Cats and Dogs - Myth busting

Domestic animals are an integral part of modern society. Many families have pets for various reasons, such as companionship, physical activity, social support, and protection. It's been demonstrated that pets bring physical and psychological health benefits to their owners. Nonetheless, many pets are relinquished to shelters and/or euthanised every year due to behavioural problems. The role of the veterinary profession is of vital importance, to inform current and future owners about animal behaviour.

Dogs

- **Dogs love being hugged**

It depends. Some dogs are very tolerant of physical contact, while others may feel uncomfortable when their ability to move is restricted, which is what happens when we hug them (Kuhne et al, 2012).

- **Dogs only see in black and white**

Dogs can see in colour, but probably not in quite the same way that most humans can. One recent study found that dogs can discriminate red from green, and blue from yellow, However, their ability to discriminate between different colours is influenced by the amount of light in the colourful stimuli. Therefore, in some light conditions, dogs are shown to be less successful in telling blue and yellow apart (Byosiere et al, 2019).

- **Dogs age 7 years for every human year**

Not exactly. A recent study of Labrador Retrievers found that an 8-week old dog would be at about the same developmental stage as a 9-month old human baby, which equates to just under 5 dog years for every human year. The average lifespan of Labradors, 12 years, corresponds to the human age of about 70. This would equate to almost 6 dog years for every human year. So the ratio changes throughout the dog's life. Also, this study only included Labs, and different breeds have different expected lifespans, so the ratio will probably also vary by breed (Petronek et al 1997; Wang et al 2020)

- **When a dog eats grass, that means they're not feeling well**

Maybe. Dogs sometimes eat grass when they're not feeling well, and sometimes they vomit after eating it, but this is the exception, not the rule. Mostly, it's just something that they do. It is a normal behaviour, but it's not yet clear exactly why they do it (Hart, 2008).

- **Dog parks are perfect for socialising puppies**

These areas can have a negative effect on puppy socialisation because puppies may have traumatic experiences in these parks. Trauma can lead to a post-traumatic stress disorder resulting in chronic stress and compromised ability to learn, which can also facilitate aggressive behaviours in specific contexts. Therefore, for these early socialisation experiences, it's not only necessary to find the right place, but also the right company of other dogs: dogs who are friendly and known to the puppy (Flint et al, 2018; Howse et al, 2018; Schöning, 2020).

- **Dogs can eat any human foods**

Careful! There are many foods that humans can eat which can be toxic to dogs, such as: chocolate, onions, grapes, garlic, avocado, and macadamia nuts (Kovalkovičová et al, 2009).

- **Dogs need to know who's in charge**

It's been found that dogs don't create hierarchies with their owners, even though it's possible for a sort of hierarchy to develop between dogs living in the same household. In the past, aggression towards the owner was believed to be caused by dominance, and the cause of that stemmed from the dog not knowing who was the 'alpha'. Nowadays, it's clear that aggression towards the owner is typically caused by extreme frustration due to an unpredictable environment and/or an inability to express natural behaviours (Yin 2007).

- **If a dog is wagging their tail, that means they're happy**

Tail posture tells us a lot about our dog's emotional state. A wagging tail doesn't only mean she's happy, it can also indicate that she's: playful, excited, interested, and even threatening (Simpson, 1997).

- **Mild physical punishment is an appropriate way to train dogs**

- **There's nothing wrong with smacking a dog with a rolled-up newspaper**

Punishment doesn't teach animals how to behave. Even if it can momentarily stop an undesirable behaviour, it doesn't offer any alternative, desirable behaviours, and the long-term effects can be unpredictable. Physical punishment can be accompanied by several undesirable, negative, and potentially harmful effects such as escape behaviours, aggression, and apathy (Yin 2007; Ziv 2017)

- **If a male dog is aggressive, the best solution is to neuter him**

Although neutering a male dog will reduce testosterone levels (hormones which, among other functions, regulate behaviour), it's usually not a magical solution to aggression and it will often be necessary to use additional, complementary methods, possibly with the help of experts such as veterinarians and behaviourists. A high percentage of dogs continue to be aggressive after neutering, although neutering does seem to be effective in reducing other problem behaviours such as urinary marking (Salavati et al, 2018; Aengwanich et al, 2019).

