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## From Working Animals to Cherished Pets

### Canine Histories across the Centuries

This article addresses the significant transformations in the status of dogs throughout history and also reveals that attitudes to dogs have varied considerably across the world. While for a long time they were kept as working animals, more recently dogs' main function has become to provide emotional support and they have often acquired the status of family members. After discussing the significant shifts in the long and entangled history of the human-canine relationship, the article concludes by outlining future perspectives, paying particular attention to the inspiration which the unique social skills of dogs can provide for technological developments.

Our planet boasts a dazzling variety of animals, but only a handful of species have acquired the privileged position of pets. Some of these function as status symbols for humans and are cherished primarily for their rarity or financial value. By contrast, people who seek companionship typically favour 'ordinary' and domestic pets such as dogs and cats. That these two species have become all-time favourites is partly serendipitous: they (or more precisely, their predecessors) happened to be in the right place at the right time, at a stage in history when humans were willing and able to domesticate various animals.<sup>1</sup> Nonetheless, canines and felines possess certain unique qualities which render them suitable and desirable companions, and these were just as essential for domestication. From this point of view it is particularly advantageous that they tend to remain in the vicinity of their owners and that their biological clocks are compatible with the daily routine of humans. Their size also appears to be ideal: large enough for them to

be perceived as individuals, but small enough not to pose a danger.<sup>2</sup> Dogs possess further attractive qualities. They are capable of conveying nonverbal expressions of love and showing receptiveness to, and empathy with, the feelings of their owners. There is evidence to suggest that they may even be able to adjust their behaviour according to their owners' moods.<sup>3</sup>

The unparalleled variety of the domestic dog, *Canis familiaris*, also helps to ensure that anyone looking for a pet is able to find one that suits their desires, needs and tastes. Dogs have the largest variation in body types and sizes of any mammal, ranging from 0.5 kilos to 100 kilos, any combination of which can lead to fertile progeny. Dogs occupy the broadest geographical range of all quadrupeds (their populations are second only to humans in terms of worldwide distribution), and they have the longest history of human domestication of any animal by some distance.<sup>4</sup> They are products of both culture and nature, and their status in society has varied dramatically across different regions of the world. In some communities, cultural and religious customs imposed limitations on, or even prevented close associations between, dogs and humans, while in others they occupied an exalted position. For example, although there is a lack of consensus among authoritative theological works on the precise status of dogs within Islamic culture, *Canine saliva* is commonly considered ritually impure and humans are required to cleanse themselves and change their clothes following direct contact with dogs. Such cultural sensitivities are highlighted when sniffer dogs searching for explosives come into contact with Muslim citizens or Muslim taxi drivers come into close proximity with a guide dog. Yet, perhaps surprisingly, this has not prevented dogs from playing a productive and constructive role in Muslim societies at times. For example, until the turn of the nineteenth century they made an indispensable contribution to herding and hunting in Ottoman Egypt. Their subsequent stigmatization as health hazards corresponded with the process of urbanization and the emergence of new sanitary standards.<sup>5</sup>

Jewish culture has witnessed ambiguous attitudes to dogs until recent decades, but this was more due to distressing historical experiences than to religious tradition. In biblical times the use of shepherd dogs was widespread; however, subsequently, in the period of diaspora, Jews did not keep dogs. Their tragic and horrific experiences in the course of pogroms and later in concentration camps, when dogs were purposefully trained to attack Jews, resulted in them becoming associated with the 'enemy'. In recent decades

however, this aversion has been overcome and pet keeping has become both widely accepted and increasingly popular among (the secular) Israeli population.

In South-East Asia, where pet ownership is a relatively new phenomenon, dogs continue to be part of the diet and their consumption has been associated with certain beliefs about medicinal properties, such as boosting men's virility. In Vietnam and South Korea the illegal and cruel dog meat trade has at times evolved into a lucrative business. Yet, the increasing awareness of animal welfare – especially on the part of women and young people whose voices are becoming more prominent in these societies – should ensure that such abuses will cease in the not too distant future.

