

The Posthuman Way of War

Abstract

Recent interventions from a 'posthumanist' or 'new materialist' perspective have highlighted the embedded character of human systems within a 'panarchy' of human and non-human systems. Some of these discussions have influenced recent work in International Relations and Security Studies. Much of this work has brought a focus to the specifically material as a counterpoint to more idealist or subjectivist discussions. This article brings attention to a very particular element of materiality, one with a profound significance for issues of security – relations between human and non-human animals in instances of conflict.

It is an indication of the deeply human-centred character of both International Relations and Security Studies that almost none of the central texts even mention the very significant roles that non-human animals have in the conduct of war. A central part of our argument is that the character of war, this key area of attention, itself would have been radically different but for the forced participation by an enormous range of non-human animals. Even though with the improvements in transportation over the last century non-human animals are less evident in the role of the movements of people and equipment, they still play a significant number of roles in the contemporary war-machines of wealthy countries.

Drawing on literature from critical animal studies, sociology, and memoirs the article discusses the enormous variety of roles that non-human animals have played in the conduct of war. We also examine the character of human – non-human animal relations in times of war.

Keywords

Posthumanism, war, anthropocentrism, inter-species relations, critical animal studies

A recent development in the areas of political and social studies has been the appearance of a range of thought broadly described as 'new materialism' and/or posthumanism. Two core outlines of this perspective have been provided in the book *New Materialisms*, edited by Diana Coole and Samantha Frost (2010), and the special edition of *Millennium* in 2013. It would be a mistake to typify this recent intervention as a coherent whole – within new materialism / posthumanism there are a number of different perspectives, some of which are potentially mutually exclusive (Wolfe, 2010, p.xi). These perspectives can have radically different understandings of, in particular, the appropriate, political projects implied. There has been some interest in the issues within Security Studies with a number of authors addressing some of

these questions (Adey and Anderson, 2012; Aradau, 2010; Mitchell, 2014). Much of this work has been influenced by Latour's Actor Network theory (see Walters 2014), and by Jane Bennett's (2010) discussions of the agency of matter.

In our recent work we have developed an alternative approach based in particular on a non-network influenced account of complexity thinking. This focuses on the interacting capacities of complex adaptive systems, highlights the close and interdependent relations between human and non-human systems, and the embedded character of human systems in the rest of nature. Yet within much of International Relations and Security Studies such interdependence is unacknowledged.

In this article we turn to one of the central concerns of International Relations, war. Steve Smith (2000: 378) has argued that the character of inter-state war has been the 'core problematic of the discipline'. War is an activity that is seen as a distinctive character of the human species (Smith, 2007: 6). Yet, along with other claims to exceptionalism for the human, such as use of language, tools and politics, this is highly debatable. Furthermore, it is an indication of the deeply human-centred character of the discipline that almost none of the central texts even make a mention of the very significant roles that non-human animals have in the conduct of war. For example, two of the leading textbooks on security (Collins, 2013; Williams, 2008) contain no mention of any non-human animal in the index. A major edited collected on war (Freedman, 1994) contains no references to the contributions of non-human animals in conflict.

One potential exception to this pattern is Quincy Wright's monumental *A study of war*. Wright is unusual in locating his study of inter-human war within a broader context of non-human animal warfare. In the study Wright includes a lengthy chapter and an appendix summarising the characteristics of non-human animal warfare, concluding that 'the study of animal warfare has much to contribute to an understanding of the psychology of human war', and that 'the drives of animal war can be observed in human war' (Wright, 1965: 49, 1199). Wright also acknowledges the contribution of non-human animals to inter-human warfare. In what Wright (1965: 145) call 'historic warfare' he recognizes the widespread use of horses and other animals in increasing military mobility in the period since the twentieth century B.C. However, he appears to draw a sharp distinction with 'modern war', where 'wind and sail, coal and the steam engine, petroleum and the internal combustion engine, have successively revolutionized naval, military, and aerial movement' (Wright, 1965: 294). Below we will indicate the widespread use of non-human animals as forms of transport up until the current day alongside a range of other roles.

A central part of our argument is that the character of war itself would have been radically different but for the forced participation by an enormous range of non-human animals. As John Sorenson (2014: 19) notes, 'without the forced conscription of other animals, it would have been impossible for

humans to carry out wars as we have known them'. Various other writers have pointed to how the use of non-human animals has impacted the character of conflict (see, for example Walker, 2008: 123). Even though with the improvements in transportation over the last century non-human animals are less evident in the role of the movements of people and equipment, they still play a significant number of roles in the contemporary war-machines of wealthy countries. The use of donkeys, horses and in particular camels, has been crucial in recent conflicts in poorer regions, such as in Darfur. Non-human animals, we will argue, have played a significant role in the conduct of conflicts, both in the past and present. As an example of this impact, Jeffrey Lockwood has estimated that the use by the Japanese of 'maggot-bombs' to spread cholera resulted in the deaths of more than 410,000 Chinese – 'Yunnan and Shandong became the Hiroshima and Nagasaki of China with flies and microbes taking as many lives as atomic bombs took in Japan' (Lockwood, 2009: 116).

