



A bear's biography: Hybrid warfare and the more-than-human battlespace

Journal:	<i>Environment and Planning D: Society and Space</i>
Manuscript ID	EPD-2015-0121.R2
Manuscript Type:	Article
Keywords:	more-than-human, military, battlespace, WWII

SCHOLARONE™
Manuscripts

View Only

A bear's biography: Hybrid warfare and the more-than-human battlespace

Abstract

This paper makes an intervention highlighting the animal dimension of military geographies as an overlooked yet illuminating aspect of the hybrid nature of warfare. By bringing animal geographies into dialogue with critical military geographies and with a focus on relational ethics, the processes, performance and consequences of the more-than-human nature of the battlespace are examined through a vignette of Wojtek the bear. Wojtek was a mascot, pet and officially enlisted soldier of the Polish Army in the Second World War who travelled the desert plains, helped to fight at the Battle of Monte Cassino, before being demobbed with his fellow Polish comrades in the UK, eventually ending his civilian days in Edinburgh Zoo. Although a well-known figure Wojtek and his biography have predominately been used as a means to explore the Polish soldiers' experience of the Second World War with the result that the bear as an animal is absent. This paper, therefore, puts the bear back into his biography in order to acknowledge the role and lived experience of animals in the military. Further, it suggests that exploring the place of animals in the military requires geographers to articulate the hybrid nature of warfare and also to explore the ethico-political relations this produces.

Keywords: more-than-human, animal geography, military geography, relational ethics

Introduction

In the late 1940s at Edinburgh Zoo once in a while something strange would occur at the bear enclosure. Large mammals always draw the crowds but this specific enclosure, home to a large Syrian brown bear, held a very particular pull for some. Other than children on school trips and families on outings, the bear drew an array of visitors who would variously serenade him with the violin, throw him sweets and cigarettes, others would simply come to see him, to talk and recall. As Whatmore explains the very 'physical fabric of the zoo [is] a showcase for public entertainment and education, designed to keep animals and people in their proper place (2002, page 42). Yet, these relatively rare and seemingly peculiar visitors to the bear enclosure were not there to witness nature or the wild, but were in fact visiting an old comrade, Wojtek who like them had been a soldier of the Polish Army in the Second World War (see figure 1.). Wojtek had served alongside these men on the battlefields of the Middle East and Italy and after the war like many of the soldiers from the Polish Corps the bear began to forge a new identity in post-war Britain. In those meetings at the zoo between old comrades, old identities were recalled and performed. There at Edinburgh Zoo in those moments of correspondence between bear and human, the distance between human and nonhuman momentarily enfolded and different, more fluid forms of identities and affinities between human and nonhuman were performed.

1
2
3 **Figure 1. Wojtek, Edinburgh Zoo (courtesy of Polish Institute and Sikorski Museum)**
4
5
6

7 In the Second World War, Wojtek became a mascot, pet and officially enlisted soldier of the
8 Polish Army helping to unload ammunition and even apparently capturing a thief. Wojtek has
9 held a place in popular imagination for over forty decades, his story first published in 1968 has
10 been translated into English and French, serialised in *Woman's Weekly* and animal magazines such
11 as *Monde Animal* and *Wild about Animals*. He became an animation for the children's TV
12 programme Blue Peter, rendered in sculptures from London to Poland, via Edinburgh and
13 Grimsby, memorialised in exhibitions, film and on stage. In these narratives Wojtek's biography
14 has focused predominately the experiences of the soldiers who were his comrades and keepers.
15 In the film *Wojtek; The Bear That Went to War* (2011) the opening credits declare: 'Like the men
16 and women he fought with, Corporal Wojtek would win a war but lose his freedom'. This
17 sentiment was echoed in a speech at the opening of the Wojtek exhibition at the Polish Institute
18 and Sikorski Museum, London, in October 2010 when Lady McEwan addressed the absence in
19 contemporary history of the Polish contribution to the Second World War, stating: 'Poland after
20 decades behind the Iron Curtain is free at last. But recognition of what she did in the war? This
21 is what Wojtek can bring. The tale he can tell. That is the burden he can now carry' (cited in
22 Ivell and Baczor, 2013, page xi). Thus, the bear has become a way into the story of Polish
23 soldiers and exiles of the Second World War. Wojtek has become symbol, a memorial in flesh,
24 fur, brute strength and abused loyalty, his animality written out, his creaturely ways erased.
25 However, Wojtek's story can be explored through a different lens, whereby his biography can
26 reveal something about the experience of being or more precisely becoming in the battlespace, it
27 can disclose the relational hybrid nature of warfare and the embodied and lasting consequences
28 of transgressing the human and animal boundary
29
30
31
32
33
34
35
36
37
38
39
40
41
42

43 That war is a process combining and reconfiguring human and nonhuman in the execution of
44 violence is not in itself a novel claim. Geographers have demonstrated the ways that technologies
45 reconfigure the battlefield into techno-cultural spaces (Graham, 2009; Gregory, 2011; Shaw et al
46 2012) and how the military has drawn on nature to develop and justify their technological
47 capabilities (Gregory, 2015; Johnston, 2015; Kosek, 2010). Much of this work has highlighted
48 how twenty-first century warfare is increasingly becoming a cyborg assemblage; dispersed,
49 complex and ambiguous. The contemporary battlespace, is thus, depicted as being increasingly
50 populated with lively nonhumans disrupting notions of who or what is enacting warfare. This
51 paper argues that although focus on the technological nonhumans enrolled in warfare reveals
52
53
54
55
56
57
58
59
60

1
2
3 something of the more-than-human nature of warfare it does not portray the full spectrum or
4 history of nonhuman lives active in the battlespace. Therefore, by bringing critical military
5 geographies into dialogue with animal geographies through a vignette tracing Wojtek's biography
6 in the Second World War, this paper reveals that the role of the nonhuman animal warrants
7 closer attention as it highlights the active place of animals in shaping warfare. In so doing so the
8 aim is to historicise the notion of hybrid warfare and to enable analysis on how more-than-
9 human warfare demands consideration of relational ethics.
10
11
12
13
14
15
16

17 **Military Geographies: Human-environment relations**

18
19
20 Critical military geographies has sought to place the military and forms of legitimate state
21 violence in their spatial, temporal and cultural contexts, accounting for and critiquing the
22 militarism of space, knowledge and culture. Various geographers are attending to the diverse
23 ways in which war is as a process that is shaped by and shapes geography (Farish, 2006; Clayton,
24 2012), which leaves its marks - physical, economic, political and cultural - on landscape
25 (Woodward, 2014), is driven and influences the geographical imagination (Driver, 2001), and
26 demands new relations with space and of course has lasting consequences for those it impacts
27 upon (Fluri, 2011; Cowen, 2008). An important strain of this work has been to explore the role
28 of technology in producing contemporary warfare as a hybrid endeavour executed by an array of
29 increasingly complex and ambiguous relations between humans and nonhumans. Perhaps most
30 notable has been the research interrogating the evolution, deployment and material-semiotic
31 networks of unmanned aerial vehicles (Shaw, 2013; Gregory, 2011; Graham, 2010), which
32 exposes the unsettling character of more-than-human warfare as accountability for killing
33 becomes disperse and ambiguous. From a historical perspective Adey (2010) and Kaplan (2006)
34 have examined the role of the aeroplane in extending the scope of the battlespace and the scale
35 and speed of violence, thus producing new visualities in and performances of war, while
36 Robinson (2013) and Forsyth (2013) have explored the development of camouflage technologies
37 to subvert these seemingly dislocated visualities. A key contribution of this research has been to
38 highlight the active ways in which technologies have mediated and shaped military geographies
39 and violence, revealing war to be a hybrid performance.
40
41
42
43
44
45
46
47
48
49
50
51
52