- **If a puppy is touched by a human, the mother will reject them**

Friendly interactions between humans and puppies, in the presence and with the consent of the mother, should happen early on. Puppies have a sensitive period of socialisation from about 3 to 14 weeks of age, during which they can benefit from exposure to a variety of social and non-social stimuli. If this exposure does not occur during these sensitive developmental periods, it can result in fearful adult dogs (Flint et al, 2018).

- **Aggression is primarily related to the breed and size of the dog**

Certain breeds are predisposed to having a strong character (e.g., Akita, Cocker Spaniel, and Wire Fox Terriers), but personality, defined as an individual's behavioural characteristics which are generalisable to any context, is the result of the interaction

between an individual's temperament and their environment. In fact, genetics explains only 10% of an individual's personality. Therefore, the way a dog is treated and trained is more important than their breed. There are studies in which small dogs are described as disobedient, excitable, and nervous by their owners. These dogs tend to be more impulsive and are more likely to bite when they are younger. But it's important to remember that the consequences of aggression by small dogs are not the same as aggression by larger dogs (Arhant et al, 2010; Wilsson, 2016).

- **It's normal for a dog to bark, whine, and destroy things when left at home alone**

No, it is not. Usually these problems are caused by anxiety perceived by the animal. 'Separation anxiety' is one of the causes of undesirable behaviours that dogs display in the absence of their owner or attachment figure. The most common symptoms are excessive vocalisations, inappropriately urinating or defecating, and destructiveness (Ogata, 2016; Amat et al, 2020).

- **It's normal for a dog to be aggressive towards other dogs, strangers, cats, other animals, and/or people bicycles or skates**

It's not normal for a dog to be aggressive towards any of these things. Aggression is usually associated with a sensitivity or a lack of socialisation as a puppy, causing these things to provoke fear in the dog, which can manifest as defensive aggression. It can also be caused by prior negative experiences, such as abandonment, aggression towards the dog, or conflict (Wilsson, 2016; Pirrone et al, 2016; McMillan, 2017; Flint et al, 2018).

- **It's normal for dogs to be aggressive towards children**

No, it's not normal. Usually, it's a learned behaviour that can present in families with small children. It's often due to high arousal levels, unpredictability, the child's tone of voice, and if the child sometimes behaves inappropriately towards the animal. This can create a potentially dangerous situation (Flint et al, 2018).

- **The best way to help a fearful dog is to expose them to their fears**

It is not. The best way is to follow a rehabilitation therapy with the support of an animal behaviour expert, such as a veterinarian or behaviourist. One of the many techniques that can be used is systematic desensitisation, which consists of slowly exposing the animal to stronger and stronger fear-inducing stimuli, while keeping the animal in a relaxed state (Poggiagliolmi, 2018; Schöning, 2020).

- **The best way to help a fearful dog is to punish them**

No. Punishment should be avoided because the animal is not acting out of disrespect or dominance, but fear. Reprimanding a phobic animal will make him feel even more fearful because he will associate the scary event with a painful and unpleasant experience (Brammeier et al, 2006).

- **If your dog urinates indoors, you should push their nose into the urine**

There are many reasons why a dog might urinate or defecate in the home. Toileting indoors where the dog rests, rather than outside, is not a normal dog behaviour. It can be the result of lack of toilet training, anxiety, or a health problem. Punishment, of this type or any other, does not teach the animal where to urinate, and it's possible that what she's actually

learning is that she shouldn't urinate in the presence of her owner, because she'll be punished. Punishment not only does not solve the problem, but it can also worsen the relationship between the owner and dog (Gomez, 2017).

- **In some breeds, dogs go crazy as they get older because their brain grows too big**

Dogs can suffer from dementia and cognitive decline with age. Furthermore, health conditions influence the way in which an animal perceives, and reacts to, the world around them. A fearful animal may have a compromised state of health. A low level of wellbeing can reduce tolerance to stress and make a dog more likely to react in an aggressive way. It's not been shown that such behaviours result from a dog's brain becoming too big, but they can signal other health problems such as tumours, epilepsy, or meningitis (Hedhammar & Hultin-Jaderlund, 2007).