Drawing on literature from critical animal studies, sociology, published memoirs and online sources such as blogs, the article discusses the enormous variety of roles that non-human animals have played in the conduct of war. We also examine the character of human – non-human animal relations in times of war. Several of the essays in the recent collection *Animals and War* (Hediger, 2013) demonstrate that powerful bonds between humans and animals during war - dogs, horses, elephants, and others, are common. Drawing on XXXXXXX's (XXXXX) work on dog walking communities we consider the possibility of the emergence of human and non-human animal communities. Here, we discuss an alternative human non-human animal community in the context of the conscription of both humans and other animals – the use of camels in the conflict with the Ottoman Empire during the First World War. Inter-species relations in situations of combat, like the dog walking communities explored by XXXXX, perhaps suggest the possibilities for 'potentially fruitful species co-habitations' (XXXXXXX).

Certainly there are mutual, reciprocal relations which may develop between human and non-humans in the context of combat. It is important to remember however, that whatever the development of symbiotic elements of human-animal relationship in conflict, the situation of non-humans is always one of vulnerability. Horses in war have been killed for food, for warmth and used as shelter from enemy fire, for example. Even in countries which are seen to care for animals involved in combat, inappropriate behaviour may leave those animals open to abandonment. Alternatively abandonment may be military policy. In Vietnam, most of the 4,000 US military dogs were abandoned in the war zone to be killed and eaten, as the US army retreated (Hediger, 2013b: 55).

Until very recently, the image of the animal in war permeating Western popular culture has been one which failed to acknowledge the reality of war for conscripted animals. Well-known war dogs include America's favourite German shepherd, Rin Tin Tin, the alleged real winner of 'best male actor' at the first Oscar ceremony and a star of Hollywood film of the 1920s through to television shows in the 1950s, often for roles in military dramas (McHugh,

2004: 119). The original 'Rinty' was a dog of war, found by a US soldier in a bombed German military dog training kennel in 1918 (Orlean, 2012: 11)., Rinty enjoyed a charmed life in the media spotlight, yet the tale of a dog's transition from war-torn Europe to riches, is very much a Hollywood story. Popular culture has latterly critically appraised the more-than-human way of war. The very significant role of horses in the first world war has been highlighted by Michael Morpurgo's book *War Horse*, which has been also been produced as a theatre play and as a feature film.

One of the aims of this article is to clarify the range of roles animals have undertaken as 'tools' of war, as we do in the opening section. Here, we want to suggest that institutions and practices of war have ever been posthuman by virtue of the fact that nonhuman animals have been intrinsic elements of the machinery of warfare. This raises questions for how we define 'armies' and their composition by 'soldiers' ('persons' who are paid to serve). There has emerged an important literature in environmental politics which understands ecosystems and non-human life forms as subjected to the violences of warfare, and as exploited resources in warfare (Austin and Bruch, 2009; Brauer, 2009; Closman, 2009; El-Bas and Makharita, 1994; McNeill and Painter, 2009). There has also been concern with the anthropocentric bias involved when 'various non-human entities' are not understood as constitutive of political community in discussions of conflict and security (Cloward, 2006: 423). However, not only have non-human animals been surprisingly neglected, but the non-human remains untheorised in terms of tools of war. The drones discussed by Walters (2014) in this journal for example, are only enlivened as strategic or affective objects when they serve as tools to secure human ends or kill human victims.

This, we think, is insufficient. Rather, we need to understand the institutions and practices of war as posthuman. We have used Dillon and Reid's (2009) phrase here to capture the ways in which an important consequence of the emergence of the human species as a security referent is the ways humans are able to conscript non-humans into practices of rule. Dillon and Reid themselves, despite deploying a biopolitical framework, miss a trick we see as crucial. Their 'liberal way of war' involves an intimate correlation between 'forms of war and forms of life' (2009:15). Liberal wars are fought for human life perceived as the 'biohuman', and thus wars are fought and large numbers of human killed as a means of 'making life live' (2009:20). We would argue that the ways of life that are defended are those of humancentred rapaciousness as much as they are to be understood as those of liberal capitalism. Their account is humancentric despite being biopolitical because they do not see the ways in which the lifeways of the liberal polity are entangled with an understanding of the animal (the embodied creature, both human and non-human) as expendable, whether as the enemy or as the referent object of securitisation.

Walters (2014: 111) has been right to suggest however, that discussions of securitisation and warfare involve inscribing the boundaries of community and identity – in making explicit which lives and which deaths count, and are seen to count. A second intention of this article is to develop a more nuanced

conception of posthuman war practice from a combatant perspective in order to disturb the straightforward understanding of animals as war tools. A sense of great loss and betrayal was experienced by serving US troops in Vietnam at the abandonment of military service dogs during troop withdrawal; dogs so useful that the Viet Cong paid bounties for their killing:

"They were treated as obsolete equipment. And if you were a handler, you couldn't see them that way," said Jack Kowall, 61, who keeps a framed picture of himself and Eric, the black lab and shepherd mix he worked with, atop his desk in Marietta, Georgia. "When that's your dog, that's your dog. He sees you in danger, he's going to respond. Unconditional love -- it's all for you. You can't help but love him."
(<http://edition.cnn.com/2010/LIVING/02/12/war.dogs/>)

We are particularly interested in how cross-species relations alter the practices of war in that military 'success' may be undergirded by positive and reciprocal relations between human combatants and conscripted non-human animals. Such relations may lead to internal challenges to military practice. For example, a legal challenge by the Vietnam Dog Handlers Association, alongside increased awareness in US public opinion prompted by the film *War Dogs*, led to a change in US policy in 2000 and the establishment of the military working dog adoption programme. In countries like the UK, some ex-service dogs are similarly able to be adopted.