53 However, this focus on the more-than-human relationship between human and technology in
54 war has been at the expense of considering the role of other nonhuman relations which act, alter
55 and shape the battlespace. As Gregory (2015) recently explained, the battlespace is a place of co-
56 productions and formations where the geo-spatial intelligence or visualisations of war always
57
58
59
60

1
2
3 depends on the bodies of soldiers to be immersed in and attuned to their environs. Thus, how
4 the military impacts upon human-environment relations is a key element in making sense of the
5 geographies and 'natures' of war. The role of the environment in shaping technologies and
6 methods of warfare has been examined in research that has variously traced salient imaginative
7 and material geographies that produced the Arctic as a site for military and engineering
8 engagements (Farish, 2006) the tropics as a militant space of guerrilla warfare (Clayton, 2013),
9 and the North African desert as a landscape that enabled increasingly deceptive methods of
10 warfare to be experimented with and justified (Forsyth, 2014 and 2015). Each of these studies
11 demonstrates the way in which the history of militarisation can only be understood if
12 environments are considered as active in shaping war, analysing how the natural is deployed in
13 crucial ways to legitimise military geographies and state-sanctioned violence. Indeed, at times the
14 relationship between the military and nature is one which is openly fostered and deployed by the
15 military. For example, Rachel Woodward (2004) highlights how environmental diversity on
16 military owned lands connects military activities with issues of environmental protectionism.
17 Concerns with preserving the fairy shrimp or the Great Crested Newt shifts focus, Woodward
18 argues, from taking a critical approach towards military activities, and instead, directs it towards
19 the military's beneficial impacts on the environment, as guardian and protector.
20
21
22
23
24
25
26
27
28
29
30

31 Research examining the military and its relationships to landscapes, environments and ecologies
32 thus reveals the ways in which nature is enrolled, produced and used to legitimise warfare, which
33 is important to analysing and accounting for the ways in which military strategies have been
34 deployed and legitimised. In short, nature is used to naturalise military violence, yet the place of
35 animals within this process presents a particularly ambiguous role.
36
37
38
39
40
41
42

43 **Military Geographies: Human-animal relations**

44 In the main, the biographies and lives of nonhuman animals are largely absent, but a more-than-
45 human approach focusing on the animal and exploring the individual and personal can produce
46 compelling and critical narratives of war. Helen MacDonald (2006, page 139) has expressed that
47 it is by 'turns bewildering, amusing, horrifying, that the traditional supposition that war and
48 nature [are treated as] utterly separate realms,' a separation persistently revealed to be illusion.
49 Although war is often painted in broad brushstrokes as perhaps the most fundamental of human
50 activities for channelling primal animal natures inherent to the human towards savage ends, the
51 role of animals themselves in war is largely understudied (Wilson, 2012; Chagnon, 1988). The
52 animal is but a symbol, not a fleshy, living and at times dying body in the battlefield: instead it is
53
54
55
56
57
58
59
60

1
2
3 reduced to telling us little more than of the violence inherent in the human whiles remaining
4 entirely mute to its own nature of being.
5

6
7 Yet, animals have been enrolled in warfare for several thousands of years (Hegiger, 2012: Kosek,
8 2010) and continue to be very much active and present in conflict as companions in the
9 battlefield, means of labour, and modes for fighting. From cavalry horses, camels for transport,
10 the ox or elephant for carrying equipment, the messenger dog or pigeon, the dolphin, dog, rat or
11 pig for mine clearing, the mascots of bears, dogs, cats, birds, goats, monkeys, rabbits, all have
12 been used by the military to wage war (Gardner, 2006). Therefore, war provides an interesting
13 space through which to explore the complex relations between humans and animals because in
14 war animal lives and relationships can be characterised through the extremes of devotion and
15 affection, but also by their utility, abandonment and sacrifice. However, often texts which
16 narrate an animal's war to a large extent reinforce divisions between human and animal, as Juliet
17 Gardner's description reveals: 'there are countless stories and anecdotes about individual animals
18 in war, about their bravery, loyalty, steadfastness and ingenuity and these deserve to be told'
19 (2006, page 10). This framing of these animal as 'heroes' is problematic, it instils an innocence in
20 the animal and drains it of any agency, the resulting narratives deplore the violence and savagery
21 of war but render war as anaemic, apolitical and a pitiful inevitability. What is more interesting,
22 indeed more pressing, than telling 'the countless stories and anecdotes' is to examine how these
23 relations - which by turns are novel, unsettling, intense, tender and exploitative - between human
24 and nonhuman animal came to *be* in the battlespace, and further, to analyse how those
25 experiences were then (re)translated into the traditional boundaries between humans and animals
26 after war. Such a relational hybrid approach allows for the ethical implications of more-than-
27 human warfare to be examined.
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43

44 **Military Geographies: Hybrid warfare**

45
46 Recently research has begun to emerge which thinks seriously about the hybrid nature of warfare
47 through the ways in which animals become enrolled in the military. Johnson (2015) has explored
48 more-than-human encounters in the laboratory drawing on lobsters as an example of the ways in
49 which scientific practices are enrolled in the militarization of biological life. By taking the
50 emergent focus on 'geographies of encounter', as a means to examine how more-than-human
51 relations 'take hold of one another to produce our worlds' (Johnson 2015, page 297) she
52 highlights how animal lives have recently become overlooked as focus moves 'beyond bodies' in
53 an effort to grapple with the processes and consequences of relations between human and
54
55
56
57
58
59
60

1
2
3 nonhuman. Although such efforts may describe the world more thickly, they do so perhaps at
4 the expense of intimacy, neglecting the embodied consequences that individuals bare in such
5 relations. Through describing an encounter between a lobster, technology, chemicals and a
6 scientist in the laboratory, Johnston reveals how the routine processes of experimentation
7 operate in a 'terrain of violence – where lives are imperilled' (2015, page 299), raising questions
8 about how and where ethical relations regarding whose bodies are disposable, are produced and
9 naturalised in the military-industrial-academic complex.
10

11
12
13
14 This approach is also explored by Jake Kosek (2010) in a study of the place and history of the
15 honey bee in the military, culminating in its current use in the war on terror. He highlights why
16 attending to animal bodies and the ethics afforded or denied to them in the military matter,
17 arguing that in war, nature and culture are reconfigured and human and nonhuman (animal and
18 technological) are materially and discursively remade. With a focus on the enrolment of bees in
19 scientific experimentations into micro-sensor technologies he explains that bees are reduced to
20 little more than mechanical devices whose manipulation, mutilation and transformation reshape
21 the biology of the bee, strategies of warfare and the boundaries of the human. This study reveals
22 what Kosek terms the “zoological consequences” of war; the transformations in the conduct and
23 practices of war have far reaching effects on humans and animals. Both Johnson and Kosek,
24 focusing on the laboratory space, highlight how certain animals become entangled in the
25 military-industrial-academic complex, to reveal how relations between humans and animals are
26 framed not as lived beings entangled in violent interactions but as scientific or engineering
27 problems. In the battlespace the “zoological consequences” of military human-animal relations
28 are at times more consciously immediate and caring which highlights the plurality of relations in
29 hybrid warfare. Focus on the battlespace can also examine the different strategies employed by
30 the military to frame, justify and sustain more-than-human relations, and further, to account for
31 the violence inherent in these more caring military human-animal relations.
32
33
34
35
36
37
38
39
40
41
42
43
44

