploration of the pilot experience, Fast's filmic art installation *5,000 Feet Is the Best*, comparing how the two works harness their respective media to best represent the figure of the drone operator.

Drone victims: *The Drone Eats with Me*

In *The Drone Eats with Me: Diaries from a City under Fire*, Palestinian author Atef Abu Saif describes his experiences in Gaza during Operation Protective Edge (2015), a 51-day Israeli offensive that resulted in the deaths of over 2000 Gazans. Noam Chomsky (2015) does not mince words in his foreword to the book, in which he describes it as a series of 'evocative vignettes of people trying to survive in a prison camp under remorseless, relentless assault by the most advanced technology of killing and destruction that the ingenuity of modern civilization has devised' (vi). Throughout his diaries, Saif uses spare, realist prose to capture the terror and uncertainty of living under the IDF's near-constant bombardment of Gaza, paying particular attention to the traumatic numbing that such circumstances inevitably induce:

> We have grown used to explosions sounding like they're just next door; we no longer jump to the window to figure out who's been hit and then head out into the street to help. […] Everything becomes normal. The barbarity of it, the terror, the danger. It all becomes positively ordinary. (140)

While Saif's diaries are certainly affecting in their depiction of everyday routines and the breakdown of family life during wartime, his writing is at its most revelatory when he describes the one-sided, curiously intimate relationship between drone and victim.

The first mention of drones comes early on in the book, in a chapter ominously titled 'It Begins':

> A moment later, the war introduces itself properly. We hear an explosion, some way to the north, echoing across the city. […] As the noise of this new explosion subsides it's replaced by the inevitable whir of a drone, sounding so close it could be right beside us. It's like it wants to join us for the evening and has pulled up an invisible chair. (4)

The agency and desire for companionship that Saif ascribes to the drone is a recurring motif throughout the diaries, as though the physical absence of a pilot within the drone necessitates the author's anthropomorphization of the drone itself. That is, the unceasing presence of the drone is too alien and abominable to be comprehended in and of itself, nor can it be subsumed into the same category of hostile entity as the manned F16 fighter aircraft that Saif describes elsewhere. As such, Saif reconceptualizes the drone in terms of the more familiar figure of an unwanted, intrusive dinner guest.

The book's preoccupation with food and eating rituals is striking, and resonates with reports from elsewhere in the world concerning how drone strikes affect appetite. For example, in *Living under Drones*, a 2012 study of the effects of US drone strikes on civilians in Pakistan, the authors describe their interview subjects as suffering from

> a loss of appetite as a result of the anxiety they feel when drones are overhead. Ajmal Bashir, an elderly man who has lost both relatives and friends to strikes, said that 'every person—women, children, elders—they are all frightened and afraid of the drones […] [W]hen [drones] are flying, they don't like to eat anything […] because they are too afraid of the drones.' Another man explained that 'We don't eat properly on those days [when strikes occur] because we know an innocent Muslim was killed. We are all unhappy and afraid.' (84)

Of course, a loss of appetite is to be expected in any situation where the threat of death is perceived as constant (especially when communities are discouraged from gathering to eat, lest attendees should be misread as conspirators). In *The Drone Eats with Me*, however, the importance of food and eating is highlighted by the fact that much of Operation Protective Edge took place in the month of

Ramadan, when participating Muslims abstain from eating during daylight hours. During Ramadan, the two daily meals—the pre-dawn suhoor and evening iftar— are something to be especially looked forward to. As Saif reports, however,

> [t]he heaviest passages in the round-the-clock bombardment seem to be at the two times of the day when we're serving food […]. Then the raids go crazy. They rain down on all sides—it's like a monsoon that we've just escaped from, to eat. Explosions can be heard intermittently all day and night, but when we set the table […] it feels like there's a fanfare being played, especially for the food. (11)

Here, the phrase 'seem to be' leaves open the question of whether this is a demoralizing tactic purposefully used by the IDF, or whether the bombardment merely feels more intense during mealtimes. In any case, in such an environment it is an act of resistance to continue the rituals of Ramadan. That is, merely attempting to prepare food as usual, and gathering to eat, becomes a difficult and hugely important task.[3] In order to make this work of cooking and eating less terrifying, the narrator must ironically rework the explosions of the bombardment into a 'fanfare,' as though the distant guns and lurking drones are at once jealous and admiring of the family's food.

