ANIMAL INTERFACES AND (NON)HUMAN PERSONAS

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ABSTRACT

This article explores the phenomenon of animal interfaces from a critical digital culture and media perspective. It focuses specifically on the shared boundary between the animal and technology, considering how such interfaces shape animal subjectivity and persona. By tracking various case studies of dog-technology interfaces – including, space dogs, dog photography and bionic dogs – it explores the possibility of a possible 'cydog' persona. I argue that dogs interfacing technology represent a possible animal persona that uniquely captures the intricacies of animal being. The cydog is an additional concept to help think through nonhuman persona that are irreducible and subjective, yet remained enframed by human actions. Guided by theorists Donna Haraway, Joanna Zylinska and Akira Lippit, I argue that interfaces play a key role in cydog encounters, creating increasingly complicated interactions that simultaneously mask anthropocentric pursuit and unmask nonhuman personas.

KEY WORDS

Animal Encounters; Cydog; Companion Species; Posthumanism; Nonhumanism; Dog Personas

INTRODUCTION

What if technological interfaces mediated not only human-computer engagement, but also animal encounters? Could these interfaces influence and create noteworthy understandings of human and animal personas? In my view, persona refers to the play of personhood and ways of being in the world. Technological interfaces act as a medium and entwinement to ensue out such personas, not only for human beings but also for animal beings. Although the animal persona can never wholly be known from the human perspective, we can consider the role of the interface in various animal encounters, considering what it reveals in relation to subjectivity, individuality and irreducibility.

The following article offers a hermeneutical reading of various animal encounters that are made possible by technological interfaces. In particular, the paper argues for considering the role of interfaces, as medium and proxy, in facilitating and shaping animal persona. My focus falls on dogs and unique, subjective dog personas as they exist in contemporary society, alongside and entangled within digital space. Accordingly, I track selected case studies where dogs share boundaries with the digital sphere, and consider the role of technology in shaping the dog persona. In doing so, I argue that technological interfaces play a key role in animal encounters, creating increasingly complicated interactions that simultaneously mask anthropocentric pursuits and unmask nonhuman personas.

'On the Internet everybody knows you're a dog'

One of the most iconic cartoons commenting on the development of digital culture appeared in *The New Yorker Magazine* in 1993. The cartoonist, Peter Steiner, introduces the viewer to two seemingly tech-savvy dogs. Dog one is seated in front of a desktop computer, paw on the keyboard, proclaiming to dog two: "On the Internet, nobody knows you're a dog" (Steiner 1993). To most scholars of digital culture, this is a familiar cartoon – perhaps one encountered it while learning about the rise of the Internet and the digital age in the 1990s. The cartoon summarises the then growing popularity of the Internet, the extent of anonymous online personas and the divide between life online versus life offline. While it playfully implied that even dogs could form part of online encounters, it also emphasised that, at times, humans could behave like metaphorical dogs, because they were protected by an online persona – their physicality and identity hidden behind a screen.

In recent times, new versions of the cartoon have appeared, further commenting on the infiltration of technology into everyday life. In the more recent meme versions of the famous image, cartoonists still depict different dogs engaged in cyberspace. However, these dogs now realise that, on the contrary, "on Web 2.0 *everybody* knows you're a dog" (Kinsley 2006, emphasis in original). These latest reinterpretations of Steiner's cartoon highlight a datafied society (Schäfer & van Es 2017), where, quite literally, everybody (and their dog) is always online (Turkle 2008). The adjustments show that technological interfaces have become increasingly complex and exist as a realm where people play between self-expression and self-concealment.

Although the commentary posed by the comparing versions of the cartoon is interesting concerning the self and persona studies, what stands out to me is the images' direct play on the animal persona, specifically dogs, in relation to technology. Even if meant playfully, the cartoons picture the prominence of *dogs* online, arguing that *dogs* developed from anonymous personas on the Internet to possible notorious digital entities. Following this line of thought, I wonder whether Steiner's original cartoon can also be interpreted as a type of prediction of how *dog* encounters have also become increasingly entangled with technology. In contemporary society, dogs are a beloved and noteworthy actor in the online realm. The cartoons therefore also introduce an essential aspect of animal encounters: technological interfaces.

In this article, I aim to explore this implicit phenomenon of the technological interface that forms part of human-dog encounters, untangling the intersection of human, dog and technological personas. I argue that technological interfaces play a critical role in the mediation of species encounters. Not only are animal figures mediated through technological interfaces, but they can also become interfaces themselves. As WJT Mitchell (2015, p. 241) explains: "They [animals] can also play the roles of screens on which a vast range of images can be projected, including of course the image of the non-human, post-human, and the inhuman". Thus, I consider the significance of the technological interface in human-animal encounters, exploring how such a shared boundary can mediate persona. Staying in line with Steiner's cartoons, I focus on dogs in particular, questioning what it means when dogs meet technology.

Dog Encounters and Interfaces

There has been substantial theoretical focus on the encounters between animals and humans in recent years. Following the broader shift towards nonhumanism, scholars turn towards human-animal relations to explore contemporary society in the age of the Anthropocene. The meeting space between species becomes a key point of discussion to make sense of nonhuman agency, approach environmentalism and counter human exceptionalism. In some ways, human-animal

encounters act as a "conceptual tool" to think through societal concerns (Ohrem 2018, p. 5). Yet, these encounters act as more than mere metaphors; rather, they are a medium that interprets and reveals ways of being. Moreover, they can become counterparts in thought, accompanying and mattering throughout research.