45 Therefore, there is a need for an ethics and politics that takes military human-animal relations
46 and their consequences seriously. This task requires a process of scrutinising upon whom or
47 what ethics are applied, and an attempt to engage ethico-political relations that account for the
48 hybrid nature of warfare (appreciating its plural, material and embodied characteristics) while
49 critically accounting for the modes of dying and living (for human and animal) that military
50 activities and practices produce. Therefore, the battlespace offers a potent site for examining the
51 processes and relations that shape humans and animals living and dying together. The practice
52 of war is an assemblage of knowledges, bodies, practices and spaces; each incident a knot tying 'a
53 vital point of connection' (Van Dooren, 2014 page 27) drawing in a range of spatialities and
54
55
56
57
58
59
60

1
2
3 temporality with implications for the individuals, species, technologies and natures who are
4 active in this process, and who in turn are shaped through these experiences. Therefore, through
5 a vignette tracing Wojtek's biography as one knot in a lineage of emergent more-than-human
6 relations in warfare, this paper reveals the hybrid nature of war, and the consequences of these
7 relations.
8
9
10

11 12 13 14 **Animal Geographies: Hybrid relations**

15
16 Animal geographies offers a means through which to explore the hybrid nature and place of
17 nonhuman animals in warfare through its attention to the particular spatial narratives of animal's
18 lives. Since its revival in the 1990s animal geographies has been 'about making animals – their
19 presences, agency and materiality as well as their ordering, use and treatment by humans – visible
20 and account-able' (Buller, 2015, page 2). Various research has taken animal lives at their centre
21 drawing attention to the diverse relations between human and nonhuman animals (see Davies,
22 2012: Lorimer, 2006: Patchett, 2008: Philo, 1995), acknowledging the pervasive and active
23 place of animals in seemingly human spaces (Hinchliffe et al, 2005), revealing that the
24 understanding of what defines an animal (and thus what it is to be human) is culturally relative
25 and spatially and temporally contingent (Ingold, 1988). As well as making the place of animals
26 visible, animal geographies has pursued a commitment to critique the tendency to maintain the
27 human-animal binary. This research has explored the impacts of environmental changes such as
28 extinction, invasive species and conservation efforts (Van Dooren, 2014: McKiernan and
29 Instone, 2015), habitat loss (Proctor and Pincetl, 1996), culminating in the current anxiety
30 regarding the Anthropocene (Robbins and Moore, 2013). Further, it has also exposed ethical
31 concerns surrounding the commodification of animal bodies through industrialised agriculture
32 (Morris and Holloway, 2014), science (White, 2005) and for fashion (Patchett, 2012) and
33 entertainment (Davies, 2000). As well as revealing the ways in which animals spatialities,
34 biologies, cultures and lives are directly impacted upon by human activities, the sub-discipline
35 has also examined the ways in which human semiotics are inscribed upon animal bodies, such as
36 articulations of nationhood (Howell, 2013: Matless, 2000) or signalling anxieties around issues of
37 race and gender (Emel and Wolch, 1998). In brief, what this work has drawn attention to is that
38 the animal, as individual, species or symbol has been fundamental to sense making processes. As
39 Emel and Wolch (1998, page 19) explain, 'the frontier between civility and barbarity, culture and
40 nature increasingly drifts, animal bodies flank the moving line. It is upon animal bodies that the
41 struggle for naming what is human, what lies within the grasp of human agency, what is possible
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

1
2
3 is taking place'. Animal geographies have revealed that flanking 'the moving line' animals occupy
4 spaces of devotion *and* brutality, theirs is a history and narrative conversely seeped in violence
5 and care. By (re)narrating the biography of Wojtek, this paper builds upon research in animal
6 geography in three ways; it traces the lived geographies of an individual animal to demonstrate
7 that the battlespace is another seemingly human space in which animals are present and active, it
8 claims that animals are entangled in shaping and being shaped by strategies of violence, and
9 finally it, suggests that studying the hybrid nature of war relational ethics of violence can begin to
10 be accounted for.

11
12
13
14
15
16 As Hodgetts and Lorimer (2015) explain, since the revival of animal geographies in the 1990s
17 there have been two approaches to animal geographies that were set out in the seminal book
18 *Animal Spaces: Beastly Places* (2000); 'animal spaces', attending to the ordering of animals and the
19 second, 'beastly places' which explores animals lived geographies. They suggest that the latter
20 approach has to some extent been overlooked due to the difficulty in developing methodologies
21 which help to facilitate geographical research into what they term 'animals' geographies'. Yet,
22 with increasing concerns to acknowledge animals as ethical and political subjects, and, in an
23 effort to further destabilise the predominant anthropocentric focus of research such difficulties
24 require addressing. Methodologies are mechanisms informing integral parts of the apparatus
25 which shape and maintain particular epistemologies and ontologies (Barad, 2007). The work in
26 animal geographies, as discussed, has revealed how humanist and modernist apparatuses have
27 had consequences for the ways in which the world is ordered, engaged with and made sense of
28 (Buller, 2014). Thus, the current effort to address 'beastly places' or 'animals' geographies' is not
29 an attempt to erase the figure of the human from research into animal lifeworlds. In regards to
30 research attending to animals and technologies in tackling questions of difference Whatmore has
31 stated that, such 'modes of enquire neither presume that socio-material changes is an exclusively
32 human achievement nor exclude the 'human' from the stuff of fabrication' (2006, page 64).
33 Instead, such enquiry is an endeavour not to allow the human to dominate the central frame of
34 research, and thus, to acknowledge the shared nature of becoming by tracing the consequences
35 on individuals and species entangled in these hybrid relations.

36
37
38
39
40
41
42
43
44
45
46
47
48
49
50 One method to account for the relational nature of the world as a continual process of becoming
51 and the agency of animals within this is storytelling. As Cameron states, since the cultural turn
52 the story for geographers has 'became a site for thinking through the workings of power,
53 knowledge and geographical formations at the most intimate of scales' (2012, page 574). She
54 explains there have developed three broad strands; stories that account for the lived experience
55 in its particularity and intimacy, stories that attempt to politically mobilise in order to enact

1
2
3 transformation and stories where the narrative is an affective (post)phenomenological tool.
4 Taking the biography of a bear and exploring one animal's experience in war is an effort to
5 account for the plurality of bodies that live, sense and shape the battlespace, its attention to
6 intimacy is an effort towards an ethico-political exploration of the more-than-human battlescape.
7
8 In particular for narrating Wojtek's biography storytelling is the only means left to studying his
9 life. The fragmentary stories of Wojtek that have survived in memoirs, photographs and film
10 are highly anthropocentric re-tellings, there is scant other material - zoo autopsies and claw
11 marked trees - where his life and presence can be traced. Lorimer (2003) has argued that creative
12 biographies (constellations of sites, times, materials, perspectives and experiences) focused on
13 'small stories' can be unsettling. This 'unsettling' is a tool for considering relations in the world,
14 it figures the individuals at the centre as 'fluid and multiple' and always unknowable, the
15 biographies themselves are not presented as 'systematic or sealed' but as lines that are
16 contingent, partial (Ibid, page 204), and thus, the personal story can provoke an array of
17 emotions and responses revealing a multitude, as well as contradictory ways in which the world
18 and our relations within it are performed. This biographical storytelling acts and participates in
19 shaping of the world. As Van Dooren explains, stories have consequences 'one of which is that
20 we will inevitably be drawn into new connections, and with them new accountabilities and
21 obligations' (2014, page 10). Such stories are more-than-human as they take animals lives at their
22 centre to narrate their lived experiences as active and important presences in the world, and in
23 order to explore the character and consequences of human-nonhuman relations. Further,
24 through a study of birds on the edge of extinction Van Dooren frames each individual as 'a
25 single knot in an emergent lineage: a vital point in connection between generations (2014, page
26 27). Analysing Wojtek's life as a knot - an entanglement of politics, cultures, environments,
27 human and nonhuman animals - is an effort to recognise the inherent hybrid nature of warfare,
28 exposing that animals are a ubiquitous presence in the military and draw attention to the
29 transformative (however long lasting or transitory) nature of becoming in the battlespace.
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45