As the title of the book suggests, the narrator's preoccupation with food ties in with his project of explicating the effect of drones on those they hover above. At one point, the title appears in the main body of the text, while the family prepares the suhoor 'in complete darkness':

> The food is ready. I wake the children and bring them in. We all sit around five dishes: white cheese, hummus, orange jam, yellow cheese, and olives. Darkness eats with us. Fear and anxiety eat with us. The unknown eats with us. The F16 eats with us. The drone, and its operator somewhere out in Israel, eat with us. (31–32)

Drones, of course, like darkness, fear, and F16 fighter jets, do not need to eat. Saif's reconceptualization of the drone as an unwelcome guest, however, has several important rhetorical effects. Firstly, it makes the drone somewhat less intimidating by imbuing it with human vulnerabilities: it suggests that drones, like people, also need to pause in their activities in order to take meals (which is figuratively true, at least, in the sense that they need to periodically refuel and undergo maintenance). At the same time, it works against this vaguely comforting idea by acknowledging the super- or inhuman qualities of the drone, which is of course not physically present at the dinner table, but *feels* present by virtue of the fact that its sophisticated

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[3]Elsewhere in the novel, the narrator describes how even falafel, 'which you can normally find on every street in Gaza and that most Gazan families have every day for breakfast, the cheapest meal imaginable,' has become unattainable due to a shortage of parsley and gas, which is used to heat up oil (128).

surveillance equipment can probably identify the individual dishes on the table from 5000 feet away. Saif gestures towards this a few paragraphs earlier:

> This is how Gaza looks on the computer screen […]. The images might include any detail. One of them could be of Hanna and I sitting on the blue sofa in our flat, staring into the darkness. Another might be of our children sleeping in the corridor, spied through the bathroom window at just the right angle. (31)

Saif imagines his home and family through the perspective of the drone, which watches them at their most intimate, private moments, and therefore feels like another presence in the house, as unwelcome as the darkness, fear, and anxiety with which it is listed.

Saif delves into the relationship not only between himself and the drones, however, but also between himself and the drone operators. As he explains, there are survival benefits to understanding the mind of the drone pilot:

> Every action you take, every small gesture, might be part of your final act. The coffee is boiling as I look down from my window and I ask myself: […] what if the operator of a drone hovering over my building is annoyed by the steam coming from the coffee maker, steaming up the window, and therefore his view into my house on his computer screen somewhere in Israel? (214)

Here, the narrator reflects on the anxiety of living beneath drone surveillance, and the need to constantly monitor one's own actions from the perspective of a hostile third party. Every action, even simple ones such as making coffee or walking down the street, must be filtered through the drone operator's eye to curb suspicious behaviour. The paranoia that this inevitably induces comes to a head near the end of the book, when the narrator catches sight of a nearby drone while walking home at night:

> Whatever I do, right now I just have to be vigilant of any slight movement the drone makes. I have to watch it as it watches me. […] I keep walking steadily, changing the side of the street I walk on from time to time. […] It occurs to me that walking erratically like this, from side to side, may draw the attention of the drone operator. […] It is better to be obvious, I realise, so I opt for my old tactic and walk straight down the middle of the street. This way the drone operator sees me perfectly clearly; he knows I have nothing to hide. (225–26)