In the harsh climate of the North, a unique, entirely interdependent cross-species relationship developed between Inuits and their dogs.<sup>6</sup> Sledge dogs played a vital role in maintaining communication between isolated settlements, lands and waterways; without their contribution, the Inuits would have been unable to maintain a self-sufficient way of life. However, this relationship was ruptured in the 1950s when the Canadian government implemented a campaign to systematically exterminate these dogs with the intention of forcing the Inuits to either leave their land or to buy snowmobiles for moving around and hunting. In 2007 a truth commission was created in Canada to establish the precise intentions behind the mass slaughter of dogs and uncover its damaging effects on the Inuits' identity and way of life. As these examples reveal, that not only are there remarkable differences in attitudes to dogs across the globe, but their status has also undergone significant transformations, both in the short and long term, over the past twelve thousand years. While dogs have always provided companionship, for a long time their main function was as working animals. More recently, their primary role has become to provide emotional and social support to their owners, to the extent that they are often viewed as members of the family. Latterly, their therapeutic and healing effects have also been recognised. The next section explores some of the major milestones in this long and entangled human-canine relationship across the centuries.

## Domestication

The exceptionally diverse morphology and distribution of the domesticated dog has never ceased to capture the human imagination. It is perhaps surprising, therefore, that until the last thirty years, scientists showed a

remarkable lack of interest in the canine population, typically viewing dogs as an ‘unnatural’ corrupted version of wolves. This attitude has been exacerbated by the assumption that dogs are artefacts of human design, rather than a unique biological species in their own right. As such, they were deemed unworthy or unsuitable subjects for serious scientific investigation.<sup>7</sup> Thus, it is only relatively recently that scientists have begun to acknowledge the huge potential that the scientific study of dogs can unlock. From this perspective it is hardly relevant that they are not closely related to humans in a morphological sense. Much more crucial is the fact that they have acquired some behavioural patterns that are commonly viewed as uniquely human. This has prompted scientists to speak about *co-evolution*, because it appears to be impossible to separate dogs from the context of human culture in which they exist.<sup>8</sup>

Nevertheless, the precise contours of domestication remain unclear. The most likely explanation is that it was the result of various evolutionary, ethological and cultural factors rather than being due to a single cause.<sup>9</sup> Some scientists have speculated that the increasingly close association between humans and dogs was related to the emergence of a new, cooperative hunting technique in the Mesolithic period (Middle Stone Age), in which the keen senses of dogs were employed to trace and retrieve wounded animals.<sup>10</sup> Others have pointed out that the skills and experience gained from pet keeping could have supplied useful practical knowledge for hunting societies.<sup>11</sup>

There have also been attempts to reconstruct the dog-human relationship as it would have been in ancient times. Perhaps the most influential recent theory was devised by Raymond and Lorna Coppinger, on the basis of their observations made in a village on Pemba Island in the Indian Ocean. The location was chosen to represent ‘Mesolithic’ conditions as the researchers believe that the contemporary hunting and farming community on the island, with its essentially free-ranging dog population, provides a model for the early dog-human nexus. It is a partnership based on interdependence and mutual gain: dogs benefit from the freedom to scavenge for their food in the debris around the settlements, while humans are spared the task of having to remove unnecessary and perilous waste. However, critiques of this theory have pointed out that the villagers’ contemporary relationship with dogs on Pemba island – they tolerate them, but do not develop individual bonds with them – may not accurately be described as ‘indigenous’; it is more likely to have been influenced by historical and cultural factors. For

example, the villagers are Muslim and this may help to explain, as we have seen above, why closer relations with dogs are discouraged.<sup>12</sup> Therefore, any attempt to reconstruct the conditions of the canine-human relationship in ancient times is bound to involve considerable speculation, particularly in light of the increasing uniformity that has come to characterize the contemporary global world.