46 **Adoption and adaption**

47
48 In April 1942 a group of Polish prisoners and deportees were making their way from Siberian
49 Labour Camps to Palestine, the mustering point for a new Polish Army, the 2nd Polish Corps. In
50 the Persian Elburz Mountains they came across a young boy carrying a hessian sack that
51 appeared to be wriggling (Ivell and Baczor, 2013). After sharing some food with him, one of the
52 men, Peter Prendys peered into the sack to see that it contained a young brown bear cub. The
53 cub's mother had been shot and the boy was going to sell the cub, most likely to be trained as a
54 dancing bear. After a period of bartering and with the exchange of some local currency, food
55
56
57
58
59
60

1
2
3 and a Swiss army knife the cub was handed over and the group decided to name him Wojtek, an
4 old Slavic name meaning “he who enjoys war” or “smiling warrior” and Peter Prendys, a self-
5 effacing man who in his mid-forties was the eldest of the group was appointed Wojtek’s guardian
6 (Orr, 2010, pages 23-27). When the group arrived in Palestine to join the 2nd Polish Corps the
7 commanding officer, Major Chelminski, agreed that Wojtek could stay as it was clear he was a
8 fine military mascot as the soldiers’ morale was buoyed by his presence (Orr, 2011, pages 28-30).
9 Military mascots highlight what Hediger (2012, page 3) has described as the ‘often paradoxical
10 contours of human-animal relationships’ in warfare, where human and animal lives are co-
11 constituted and it is through these relations that soldiers cling to a sense of humanity. In these
12 engagements animals remain objects through which humans locate and maintain structures of
13 the self. Such relations and figurations of the animal – as a tool for identifying and articulating
14 the human - have long and enduring histories. For example, the figure of the bear has held a
15 particular place in human history and imagination as Bieder summarises; ‘Long ago bears
16 lumbered into human imaginings and left legends, stories and myths’ (2005, page 49) they persist
17 in folklore and myth; as a worthy adversary in big game hunting, a creature with appealing
18 aesthetics for an endearing toy and possessed with an intelligence to be tamed as a performer.
19 These bear stories continue to shape and mediate the world around us as: ‘[s]tories are politically
20 and ideologically charged, they illuminate specific historical and cultural periods’ (Bieder, 2005,
21 page 117). Wojtek, thus contributes to a long tradition leaving his mark on the imaginings of the
22 soldiers who shared his journey, and on those who know him through the retelling. However,
23 Wojtek has contributed something further, if the nature and practices of his relations with those
24 around him in war are explored it appears he did not reflect but challenged categories of bear
25 and human, perhaps even highlighting the ambiguity of who or what can be considered a
26 ‘soldier’.

27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42 **Figure 2: Wojtek as a cub with Polish soldiers (courtesy of Polish Institute and Sikorski Museum)**

43
44
45 In the desert the cub quickly became part of, and embedded in, military life. Wojtek lived with
46 and adapted to the soldiers as they travelled through Iraq, Syria, Palestine and Egypt as part of
47 the 22nd Transport Company. He shared their supplies, slept with them in their tents and rode
48 with them in their trucks. The soldiers in turn became attuned to Wojtek’s experience of their
49 military posting. For example, the demands of the desert terrain led the soldiers to adapt their
50 camp to the bear’s needs; a makeshift canopy was erected to protect him from the sun (Ivell and
51 Baczor, 2013, page 41) and while on a posting to Egypt the soldiers dug him a bathing pool in
52 the sand to keep him cool during the searing heat of the day (Orr, 2010). As Wojtek grew from
53 cub to full sized bear, he socialised with the soldiers; wrestling with them, mimicking their
54
55
56
57
58
59
60

1
2
3 behaviour such as drinking beer and saluting when greeted (Orr, 2010). Many of the soldiers
4 enjoyed his company and were patient of his inquisitive nature, although on occasion discipline
5 had to be enforced and Wojtek was tethered in the camp when he raided their limited food
6 supplies. One soldier, Stanislaw Krocak (cited in Ivell and Baczor, 2013, page 54) recalled that
7 with no trees in the desert a metal stake was driven into the ground, Wojtek would then spend
8 his time swivelling backwards and forwards until the stake came free and he was able to wander
9 where he pleased. The soldiers would have to go after him in a truck until he was willing or
10 could be cajoled to get on board and be taken back to the camp.
11

12
13
14
15
16 Therefore, on occasions the restrictions of army life and the physical geography of the
17 battlespace proved more laborious in the company of a bear, while army life also served at times
18 to restrict and curtail Wojtek's spatialities. What appears from considering this relationship
19 between human and nonhuman animal is that through a process of negotiation, novel strategies
20 of co-dwelling were trialled and brought into being. The battlespace here is an example of
21 Haraway's (2008) notion of 'response-ability', as a space operating outside normal conventions
22 the soldiers' in the desert practised attentive relations of care while adapting to Wojtek's
23 presence. As captive companion animal Wojtek is comparable to the elephant in the zoo who, as
24 described by Whatmore, becomes adapted 'to a more impoverished repertoire of sociability,
25 movement and life skills that will always set her apart' (2002, page 56). But for Wojtek the
26 effects of captivity are less clear-cut. He enjoyed relative freedom and a very close, social and
27 embodied relationship with the soldiers. They slept, played and ate together, some of the
28 soldiers in turn clearly found their military life enriched through their relationship with the bear.
29 Their everyday routines and rhythms were shaped by a continual choreography of co-dwelling.
30 Yet of course, as Haraway (2008) has also drawn attention to, such spaces or encounters do not
31 eradicate asymmetrical relations and strategies of control were devised to constrain Wojtek's
32 everyday geographies; he relied upon the soldiers for food and water, just as they relied upon the
33 military for their own supplies. All were finding their military identities and place in the war.
34
35
36
37
38
39
40
41
42
43
44
45

46 However, the relationship between Wojtek and the soldiers in the company should not be over
47 romanticised. For some, Wojtek's presence was not welcome but a further unnerving addition
48 to army life. One soldier, Franio Rodowicz, had the rather terrifying experience of being woken
49 in his tent by the great weight of Wojtek upon him, his teeth bared, which left Franio with an
50 occasional stutter (cited in Ivell and Baczor, 2013, page46). This demonstrates that the
51 consequences of the blurring of boundaries between human and nonhuman animal did not apply
52 only to Wojtek, it drew in other lives not all of whom were consenting to this challenge. Thus,
53 entangled relations of being and becoming in the battlespace, as experienced by Wojtek and the
54
55
56
57
58
59
60

1
2
3 soldiers in his company, should not be considered innocent because the process of ‘making
4 available’ so to inhabit spaces of intimate co-dwelling can put difficult demands on bodies and
5 lives. In the Second World War operating and living in the desert environment for both human
6 and nonhuman influenced their embodied experiences, helped to produce their relations
7 between one another and shaped the everyday rhythms of military life. Therefore, Wojtek
8 reveals how the hybrid nature of the battlespace demands, to varying levels, relations between
9 human and nonhuman which in turn facilitate a continual negotiation of precarious co-dwelling
10 in the making.
11