For example, in the seminal *The companion species manifesto: dogs, people and significant otherness* (2003) and its extension, *When species meet* (2008), Haraway introduces the notion of companion species, which describes the kinship encounters of human and dog who are joined together as significant others. For Haraway, dogs are not used as an allegory for other aspects of being human; they are what matters and what manifests (Cassidy 2003). In other words, Haraway focuses on the distinct encounter between humans and dogs to reveal ideas about humanity while simultaneously delving deeper into the subjective persona of the animal (specifically the dog). Echoing Haraway, several other scholars take animals seriously (see for example Calarco [2008], Deleuze and Guattari [1987], Derrida [2002], Weil [2012] and Wolfe [2003]). For these theorists, the encounter between human and animal informs, teaches and transforms (Ohrem 2018, p. 4).

Undoubtedly, engagement with animal encounters offers successful and constructive ventures in various disciplines of study. However, I am interested in a particular aspect of these encounters from a digital culture perspective: the interfaces that make human-animal engagement possible. Or, more specifically, the technological interfaces that allow for meeting points between human and animal subjects. Here, technological interfaces take on various forms of integration. As Johanna Drucker (2013, p. 213; 218) explains, interfaces are "techno-human mediations" that are no longer a space of boundaries, but a "space in which the experiential construction of an in-betweenness that is inclusive, both human and computational comes into being". In relation to the prominence and focus on human-animal encounters, such in-between technological interfaces then also extend to the entwinement between animal and computation. Technological interfaces – as physical, tactile, haptic, immersive, mediating technology – are surfaces of subject formation (Drucker 2013), or then persona formation.

There exists a wide variety of different technological interfaces that mediate the human-animal encounter. Although at times tough to pinpoint, or 'gooey' as Drucker (2013, p. 213) might say, some interfaces mediating animal persona could include hardware technologies, such as screens or cameras, software technologies, such as algorithms or applications designed for animal engagement, and technological immersive environments, such as simulators. Such technologies at times *enframe* animal persona (Heidegger [1954] 1977) but can also become part of the intricate entwinement between human, nature and technology, where all of these elements reciprocally shape and co-emerge with one another (Haraway 2008). In other words, they could be anthropocentric in their relation to animals, as well as encourage a nonhumanist approach to being – allowing for the formation of subjective, irreducibly animal personas. Throughout this article, I focus on case studies of such existing technologies as interfaces, to examine their role in shaping animal persona. Admittedly, what constitutes such interfaces can seem blurry and unclear, reflecting the complexity of the nature of the interface (Drucker 2013). Therefore, I consider various technologies that act as evident border spaces and mediators in human-animal-technology encounters.

Using Derrida's seminal essay, *The animal that therefore i am (more to follow)* (2002), as a reference point, studies of animal encounters often focus on the interchanging look between human and animal. In his essay, Derrida is stripped of any mediating force as he finds himself naked in front of his cat. This encounter allows Derrida to consider the subjective persona of the animal, wondering who we are when we look at animals and noting that the animal can also be

the examiner – gazing back at the human. Notably, human-animal encounters subject to the digital age are more complex than Derrida's uncovered confrontation. In fact, animal encounters are increasingly covered, filtered, and mediated, and they take place through a shared technological interface, complicating the animal's gaze. As Steiner's cartoon illustrates, just like human interaction, animal encounters often occur through a shared boundary – a technological interface that affects the relationship. Yet, these technological interfaces that transmit and often make animal encounters possible do not always take centre stage in discussion. In focussing on the human-animal gaze, literature frequently omits that animal-human meetings do not always occur solely in physical proximity or in the flesh. By applying a critical digital culture lens to animal encounters, I aim to take such nonhuman interfaces seriously in the following inquiry as I explore the role of the technological interface in nonhuman personas.

In the instances where technology is considered in relation to the animal, the focus often remains mainly on humans relating to technology, with animals as a human counterpart to the human-technology amalgamation. Alternatively, humans, animals and technology are treated as actors in a vast network of relations. Generally speaking, digital and media scholars consider the relation between the human and nonhuman, by focussing on the human emerging via, and in relation to, technology progressing over different periods (Zylinska 2009, p. xii). However, little scholarly attention is paid to the animal emerging via, and in relation to, technology – even if there is clear evidence of such a progression. Addressing the gap in the literature, I follow the digital pawprints left by dogs on various interfaces, exploring different case studies of how technology remakes and mediates animal encounters. In this way, I expand on Derrida's thoughts by thinking through what happens when we look at animals via technological interfaces. Additionally, I also respond to Haraway's (2008, p. 3) driving question, "Whom and what do I touch when I touch my dog?", by wondering: whom and what do I touch when I touch my *robot* dog?