Again, the internalization of the drone operator's perspective leads to a sort of self-policing by the narrator—captivity is imposed on the narrator not only by the threat of violence that the drone projects, but also by the capriciousness and unthinking obedience of its pilot: 'We have to put ourselves in the shoes of the drone operator; we have to think like a drone operator; we have to respect his blind following of commands, the dumb logic of his mission goals. We need to keep that operator's unquestioning obedience ever present in our minds' (66). That is, one cannot

know who is looking out through the drone's camera, and to survive, one most always anticipate and compensate for the most suspicious and trigger-happy drone operator. As Foucault (1995) comments, in the remarkably similar context of the Panopticon, '[h]e who is subjected to a field of visibility, and who knows it, assumes responsibility for the constraints of power; he makes them play spontaneously upon himself; he inscribes in himself the power relation in which he simultaneously plays both roles; he becomes the principle of his own subjection' (202–03). Even when the drone's weapons are not being fired, that is, Gazans like Saif are disciplined by the fear of surveillance and retribution that accompanies even the possibility of a drone being overhead. Gaza, in Saif's rendering of it, is a giant Panopticon.

Saif's imagining of Israeli drone operators, and his act of trying to put himself in their shoes, is not only a survival tactic, however. In the absence of concrete information about who the Israeli drone operators are,[4] he pieces together an image of the drone operator in order to have a target for his impassioned pleas for mercy and understanding:

> Who will convince the drone operator that the people of Gaza are not characters in a video game? Who will convince him that the buildings he sees on his screen are not graphics, but homes containing living rooms and kitchens, bathrooms and bedrooms; that there are kids inside, fast asleep; that mobiles hang over their beds; that teddy bears and toy dinosaurs lie on the floor; that posters line the walls? Who will convince him that the orchards his craft flies over in the dark aren't just clusters of pixels? Someone planted those trees, watered them, watched them as they grew. Some of those trees are ancient, in fact, maybe older than the Torah itself, older than the legends and fantasies he read about as a boy. (66)

In this passage, the narrator attempts to bridge two different gaps: that which separates Islam and Judaism on the one hand, and drone operator and drone victim on the other. By appealing to the drone operator's presumed reverence for the Torah, he tries to draw his attention to the fact that the orchards of Palestine can be considered just as venerable and sacred. By fleshing out and humanizing the people who appear as mere clumps of pixels on the drone pilot's screen, he seeks to consolidate the perspective of the drone camera with that of the Gazans beneath it. What results is an appeal to empathy—not only the empathy of the drone operator (who, realistically, is unlikely to ever read Saif's words), but the empathy of the reader as well. By framing his plea as a series of questions—'Who will do this?'—, the narrator invites the reader's participation in the process of 'convincing' the drone operator. By simply explaining the plight of ordinary Gazans, that is, Saif issues a call for political action on their behalf.

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[4]Unlike the US, at the time of writing Israel has not officially acknowledged that it even has a drone programme, making it very difficult to obtain any kind of information about who pilots the drones, how they are trained, and what their objectives are.

Drone operators: *Unmanned* and *5,000 Feet Is the Best*

While in Saif's text drone operators are invisible, unknowable, and present only by extension through the drones they control, in *Unmanned* the spotlight shifts entirely away from the victim to fall directly on the drone operator. *Unmanned* is a short experimental game created by the one-man independent game studio Molleindustria in 2012 (the height of the Obama-era drone strikes).[5] The player controls a drone pilot as he goes about his day: shaving, driving to work, piloting a Predator drone (presumably from Creech Air Force Base, given the desert setting), guiding missiles to their destination (Figure 1), and then driving home to spend time with his son. These scenes are presented as minigame vignettes—brief sequences of roughly 30 seconds to a minute, during which the player is given control over a simple action, such as carefully clicking and dragging the mouse to shave the pilot's face, or holding down the left mouse button to take a drag from a cigarette. While the overall narrative arc of the game is fixed, the player is able to choose dialogue options at various points, determining how the pilot responds to his family and colleagues, and how he processes his thoughts during moments of internal dialogue. As such, the player is free to explore different modes of inhabiting the pilot and steering his personality: is he gung-ho and macho, flirtatious with his colleague but curt with his wife, or is he introspective and troubled, struggling to establish a meaningful relationship with the people around him? Does he fire on the suspected militant without hesitation, or does he betray his misgivings, or even refuse to fire altogether?