### From the 'premodern' to the pedigree dog

While many issues around domestication remain unresolved, it is clear that the process had significant biological and cultural effects on both the canine and the human population. For example, the shift from the wild to the domesticated setting transformed the dogs' perceptual world. In the wilderness, heightened perceptions combined with an instinctive rapid reaction to threats are essential traits for survival, whereas in a domesticated setting the necessary behavioural requirements include docility and obedience, lack of fear and tolerance of stress.<sup>13</sup>

Moreover, while it could be argued that dogs are the chief agents of their own domestication, the emergence of modern breeds is a direct result of human intervention. The Middle Ages witnessed early signs of diversification among the canine population, when the selective breeding of dogs for specific purposes was set in motion. Hunting enjoyed a reputation as a symbol of power and prestige for feudal aristocracy, and different types of dogs, such as deerhounds and wolfhounds came to be deployed for different forms of hunts, while greyhounds were employed for chasing game. In addition, sheepdogs played a role in warding off predators, while herding dogs were used to guide livestock from one place to another, on command.

It was not until the nineteenth century, however, that the human-controlled gene exchange was given an institutionalized form. Prior to this time, dogs had been primarily classified according to the functions they performed, but from this period onwards, classification became increasingly based on lineage and breed purity. Dogs were viewed as purebred if it could be proven that their ancestors had conformed to certain previously defined breeding standards. The main criterion for membership of a certain breed was physical appearance. Breed registers were introduced in order to record dogs' lineage, and new institutions, such as breeding clubs and dog shows, were established in order to define and maintain the standards of excellence. The invention of the 'purebred' dog was closely related to the kind

of conceptual thinking about race, purity, nationalism and progress which characterized the age of empires. This new development coincided with the period of transition from a predominantly rural to an urban industrial society in the Western world. The emphasis on breed purity was not entirely new; it had earlier been considered important for thoroughbred horses (as well as human aristocratic lineages).

As these details reveal, similarly to the case of human races, animal breeds are not fixed categories, but ever-changing, socially and culturally constructed concepts. There is hardly a better way to demonstrate the relevance of human-animal parallels than to observe how intimately these changes in the genetic makeup and function of dogs were related to the rise of nationalism, racism, and eugenics, as well as to class and gender consciousness.<sup>14</sup> Perhaps the best-known instance of the nationalization of dogs – the identification of certain breeds with certain nation states or cultures – is the invention and codification of the German shepherd dog in the late nineteenth century. The mastermind behind the initiative, a retired Prussian cavalry captain, Max von Stephanitz, sought to find a new mission for the shepherd dog, whose traditional task of protecting sheep from predators in rural settings had become increasingly redundant in the face of urbanization and the near-disappearance of predators from cultivated lands. In its new incarnation, as ‘manufactured’ by Stephanitz, the shepherd dog was bred for utility and ‘intelligence’ and was endowed with distinctively German origins. Emphasis was placed on the German shepherd’s ‘wolfish nature, partially due to Stephanitz’ fascination with wolves, and partly because the wolf was a popular symbol of German imperial ideology. In 1899 Stephanitz founded the Verein für Deutsche Schäferhunde (Society for German Shepherd Dog), which evolved into the world’s largest breeding society of any species.

Imperial and global networks enabled the German shepherd to enjoy stellar success on an international scale. For example, in the early twentieth century, it became one of the most popular breeds in Britain. However, in the aftermath of the First World War, many people in Britain conflated this breed with German imperial aggression, and later Nazi ideology. Its name was therefore changed to the Alsatian, and only in 1977 was the original name restored. Moreover, the remarkable adaptability of the German shepherd and its reputation as a loyal ally of those in power enabled the appropriation of the breed for national and racial exploitation by armies and police forces throughout the world. To that end, in the 1930s the breed became Japanized

and evolved into a potent symbol of the enforcement of social control by the Japanese imperial army.<sup>15</sup> It was also employed by colonial police forces in South Africa, where it came to epitomize the subjugation of indigenous black people.<sup>16</sup>