The article opens with a discussion of dogs interfacing technology, guided by Haraway's theory of the cyborg and companion species. I briefly track Haraway's arguments and suggest an additional concept of the so-called 'cydog' to make room for critically discussing interfaces. Within the scope of this article, my consideration of Haraway here is arguably oversimplified. However, my goal is not to provide a close reading of Haraway's companion species. Instead, I employ Haraway as a guide to encourage scholarly conversation and inform my hermeneutical reading of animal personas in relation to technological interfaces. Thereafter, I provide a collection of case studies where dogs come face-to-face with technology. These case studies include space dogs, nonhuman dog photography and bionic dogs. Through this assortment of examples, I aim to expand on persona studies beyond the human realm, by including dog personas (through the possible cydog) and thinking through animals in relation to technological interfaces.

FROM CYBORG TO CYDOG

Prior to companion species, most scholars are introduced to Haraway through her significant – yet controversial '*Cyborg manifesto*', in which she establishes her notion of the cyborg. In an "effort to build an ironic political myth", Haraway (1991, p. 149) implements the infamous, post-gendered hybrid figure of the cyborg: "a cybernetic organism, a hybrid of machine and organism, a creature of social reality as well as a creature of fiction." Haraway's cyborg is a liminal creature of both reality and science-fiction, simultaneously machine and organism. Notably, the term was first used to describe an *animal*-technology hybrid by scientists Manfred E. Clynes and Nathan S. Kline (1960). The scientists described a laboratory rat with an osmotic pump placed under its skin, promoting survival function. After that, in the 1980s, Haraway

elaborated on Clynes and Kline's cyborg to picture a consciously aware fusion of the human and nonhuman, specifically the human, animal and machine.

In *The companion species manifesto* (2003) as well as *When species meet* (2008), Haraway extends her cyborg figure to the figure of companion species: "I have come to see cyborgs as junior siblings in the much bigger, queer family of companion species" (Haraway 2003, p. 11). Haraway's labelling of cyborgs as junior to companion species may refer to the fact that historically human-animal relations predate technological hybrids. However, a simple hierarchical sibling structure between cyborgs and companion species is often difficult to accept and insufficient. As Weinstein (2004, p. 188) notes, readers familiar with the cyborg might be confused as to whether or not Haraway still believes that all humans are cyborgs, or if she now considers cyborgs to be figures amongst many others that fall under the umbrella of companion species. We are left contemplating whether companion species are also cyborgs, embodying and entwining with technology. What about those animals that interface technology, like Clynes and Kline's lab rat?

Even if Haraway's turn towards companion species has dethroned and attempted to move away from the cyborg figure theoretically, I argue that the cyborg figure (or at least the machine hybrid premise behind the cyborg) remains relevant in the discussion of animal encounters. Seeing that Haraway (2008, p. 10) emphasises that technology forms a key part of the human-dog relation, how the human and dog fuse with technology before meeting with each other remains relevant. Especially on the grounds that companion species bring their historicity of technological embodiment to the meeting. In other words, if Haraway (2008, p. 133) is curious "to know how the emergence of an ethics of cross-species flourishing, compassion and responsible action is at stake in technosavvy dog cultures…", then it is also required to unpack precisely what such techno-savvy dogs that are interfaced with technoculture entail.

Markedly, Haraway does lean into the technological entwinement of dogs when discussing companion species, albeit to a limited extent or for the purpose of discussing a more significant idea, such as the ethical treatment of animals or animal agency. For example, in a chapter entitled *Cloning mutts, saving tigers*, she explores dogs' interfacing technology in instances such as cloning, genetic breeding, and the pursuit of techno-scientific research. However, she does so to question the ethical aspects behind these acts, investigating techno-animal hybrids under the larger question of living responsibly with others (Haraway 2008, p. 133-157). Similarly, in *Crittercam*, Haraway (2008, p. 249-263) explores the human-animal-technological compound in terms of companion species, not cyborgs, by looking at the phenomenon of photograph apparatuses and how such technologies can give animals an agency to make meaning in the human-animal relation.

Interestingly, Haraway's curiosity regarding the specific human-dog-technology compound does not propel her to investigate the technological animal or hybrid dog figure without focusing on the human entanglement. Regardless of Haraway's motivations behind largely avoiding a discussion of machine-dog hybrids, I suggest returning to such an enquiry might be helpful. Following Haraway's original cyborg formation, perhaps a focus on machine-animal hybrids could establish a possible way of holding different worlds together via the interface. Focusing on a hybrid dog figure could also lead to imaginative thinking about animal couplings and animal subject formation in a (post)digital age. Moreover, the technology-dog relation, with technology and dog as the main focus, is a prominent phenomenon in contemporary society and highlights a need to think of the animal as a separate, subjective and irreducible entity.

Upon closer inspection, there is evidence of technologies interfaced with animal flesh, specifically regarding the dog's body. In typical cyborg fashion, the figure of the dog interfacing technology is rooted in and mapped out in science-fiction and fantasy, corresponding to the cyborg as "creatures simultaneously animal and machine, who populate worlds ambiguously natural and crafted" (Haraway 1991, p. 149). Eminently, contemporary society is also littered with technological dog fusions. Several household dogs are microchipped with an electronic tracker and number, becoming dogs with everlasting technology infolded right under their skins. Other dogs wear dog collars that can be fitted with electronic devices, such as fitness trackers (for example *Whistle* and *FitBark*) and lightweight collar cameras (for example *CollarCam*). Furthermore, it seems the fictional figures of bionic dogs extend into the tangible world as robot dogs multiply rapidly and become accessible to the general public (Sparrow 2002, p. 3). Additionally, transhumanism pursues enhancing animals' cognitive abilities with technology in pursuit of the so-called "post-dog" (Hauskeller 2017, p. 25), while the space race of the 1950s saw dogs sent into space as astronauts or cosmo dogs.