12
13
14
15
16 Further, Wojtek was not the only animal living amongst the Polish soldiers and certainly not the
17 only animal enrolled in desert warfare. As Gardiner explains, animals in war provide morale,
18 comfort, an outlet for sentimentality when faced with danger and a distraction from boredom
19 (2001, page 141) and as a result novel interspecies relations develop between nonhuman animals.
20 In Egypt, Wojtek, for example, befriended a Dalmatian, Krikuk, who was the pet of a British
21 liaison officer. There was also for a time another bear, Michal, who joined the Company after he
22 had been abandoned in Palestine by an Infantry Battalion, but due to a hostile and at times
23 violent relationship between the two bears, Michal was eventually traded with the zoo in Tel
24 Aviv for a monkey, Kasia (Krockzak, cited in Ivell and Baczor, 2013, page 61). The boundaries,
25 therefore, for some nonhuman animals were still firmly in place and reinforced through difficult
26 nonhuman relations, and in this instance, Wojtek’s presence prioritised. Thus, where Wojtek’s
27 biography intersects with a variety of other animals in the battlespace and some uncomfortable
28 humans, it chimes with Van Dooren’s (2014) narrative on Whooping Crane conservation where
29 intense efforts to save a species from the brink of extinction is characterised by care and hope
30 but equally violence and coercion directed at “sacrificial populations”. As heterogeneous and
31 plural the military and battlespace may be, but cuts are still made to exclude specific animals
32 deemed not or beyond use (be that as labour or for companionship or morale). Wojtek reveals
33 the cuts that care enacts, between species and individuals. Further, his narrative reveals that
34 asymmetrical power relations in the military are not explicitly drawn between human and
35 nonhuman animal but along the lines of care, attachment and use. In fact, issues of inclusion and
36 military identity appear to be more an issue decided by rank than by biology as an incident at the
37 Port at Alexandria reveals.
38
39
40
41
42
43
44
45
46
47
48
49
50
51

52 53 **A bear’s biography: becoming soldier**

54
55 In December 1943 Wojtek arrived in Egypt when the company were being mobilised for a move
56 to Italy and action. Up until then Wojtek had been one animal amongst many living with the
57
58
59
60

1
2
3 soldiers in the Middle East as one soldier recalled: ‘there were mascots everywhere – dogs,
4 ferrets, owls, lizards, foxes, pigs. Everybody wanted something to love’ (Lavis, 2011). However,
5 animals were forbidden to travel to Italy. In order to gain passage aboard the British transport
6 ship, Wojtek had to become officially drafted into the Polish Army, issued with a military ID and
7 rations. Archibald Brown – who was Courier to General Montgomery – recalled that in
8 February 1944 when the ship was preparing for departure one Polish soldier remained
9 unchecked on the rostra, a Corporal Wojtek. Eventually two of the Polish Officers were cajoled
10 by Brown to insist to the Corporal he be registered in person. On their return, Brown, obviously
11 shocked at seeing a bear being brought forth, refused to allow Corporal Wojtek passage. A
12 heated discussion ensued whereby the Port Authority was finally persuaded to phone the High
13 Command in Cairo in order to speak to General Anders, Commander of the 2nd Polish Corps.
14 Anders confirmed that Wojtek was indeed a bear *and* a soldier of the Polish Army and should be
15 allowed on board (Lavis, 2011). In that moment between shore and ship, Wojtek transgressed
16 from animal to soldier, from bear to Corporal, simultaneously inhabiting the role of pet, mascot
17 and comrade. Wojtek’s being in this moment is hazy, his ontology of ‘animal’ becomes slippery,
18 but his identity is clearly defined as a soldier of the Polish Army. Further, this moment reveals
19 the power of who can categorise, classify and name. To Brown, Wojtek, as a bear, was obviously
20 not and could not be a soldier because he was an animal. But General Anders overrides this
21 ‘commonsensical’ reasoning, and thus, from this point Wojtek not only embodies the soldier-
22 identity in the everyday but is also discursively subjectified as one in the power relationship by
23 which the General can make and enact Wojtek is a soldier. Therefore, much like the assemblage
24 of the laboratory in which the scientist-as-expert determines the bee as a ‘mechanical device’, so
25 does the assemblage of the military hierarchy in which the general-as-authority determines the
26 accepted status of Wojtek as ‘soldier’.

27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

Wojtek continued to inhabit this ambiguous role in Italy when the Company was posted to the
Battle of Monte Cassino. This battle took place between 17 January and 18 May in 1944. At the
beginning of 1944, the western half of the Winter Line was anchored by Germans holding the
Rapido, Liri, and Garigliano valleys and some of the surrounding peaks and ridges. Fearing that
the abbey in Monte Cassino formed part of the Germans’ defensive line, the Allies sanctioned its
bombing on 15 February. The destruction and rubble left by the bombing raid provided even
better protection from aerial and artillery attacks, so German paratroopers took up positions in
the abbey’s ruins. Thereafter the Monte Cassino and the Gustav defences were assaulted four
times by Allied troops, who eventually broke through, but at a high cost (Hapgood and
Richardson, 2002). It is estimated that the four battles cost the lives of 60,000 soldiers. One

1
2
3 survivor recollected: 'My battalion of 1000 men advanced into Monte Cassino village, three days
4 of fighting reduced it to 97 men' (cited in Orr 2012, page 43). It was in this battle that Wojtek
5 took on legendary status by helping unload boxes of shells. He was performing a task he had
6 seen the soldiers around him undertake numerous times. Although he had never been trained or
7 instructed to move boxes of ammunition, he mimicked the other soldiers' behaviour, but as one
8 soldier recalled 'it has to be said he did the lifting very much on his own terms; he chose when
9 and how long he would work' (Orr, 2010, page 47). In the Battle of Monte Cassino Wojtek's
10 shifting of shells consolidated his status as 'soldier' and the Polish 'soldier bear' became the
11 official badge of the 22nd Transport Company, a symbol that appeared on vehicles, pendants
12 and on the uniforms of the soldiers. One of the soldiers, Kay, recalled: 'He was a brave brave
13 man, as a bear' (Lavis, 2011). Haraway has explained that the world is one of 'webbed existences
14 and multiple beings in relationship', which is a 'tapestry of shared being/becoming' (2008, page
15 72), and as such, Wojtek's being and behaviour were shaped by the Polish soldiers, and they in
16 turn, formed aspects of their army's identity based upon their relationship with him. Wojtek as a
17 soldier *in*, yet also *out* of, place, is symptomatic of the capacity of war to create experiential hybrid
18 spaces. Whilst also revealing the capacity for social relations between humans and animals to
19 occur which in turn shape lives, practices and identities in the battlespace. By attending to
20 Wojtek's biography the battlespace is revealed to be a space of interaction between human and
21 nonhuman animal which can be born through the closeness of co-habitation and degrees of trust
22 between soldiers that was produced through everyday, even mundane rhythms of life, in
23 moments and places of exception. Woodward has explained that military-scapes are constituted
24 by military objectives but also through the ways in which they are experienced on personal scales;
25 these elements and scales converge to produce military identities (2014, page 43). In the
26 battlespace military identities (which as Wojtek demonstrates, expands to include specific
27 nonhumans) thus become co-constituted in complex networks and assemblages born of the
28 military-industrial complex. These identities are by their nature hybrid, but also importantly,
29 ones of intimate embodiment, everyday practices and the materiality of the battlespace. Despret
30 explains: 'The identities upon which identification could ground itself do not pre-exist; the
31 identity is created by the previous construction of affinities. Identity is the outcome, the
32 achievement' (2013, page 60). Wojtek was both a novelty but also a firmly embedded part of the
33 company. When removed from the battlespace such entangled identities become hard to sustain
34 and peace required identities to be reconfigured.