However, a third aim of the article is to emphasise that posthuman social and political forms are not co-constituted in a context of equality. Here, we depart very much from Latourian and other assemblage approaches. As Dillon and Reid make clear, actual human life is expendable in the protection of liberal capitalist lifeways. But in a human centred world, the lives of non-humans are even more precarious, and non-human animals are incredibly vulnerable and dependent on human patronage:

This bloke came in [to a pub] with this huge Alsatian, he'd got him from [a rescue centre]...but apparently he was RAF [Royal Air Force] trained. He came with a story that he was too soft for them, you know, he wasn't aggressive enough. He wasn't aggressive at all, huge great thing, soft as tripe, lovely! He was a delight... when he came to me, they had called him 'Spud', and he was quite ill and he cost us a lot of money. He'd got a tattoo in his ear and I rang the RAF and they said, 'oh, you've got 'Lucky' there', and apparently he was an ex-service [pause] well, classed as an ex-serviceman and they would have paid for his vet bills because he was like, an ex-soldier, but, of course, we'd paid 'em, not realising. But at least then we did call him 'Lucky' because he was with us and so he was going to be ok. (interview with a 'pet' dog owner, May 2013)

'Lucky', ultimately, cannot be a soldier because he could not be 'paid to serve'. Like a human slave, he was a working animal who labours for keep. The posthuman military is not therefore, an assemblage of humans, non-humans and things in hybrid soup. It is in many ways, an exaggerated reflection of formations of social domination, including those of species hierarchy, in which few animals are lucky and most are exploited, often to further human ends which make light of all forms of life.

.We want to suggest that military animals are not to be understood as 'objects' of war. While they may have been an absent presence in international

relations scholarship, they have been lively matter in the institutions and practices of warfare. The agential qualities of non-human animals is amplified in the cyborg nature of warfare, both individually (the human soldier and their gun and/or dog) and collectively (the development of military strategy is enabled or prohibited by the involvement of non-human creatures). Our intention here then is to demonstrate the intrinsic importance of animals in warfare, the vulnerability of non-human creature in war and in Haraway's words, the 'web of interspecies dependencies' that are spun in times of conflict.

The Uses of Non-Human Animals in War

In xxxxxxxxxx, we qualified our use of 'post' with the claim that 'post' signalled a choice of trajectory for the future but was also a recognition that international politics has ever involved the more-than-human world. Here again, we would suggest that the practice of warfare has been more-than-human from antiquity to the present.

There are a surprisingly large number of roles which non-human animals have played in warfare. These include the generation of war-fighting models in which, according to Moore and Kosut (2013: 37), bees have been studied to understand insurgency strategy. Non-human animals have also been embroiled in warfare as trophies - 'ancient armies regularly seized local wildlife as war trophies, a custom that led to some of the earliest animal collections in recorded history' (Kinder, 2013: 48). In addition, the practice of bringing back the local wildlife as a demonstration of power continued as a colonial practice (see Kisling, 2001: 33-37). Animals have been used as basic tools such as pest control, particularly in World War 1 trenches (Lawrence 1991: 147); and as lights, glowworms were used during the First World War for reading maps and sending signals (Sørensen 2014: 20) and to guide tanks (Lawrence, 1991: 148). Below, we identify some of the key uses of animals in war: as transport, as weapons, in sensory detection, as experimental subjects and for morale.

As transport

Before the advent of the petrol engine and motorised transport, everything that wasn't to be transported by hand had to be carried, or pulled by a non-human animal. The capacity for armies to move large quantities of war materials and people into conflict zones was entirely reliant on the use of non-human animals. Horses provided the means to move equipment and supplies, and also to move combatants, either on horseback, or by chariots, and some of the earliest images of domesticated horses depict them pulling chariots (Walker, 2008: 121). DiMarco (2007: ix) describes the horse and rider as the most enduring weapon system, with a history dating over 3,000 years. Up until the middle of the twentieth century the horse remained the most efficient way in which to transport soldiers in battle.

At the start of World War One the British army had only 80 motorised vehicles, but had access to 25,000 horses (Allen, 1999: 2). Despite the advances in transport through the first half of the twentieth century the German army was heavily reliant on horses during the Second World War. According to Dinardo (1991: xiii-xiv) whilst the German army had the reputation of a 'mechanized juggernaut', less than 25% of the army was made up of motorised units, with the majority of the rest relying on horsepower for transportation. Walker (2008: 134) states that over 52,000 horses were lost at the battle of Stalingrad alone. Occasionally, there is a happy ending, a particular example being the horse that became named 'Reckless' and decorated for her bravery during the Korean war. Reckless was involved in carrying supplies and transporting the wounded. On one noted occasion during a battle she made 51 trips carrying ammunition to the troops in the front line under gunfire and covering a total of 35 miles. Each load was greater than one third of her own weight. Reckless was promoted to sergeant in the army and following the Korean war was transported to the United States where she lived in retirement at the marine base in Pendleton, Southern California. In 2013 a statue was erected in her honour (Lawrence, 1991: 146; Geer, 1955: 182).