Moreover, dogs also seem to respond to virtual interfaces in their environments. They often react to television and computer screens and interact with other dogs and humans through screens, including smartphones, computers, and pet monitor applications (Hirskyj-Douglas & Read 2018). That is to say, technologies form a part of the dog's immediate environment and mediate its behaviour and relations with other entities.

The extent to which boundaries have become blurred between dogs and technology is clearly indicated by the dog's presence on the Internet. Dogs have become prominent digital entities in the virtual world of social media and Web 2.0. In these instances, dogs are embodied in a technological realm and become hybrid creatures in their own right (Brittz 2020). A set of technological vocabulary for the digital versions of dogs has even emerged, demonstrating the significant reality of the technology-dog coupling. Popular press articles explain that a dog on the Internet is typically referred to as a "doggo", while a fluffy dog is referred to as a "floof". In turn, on the Internet a dog does not bark, but "borks". On social media, "doggos" also appear to have their own digital language and vocabulary, including words such as "heckin" and "hooman" (Valdez 2018). In this manner, through the social media interface, the digital dog reworks and transgresses the boundary between dog and machine. A unique, hybrid persona develops with its identifiers, carrying its own meaning and allowing for human interpretation.

From these brief examples, it can be deduced that the dog's fusion and technological embodiment is similar to Haraway's cyborg figure. The parallels are endless, ranging from hybrid dogs in fictitious examples to real-life dogs embodying technology or who become encoded figures submerged in virtual environments. Perhaps the similarities are not surprising since Haraway's (1991, p. 154) cyborg, parallel to companion species, includes a "joint kinship with animals and machines". Yet, arguing that dogs are also cyborgs is difficult, firstly, because Haraway distances her discussion of dogs as companion species from the hybrid cyborg figure. Secondly, the cyborg is a fluid entity with "leaky distinctions" between animal, machine *and* human (Haraway 1991, p. 152), which stands in direct contrast to dogs and humans as distinct subjective beings. Thirdly, Haraway's cyborg theory remains controversial, and we must take heed when interpreting and implementing it since several criticisms and questions surround the cyborg and its political agenda. For instance, Haraway insists that cyborgs are fluid and do not have a specific subject. Yet, she also urges cyborgs to embody responsibility (Haraway 1991, p. 146) – something that becomes questionable if there is no subject to take on this responsibility. In a similar fashion, Haraway ironically creates a figure that projects the anthropocentric ideal of technological domination over the natural realm, while simultaneously arguing against such a Western human exceptionalism (Marsden 1996, p. 9). If this critical

reception of the cyborg is thoughtfully considered, Haraway's cyborg theory should be approached with care, taking its intricacies and contradictions into account.

In order to move away from these intricacies, I, therefore, propose thinking of the infolding or interfacing of dog and technology as a so-called *cydog* – a hybrid persona that refers explicitly to the breached boundaries between technology and dogs in the digital age. The cydog persona moves away from the politics surrounding Haraway's cyborg by focusing solely on conceptualising the idea of a hybrid figure. It places the focus on the animal-technology hybrid, centring the discussion on the animal and nonhuman persona and not the persona of the human being. My motivation for the usage of this term here is purely for the investigation of the role of technological interfaces in relation to animal beings. Its usage is intended as an additional concept to think through dog encounters with technology specifically, guiding my exploration into animal persona. I do not suggest that it replaces Haraway's cyborg, nor should it become a generalised idea to apply to other animals at random. If animals are treated as individual personas according to their species, their hybridity with the technological interfaces would differ accordingly. Although thinking about the possibility, feasibility and implications of potential figures for other animals (for example, a cycat) is noteworthy, it is beyond the scope of this article. Here, I merely wish to entertain the idea of one specific animal, the dog, and its distinct interfacing nature with technology. Following Haraway, I argue that the dog is one of the animals most likely and prominently engaging with technology and, thus, acts as an interesting agent to examine the role of the interface in the enframing and revealing of animal persona.

My suggested cydog alludes back to Clynes and Kline's (1960) original use of the term 'cyborg' as an animal-technology hybrid. Taking my cue from the original meaning of the word, I reason that a suggested cydog is a dog amplified by technology in complex manners that results in a constant way of living with machine, albeit unconsciously. That is to say, the cydog does not need to show signs of awareness of its hybridity. The mere existence of the dog interfacing technology is sufficient to qualify it as a cydog, no matter speculation of how the dog understands its hybridity or the extent to which the human instigates the fusion between dog and machine, because it forms part of the dog's inherent persona.

Following Haraway's extension of Clynes and Kline's cyborg, cydog*s* are also "floating signifiers" (Haraway 1991, p. 153) that are not impartial or innocent figures (both in real life, virtual environment or as sci-fi creatures). They transmit meaning and require interpretation. Like cyborgs, cydogs are (digital) storytellers. These digital cydogs tell digital stories of animal encounters, which add an additional layer of meaning to the interpretation and interaction with the dog persona in contemporary society. As signifiers, cydogs acquire a sense of agency to construct, rework and signify meaning. Thus, the interface between dogs and technology gives dogs a sense of subjectivity and reaffirms them as entities with active influence on their environment, including their human companions.