- **Dogs know when they've done something bad. That's why they look guilty when their owners come home and see what they've done**

It's not that simple. Even though animals have been shown capable of feeling simple emotions like happiness and fear, experiments investigating complex emotions like guilt are inconclusive. It's likely that in some cases dogs don't know the difference between right and wrong but can read people's expressions; if the owner appears angry, sad, or nervous, the dog may try to calm her with appeasing behaviours, such as yawning or lip licking, to avoid receiving punishment (Ostojić et al, 2015; Lea & Osthaus, 2018; Benz-Schwarzburg et al, 2020; Horowitz et al. 2009; Hecht et al, 2012).

- **Dogs misbehave to punish their owner**

Just like guilt, vengefulness has not been demonstrated in animals. Usually, it's the product of how we humans interpret an animal's behaviour. We sometimes anthropomorphise, which means to believe that animals possess human traits. A dog may engage in these behaviours because he's suffering from separation anxiety or lack of environmental enrichment. In neither case is he behaving badly just to 'get back' at his owner out of some sense of injustice (Gomez, 2017).

- **Some breeds, like Doberman Pinschers or Rottweilers, don't recognise their owners at night**

This isn't correct because dogs don't identify their owners by vision alone, but also through their sense of smell and by hearing the owner's voice (Horowitz, 2020).

- **If dogs eat raw meat, they'll become aggressive**

- **A dog that has tasted blood will become aggressive**

No. Many raw meat diets exist. These diets should be controlled carefully to ensure they are balanced. There's a risk of cross-contamination during the processing and transport of raw meat, which can cause illnesses in our animals. These illnesses can lead to aggressive behaviour, but not the meat itself (Morelli et al, 2019).

- **Small dogs don't need to go out**

Owners have an obligation to ensure that animals fully develop their social and cognitive potential, so that they can confront challenges they face, and have as good a life as possible (Benz-Schwarzburg et al, 2020).

- **Dogs aren't meant for apartment living**
- **If you have a dog, you need a garden/yard**
- **If you have a big dog, you need a big house and garden/yard**

These three issues can be summarised as follows:

It's been shown that a small, limited space can be stressful for animals, which can cause discomfort and result in problematic behaviours. All animals need an environment that allows them to be physically and mentally stimulated, and this is particularly important for animals that are confined. Dogs are a social species and need regular interactions with other dogs, other animals, and their owners. Therefore, a dog can live in an apartment, and it's not necessary to have a garden/yard, but it's very important to satisfy his need for physical and mental activities. Varied daily walks, including interactions with people and other dogs, should be sufficient (Beerda et al, 1999; Miklósi et al, 2004).

- **Only puppies can learn to love their owner; adult dogs can't**

Dogs are very social animals and they can develop attachments to people at any age (Gácsi et al, 2001; Mongillo et al, 2013; Mornement et al, 2015; Chopik & Tessitore, 2019; Clay et al, 2020).

- **Don't look a dog in the eye**

This is based on the false belief that dogs perceive being looked in the eye as a threat. In fact, dogs monitor human faces to receive important social information such as communicative gestures and attention. Not only that, but they can also be reluctant to follow instructions from someone who is not looking directly at them (Benz-Schwarzburg et al, 2020).

- **If your dog is scared or crying, you should ignore them so you don't reinforce their fears**

Ignoring your dog in these situations can cause him to develop more anxiety. It's better to try to distract him with another activity or grab his attention with something that will help him disconnect his mind from the cause of his fears (Rooney et al, 2016; Poggiagliolmi, 2018).

- **You should go through the door before the dog**

Absolutely not. What's important is that your dog is trained to pay attention to you, to stop when necessary, and not to pull on the lead. We decide which 'good manners' they need to have (Vieira de Castro et al, 2019).

- **Dogs should eat after we do**

Absolutely not. This idea came from the assumption that dogs are like wolves, and that the nuclear family is like a wolf pack. But it is not correct. Not only are dogs not like wolves, but the relationships between dogs and humans are not hierarchical. At any rate, you're the one who's providing the dog's food, which is much more meaningful in terms of the dog-owner relationship (Koscinczuk, 2017).