Elephants given their size and strength have been significant in war for moving large items such as siege engines and cannons (Kistler, 2006: x). They were used to drag cannons for the Prussian army at the siege of Paris in 1870 (Kistler 2006: 225), and Jenny, an elephant kept at Hamburg zoo was used to move heavy equipment for the German forces during World War One (Wylie, 2008: 137). Elephants played a significant role in the Vietnam war, where they were able to keep North Vietnamese forces well supplied across terrain that would be difficult for other forms of transport to traverse (Kistler 2006: 230). Non-human animals used on the battlefield immediately become a target for the opposing forces – leading to widespread loss of life. This has meant that elephants, given their size, have been particularly vulnerable (Kistler, 2006: 230). While it is perhaps not surprising that the larger, stronger non-human animals have been utilised for transporting combatants and materials, this has also extended to non-human animals of less magnitude. Allen (1999), for example, notes that dogs were used during World War 1 to transport ammunition boxes and messages to the front lines.

The capacity of non-human animals to transport both supplies for war-fighting, and combatants, has contributed exceptionally to the character of war. Without the possibility of moving vast amounts of material the potential to mount large scale attacks would not have been a feasible option. Where the terrain is difficult, or motorised transport is not available this utilisation of non-human animals persists up to the current day.

As Weapons and Weapon Carriers

Non-human animals have also been used as specific kinds of weapon. We have already mentioned the use of 'maggot bombs' during the Second World War, and insects do appear to have a particular utility as a weapon of war. Lockwood (2009: 5) describes the combined capacity of humans and insects

as 'one of history's most potent alliances'. Yet this utilisation of non-human animals, as with transport, extends right across the scales of magnitude.

Moore and Kosut (2013: 33) note that 'as soon as humans were able to throw beehives there is evidence across cultures and historical epochs to suggest that they did so'. Beyond simply throwing beehives, increasing sophisticated ways were developed to launch bees into the midst of an opposing force, such as bee cannons and bee grenades. The use of bees has extended to comparatively recent times with the claim that during the Vietnam War the North Vietnamese attempted to train bees to attack anyone wearing a US army uniform, whilst the US retaliated by attempting to manipulate the alarm pheromone of bees (Moore and Kosut, 2013: 35-36). There are also suggestions that non-combatant species have also been targets as part of conflict strategies. There are, for example, claims by the Cuban authorities that deliberate attempts have been made to sabotage the country's agricultural production by spreading *Varroa* mites, which attack bee colonies (Moore & Koust, 2013: 34; Lockwood, 2009: 219-220). The history of such 'bioweapons' is a long one, but it is not only insects that have been used to spread disease. Hediger (2013a: 7) points to the use of infected horses to spread disease during medieval conflicts, by throwing them over castle walls during sieges.

Non-human animals have been used as parts of weapon systems. During the Second World War the Soviet army trained dogs to crawl underneath tanks with a bomb strapped to their backs. At the battles of Kursk and Stalingrad up to 25 tanks were destroyed using this method – which also of course, killed the dogs. However, it proved difficult for the dogs to distinguish between friendly and enemy tanks, and so this practice did not become widespread (Hediger 2013a: 11). There were also not entirely successful results with the experiments to use cats to guide bombs onto warships – the idea being that the cat would do anything to avoid landing on water (Salter, 2014: 9). Similarly, experiments have been conducting for the purpose of using pigeons to carry bombs (Morrón, 2014: 67). Although not specifically a weapon, pigeons were also used during the First World War to carry out aerial reconnaissance with cameras strapped to their bodies (Allen, 1999: 33).

For their sensory capabilities

One element that is rarely acknowledged in human relations with the rest of non-human nature is that in many aspects of activity other species are much more capable than humans, and in some instances more capable even than human technological capabilities. At times of conflict humans have been more than happy to exploit the extraordinary capacities of nonhuman animals, as Lawrence (1991: 151) notes 'the cognitive abilities of animals that are often disputed in other contexts are taken for granted in war'.

Whilst there is a long history of the use of dogs in war, their training for specific tasks associated with human use of their sensory range, was pioneered in Germany in the late nineteenth century with German shepherd and shepherd-cross dogs specifically bred and trained for military use

(Cooper, 2002: 73-4). Dogs have between 15 and 25 times the number of smell receptors of a human, and the part of the brain that analyses this information is four times larger. It is unsurprising therefore, Hediger writes of the important contribution of 'war dogs' in the US military during the Vietnam War where, in a context in which the Viet Cong and North Vietnamese Army made considerable use of their knowledge of the terrain:

the American war dogs... mitigated some of the Viet Cong's advantages by adding information with a different regime of sensory abilities, from acute scenting to sharp hearing, made legible and useful by the powerful relationships between dogs and human handlers. (2013b: 59)

In this particular conflict, dog-human teams often were 'on-point' that is, in the very front line of the unit and most exposed to the Viet Cong or North Vietnamese. Hediger draws on the account of US soldier and dog handler John C Burnham in arguing that conventional human/animal hierarchies are challenged in these situations as human handlers have to 'translate' the dogs' knowledge and perception of events to the rest of the unit as a situation where, for Burnham, the dog is effectively 'in charge' (Hediger, 2013: 61). However, it is rather that canine instructions must be understood and effectively translated by the handler for the rest of the platoon:

On patrols, Kowall [a dog handler] used hand motions to speak to Eric [a GSD/Labrador cross]. In turn, the animal spoke back through his movements. His ears would shoot up and turn in the direction of suspicious noise. The hair on his back would stand up if danger was close. If he wanted Kowall to stop moving, he'd look back at him.
(<http://edition.cnn.com/2010/LIVING/02/12/war.dogs/>)

Whole missions and platoons hung on the relationship between the human handler and the dog. If handlers were inexperienced and/or misread the signals from their dogs, lives were lost. Alger and Alger note that the dog handlers 'were certain that the dogs, by warning them of booby traps and ambushes, had saved thousands of lives' (2013: 87). In the words of some ex-marines:

As an old grunt who has followed many a tail through the bush, those 'soldiers' who spoke with a bark were worth their weight in gold. A good dog in the bush is worth more than a platoon behind you.