To support my formulation of the cydog figure I turn to media studies theorist Akira Lippit. In *Electric animal* (2000), Lippit examines the development of the animal as a figure of modernity and technology. For Lippit (2000, p. 165) the animal becomes intertwined with its antithesis, technology, "serving as its vehicle and substance". Moreover, animals appear "to merge with the new technological bodies replacing them" (Lippit 2000, p. 187). That is to say, technological interfaces become "virtual shelters" for animals (Lippit 2000, p. 187). Thus, according to Lippit (2000, p. 197) the "traditional opposition between nature and artifice, *phusis* and *technē*, animal and technology" have converged and accumulated into an electric, semiotic animal – or then, in the case of the canine and *technē*, a possible cydog.

Specifically, Lippit (2000, p. 177) contends that the merger between animal and technology, since the latter half of the nineteenth century, prominently manifests in film and photography. For Lippit (2000, p. 183), photography aligns animal and machine. In turn, cinema can be seen as the culmination of the animal and the rise of technology that captures and expresses the animal's persona (Lippit 2000, p. 185; 197). According to Lippit (2000, p. 177; 185) photography is, therefore, a "place of being" for animals, while cinema "is a new way to transport information from one locale to another; from one forum to another; one body to another; one consciousness to another". In other words, digital photographs and videos of dogs on social network platforms, are virtual places of being for the dog that expresses information or carries meaning from dog to technology and technology to human. Therefore, the dog on social media, the dog in film and the dog in photography are also cydog personas, merged with, and carrying meaning through technological interfaces.

Interestingly, in a somewhat posthuman sense, Lippit (2000, p. 192) adds that the animal-technology hybrid also gives the animal an opportunity to 'stay alive' (so to speak) beyond its corporeal reality: "Unable to die, they move constantly from one body to another, one system to another". Similarly, we can argue that the cydog could lead towards what Hauskeller (2017, p. 25) calls the "post-dog", where the dog remains a being beyond its physicality. An always-online or enduring cydog clearly already manifests in the case of dog cloning, dog prosthesis and datafied social media images that leave traces of permanent dog data, or then digital pawprints, in the online realm.

Thus, I argue that the culmination of technological interfaces – including the digital, the electric and the medium of photography and film – and the dog as animal, results in a particular and noteworthy persona that transfers meaning and alters the physical constraints of the dog. Consequently, I summarise the technological encryption of the canine as a cydog similar to Haraway's cyborg, yet exclusively referring to a machine-dog hybrid persona.

CASE STUDY ONE: SPACE DOGS

Thus far, I have presented the idea of the cydog and the technological interface in a particularly nonhumanist manner, where both technology and the dog are actors merging with one another in a network of relations. However, what is omitted from the above discussions is the role of the human actor in the formation of the cydog persona. It is evident that the cydog, although a separate being from the human, is often a result of human action or can also be framed as an anthropocentric creation. For instance, cloning a dog is an overtly human endeavour, either in pursuit of scientific development or driven by a human attempt not to suffer the loss of a pet. It is, therefore, crucial to remain conscious of the human's role in the dog-machine interface. In this instance, I consider the human not as a cyborgian coupling with the dog hybrid, nor as a companion species, but as a distinct entity, enframing the initial conception of a cydog figure.

Haraway (1991) maintains that humans did not initially choose to become cyborg. Moreover, she argues that in cyborg relations it is no longer clear if human or machine is in power in the hybrid figure. Although whether or not humans chose to intertwine with technology remains a debatable point, Haraway's (1991) focus on the relation between human and machine in terms of power and initial creation does not necessarily translate to the animal and the figure of the cydog. I maintain that unlike Haraway's cyborg figure, we can see the cydog as a direct result of an initial human choice, human drive and human need.

For example, by thinking through the process of sending dogs into space, it becomes clear that interfacing dogs and technology can be an inherently anthropocentric pursuit. On 3 November 1957 a dog named Laika was launched into Earth's orbit onboard Sputnik 2. Laika

was one of Russia's numerous attempts to launch a dog into space, including several attempts that resulted in fatalities (Kemp 2007, p. 541). The so-called 'space dogs' or 'cosmo dogs' were typically selected based on a specific, human criteria: "weighing no more than 15 pounds, measuring no more than 14 inches in length, robust, *photogenic* and with a calm temperament" (Turkina 2014, emphasis added). Evident in the imagery surrounding the launch of Laika into space in the press, the space dog (or then cydog) seems to echo the posthuman figure of the astronaut: strapped into technology and looking out over Earth from the space shuttle window, Laika becomes fully dependent on technology to survive. Describing the state of Laika in the space shuttle, author Chris Dubbs (2003, p. 51) says: "All of the wires, machines, glowing lights, and strips of paper gave the oddest impression – that Laika was actually a part of this great machine, rather than just a passenger". In other words, Laika embodied technological apparatuses and became mediated through technology.