In addition to heralding the invention of the German shepherd dog, urbanization represented another watershed in canine history. While in rural areas people continued to view dogs primarily in functional terms, a new sensibility towards 'man's best friend' developed among the urban middle class in Victorian Britain, and simultaneously elsewhere in Europe.<sup>17</sup> Through the emergence of the culture of pets, the status and cultural representation of dogs acquired new dimensions. One of the most famous manifestations of these new sensibilities is the story of Greyfriars Bobby, a Scottish terrier who lived in Edinburgh in the middle of the nineteenth century. When the dog's owner died, Bobby slept on his grave in the Greyfriars graveyard every night for fourteen years. Following Bobby's own death, a small monument was erected to his memory. While questions remain about the authenticity of this story, it epitomizes a novel phenomenon in the modern human-animal relationship: many monuments and paintings portraying famous people in the company of their dogs had been produced in earlier periods, and displaying emotion and grief towards a dead animal was not uncommon, yet, unusually, in Bobby's case, the celebrity status was enjoyed by the dog and not by its owner.<sup>18</sup> It was also during this period that, in addition to the existing practice of memorializing companion animals in private spaces, dog cemeteries began to appear, the first and most famous of which was the Parisian Cimeterie des Chiens, founded in 1899.

Another sign of a new attitude towards pets was the portrayal of dogs and cats in literature as emotional creatures, capable of feeling and possessing a distinctive sense of self.<sup>19</sup> Apart from the numerous texts aimed at children, eminent writers were also inspired to produce works that endowed animals with human traits. Notable examples are masterpieces such as Virginia Woolf's *Flush* (published in 1933, but completed earlier), the semi-fictional biography of a cocker spaniel, and Jack London's *Call of the Wild* (1903), the fictional story of Buck, who was used and abused as a sledge dog during the Alaskan gold rush.

This period saw the birth of activism against cruelty toward animals, a movement which showed clear parallels with activism against the abuse and mistreatment of women, once again revealing the commonalities between

the historical trajectories of humans and animals. In Britain the suffragette movement was intimately linked to the anti-vivisection movement, as the famous Brown-dog affair of 1907, which even led to riots, reveals. The conflict erupted after two female Swedish activists had attended a vivisection performed by a professor from the Department of Physiology at University College, London. Women's rights activists drew a clear analogy between the vivisected dog, tied helplessly to the operating board, and one of their fellow suffragettes currently on hunger strike in prison, having to endure being force-fed. It also echoed the humiliating situation in which women found themselves when strapped to the gynaecologist's table, often as the passive subjects of experiments, rather than recipients of medical treatment.<sup>20</sup>

Class and status consciousness was also reflected in dog breeding and ownership. For example, the new urban, white male middle classes displayed sentimentality only towards their cherished purebred pets, while simultaneously regarding the vulgar 'mongrels' kept by the working classes and the stray dogs roaming the streets in packs with disdain and contempt. To them, the 'canine proletariat' was synonymous with their human counterparts, which the middle classes believed were threatening the existing social order. The parallels between the intention of eugenicist thinkers to reduce levels of reproduction among the lower classes and the desire to prevent hybrid 'mutts' reproducing abundantly are also obvious.<sup>21</sup> While the purebreds were embraced as companion species, canines without pedigree were perceived first and foremost as sources of disease, filth and waste and, as such, treated as a sanitary problem requiring a (radical) solution.

The First World War contributed hugely to the intensification of the bond between humans and dogs, particularly because dogs shared the same fate as soldiers on the fighting front. Not only did canines perform important jobs in the war – for example by tracking injured soldiers and delivering messages – but they also provided emotional support for the combatants who were compelled to spend lengthy periods of time away from the families. Their companionship with dogs helped them to retain their humanity amidst the brutality of the War.<sup>22</sup> This experience led to the emergence of a new human-canine alliance based on mutual trust. One manifestation of this intensified relationship was that guide dogs for the blind began to receive professional training during the War, first in Germany and later in several other countries. In addition to acting as the eyes of their owners, these dogs also had a therapeutic value, providing much-needed companionship for the socially isolated veterans. Because thousands of animals worked and died



on the front, those canine soldiers that did not survive had to be replaced quickly; consequently, a new and sizeable group of professional military dog trainers emerged, who, once the War had ended, transferred their skills to the training of the 'civilian' canine population.