The pun in the title of the game reveals one of its central themes: the notion of masculinity, and the question of what happens to (in this case male) soldiers when they can kill from a distance with no risk of being killed themselves. In other words, the game asks what happens to military masculinity when killing the enemy becomes a desk job. In *Drone Theory* (2015), Grégoire Chamayou fields a persuasive argument about the threat to traditional soldierly masculinity posed by the introduction of drones:

> [O]ne of the troubles with unmanned aerial vehicles is literally the peril of becoming 'un-manned' in every sense of the term, including 'emasculated.' That is why [...] Air Force officers initially put up such resistance to the general adoption of the drones. Obviously the drones threatened their own employment, their professional qualifications, and their institutional position, but the threat was also to their own virility, which was largely associated with the taking of risks. (100)

As Chamayou explains, the drone pilot's lack of exposure to the threat of death is an affront to 'the traditional principles of a military ethos officially based on bravery and a sense of sacrifice. Judged by the yardstick of such classical categories, a

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[5] *Unmanned* can currently be played in-browser or downloaded at <http://unmanned.molleindustria.org>.

FIGURE 1   *Unmanned* by Molleindustria.

drone *looks like* the weapon of cowards' (17, emphasis in original). As revealed by former drone pilots, their peers do indeed judge them by this yardstick. In an interview with *The Guardian*, four former US drone operators attest to a 'sense of disparagement within the wider air force.' One of the interviewees, Brandon Bryant, reports that 'We were looked down upon, because we were wearing flight suits but not sitting in the cockpit of an actual aircraft. Drones were like a joke in the military' (Pilkington, 2015). Drone piloting, that is, tends not to be viewed as combat in any traditional or heroic sense of the word, because the drone operators' bodies are not present on (or above) the battlefield, and are therefore completely safe.[6]

In *Unmanned*, this crisis of masculinity is reflected in several different ways, beginning with how the appearance of the protagonist himself is contrasted with his actions. As shown in Figure 1, the pilot is depicted with a crew cut, wide neck, square jaw, and large muscles—the hallmarks of a traditionally masculine video game protagonist, as seen in action titles such as Epic's well-known *Gears of War* series. The game's first vignette, however, contrasts the pilot's overtly masculine appearance with the vulnerability he demonstrates while asleep: in the first scene, he lies in bed dreaming of being pursued by furious civilians in a Middle-Eastern setting, before turning into a Predator drone and flying away. On the left-hand side of the screen the player can see the pilot's face, while on the right the player is tasked with moving the dream representation of the pilot away from the angry civilians. If the civilians touch the player, the pilot's face contorts in pain. When the pilot awakes at the end of the dream, his facial expression reveals his fear and panic (Figure 2).

Later, while the pilot shaves in the mirror (which can be viewed as a traditional ritual of masculine reaffirmation), one possible dialogue tree leads to him ruminating on the meaning of his dream:

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[6]In George Brant's play *Grounded* (2013), the female drone operator comments on the 'ridiculous' yet weirdly exhilarating dynamic of killing by drone: 'I feel my pulse quicken / Ridiculous / I'm sweating my pits my hands / I'm not there I can't be killed the threat of death has been removed there is no danger to me none I am the eye in the sky there is no danger but my pulse quickens why does it quicken I am not in combat if combat is risk if combat is danger if combat is combat I am not in it / But my pulse quickens / It is not a fair fight / But it quickens' (41).

FIGURE 2   The pilot awakes from his nightmare.

And what was that fucked up dream about?

Dreams reveal a lot …

Maybe I want …

… to face the enemy.

Instead of dispensing death from above.