Many times my dog Chief, 132 pounds, alerted us to troop movements that we would have just walked up on. I worked 200-300 yards in front of the team to make sure that they didn't get hurt...had he been a human soldier he would have had more medals that the service could offer.

After his second tour, his dog was reassigned to another handler. Unfortunately, the man was lacking in aptitude or training (or both) and ignored his dog's signal to stop - they were both blown up.
(<http://edition.cnn.com/2010/LIVING/02/12/war.dogs/>)

This suggests then, that in some cases, the use of sensate animal capabilities has been a co-constitutive process involving both human and animal capacities in interaction.

This capacity to detect and analyse smells has been used in numerous conflicts, but most recently in the wars in Afghanistan and Iraq, where widespread use of 'improvised explosive devices' have been used. Large numbers of dogs have been trained for the purpose of detecting such devices, for which they have a 98% accuracy rate (Alger and Alger 2013: 93). Salter (2014: 10) reports that the US military was using more than 2800 dogs in Iraq and Afghanistan, many of them for the purposes of detecting roadside explosive devices. These sensory capacities have also led to the use of dogs as guards. According to Tindol (2013: 110), 'Himmler considered one dog to be the substitute for two [human] guards'. Other animals, such as dolphins, also have been used as 'underwater sentries' (White, 2007: 216). Bees also have a great capacity for detecting scents and have been used to detect the particular odours given off by explosive materials. Moore and Koust (2013: 36) claim that bees might be even more effective at this task than dogs.

Other non-human animals have been used in a variety of ways to detect the presence of gases that would be fatal for humans. During the First World War slugs were used to detect the presence of mustard gas (Lawrence 1991: 148) and canaries were used to detect gas in the tunnels that were dug under opposing trenches in the same ways that they were employed in coal mines (Allen, 1999: 33). Goldfish were also used during the First World War to gauge whether helmets that had been exposed to mustard gas were completely de-contaminated (Allen, 1999: 38).

The abilities of dolphins to navigate and operate underwater have also been exploited, in particular their ability to find and to identify, using their sonar capabilities, items in murky waters (Ramanathapillai, 2014: 109). During the Cold War dolphins were trained to locate mines and to protect divers from attack (Kinder, 2013: 65-66), a role that they repeated during the Iraq war. The US Navy Marine Mammal programme remains in action utilising some 80 dolphins, 28 sea lions and one beluga whale (Kistler, 2011: 325). Whilst there are predictions that they will be superseded by mechanical submersibles, it remains the case, as reported by a navy spokesperson that 'dolphins simply do the job better than existing technology' (quoted in Lawrence 1991: 152).

The ability of non-human animals to perceive sounds and vibrations that are not detectable by humans has also been used as the basis for early warning of approaching danger. Sax (2013: 199) points to the 'numerous animals were used to give warning of enemy planes in both Britain and Germany during World War II, including pigeons, parrots, dogs, and cats.'

These various examples all point to the human reliance and utilisation on non-human animal capabilities which exceed those of humans, undermining claims to human uniqueness or exceptionalism. These various capacities are ones which humans have been prepared, and on which lives have been dependent all undermine claims to human to separateness from the rest of nature and underline the inter-connected character of human and non-human systems.

As experimental subjects

Non-human animals have also been drawn upon to duplicate the human experience of being attacked in various ways. The types of experiments are wide ranging and frequently horrific, with little or no concern shown for the suffering caused. Many of the experiments are unnecessary and produce data of little use. Experiments have included a navy experiment during the Second World War where a zoo bear was given a solution of boric acid so that scientists could examine the impacts on the brain (Kinder, 2013: 67); other experiments during the Second World War used a variety of non-human animals including monkeys, dogs, cats, rabbits, guinea pigs, rats and pigeons to test substances used in chemical warfare (Lawrence, 1991: 149). Numerous non-human animals have been used to assess the impacts of radiation burns (Kinder, 2013: 67; Lawrence 1991: 149).

Non-human animals have also been used to test the effectiveness and effects of more conventional weapons. McCarthy (2014: xiii) points to the practice of shooting cats in the head to test the accuracy of rifle fire. Justin Goodman *et al* (2014) describe the on-going use of non-human animals in experiments to test medical procedures in the US Army – experiments which many experts claim could be conducted much more effectively using simulations. The British campaigning group PETA (People for the Ethical Treatment of Animals), has recently highlighted similar practices conducted by the British Army. Every year British army surgeons are sent to a training site in Denmark where pigs are shot for the purposes of ‘invasive and deadly trauma training’ exercises (PETA, 2014a). At Porton Down in Wiltshire, pigs have been blown up to examine the possibilities of survival after severe battle-field trauma, and to test clotting agents. Following on from a freedom of information request PETA stated that 115 pigs have been blasted with explosives in these experiments in the past three years (PETA, 2014b).