### The arrival of the modern dog

The twentieth century witnessed the emergence of 'modern' dogs, which are often viewed as members of the family; at the same time, the social environments of puppies and children have become increasingly comparable. At school, children undergo an educational 'civilizing process', and they receive specialized medical care from paediatricians. Infants are nourished with 'baby food' and most restaurants typically offer a 'kids' menu' in addition to their standard fare. In a similar way, canines undertake obedience training in schools specifically established for that purpose, they are looked after by veterinarians and, with the emergence of the pet food industry, their dietary needs are catered for in a specialized way.

The professionalized training of dogs, as we have seen, had its origins in the two World Wars, and was spearheaded by retired military war trainers who provided obedience training based on a regime of punishment. In the twentieth century, new training needs evolved as dog owners had to work outside of the home and were confronted with the behavioural problems of the pets that they had to leave behind for an extended period of time. In a shift that mirrored the education of children, over time, the emphasis of the training switched from negative to positive reinforcement.

It was also in the first half of the twentieth century that dogs became the patients of veterinarians. Not much earlier, such an idea would have been viewed as absurd, and unwanted dogs were simply left to suffer or die. Turning dogs into patients provided a solution for the veterinary profession's existential crisis which was caused by the disappearance of their traditional patients: horses used in a working capacity. Dogs' adaptability and tolerance of veterinary interventions made them exemplary patients.<sup>23</sup> Nevertheless, long after they had started to receive medical care, the idea of treating them for 'psychological' or 'behavioural' problems remained unimaginable. Yet, in the late twentieth century, when human and animal psychology and psychiatry had forged much closer links, new medical and pharmaceutical paradigms emerged which postulated that animals can develop mental health problems in a similar way to humans.

One such disorder was ‘separation anxiety’, a condition that small children had previously only been diagnosed with. Canine behavioural therapy – ‘the application of scientific principles to modify an animal’s behaviour for the ultimate benefit of both the animal and the owner’<sup>24</sup> – was invented to treat symptoms such as those produced by ‘separation anxiety’. One of the key symptoms was ‘excessive barking’, which had, until the invention of canine behavioural therapy, been viewed as a completely natural reaction for a dog, as a sociable creature who may become frustrated if left alone for a long period of time. Since then, the parallels between human and animal conditions have been taken a stage further: in 2007 the pharmaceutical company Elli Lilly introduced a beef-flavoured anti-depressant for dogs that contained the same active ingredient as Prozac, the leading anti-depressant for humans.<sup>25</sup>

The creation of a pet food industry, scientifically underpinned by the establishment of ‘nutrition research centres’, transformed the nourishment of dogs into a multi-billion dollar industry. Traditionally, dogs were fed on household leftovers such as bread, bones from dead sheep, and by-products of meat or, alternatively, they consumed whatever they could scavenge on their own. It was during the Industrial Revolution, in the 1860s, that the first cheap dog biscuits, aimed at urban dog owners, were introduced to the British market by James Spratt, a businessman who also founded a factory and erected the first ever billboard in London to advertise his new product. The year 1922 saw the introduction of canned dog food in Britain designed for a mass market. In the United States the foundation of the Pet Food Institute in 1964 marked a turning point. This was actually a lobbying group in the service of the pet food industry, whose aim was to convince people that feeding dogs with anything other than packaged food was not only undesirable but also detrimental to their pets’ health. Their lobbying proved remarkably successful and, in recent years – again following human nutritional trends – an even more specialized pet food market has evolved, offering ‘wholesome’, ‘organic’ and ‘hypoallergenic’ products for dogs.