56 **A bear's biography: becoming bear**

1
2
3 By the end of the Second World War the Company and Wojtek were stationed at Winfield Camp
4 in the Scottish Borders. In 1947 the Polish Army were demobbed, but what civilian life had to
5 offer the Polish soldiers was uncertain and Wojtek, as Polish soldier and bear posed a particular
6 problem. Therefore, Wojtek's experiences in the military demonstrate the slipperiness of
7 categories such as human and animal, exposing them as made through cuts that are not
8 inevitable but material (Barad, 2007). His biography also reveals that not only are there realities
9 (or ethics) to the cuts made through processes of categorisation, but also, ethical questions arise
10 when novel realities which challenge categories of difference are produced, performed and then
11 abandoned.
12

13
14
15
16
17
18 Raised in the relative freedom of the battlespace Wojtek was neither wild nor domesticated; he
19 was never human yet never quite 'bear' either. Accustomed to having food provided, constant
20 companionship and with some freedom to roam as he pleased the choices for Wojtek in
21 peacetime were limited. It seemed he could either be put down or put in a zoo, both upsetting
22 prospects for the soldiers who lived with him. On witnessing Wojtek's arrival the director of
23 Edinburgh Zoo recalled: 'I never felt so sorry to see an animal that had enjoyed so much
24 freedom confined to a cage' (Gillespie, 1964, page 65) and one soldier recalled that Wojtek
25 became 'a different animal in the zoo' (Lavis, 2011). Fluri states that it is bodies which are the
26 most 'immediate and delicate' corporeal sites of warfare(2011, page 282). Yes they can be
27 damaged, ripped and torn apart but as we are also aware there are other painful consequences
28 and costs of war that bodies must bear, and these include nonhuman bodies.
29

30
31
32
33
34
35
36
37 Kinder has examined how the zoo animal is variously affected by warfare; from being bombed,
38 starved, massacred or eaten, promoted as paragons of civic virtue or enrolled in the military as
39 'good soldiers'. He suggests that '[s]patially concentrated, physically constrained, their entire
40 lives subject to the almost unmitigated control of their keepers, zoo animals are perfectly primed
41 for wartime' (2013, page 53). Wojtek's biography offers a different, distinct but surely not unique
42 story challenging how 'primed' army animals are to be fitted into human sites designated and
43 designed for safe human animal encounters. After becoming something slippery and hybrid in
44 the battlespace, Wojtek's being was forced to become stabilised outside the military. This was a
45 process that required further adaptation from Wojtek, but this time without the same level of
46 mutual accommodation or correspondence with the humans around him. Therefore, Wojtek
47 was demanded to inhabit, become a different form; one that fitted to within defined, clear and
48 distinct categories of human and animal. He was required to become a bear. Indeed in the zoo
49 Wojtek became a different animal: one to be observed as an example of type, species rather than
50 one interacted with as an individual. Although he had to some extent always been a spectacle he
51
52
53
54
55
56
57
58
59
60

1
2
3 now became primarily an object of curiosity. Soldier-bear and zoo-bear; two quite distinct,
4 discrete beings, each with different spatialities and different relations. One negotiated the other
5 fixed: yet both performed by one life.
6
7

8 **Relational ethics in war**

9

10 Focusing specifically on the more-than-human, blurring the boundaries between human and an
11 array of nonhumans examines how the world is becoming through entangled relations.
12 Greenhough suggests this 'puts us under obligation to find new ways of practising geography
13 that acknowledge the collective agency of geographers and those with whom they research in
14 shaping multiple and lively worlds'(2010, page 41). This approach expands the view posed by
15 Garner who states that 'animals should not be outside our moral concern... we have some duties
16 towards them' (1993, page 35). In short, it is not enough to grant or extend anthropocentric
17 rights or politics to animals as this never challenges the apparatus that allowed for an
18 anthropocentric politics and ethics to be produced in the first place. Instead, a more-than-
19 human approach reveals and invigorates the contexts and manners in which ethics are formed,
20 performed and reformed through multiple human-animal interactions (Buller, 2015). This
21 attention to co-presence, mutual corporeality and the responsive nature of non-humans in
22 shaping this world is to produce what Whatmore (1997) terms 'relational ethics' rather than to
23 work with pre-existing codes of morals and ethical universals. This ethico-political commitment
24 to embodiment, materiality, hybridity and situatedness is wary of homogeneity and desires for
25 holisms, and instead, by attending to intricate agencies between human and nonhuman (Puig de
26 la Bellacasa, 201, page 87) extends the body politic beyond the human, grounds processes and
27 rationalities as practiced and embodied and displaces 'the fixed and bounded contours' of ethics
28 (Whatmore, 1997 page 50).
29
30
31
32
33
34
35
36
37
38
39
40
41

42 As Ginn explains, embracing such heterogeneous more-than-human studies requires negotiation
43 that is not focused on a utopian view of such relations but has a more practical consideration of
44 how 'to learn to live (and die) well together without the promise of harmony, or safe endings for
45 any of those involved in the composing' (2013, page 3). Wojtek's biography demonstrates that
46 taking the nonhuman seriously offers interesting and innovative potentials to how the hybrid
47 nature of war is understood, but it unsettles any sense that relations between humans and their
48 animal companions in war are benign, safe or easy. Wojtek's biography provides an opportunity
49 to study war as a space that allowed different and diverse ways of being with nonhuman animals
50 as well as becoming more-than-human which produced particular materialities and realities. Such
51 geographies can recast histories of military engagements to become stories about the networks
52
53
54
55
56
57
58
59
60

1
2
3 and assemblages which actively transform knowledges, relations and bodies and which diffuse
4 far beyond the confines of battle. In this sense animals not only destabilise essentialist tropes
5 but offer a more-than-human perspective of 'lives-in-the making' (Buller, 2013, page 313) as well
6 as histories and geographies in the making.
7
8

9
10 In particular, by attending to the hybrid nature of warfare through an individual's biography the
11 everyday practices of care in the battlespace come to the fore. When the soldiers decide to take
12 care of Wojtek they instigated 'a transformative ethos' where caring was a 'living technology with
13 vital material implications for human and nonhuman worlds' (Puig de la Bellcasa, 2011, page
14 100). Drawing attention to these embodied, everyday practices and negations of care provides a
15 means to more fully describe the hybrid nature of the battlespace and warfare. Despret explains
16 the potential in taking such an approach stating:
17
18
19
20
21

22 To 'de-passion' knowledge does not give us a more objective world, it just gives us a world
23 'without us'; and therefore, without 'them' - lines are traced so fast. And as long as this
24 world appears as a world 'we don't care for', it also becomes an impoverished world, a
25 world of minds without bodies, of bodies without minds, bodies without hearts,
26 expectations, interests, a world of enthusiastic automata observing strange and mute
27 creatures; in other words, a poorly articulated (and poorly articulating) world (2004, page
28 22).
29
30
31
32
33

34 Yet, Johnson has called for attention and reflection in regards to which animals are considered as
35 participating in and being the focus of more-than-human geographies. She contends that by
36 attending to reciprocity or 'other emotional tissue' may dismantle binary relations but other
37 asymmetrical relations are recast, as nonhumans who do not offer immediate emotive
38 connections remain mute (2015, page 301), raising important questions about which animals and
39 ethical relations gets overlooked in the military-industrial-academic complex.
40
41
42
43
44