Sørensen (2014: 33) states that military testing using live non-human animals is on the increase. However, only four members of NATO from a total of twenty-seven conduct such practices, and there are widespread claims that the experiments and training could be more effectively conducted using simulators. This suggests that there is a purpose involved here that it is more than training or testing of weapons and medical procedures. Part of an explanation for this may be that engaging with and acting upon the bodies of animals is an element of the military training processes. Goodman *et al* (2014: 50-51) point to a ‘social function to harming animals’. In Peru, part of the training for army cadets involved ‘the rabbit lesson’ - the killing of rabbits as part of an exercise, both to test the soldiers and to prepare them for killing later on.

For Morale

Non-human animals have also played a role that might point to a more positive aspect of human/non-human animal relationships. As Hediger (2013a: 16) notes the collegiality that can be generated under wartime conditions does not necessarily halt at the species barrier. There are

numerous accounts of a range of non-human animals being adopted as companions and mascots by soldiers. His difficult and dubious reputation notwithstanding, General Custer insisted that his sight hounds accompanied him on all his various campaigns and shared his bed at night when he was in the field:

“The pack of hounds were an endless source of delight to the general”, wrote Mrs Custer. When making camp at night the dogs all followed them into their tent. She continued, “If it were very cold when I returned from the dining-tent, I found dogs under and on the camp-bed and thickly scattered over the floor... If I secured a place in the bed I was fortunate (Tillotson, 2013, quoting Elizabeth Custer (1885) *Boots and Saddles; or, Life in Dakota with General Custer*)

Richard van Emden (2010: 2) points to the significance of non-human companionship for the soldiers in the trenches of the first World War, noting that non-human animals weren't used just for military purposes, but were also 'kept as pets or mascots, providing comfort to men who rarely received leave and who were consequently starved of affection'. Likewise Allen (1999: 33) points to the widespread adoption of dogs, many of whom had been abandoned by their owners who had fled the battlefields, and the use of caged songbirds in hospital wards and ambulance trains to 'cheer the wounded'.

There is evidence of the close inter-relationships between soldiers and their non-human companions and comrades. Riitta-Marja Leinonen's account of Finnish war horses notes the close bond between the soldiers and their horses, such that the horses were friends as well as heroes, and that often the men 'grieved more over the death of horses than humans' (Leinonen, 2013: 135). Military training programmes, such as those currently used by the US Marines instil the view that a military dog is essentially 'an instrument' to be mastered, 'just as a technician had to understand sonar on a submarine or a drone operator had to learn to control a Predator' (*National Geographic*, 2014). Yet the interdependency of animal and human working in combat situations means that working with an animal is more than a technique to be mastered. It is a process that relies on bonds. In the very recent conflict in Afghanistan, military working dogs were air-lifted alongside their handlers when the latter was injured – not just because such dogs are a valuable asset, but because handlers are more likely to survive serious injuries on the journey in the company of 'their' dog.

Camels in the First World War

*In the days when I was younger, when I never knew your worth;
When I thought a prancing palfrey was the finest thing on earth;
When a ride upon a camel seemed a punishment for sin;
And made a man feel fed up with the land we're living in:
It was then my errant fancy lightly turned to thoughts of verse,
And I libelled you old Hoosta, in a wild iambic curse.
I know you now for better; but for you I might be dead.
So I recant, old Hoosta; I take back all I said.*

(Hogue [Trooper Bluegum], 1919: 278)

Having discussed the very broad range of uses that non-human animals have been put to in times of war, we turn to a very specific incidence – the use of camels in the First World War in the fight against the Ottoman Empire. We will use this discussion as an illustration of some of the points made above, but also to indicate how, despite a camel's unfavourable reputation a 'species co-habitation emerged'. The history of the use of camels in conflict is an extensive one. According to Irwin (2010: 140), the early history of the domestication of camels is hazy, and is likely to have been much more recent than for dogs and horses. Herodotus in *The Histories* includes various discussions of the use of camels in warfare, and the camel was used extensively by Arab armies though primarily as a means of transport (Irwin, 2010: 143, 151-152). Camels were used by Napoleon in the French campaign in Egypt in 1799 and had been used by the British in various campaigns – most notably in the disastrous attempt to invade Afghanistan in the Afghan war in 1839, and in the Crimea (1854) and Abyssinia (1867) (Langley and Langley, 1976: 30-32). According to Robertson (1938: 13) the use of camels in the conflict against the Ottoman Empire represented the largest use of camels in any modern conflict. The 'cameliers' were primarily made up of Australian cavalry divisions who had been part of the unsuccessful campaign at Gallipoli.

The initial contacts between the Australian soldiers and their new comrades were not entirely encouraging:

Their first glance at the brutes was anything but reassuring. There was a supercilious, haughty expression of disdain about the hump-backed, splayed-footed, knock-kneed, long-necked, unwieldy creatures which chilled right from the beginning any feeling of intimacy that might be desired between a camel and his rider.... A few looked no more ferocious than an angry bulldog that had gone hungry for a few days; but as a rule they seemed to regard everyone who approached them as a potential enemy, to be growled at, grunted at, and snapped at with an intensity of purpose that any tiger might well envy (Reid, 1934: 6).