### The postmodern dog

Although the majority of historical developments outlined above primarily relate to ‘developed’ regions of the world, it would be a mistake to conclude that keeping dogs as pets is merely a sentimental habit confined to relatively

affluent members of Western or 'westernizing' societies. Poverty does not appear to deter people from keeping pets. On the contrary, even in deprived regions of the world, people have proved equally keen to invest substantial emotional and material resources in dogs. Furthermore, it has been shown that they are unlikely to reduce the amount that they spend on their pets (as in the case of their children) even in times of severe financial hardship.

This is surely because, although dog ownership may be useless from an economic point of view, it yields emotional and psychological benefits by complementing and enhancing human relationships. Dogs can also have positive effects on people with certain types of disabilities, a remarkable phenomenon which in 1969 inspired an American child therapist, Boris Levinson, to create a scientific framework for pet therapy. The catalyst for this framework was Johnson's observation that some of his severely withdrawn child patients, who had great difficulty relating to him and to other humans, effortlessly developed a cordial friendship with his pet dog during the therapy sessions.<sup>26</sup> Since then, it has also become scientifically established that dogs can play a role as icebreakers for autistic children whose cognition reveals similarities with that of animals: in both cases thinking occurs not in language but in pictures.<sup>27</sup> Over the last few decades the employment of dogs as service animals has become even more widespread. Positive experiences with guide dogs have inspired the training of hearing dogs to assist deaf people, while therapy dogs enhance the lives of people with dementia and autism. Currently, there are plans for experiments to test whether dogs' acute sense of smell can be used to anticipate a drop in blood sugar levels among people with diabetes and to predict when an epileptic person is about to have a seizure.

While it would be unwise to overestimate dogs' capacities to assist humans by presenting them as 'miracle animals', the highly advantageous nature of their social skills has become an undisputed scientific truism. However, not everyone who could benefit from those skills is in a position to keep a pet: some people simply do not like dogs; others are allergic to them or lack the necessary material resources that would enable them to become responsible dog owners. For this group, robotic dogs may provide a viable alternative. Futuristic and superficial as this idea may sound, it has already been tested through various pilot schemes. Perhaps the most well-known instance is the AIBO robotic dog, which was introduced by Sony in 1999. AIBO is characterized as a 'sophisticated and autonomous robot that can hear and see, it also has a sense of balance and touch. Eighteen specialized motors allow

such dog-like motions as rolling over, scratching, playing dead and chasing a pink ball'.<sup>28</sup> Similarly to a 'real' puppy, this robotic dog undergoes different stages of development over its life course: it is initially rather clumsy, but with time and training its movements and behavioural patterns acquire a degree of sophistication. Moreover, it develops the ability to respond to verbal commands and stimulate emotions such as anger, happiness and surprise.

Some people may find the idea of a robotic dog alienating. However, many scientists believe that, on the contrary, under certain circumstances robotic dogs could help to combat the loneliness and social isolation which the world's ageing population is increasingly facing. To that end, nursing homes have confirmed the positive effects of robotic dogs on patients with Alzheimer's disease, while children with autistic spectrum disorders also appear to be able to maintain attentiveness to humanoid robots. It is not the intention of scientists to create robots which mimic the behaviour and appearance of dogs as closely as possible. Rather, in the long run the aim is to install in robots the innate ability of dogs to dramatically change their physical and social environment for the better through cooperation with people. Thus, as has been suggested, dogs seem to have the potential to develop an attachment to their owners, akin to the attachment formed by adult humans as caregivers to children. However, this will provide the subject matter for a future chapter, rather than constituting an episode in the history of the world's canine population.