Laika's launch and astronaut embodiment were clearly not her own doing. Selected from a group of trained stray dogs that fit the Russian space programme's criteria, Laika had no choice (and arguably no awareness) in fusing with technology and boarding the one-way space flight sent to orbit Earth (Kemp 2007, p. 541). Moreover, the Russian space programme used the dog as an experiment to help gain insight into the possibility of human space travel. Additionally, using an animal aided the space agency: "Space agencies rely on the public's interest in people and animals to sustain engagement with their programmes ... striking images of astronauts and space animals have strongly contributed to the visual output of the agencies" (Kemp 2007, p. 541). That is to say, Laika's merge with technology to become a space animal and a cydog (and ultimately her likely death) was motivated and dominated by human beings and their pursuit towards development and power. In this sense, cydogs can be framed as an anthropocentric construct, where the human overpowers (or enframes) the animal with technology as a means to a human-driven end. For this reason, cydogs can also be critically considered in terms of the ethical implications for the animal being.

Parallel to Lippit's (2000, p. 192) argument that the animal-machine hybrid immortalises the animal, arguably space dogs are also memorialised through technology. Kemp (2007) argues that Laika "has achieved a kind of immortality" since she never returned to Earth and her body continued to orbit inside the space capsule. Similarly, Turkina (2014) explains that cosmo dogs are immortalised by becoming visual icons around the globe reproduced in popular culture. Kemp (2007) also notes that the statue erected in Moscow in memory of Laika features the dog's turned head and a piece of her space harness, indicating that Laika became a permanent cydog and, more specifically, a technological object in an (in)human(e) experiment.

In a similar manner, Michael Hauskeller (2017, p. 36) argues that the notion of a "post-dog" is primarily a human-centred action that eliminates the distinct being of the dog that is free to do as it pleases. Hauskeller (2017, p. 36) argues that the notion of the post-dog is post*human* and trans*human* driven and takes away the dog's "freedom to live [it]'s life as the kind of creature that [it] is, without the pressure or need to change and become something else". Comparatively, Robert Sparrow (2002, p. 12) argues that robot dogs are an assimilation of the human that does not capture the unique being of the animal. Instead of harnessing the dog as an animal with a different persona and elaborating on an irreducible subjective human-dog companionship, robot dogs anthropomorphises the animal (Sparrow 2002, p. 14). Furthermore, Sparrow (2002, p. 16) demonstrates that robot dogs are only beneficial for humans and can offer significant advantages as companions to people in need. In other words, the creation of such a technological dog is solely valuable to human beings.

Unpacking the possible anthropocentric narrative to identify the human agency at work in the fusion between dog and machine highlights the importance of identifying a cydog persona, separate of the human-animal-machine hybrid. Moving away from seeing the dog's hybridity as part of a blended knot of actors that include technology, humans and dogs, we are now able to see how human agency plays a role in the dog's infolding towards technology, which at times can lead to ethically questionable treatment of animals. Thus, the cydog persona unmasks anthropocentric pursuits that are often revealed through encounters with technology interfaces.

CASE STUDY TWO: DOGCAMS

As an alternate vantage point, there are certain examples of dog-technology interfaces that, in contrast to an anthropocentric narrative, focus on the nonhuman agency at play in the cydog persona. Dogs connected to smartcameras, like the *The GoPro Fetch* dog harness and *Nature's Recipe Collarcam*, posits the notion that some aspects of cydogs, to some extent, encourage nonhuman agency. Zooming into the nonhuman drive of the cydog opens up an anti-anthropocentric way of understanding dog interfaces, in addition to the already discussed human-anchored idea of enframing dogs and technology.

Technologies such as *The gopro fetch* and *Nature's recipe collarcam* entangle dogs with a device that, once attached to their physical bodies, allows them to film, photograph and post pictures to social media networks without human interference. That is to say, *after* human assistance or incentive to attach the device to a dog, the dog-camera hybrid produces images that are not captured by humans and represent the world from a nonhuman perspective. Haraway (2008) refers to such devices as crittercams that remove the human agent from the anthropocentric canon of photography. Additionally, crittercams reveal the way of being of the nonhuman animal without human interference or anthropomorphism: "Through the camera's eye glued, literally, to the body of the other, we are promised the full sensory experience of the critters themselves, without the curse of having to remain human" (Haraway 2008, p. 252). Thus, according to Haraway (2008, p. 257) crittercams give the human access to an interface of the animal's point of view.

In another crittercam example, dogs sometimes come into contact with smartphone devices or cameras and 'accidentally' take pictures of themselves, resulting in so-called 'accidental dog selfies' often shared on social media (Figure 1). In these instances, the human is no longer the sole agent behind the entwinement of dog and apparatus. As a result, the cydog gains agency and, in turn, highlights that cydog personas can shift the attention away from the human as the focal point towards the nonhuman being.

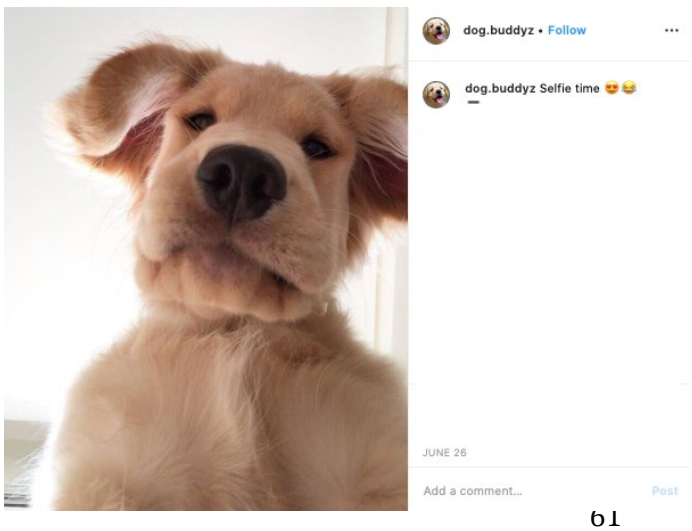

Figure 1: Screenshot of a so-called 'accidental dog selfie' on Instagram (dog.buddyz 2019).