For Oliver Hogue (1919, 1) the antipathy was mutual: 'the very idea of association with such brutes was hateful to us', and Robertson (1938: 36) suggests that camels showed little in the way of companionship 'thus we find that the animal has no feelings of gratitude for any kindness done to it, and has no companionship for man or beast. It will accept food from the hand but will just as likely try to eat the hand that feeds it.'

Despite the antipathy of these initial encounters, the cameliers started to appreciate the qualities of the camels, particularly in the context of the desert. Langley and Langley (1976: 41) note that a properly cared for camel gives 'excellent service'. The war office guide to camel training notes that one of the main attributes of a camel is that it can cover very long distances at a steady speed (War Office, 1913: 58). Also that camels have tremendous powers of endurance, such that 'frequently the first intimation that he is being pushed beyond his powers of endurance is that he drops dead in his tracks' (War Office, 1913: 2). Two features in particular seemed to gain the admiration of

the soldiers. In the first instance the ability of camels to go for five days without water. As Langley and Langley (1976: 41) note, 'with proper training it can travel for over five days on one drink, which may consist of twenty-four gallons.' This allowed for considerable expeditions, which could be conducted without having access to water. Secondly their ability to transport heavy loads, thus allowing 'his favoured rider to carry an unlimited supply of blankets and provisions' (Gullett, 1976: xi-xii). These qualities of endurance were highly appreciated by the soldiers, and the relationship with the camels was one, in the desert situation, of absolute reliance. As Inchbald (1970: xviii) notes, 'there were occasions when our lives were in their hands or rather in their humps'.

One characteristic that was more problematic was the annual period when the camels were in season. At this point the males were known to go 'completely 'magnoon' (beserk) attacking anyone in its path' (Langley and Langley, 1976: 47). A camel in season is described vividly in a military pamphlet on transport:

He then becomes restless, eats but little food, and rapidly deteriorates in appearance. He refuses water, becomes furious, cries out, and attempts to bite passers by, or even his master. His eyes glisten and he foams at the mouth. The exasperation of the animal increases as he is unable to attain his desires.' (Burn, 1887: 128)

At this time of the year the camels could be particularly dangerous and likely to attack other camels as well as anything that came into its path. As the War Office (1913: 5) manual on camel training rather drily notes camels 'are seldom dangerous except in the rutting season'. At these times the camel is 'subject to fits of great ferocity'. In several instances some of the more aggressive males were killed at this time when they had attacked members of the service (Inchbald 1968: 38).

Despite the peculiarities of the camels, all of the accounts of the campaign include some details of a growing respect and closeness between human and camel. Hogue (1919: 1) for example, indicates that the while the positive characteristics of camels took some while to become apparent, they did eventually emerge, and over time 'familiarity bred content'. Likewise, Inchbald (1968: 37, 38) states that despite the difficulties with maintaining and using camels the soldiers became 'quite attached to them', and that their appearance of hostility and perversity may have been deceptive; instead they were 'great hearted'. Inchbald (1968: 78) goes on to note that by the end of the campaign many of the camels were in a very poor state and that 'they had served us faithfully, poor devils, and we had become very attached to them, or at least to most of them'. Inchbald (1970: xvii) notes that whilst there were some exceptions, camels were 'humped angels'. Ultimately, the view was that the camel 'is indeed a wonderful and unique creature and we came to have a great affection for our comrade in arms' (xviii).

As in other conflicts when the fighting came to an end, or in in this instance the advance of the allied forces was into territory unsuitable for camels, there were questions raised about the future of the animals that were no longer required for fighting. Reid (1934: 221) describes the concerns expressed

about the camels expressed by the soldiers when they discovered that the camels were to be sold to the local population:

We were sorry for the camels. Although we had often cursed them, when they were to be taken away from us we found that we had become quite attached to our ugly, ungainly mounts. The Arabs would not treat them as kindly as we had done, and we reckoned they were entitled to a long spell in country that suited them better than the rough and slippery mountain tracks of Palestine.

The Imperial Camel Corps has been described as comprising 'a deciding factor in the Palestine Campaign' (Davidson, 1934), again indicating that the character of the conflict would have been considerably different without the participation of non-human animals. What is also significant about this history is of the growing bonds of affection between the soldiers and the camels, despite an initial antipathy, and some of the less than endearing characteristics of their companions. This perhaps is a result of the conflict situation that they found themselves in but also of the admirable qualities of the camels and the absolute reliance of the soldiers on their companions.

A posthuman way of war?

The imperative of posthumanism, in our view, is to develop tools for developing an understanding of human embeddedness in non-human animate and inanimate systems. In addition, a *critical* posthumanism is required. It is not simply a case of demonstrating that the conduct of war is constituted by and reliant on a variety of non-human animals, and that exclusively-human warfare would look very different. In addition, we would like to draw attention to some of the difficulties and ambiguities attending what we call the 'posthuman way of war'.