45 Although the biography of Wojtek tells the tale of a charismatic creature, an animal like us,
46 Wojtek's biography also reveals relations of care as provided by war to have unsettling less
47 innocent qualities. Giraud and Hollin (2016) explain how care conversely requires relationships
48 which are attentive to needs, but, they also foreclose certain forms of responsibility. In the
49 military, care for animals can provide succour, it can lubricate relations that produce bodies for
50 labour, sacrificial bodies or techno-cultural bodies and it can also shut down questions of the
51 ethical implications of animals in the battlespace. Wojtek reveals the way in which war allows
52 diverse relations between human and nonhuman, he highlights how individual bodies and
53 experiences are shaped by military processes and he hints at the lasting consequences of when
54
55
56
57
58
59
60

1
2
3 knotted relations are unpicked and ordered into the neat delineated lines between human and
4 animal. Thus, taking care to consider who and what are active in the battlespace and how these
5 relations are produced and performed complicates narratives of war and highlights the wide
6 ranging ethical implications of violence on a range of bodies, environments and relations.
7
8

9 10 **A bear's biography: recalling configurations**

11
12 To conclude, let us return to Edinburgh Zoo and to the bear enclosure. Wojtek's visitors,
13 former comrades and fellow soldiers reconfiguring themselves in the post-war era and peacetime
14 space induced a visible response in Wojtek. He swayed to the music, visitors insisted on
15 throwing him cigarettes (a task that could cost up to two packets) until one would finally reach
16 the enclosure, where the bear retrieved and ate it. His ears twitched back and forth when he was
17 spoken to in Polish, occasionally nodding his head in a seemingly sage response (Lavis, 2011).
18 Zoos are, it is been widely acknowledged, abstractions of nature. The closeness to the wild and
19 exotic offered by the zoo only serves to reinforce the distance between human and nonhuman
20 animal. Thus, as Anderson (1995) reveals, the zoo is complexly crafted in order to narrate what it
21 is to be 'human', to be 'self' as opposed to something 'other' something more 'beastly' and
22 lacking. Yet as Wojtek suggests, there can be moments of disruption when the physical and
23 cultural fabric of the zoo are temporarily breached, when boundaries dissipate, and the mutual
24 creaturely nature of both – human and nonhuman animal – forged in a different space come into
25 sharper focus. Despret has commented that working closely with nonhumans can induce
26 moments when 'animals are invited to other modes of being, other relationships, and new ways
27 to inhabit the human world and to force human beings to address them differently' (2013, page
28 60). But moments of connection of 'making available', are also moments tinged with tension
29 that demonstrate the 'ways 'humans' have not only defined but struggled with their complex
30 relationship to nature' (Anderson, 1995, page 279).
31
32

33
34 In particular, as this paper has discussed, war draws humans and nonhuman animals into its fray.
35 Wojtek's narrative reveals the connections, tensions and struggles that such hybrid relations
36 produce. Therefore, this paper has aimed to highlight that the attention given to the nonhuman
37 in critical military geographies has predominately focused on the role of technology at the
38 expense of human-animal relations in war. Through a vignette of Wojtek's biography, and by
39 drawing on animal geographies and storytelling, this paper reveals the battlespace to be a place of
40 co-habitation and transgression, where categories of human and nonhuman, nature and culture,
41 civilized and wild are challenged and destabilised, because through its hybrid character, war
42 inevitably undermines these naturalised categories of difference. Wojtek's biography reveals his
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

place in the military was not borne out of technological or scientific innovation but of a desire for close human-animal relations in warfare, revealing the diverse ways through which the hybridity of war is enacted and performed. The unsettling end to Wojtek's biography begins to suggest that when more-than-human relations are beyond utility or cannot be sustained outside the battlespace there are consequences. From saved and prized in the battlespace, protected and prioritised as companion and then parted from and reconfigured in the zoo, Wojtek's story is saturated with care but also with the violence inherent in human-animal relations. Thus, as well as highlighting the active role of animals in the military this paper has suggested that there are important relational ethical questions which are raised in the more-than-human battlespace. Wojtek's experiences demonstrates that reciprocal more-than-human relations expose a double significance of 'care' as a tool and relation, as both an everyday labour of maintenance but also an ethical obligation: 'we must take care of things in order to remain responsible for their becomings' (Puig de la Bellacasa, 2011, page 90). This requires research to articulate the hybrid nature of warfare and also to explore the ethico-political relations for *all* enrolled in the military geographies. Overall, this paper makes an intervention which argues for tracing the animal dimensions of military geographies which exposes the hybrid relations that compose complex assemblages of military violence to scrutinise and account for the intimate, embodied and unsettling practices of becoming in the more-than-human battlespace.

Reference List

- Adey P, 2010 *Aerial Life: Spaces, Mobilities, Affect* (Blackwell, Oxford)
- Anderson K, 1995 "Culture and Nature at Adelaide Zoo: at the frontiers of 'human' geography" *Transactions of the Institute of British Geographers* **20** 275-294
- Barad K, 2007 *Meeting the Universe Halfway: quantum physics and the entanglement of matter and meaning* (Duke Press, London)
- Beider R 2005 *Bear* (Reaktion, London)
- Buller H, 2013 "Animal geographies I" *Progress in Human Geography* **38** 308-318
- Buller H, 2014 "Animal geographies II: Methods" *Progress in Human Geography* **39** 374-384
- Buller H, 2015 "Animal geographies III: Ethics" *Progress in Human Geography* online first 1-9
- Chagnon N.A, 1988 "Life Histories, Blood Revenge, and Warfare in a Tribal Population" *Science* **239** 985-992
- Clayton D 2013 "Militant Tropicality: War, revolution and the reconfiguration of 'the tropics' c.1940 – c.1975" *Transactions of the Institute of British Geographers* **38** 180-192

- 1
2
3 Cowen D, 2008 *Military Workfare: The Soldier and Social Citizenship in Canada* (University of
4 Toronto Press, Toronto)
5
6 Davies G, 2000 "Virtual animals in electronic zoos: the changing geographies of animal capture
7 and display". In *Animal spaces, beastly places: New geographies of human-animal relations* Eds Philo C
8 and Wilbert, C (Routledge, London) 234-267
9
10 Davis G, 2012 "Caring the multiple and the multitude: assembling animal welfare and enabling
11 ethical critique" *Environment and Planning D* **30** 623-638
12
13 Despret V, 2004 "The Body We Care For: Figures of Anthro-zoo-genesis" *Body & Society* **10**
14 111-134
15
16 Despret V, 2013 "Responding Bodies and Partial Affinities in Human-Animal Worlds" *Theory,*
17 *Culture and Society* **30** 51-76
18
19 Driver F, 2001 *Geography Militant: Cultures of Exploration and Empire* (Blackwell, Oxford)
20
21 Emel J, & Wolch J, 1998 *Animal Geographies: Place, Politics and Identity in the Nature-Culture*
22 *Borderlands* (Verso, London)
23
24 Farish M, 2006 "Frontier engineering: from the globe to the body in the Cold War Arctic" *The*
25 *Canadian Geographer* **50** 177-196
26
27 Forsyth I, 2013 "Subversive Pattering: the surficial qualities of camouflage" *Environment and*
28 *Planning A* **45** 1037-1052
29
30 Forsyth I, 2014 "Designs on the Desert" *cultural geographies* **21** 247-265
31
32 Forsyth, I. 2015 "Desert Journeys: From exploration to covert operations" *The Geographical*
33 *Journal* 1-14
34
35 Fluri J, 2011 "Bodies, bombs and barricades: geographies of conflict and civilian (in)security"
36 *Transactions of the Institute of British Geographers* **36** 280-296
37
38 Gardiner J, 2006 *Animals in Wartime: From the First World War to the Present Day* (Portrait, London)
39
40 Garner R, 1993 *Animals, politics and morality* (Manchester University Press, Manchester)
41
42 Gillespie T, 1964 *The Story of the Edinburgh Zoo: The Royal Zoological Society of Scotland and the Scottish*
43 *National Zoological Park: an account of their origin and progress* (Slains, Edinburgh)
44
45 Giraud, E and Hollin, G 2016 "Care, Laboratory Beagles and Affective Utopia" *Theory, Culture*
46 *and Society* early online 1-23
47
48 Graham S, 2010 "Combat Zones that See: Urban Warfare and US Military Technology". In
49 *Observant States: Geopolitics and Visual Culture* Eds MacDonald F, Hughes R, and Dodds K, (I B
50 Tauris, London) 199-224
51
52 Greenhough B, 2010 "Vitalist geographies: life and the more-than-human" in *Taking-place: non-*
53 *representational theories and geography*. Eds Anderson B, and Harrison P, (Ashgate, Franham) 37-54
54
55 Gregory D, 2011 "From a View to Kill: Drones in Late Modern War" *Theory Culture and Society* **28**
56 188-215
57
58 Gregory D, 2015 "The Natures of War" *Antipode* **48** 3-56
59
60