To further study the nonhuman agency at work in these case studies of dog-technological interfaces, that are notably photography and social network driven, I turn to Joanna Zylinska's (2017) notion of "nonhuman photography". Zylinska explores the idea of nonhuman photography rooted in the philosophical ideas surrounding the nonhuman turn as well as posthuman theory. Notably, Zylinska (2017, p. 3) places nonhuman photography not as an opposition to human-centric photographic practices in a typical 'human versus machine' narrative, but rather configures it as an *expansion* of technological practices that the human is not part of (Zylinska 2017, p. 5). In other words, Zylinksa (2017, p. 4-5) remains mindful of the human input in photography, but also wishes to sketch a multi-perspective that includes the active role of the nonhuman in photographic practices.

Similarly, by exploring agency performed through cydog personas, I suggest an understanding of techno-dog interfaces that build on the typical anthropocentric association of such creatures. At the same time, I challenge such human-centric associations by acknowledging the cydog's possible influence and agency in the nonhuman world. Since the particular cydog personas that emphasise a nonhuman aspect are also photography-based and exemplify Zylinska's (2017, p. 5) description of nonhuman photography, I turn to her concept to show how dog-technology interfaces related to photography, emphasise the being of the nonhuman. In other words, I suggest a link between the dog-camera interface taking photos and the notion of nonhuman photography.

Zylinska writes that nonhuman photography encapsulates three overlapping concepts:

> (1) the rather frequently encountered yet often uncanny-looking photographs that are not of the human (depopulated expansive landscapes say);
>
> (2) photographs that are not by the human (contemporary high-tech images produced by traffic control cameras, microphotography, and Google Street View, but also outcomes of deep-time 'impressioning' processes, such as fossils);
>
> (3) photographs that are not for the human (from QR codes and other algorithmic modes of machine communication that rely on photographic technology through to perhaps still rather cryptic-sounding photography 'after the human'). (2017, p. 5, emphasis in original)

Apparatuses such as camera fitting dog harnesses and dog collar cameras, as well as those photographs accidentally taken by dogs, would then fall under the second concept, since the outcome of the apparatus is photos taken by nonhumans and also shared to social media networks by a nonhuman algorithm, i.e. not by the human but by technology-dog interfaces.

For Zylinska (2017, p. 13) nonhuman vision is where "the very act of seeing something, and its subsequent temporary fixing into an image, are performed by a nonhuman agent, even if their addressee is determinedly human". In doing so, nonhuman photographic devices secured to a dog's body, allows the dog's point of view to be shared, while also removing the human's privileged perspective: "It is about inviting the view of another to one's spectrum of visuality, to the point of radically disrupting this spectrum" (Zylinska 2017, p. 15).

Correspondingly, videos shared of dogs wearing *The gopro fetch* allow viewers to experience occasions via the dog's viewpoint and on the dog's four-legged level (Figure 2). The footage from such devices also removes a sense of human handling, as we see the embodied device shake, shift and slant along with the dog's movement. In other words, the cydog produces images that open up the dog's view of the world, which is not specifically human (Zylinska 2017, p. 17). Furthermore, devices such as the *Collarcam* share a point of view independently of humans on a digital social media platform, which is also computed by nonhuman algorithms and formulas. In particular, Zylinska (2017, p. 17) argues that a nonhuman perspective or way of seeing emulates different personas made possible by technology.

Figure 2: Screenshot of footage from GoPro Fetch (MRwiteout 2022).

Likewise, accidental dog selfies also suggest a sense of nonhuman agency. Suppose selfies are a gesture in self-representation that extends the self and negotiates the relation between the subject and the object, where the photographer is both the curator and the curated (Senft & Baym 2015, p. 1589). In that case, we can also contend that accidental dog selfies can equally suggest a sense of agency of the nonhuman dog taking a photo of itself (albeit not necessarily deliberately). Therefore, such an image dispatches a possible sense of agency to the dog, where the dog is no longer the object in a photo but also the subject, creator and possible sharer of the image. Moreover, dog selfies typically show the dog looking into the camera, as a subject, straight at the (human) viewer. Like Derrida's cat (2002), it presents the dog's gaze, which the human can recognise and respond to.

Thus, cydog figures that create nonhuman photography and nonhuman viewpoints bring forward another perspective "from which to understand ourselves and what we humans have called 'the world,' in all its nonhuman entanglements" (Zylinska 2017, p. 8). Zylinska declares that such models of nonhuman photography therefore "opens up a passageway to being-with" (2017, p. 8), inasmuch as they present a nonhuman persona, separate from the human (2017, p. 30). As a result, nonhuman imagery taken by a cydog presents a new persona unique to the dog, highlighting the different subjective being of humans and animals. In this way, a space opens up for the human to encounter a distinct nonhuman persona and point of view. Here humans acknowledge and come to know the animal's gaze independent from their own.