- **A dog must never bite their owner**

Accidents can happen, and oftentimes, the owner or handler's behaviour is responsible for a dog bite. Common reasons for a dog to bite are when the dog is handled too roughly, when the dog is in pain, playing with the dog too roughly, trying to help a dog that has been knocked down, or trying to separate fighting dogs (Wake et al, 2006; Rosado et al, 2009)

- **Put your hand in the food bowl to teach your dog not to become possessive of food**

It's better to leave the dog's food alone when she's eating. In one study, dogs were more likely to show severe resource guarding behaviours more often if the owner removed their food bowl during mealtimes (Jacobs et al 2018).

- **Old dogs don't need to play**

Dogs are highly social animals and they enjoy play, especially with their humans, even as they get older (Bradshaw et al 2015).

- **Dogs need to be bathed often**

It will depend on the type of coat, your dog's activity level, her skin condition – allergies, other issues – but also your own preferences. Generally speaking, a healthy dog with a short, smooth coat and no skin problems doesn't need to be bathed often. When you do need to bathe your dog, be sure to use a veterinary shampoo, not a shampoo designed for humans. Dog skin isn't the same as human skin and human shampoos can irritate dog skin. Even with dog shampoo, it's possible to overdo it; overuse of canine commercial shampoos can cause skin problems in some dogs (Hogan, 2001; Yu et al 2013).

- **If a dog's nose is dry, that means they're not feeling well**

Dogs usually have wet noses because a wet nose is better for sniffing. However, a hot, dry nose doesn't always mean trouble. Some dogs just have naturally dry noses. Other reasons why a dog's nose might be dry is if she's been sleeping or exercising. Dog noses can also get drier with age.

In some cases, though, a dry nose can mean she's not feeling well, it can indicate a health problem, especially if there are other symptoms like behavioural changes (e.g., less active, eating less), vomiting, or diarrhea. In this case, or if she has a wound on her nose or there is blood or coloured discharge coming out of her nose, contact your veterinarian for advice (Llera & Buzhardt, 2021).

CATS

- **Cats get attached to the house, not people**
- **Cats get more attached to their territory than to their owner**

Usually, these statements come from our inability to see cats differently than we see dogs. Even though they're social, cats are more independent than dogs. They don't have trouble forming a bond with humans. The cat's attachment bonds seem to be relatively stable and are also present in adult cats (Vitale et al, 2019).

- **Cats rub against our legs to show affection**

These are affiliative behaviours which enable cats to deposit pheromones, which identifies us as one of their social group (Ley, 2016).

- **Cats scratch furniture out of disrespect**

Scratching is a normal feline behaviour, which serves to sharpen or remove nails, leave visual and olfactory signals, and to stretch and exercise. In the absence of appropriate surfaces to engage in this normal behaviour, sometimes they choose to use furniture instead (Herron & Buffington, 2010; Zhang et al, 2019).

- **Cats urinate outside the litterbox out of disrespect**

This is not the case. In fact, urinating inside the litterbox is, in some sense, instinctive, because even without being taught, cats as young as one month old begin to dig into fine, soft substrates. If the litterbox is not sufficiently clean, however, this can lead the cat to urinate outside of it (Crowell-Davis, 2005; Herron & Buffington, 2010; Ley, 2016).

- **Picking a cat up by the scruff of her neck is a good way to calm her**

Many people are taught to pick a cat up by the scruff of her neck but doing it too often can increase her arousal and fear, because it makes her feel like she doesn't have control. However, many cats *do* like being massaged on the head, behind the ears, and below the chin. This type of massage can distract and calm nervous cats (Anseeuw et al, 2006).

- **Cats are solitary animals**

The domestic cat is an intriguing and highly successful species, because they can adapt to a wide variety of living conditions, including many different social conditions. Some cats live a solitary life, some live in a family with a few other cats, and some live in large cat colonies (Ley, 2016).

- **Cats suffocate babies while they are asleep in their crib**

Cats are curious animals. New things in the house, the particular odour of human babies, and behavioural changes in the owner can spark their curiosity. They may mark the area and jump into the baby's crib to find the baby. This can be dangerous because the baby is not able to move without help. For this reason, it is recommended that babies not be permitted to sleep with pets (Stott, 2016).