- 1
2
3 Hapgood D, and Richardson D, 2002 *Monte Cassino: the story of the most controversial battle of World*
4 *War II* De Capo: Cambridge
5
6 Haraway D, 2008 *When Species Meet* (University of Minnesota Press, Minneapolis)
7
8 Hediger R, 2012 "Animals and War: Introduction". In *Animals and War (Human-Animal*
9 *Relations)*, Eds Hediger, R (Brill, Boston) 1-28
10
11 Hinchliffe S, Kearnes M, Degen M, & Whatmore S, 2005 "Urban wild things: a cosmopolitical
12 experiment" *Environment and Planning D* **23** 643-658
13
14 Hodgetts, T and Lorimer, J 2015 "Methodologies for animals' geographies: cultures,
15 communications and genomics" *cultural geographies* **22** 285-295
16
17 Howel, P 2013 "The Dog Fancy at War: Breeds, Breeding and Britishness, 1914-1918" *Society and*
18 *Animals* **6** 546-567
19
20 Ivell, K and Baczor, V. 2013 *Wojtek album: a collection of Wojtek photographs and anecdotes* (Krystna
21 Ivell, London)
22
23 Johnson E, 2015 "Of lobsters, laboratories, and war: animal studies and the temporality of more-
24 than-human encounters" *Environment and Planning D* **33** 296-313
25
26 Kaplan C, 2006 "Mobility and war: the cosmic view of US 'air power'" *Environment and Planning*
27 *A* **38** 395-407
28
29 Kinder, J, 2012 "Zoo Animals and Modern War: Captive Casualties, Patriotic Citizens, and
30 Good Soldiers". In *Animals and War (Human-Animal Relations)*, Eds Hediger, R (Brill, Boston) 45-
31 76
32
33 Kosek, J 2010 "Ecologies of Empire: On the New Uses of the Honeybee" *Cultural Anthropology*
34 **25** 650-678
35
36 Lavis, A 2011 *Wojtek: The Bear that went to War* (Brighspark, London)
37
38 Lorimer, H 2003 "Telling small stories: spaces of knowledge and the practice of geography"
39 *Transactions of the Institute of British Geographers* **28** 197-217
40
41 Lorimer, H 2006 "Herding memories of humans and animals" *Environment and Planning D: Society*
42 *and Space* **24** 497-518
43
44 Macdonald H, 2002 "What makes you a scientist is the way you look at things': ornithology and
45 the observer 1930-1955" *Studies in History and Philosophy of Biological and Biomedical Sciences* **33** 53-77
46
47 MacDonald H, 2006 *Falcon* (Reaktion, London)
48
49 Matless D, 2000 "Versions of animal-human: Broadland, c.1945-1970". In *Animal spaces, beastly*
50 *places: New geographies of human-animal relations* Eds Philo C and Wilbert, C (Routledge, London)
51 115-140
52
53 McKiernan S and Instone L, 2015 "From pest to partner: rethinking the Australian White Ibis in
54 the more-than-human city" *cultural geographies* 1-20
55
56 Morris C and Holloway L, 2014 "Genetics and livestock breeding in the UK: Co-constructing
57 technologies and heterogeneous biosocial collectives" *Journal of Rural Studies* **33** 150-160
58
59
60

- 1
2
3 Orr A, 2010 *Wojtek the Bear: Polish War Hero* (Birlin, Edinburgh)
- 4 Patchett M. 2008 "Tracking Tigers: Recovering the Embodied Practices of Taxidermy" *Historical*
5 *Geography* **36** 17-39
- 6
7 Patchett M, 2012 "On Necro-Ornithology, Monstrosity and Botched Birds" *Antennae: The Journal*
8 *of Nature in Visual Culture* **20** 9-26
- 9
10 Pearson C, 2012 *Mobilizing Nature: The Environmental History of War and Militarization in Modern*
11 *France* (Manchester University Press, Manchester)
- 12
13 Philo C, 1995 "Animals, geography, and the city: notes on inclusions and exclusions" *Environment*
14 *and Planning D: Society and Space* **13**.655-681.
- 15
16 Proctor J and Pincetl S, 1996 "Nature and the Reproduction of Endangered Species: The
17 Spotted Owl in the Pacific Northwest and Southern California" *Environment and Planning D* **14**
18 683-708
- 19
20 Puig de la Bellacasa M, 2011 "Matters of care in technoscience: Assembling neglected things"
21 *Social Studies of Science* **41** 85-106
- 22
23 Robbins P and Moore S, 2013 "Ecological anxiety disorder: diagnosing the politics of the
24 Anthropocene" *cultural geographies* **20** 3-19
- 25
26 Robinson, J 2012 "'Darkened Surfaces': Camouflage and the Nocturnal Observation of Britian,
27 1941-45" *Environment and Planning A* **45** 1053-1069
- 28
29 Shaw I, 2013 "Predator empire: the geopolitics of U.S. drone warfare" *Geopolitics* **18** 536-559
- 30
31 Shaw, I and Akhter, M, 2012 "The Unbearable Humanness of Drone Warfare in FATA,
32 Pakistan" *Antipode* **44** 1490-1509
- 33
34 Whatmore, S 1997 "Dissecting the autonomous self: hybrid cartographies for a relational ethics"
35 *Environment and Planning D* **15** 37-53
- 36
37 Whatmore, S 2002 *Hybrid Geographies: Natures Cultures Spaces* (Sage, London)
- 38
39 Whatmore, S 2006 "Materialist returns: practising cultural geography in and for a more-than-
40 human world" *cultural geographies* **13** 600-609
- 41
42 White P, 2005 "The experimental animal in Victorian Britain: In *Thinking with animals: New*
43 *perspectives on anthropomorphism* in Eds Daston L and Mittman G (Columbia University Press, New
44 York) 59-82
- 45
46 Wilson E.O, 2012 *The Social Conquest of Earth*. (Liveright Publishing Corporation, New York)
- 47
48 Woodward R, 2004 *Military Geographies*, (Blackwell, Oxford)
- 49
50 Woodward R, 2014 "Military landscapes: Agendas and approaches for future research" *Progress in*
51 *Human Geography* **38** 40-61
- 52
53 Van Dooren, T 2014 *Flight Ways: Life and Loss at the Edge of Extinction* (Columbia University Press,
54 New York)
- 55
56
57
58
59
60

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

For Review Only

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60



Wojtek, Edinburgh Zoo (courtesy of Polish Institute and Sikorski Museum)

93x140mm (300 x 300 DPI)

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60



Wojtek as a cub with Polish soldiers (courtesy of Polish Institute and Sikorski Museum)

128x77mm (300 x 300 DPI)

View Only