If the player chooses these dialogue options, the pilot is forced to confront his desire for vulnerability and danger, betraying his deep insecurities about his risk-free position behind the drone control console.[7] It is not the pilot's skill in combat that keeps him safe, nor his muscular build, but the Predator drone, which in the dream becomes a replacement for his body. The dream imagery thereby reveals another anxiety: that the pilot might become a drone himself, in the sense of a male bee who does no work in the colony, or, more colloquially, an unproductive worker or a cog in a bureaucratic machine.

Later, the appearance of the protagonist is also contrasted with that of his colleague, a slight, blue-haired woman (Figure 3). By setting the two characters alongside each other in separate frames, the game reveals how absolutely extraneous the pilot's musculature is (not to mention his regulation crew-cut). If his job can be performed just as well (if not better, depending on the player's choices) by a physically diminutive woman, the game seems to ask, then what is the point of the pilot's formidable size and strength? *Unmanned* gives the player a chance, here, to reassert the

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[7]As a point of comparison, Nathan K. Hensley's article 'Drone Form: Word and Image at the End of Empire' (2016) offers an interesting analysis of the way that various contemporary military 'thriller' novels, which he describes as 'compensatory late-imperial fables,' try 'to recapture, and paint in bright colors, the heroic male agency that drone war erodes in its very structure.'

FIGURE 3   The pilot and his co-worker.

masculinity of the pilot by having him flirt with his colleague. When she points out that he is married, one of the pilot's available responses is: 'I'm married, not castrated.' In the life of the protagonist, the sublime danger of combat has been replaced by the much more mundane thrill of adultery.

The game demonstrates the superfluity of the pilot's physical strength once again later on, when he returns home to play video games with his son. Here, the difference between the two characters is even more striking, with the father awkwardly bursting out of the frame that his son only half fills (Figure 4). Again, the game seems to suggest that if both the father and his son are equally competent at video games, which require almost no physical strength, then the father has no need for the muscled physique that is the hallmark of military masculinity. Moreover, the pilot's physical strength does not help him at all with the tricky task of attempting to connect emotionally with his son.

Of course, *Unmanned* fields its arguments about drone piloting not only through these visual conceits, but also through certain rhetorical tactics that are only available to video games. As such, the game functions as a good example of what Ian Bogost (2007) has termed 'procedural rhetoric'; that is, a mode of persuasive expression founded on the formal capabilities of computers to manipulate symbols according to rules, programmes, procedures, and user input. One
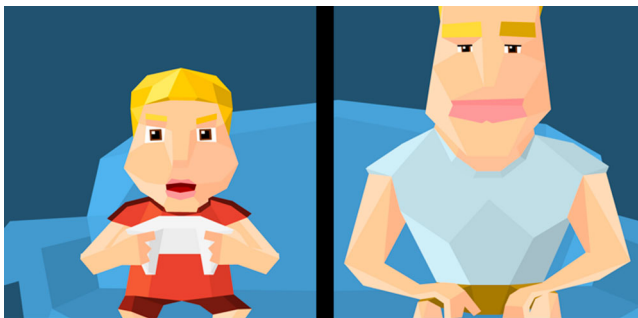

FIGURE 4   The pilot compared to his son.

example of this is the consistently low level of input that the game requires from players to progress through the minigames/vignettes, no matter what their content might be. That is, shaving the pilot's face in a clicking and dragging motion requires almost the exact same amount of effort as tracking and firing missiles at a target. By making more 'serious' tasks like taking a life just as trivial as shaving, *Unmanned* hammers home the dangerous ease with which killing can become routine to drone operators. Interestingly, the 'hardest' part of the game is actually the section in which the protagonist plays video games, because the targets he shoots at can fight back, and the characters he controls in the games can die. By including these games-within-a-game, *Unmanned* challenges the common assertion that drone piloting is like playing a video game; it suggests that, if anything, video games require *more* effort and concentration than the average shift at a drone control console.