Posthumanism urges us to attend to the realities of our situation in a world where we are all made up of multiple species and things. Within Security Studies, at least at its margins, there has been a growth of critical positions on its state-centrism. This has been particularly driven by feminist scholarship and the attempt to broaden the actors and 'populations' of study – to women of course, and also more recently, to children. What we have suggested here is that to capture more accurately systems of war there is a need to appreciate the ways in which our world is teeming with multiple human and non-human lives, relations and formations of being. We have attempted to exemplify this here with a consideration of the more-than-human qualities of warfare. The above sections have mapped the ways in which warfare is not the human exclusive activity that scholarship has often presumed. Rather, different species are drawn into war, in ways which reflect specific needs (locating a hidden enemy in an alien landscape in the case of dogs in the Vietnam war) or in moving people and equipment in difficult terrain and climate (as in the case of camels in the First World War). In light of this, at the very least, International Relations scholarship might simply include non-human animals in the landscape of war.

We have argued however that a more nuanced analysis of the roles of non-human animals in times of conflict is needed. A posthuman account not only includes animals by illuminating the uses of non-human animals in conflict, it draws our attention to the co-constitutive character of human/non-human systems. For Haraway (2008), important in realising the potentials of human-animal relationship is direct embodied experience where we 'meet' and share across the species barrier, co-constituting one another. We are, she says 'beings-in-encounter in the house, lab, field, zoo, park, office, prison, ocean, stadium, barn or factory' (2008:5). XXXXX's (XXXXXX) work on companion animals in human households and public spaces argues that the public spaces of dog walking are spaces of beings-in-encounter which can be seen as posthuman micro-communities (of dogs and human companions) which emerge over time through routine practices and have particular characteristics. The spaces of war are, as we have tried to demonstrate, also spaces of beings-in-encounter through which particular communities emerge. They are very different spaces – often of tension, of threat and danger, of urgency, as well as those in which humans and dogs, camels, horses and so on may 'hang out' together. In the case of the cameliers, humans and animals may be cast together suddenly as unlikely co-actors in the theatre of war. The rather different communities that emerge are likely to have specific characteristics – of urgent co-dependency, of human utility, perhaps of respect, or even comradeship, and these are issues we would wish to further explore through case studies of particular conflicts, and the interrelations with specific species.

It is important to emphasise that these forms are not co-constituted in a context of equality. Hediger (2013b) claims that the conscription of non-human bodies to mitigate against embodied inadequacies of humans constitutes an operation of 'biopower', and all the functions we have identified can be seen to contain elements of the biopolitical. Nicole Shukin (2009: 6-14) is probably more accurate to characterise this as 'zoopolitical' rather than 'biopolitical' as both human and non-human animals are subject to control as populations of embodied beings. For Foucault himself, in contemporary warfare, 'entire populations are mobilised for the purpose of wholesale slaughter' (1978: 137). Foucault is often seen to suggest that warfare in modern times is increasingly violent, yet important to Foucault's conception is that biopower operates in ways that are both disciplinary and pastoral, often at the same time. This can be seen in the cyborg figure of the mounted soldier, and the specific context of the First World War. Horses, and often conscripted civilian horses, were ridden to be massacred in huge numbers by German machine guns in the foolish early cavalry charges, often by humans who cared much for them and had negligible agency of their own. Military dogs have been bred and trained for toughness and stamina and trainers exert strict discipline. Yet dog handlers are also selected for their ability to communicate with dogs and for simply liking dogs and having a history with them (*National Geographic*, 2014). For Sheryl Vint (2010), it is because humans and other animals share embodiment that they can be shaped by biopower – in breeding, in training, in adopting ways of living and dying that are constituted across species. Other animals involved in warfare are simply tools. The pigs at Portland Down illustrate the harsh realities of life and the

disposability of animals used as experimental subjects or research tools for the improvement and development of new ways of killing and patching up. Despite having significant training and probably close relationships with their handlers, the dogs sent to their deaths as drones delivering explosives to tanks are similarly tools, albeit that some element of pastoral power is necessitated in their realisation as a weapon delivery system.

For many other animals, horses, dogs and camels, for example, the relationships of co-dependency mean that both humans and animals are caught up in biopolitical structures which are both disciplinary and pastoral. In these cases, it is the relationship between the animal and the human handler which is key to their agency in combat. However, whilst these animals are highly useful (as transport, as weapons, in sensory detection and for morale) they also exhibit significant category mobility as warfare intensifies the reversibility and fluidity of the categories of human, animal and machine. Thus the dogs of the US in Vietnam made decisions affecting the actions of whole platoons on the one hand, and on the other, were expendable tools of warfare during the US withdrawal. Likewise, horses and camels in both World Wars were abandoned or sold, often for food Hediger (2013b) suggests that the extremities of war encourage very rapid and extreme 'category flipping' (2013b: 66) where animals quickly become obsolete technologies. This is particularly so when animals behave like animals, outside the boundaries of human utility. The 'magnoon' camels seeking mates and refusing human discipline is a good example. Dogs of war are often muzzled to silence them or prevent them biting in fear when they are taken on boats or dropped out of aeroplanes.

There is so much more that might be investigated. Work in feminist and environmental security studies has pushed us to think about the impact of war on a range of non-combatant populations – from children in villages to forest fauna. There is certainly something to be said, for example, of the impact of war on 'civilian' non-human animals, as well as the conscripts of war. The stories of animals in war are hard to read and most end tragically. Yet within the horror of war we see, through posthuman lenses, glimpses of other possibilities. There is the porous character of species difference, there is appreciation of and respect for individuals, both human and non-human and changing understandings of value and of the contributions of non-human animals in human lives. There is also love across the species and a concern to do well for those many non-human animals we make work and let die in war.

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