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## Notes

1. James Serpell, *In the Company of Animals* (Cambridge: Cambridge University Press, 1996), 126.
2. Idem, 127.
3. Idem, 130.
4. Susan McHugh, *Dog* (London: Reaktion Books, 2004), 7.
5. See Alain Mikhail, "A Dog-Eat-Dog Empire: Violence and Affection on the Streets of Ottoman Cairo?", *Comparative Studies of South Asia, Africa and the Middle East* 35 (2015): 76-95.
6. See Susan McHugh, "A Flash Point of Memories: Endangered Knowledge in the Mountie Sledge Dog Massacre", *English Studies in Canada* 31, nr. 1 (2013): 149-175.
7. See Juliet Clutton-Brock, "The unnatural world: Behavioural aspects of humans and animals in the process of domestication," in *Animals and Human Society: Changing Perspectives*, ed. A. Manning and J. Serpell (London: Routledge, 1994), 23-35.
8. Susan McHugh, *Dog*, 19.
9. Ádám Miklósi, *Dog Behaviour, Evolution and Cognition* (Oxford: Oxford University

- Press, 2007), 50.
10. Raymond Coppinger and Lorna Coppinger, *Dogs: A New Understanding of Canine Origins, Behavior and Evolution* (Chicago: University of Chicago Press, 2001), 69-83.
  11. Miklósi, *Dog Behaviour, Evolution and Cognition*, 50.
  12. Ibidem.
  13. Serpell, *In the Company of Animals*, 126-7.
  14. Aaron Skabelund, "Breeding Racism: the Imperial Battlefield of the 'German' Shepherd Dog", *Society and Animals* 16, nr. 4 (2008): 354.
  15. Aaron Skabelund, *Empire of Dogs. Canines, Japan and the Making of the Modern Imperial World* (Ithaca: Cornell University Press, 2001), 136.
  16. See Keith Shear, "Police Dogs and State Rationality in Early Twentieth-Century South Africa", in *Canis Africanis. A Dog History of Southern Africa*, ed. Lance van Sittert and Sandra Swart (Leiden and Boston, Brill, 2008), 193-216.
  17. This process is described in Harriet Ritvo, *The Animal Estate: the English and Other Creatures in the Victorian Age* (Cambridge Massachusetts: Harvard University Press, 1987).
  18. Hilda Kean, "The Moment of Greyfriars Bobby: the Changing Cultural Position of Animals, 1800- 1920", in *A Cultural History of Animals in the Age of Empire*, ed. Kathleen Kete (Oxford and New York: Berg, 2007), 27.
  19. Ibidem.
  20. Coral Lansbury, *The Old Brown Dog: Women, Workers and Vivisection in Edwardian England* (Madison: University of Wisconsin Press, 1985), 24.
  21. Aaron Skabelund, "Breeding Racism: the Imperial Battlefield of the 'German' Shepherd Dog", *Society and Animals*, 16 (2008), 356.
  22. Monika Baár, "Prosthesis for the Body and for the Mind: the Origins of Guide Dog Provision in Interwar Germany", *First World War Studies* 6:1 (2015), 82, Open access: <http://www.tandfonline.com/doi/full/10.1080/19475020.2015.1047890#abstract>
  23. Andrew Gardiner, "The 'Dangerous' Women of Animal Welfare: How British Veterinary Medicine Went to the Dogs", *Social History of Medicine* 27, nr. 3 (2014): 466-487.
  24. Roger A. Mugford, "Canine Behavioural Therapy," in *The Domestic Dog. Its Evolution, Behaviour and Interactions with People*, ed. James Serpell (Cambridge: Cambridge University Press, 1995), 141.
  25. This paragraph draws on an unpublished paper by Jennifer Adlem: "Puppy Prozac: the development of psychopharmaceutical products for dogs", I thank the author for her willingness to cite her work: [https://www.academia.edu/13445919/Puppy\\_Prozac\\_The\\_development\\_of\\_psychopharmaceutical\\_products\\_for\\_dogs](https://www.academia.edu/13445919/Puppy_Prozac_The_development_of_psychopharmaceutical_products_for_dogs)
  26. James Serpell, *In the Comany of Animals* (Cambridge: Cambridge University Press, 1986), 89.
  27. See Temple Grandin, *Thinking in Pictures: My Life With Autism* (Expanded ed., New York: Vintage, 2006).
  28. [http://www.robotbooks.com/sony\\_aibo.htm](http://www.robotbooks.com/sony_aibo.htm).