Another way in which *Unmanned* uses its 'gameness' to make an argument about drone piloting is through its inclusion of 'Achievements' in the form of medals. In many modern games, players are awarded achievements for completing certain difficult tasks—finishing the game without dying, for instance, or killing enemies in a particularly spectacular or unusual way. Unlocking every achievement for a certain game is no mean feat and demonstrates the player's mastery over it. In *Unmanned*, however, achievements are awarded not for difficult tasks, but for utterly banal ones. The player receives a medal at the end of the shaving scene—'Excellence in Shaving'—if they avoid going too quickly and cutting the pilot's face, for example. In an interview about the game, Molleindustria's Paolo Pedercini explains his motivation for including these achievements:

> On a meta-level, the medals are my ironic take on gamification and external motivators: Jesse Schell, in his famous talk about gamification or 'gamepocalypse' was envisioning a world in which you get points for brushing your teeth; here you have shaving and similarly trivial stuff, accomplishments that are appropriate for the pathetic suburban hero you are impersonating. (Orland, 2012)

In one possible conversation between the pilot and his co-worker, it is revealed that the achievements may be diegetic: since the work of the two characters is classified, and cannot be officially endorsed by the award of medals, the two characters consider making up their own. This lends a particular poignancy to the achievements; one wonders how desperate the pilot's life must be if he needs to award himself imaginary medals for shaving or, in one case, singing along successfully to Queen's 'One Vision.'

A final way in which the game uses its medium to convey a rhetorical message is through repetition. A single playthrough of *Unmanned* spans one day of the protagonist's life, from the moment he wakes up to the moment he goes to bed. At the end of the game, when one might expect to see a credits sequence or some kind of definite ending, the game simply loops back to the beginning, as though the player had

clicked 'play' again. Since the game allows multiple ways to play through its dialogues and minigames, of course, players are encouraged to go through the game again and try different things. Nevertheless, even when all of the options are exhausted, the game continues to loop, resetting all the player's actions endlessly. By putting the player through these loops, and rerunning the same day over and over again, *Unmanned* emphasizes the dull, repetitive nature of the drone pilot's job. Thankfully, the player only needs to run through the game once or twice to get a feel for the protagonist's mental state, but the pilot must essentially repeat the same day— the same boring tasks—endlessly.

This is similar to the technique employed by Omer Fast in his art installation *5,000 Feet Is the Best* (2011), a 30-minute looping film originally shown at the Imperial War Museum in London. The film intermixes four different genres or styles: a fictionalized interview with a former drone pilot at a Las Vegas casino; footage of the 'real' interview with the pilot's face blurred out and voice altered; recreations of stories told by the fictionalized drone operator; and drone's-eye footage of (presumably) US cities and towns, including Las Vegas, with the 'real' pilot's musings laid over the top. There is also repetition within the 30-minute loop: each time the fictionalized pilot is interviewed, the conversation begins the same way, although the actor playing the pilot (Denis O'Hare) emphasizes his lines differently each time, and the scenes are shot from different angles. The repetition and layering of multiple perspectives in *5,000 Feet Is the Best* create a few interesting effects. Firstly, the overall repetition of the piece conveys a similar feeling of hopelessness and mundanity as in *Unmanned*.[8] Secondly, the repetition of the interview segment *within* the film points towards the pilot's psychological fragmentation, opening up the possibility that he might be suffering from post-traumatic stress disorder (PTSD). In connection with this, the layering of different genres and viewpoints—along with the fictionalized pilot's evasiveness and irritability—suggests the unreliability of narration within the film. Charles Darwent (2013) points out that while the first interview foregrounds its fictionality, this also has the effect of drawing the viewer's scrutiny to the supposedly 'real' section of the film:

> The first [drone operator], photogenically haggard, is a character from a docudrama, a re-enactor of genuine events. [...] By contrast, the second drone pilot seems actual, documentary rather than docudramatic. As in leaked news items, his face is encryptically blurred. It is only as *5,000 Feet* goes on that you realise that this second pilot's credibility comes from the way he is filmed—that a blurry face and to-camera delivery mean 'real' to us, whereas the props and staged script of the first pilot mean 'unreal,' or 'less real.'