To a certain extent nonhuman photography can be viewed as a methodology to map and examine the animal persona. That is to say, these cydogs of photography translate and

document a possible dog persona that encourages a different way of looking at animals and acknowledging the dog's gaze. Therefore, cydogs become an intertwining of dog and technological apparatus or "the technical and the discursive" (Zylinska 2017, p. 75) to produce a nonhuman vision and make visible the possible, often-invisible inner persona of the animal to its human companions.

CASE STUDY THREE: THE QUANTIFIED DOG

Reflecting on the various ways dogs interface technology, a last interpretation of the cydog persona comes to light. In some instances, technology becomes a possible aid to the dog, to extend into the digital age. In relation, cydogs also help humans to exist with animals. Therefore, technological interfaces can also be seen as mediators, messengers and intercessors between human and cydog persona.

For instance, the *FitBark* fitness tracker for dogs, a small device that attaches to a dog's collar and monitors its activity levels, quality of sleep, distance travelled, calories burned, and overall health and behaviour – essentially a smartwatch for dogs – aids humans to interpret and understand their dog's behaviour better (Figure 3). It promotes healthy living for human and dog and translates the dog's bodily functions so that the human can detect early signs of discomfort or disease (FitBark 2019). In other words, the data tracker acts as a transposing interface, a messenger or translator (much like nonhuman photography) between human and dog, so the human can learn to care for the dog better. That is to say, the *FitBark* is a way of encountering dogs that, to use Haraway's (2008, p. 3) phrasing, teaches us to become "worldly" and "nurturing" to live better together. Thus, the *FitBark* is beneficial for both human and dog and provides human insight into the cydog persona.

Figure 3: Example interfaces from FitBark devices (FitBark 2024).

Similarly, cydog products such as dog monitor cameras (markedly another form of nonhuman photography following the principle of CCTV footage), allow humans to check-in with their dogs and observe their nonhuman world. Furthermore, they allow humans to respond to their dogs when they are in need or physically unable to interact with them. Much like a two-way video call, monitors act as a technological interface of connection and response between human and dog via technology. For example, some monitors allow humans to talk to their dogs through a screen, while others can even dispense treats and water. The means of technology emphasises how interfaces aid in revealing the cydog persona and, importantly, evoking responsibility and care from its human companion.

Interpreting the cydog figure in this way drifts away from the dominant view of technology as an anthropocentric ideology towards a more posthuman understanding of technology as a means to shape our world and thus shape animal encounters. A particularly new technological development that illustrates how technology can aid companion species is a recent facial recognition software developed by Megvii, which can identify one dog from another using noseprints. According to Winder (2019), "the company has developed the software on the basis that dogs have unique nose prints ... the new Magvii software just requires a smartphone camera to take a series of images of the nose from different angles that are then analysed by the software to determine the critical identification markers". In other words, Magvii's AI learns to recognise the individual being of dogs, creating digital footprints – or then noseprints – for unique cydog personas. The datafied prints of cydogs can then be used to trace dogs via CCTV footage, keep them safe and return them to the owners if lost. Moreover, the app can be used to monitor human-dog behaviour, "cracking down on what is referred to as uncivilized dog keeping" (Winder 2019). That is to say, the digital noseprints of dogs can also act as a messenger and tracker to keep them safe from anthropocentric, unethical pursuits and treatment.

The noseprint recognising AI software brings together: (1) the notion of uploading the dog to virtual space (as a cydog); (2) analysing the digital dog by means of software computation; (3) nonhuman photography tracing the data prints via CCTV footage; (4) using technology as a mediator to aid dogs and, finally; (5) to hold humans accountable for the ethical treatment of their canines. Not to mention, the software is also based on the idea that each dog (and its digital doppelganger) has a unique identity and nose print, emphasising the cydog's irreducible persona. Thus, cydog personas are complex entities that also speak to the importance of recognising different layers of understanding in animal encounters. Ultimately, identifying and considering the technological interfacing layer in animal encounters guides us towards an understanding of subjective cydog personas.

CONCLUSION

Briefly examining case studies of dogs interfacing with technology, shows how, in a contemporary society where 'on the Internet everybody knows you're a dog', such technological-dog interfaces result in an extension of the dog persona into a type of cydog persona. That is to say; when I touch my dog via a technological interface, I also touch a cydog. This cydog embodies all the layers of understanding of animal encounters, from the human-centred anthropomorphism and domestication of dogs to evoking a sense of anti-anthropocentric agency. In other words, touching a cydog through a technological interface is also a way of encountering animals.

Additionally, exploring examples of cydog persona allows us to identify human-centred pursuits often masked as posthuman or nonhuman relations, as well as to showcase and enhance the dog's separate nonhuman persona, albeit for human understanding. Technological-dog interfaces can also give dogs more agency and a nonhuman 'voice', while acting as an aid and mediator between dogs and humans. Thus, when we follow cydogs online, we follow, to a certain extent, a dog's nonhuman persona. More importantly, the cydog showcases that in the drive towards posthumanism and cyberspace, humans want to take their dogs as companion species – in all their complex layers of anthropomorphism, nonhumanism, care, play, touch, love and responsibility – with them, transferring their co-presence into the playground of the digital sphere.

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