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[8]It is worth remembering that the film was originally intended to be viewed as part of an art exhibition. As such, it makes sense for it to loop, since audiences might walk in and out at any time, and would not necessarily watch it from beginning to end in one sitting. Although it takes 30 minutes for audience members to see material that they have already seen, that is, the start and end point of the film are not fixed.

In other words, Fast uses the conventions of documentary versus docudrama to obfuscate the notion of objective truth, leaving the viewer with no option but to doubt both the 'unreal' and the 'real' sections of the film.

What is consistent across both these examples, then, is that their creators use the formal qualities of their respective media to lay bare to the player/viewer what the deleterious psychological effects of drone piloting might be. In the case of *Unmanned*, the player bears witness to the dangerous trivialization of long-distance killing, coupled with the boredom and unexpected disempowerment that such a job entails. *5,000 Feet Is the Best*, on the other hand, brings to light the psychological unhinging of the drone pilot, while questioning the reliability of the scant information we do have regarding how the US drone programme works, and how it feels to partake in such a system. Both of these works answer the call for drone fiction to elucidate these hidden, human elements of drone warfare, neither demonizing drone pilots nor treating them simply as victims.[9]

Conclusion

While each of the works discussed above takes drone warfare as its primary topic of interest, they use very different approaches to flesh out the roles of victims, pilots, and drones, and the relationships between them. In *The Drone Eats with Me*, Atef Abu Saif uses a bleak, realist prose style to describe the lives of everyday Gazans; here, the drone and its unseen pilots feature as an utterly alien intrusion, inflicting gradual trauma on the civilians that they ceaselessly monitor and destroy. In order to survive, Gazans like Saif must think like a drone pilot, adjusting their behaviour in order to appear as innocent as possible before the drone's electronic eye. In *Unmanned* and *5,000 Feet Is the Best*, Molleindustria and Omer Fast explore the perspective of the drone operator in a way that Saif does not. As described above, both of these works play with their respective media forms in order to more richly describe the life of the drone pilot, and inculcate a sense of empathy for them on the part of the viewer or player. Each of these works has a distinct rhetorical purpose and style, and each answers Sunny Moraine's call for drone fiction in a unique way, adding to our knowledge of how drones affect those who encounter them day-to-day, and what the consequences of drone proliferation might be.

As interesting as they are in terms of the methods they use to portray drones, the three works mentioned above—book, video game, and short film—represent only a tiny sample of media representations of drones. At the time of writing, the Wikipedia page 'List of Films Featuring Drones' (2017) names fifty or so mainstream films, released predominantly in the last five years, that depict drones incidentally or as core plot devices. As recently as October 2016, the hit television series *Black*

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[9]In this way, both *Unmanned* and *5,000 Feet Is the Best* can be connected to the current trend within trauma studies of examining the phenomenon of perpetration and, more particularly, perpetrator trauma. Alan Gibbs's book *Contemporary American Trauma Narratives* (2014) provides a solid introduction to the topic.

Mirror ran a feature-length episode in which bee-like killer drones are responsible for the mass murder of 387 036 people ('Hated in the Nation', 2016). The list goes on. Indeed, stories about drones—killer or otherwise—seem to multiply as quickly as drones themselves. As drones become smaller, more sophisticated, and more accepted (even celebrated) by Western society, it is imperative that we continue to create and interpret stories about them in order to reach a measure of understanding with regard to their social, cultural, political, and economic impact. By analysing a selection of drone fiction in some depth, we hope to have contributed to that endeavour, albeit in full awareness of the limitations imposed by the small size of our sample and of the likelihood that new issues will emerge as drone technology continues to evolve and the archive continues to expand.

Funding

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