- **When a cat purrs, that means he's happy**

Even though humans often interpret purring to mean that the cat is happy, some cats purr when they're eating or when they're asking to be fed. But the basic function of purring in human-cat communication seems to be to calm and to maintain contact, and it serves the same function in communication between cats (McComb et al, 2009; Bradshaw, 2016).

- **Cats don't need to go outside**

Behavioural problems can be associated with keeping cats indoors. However, the quality of the space is more important than its size. An enriched space with vertical structures, scratching posts and hiding places, for example, can improve a cat's wellbeing. It's very important to avoid unenriched, barren environments, as well as unpredictable changes, because both can cause stress in cats (Amat et al, 2009).

- **It's impossible to train cats**

Cats can be trained to follow basic commands like 'sit', as well as to perform more complex behaviours like giving a paw or standing on the hind legs. However, this is a delicate and time-consuming process. Punishment does not work at all, and the preferred technique is positive reinforcement. It is difficult to maintain a cat's interest for a long time (Whitehead, nd).

- **Cats meow to communicate with each other**

- **If a cat meows, that means he's hungry**

Cats sometimes meow because they're hungry, and sometimes they meow to communicate, but it's not always for positive communication. There are many types of meows with different sounds, and which exist alongside other forms of communication between cats, such as tail and body position, raised fur (i.e., piloerection), and staring (Ley, 2016).

- **Cats hate water**

Cats drink water because they need to hydrate. Some cats do not enjoy getting wet because their fur gets drenched, or they are sensitive to the smell of tap water which can contain chemical substances, or they are simply scared because they've never experienced it and they are naturally cautious animals. Other cats enjoy being in water, especially if they live in a hot, dry climate and they find the water to be refreshing (Petful, 2018).

- **Cats are 'low maintenance' pets**

Cats are very sensitive animals, and sometimes changes in their home environment can cause them stress. It's necessary for them to have an area where they can rest, a litterbox that is cleaned every day, and free access to fresh water and food. They also need an environment which provides physical and mental stimulation; this is particularly important for indoor cats (Seksel, 2016).

- **A cat who is crouched on her front paws wants to be petted**

This behaviour needs to be taken in context. It can be an affiliative behaviour, in which the cat is looking for social contact, or it could just be stretching, or even play, as it is similar to the posture cats take when stalking prey (Ley, 2016).

- **Cats can see in total darkness**

It's not that they can see in total darkness, but they do have better night vision than humans. In fact, cats have a higher number of receptors and a structure in the back of the eye that humans don't have, which improves their ability to see in the dark. (Wiebe, & Hamilton, 2002).

- **Pregnant women should not live with cats due to the risk of toxoplasmosis**

The majority of cats who carry toxoplasmosis live outdoors and drink contaminated water. The likelihood of a women being infected from her cat is low if he does not go outdoors and he eats commercial cat food, because he has a lower risk of encountering toxoplasmosis. Periodically worming the cat as advised by a veterinarian can further reduce this risk. Pregnant women do not need to avoid cats, provided a few hygienic precautions are taken which can prevent the transmission of the parasite, such as wearing single-use gloves when cleaning the litterbox and thorough handwashing immediately after finishing (Cortés et al 2012).

- **Cats need to drink milk**

Cats are strict carnivores and some get diarrhea after drinking milk because they are lactose intolerant; that is, they lack the digestive enzymes necessary to digest lactose (Cats and food, nd).

- **Cats love being touched on their belly**

Our cat's posture tells us about her mental state. When a cat exposes her stomach, it can be a behaviour indicating a bond with those around her, wellbeing, or play. It represents a positive mental state. But it does *not* mean that she wants to be treated like a dog. This is why she can sometimes become aggressive if her owner reacts by rubbing her belly when she's lying on her back (Crowell-Davis, 2007).

- **If a cat jumps on your lap, that means he wants to be petted**

This will depend on the individual cat. Some cats enjoy being petted, while others merely tolerate it, and still others actively dislike it. Do not make your cat sit on your lap, and when she does, give her the option to leave. Forcing a cat to be petted when they don't enjoy it can cause them to become stressed (Ramos et al, 2013).

- **Black cats bring bad luck**

There is no scientific evidence for this, but people who are superstitious are more likely to believe this claim than people who are not. There is also a perception that black cats are less likely to be adopted as pets. One study found that, while black cats were rated as less friendly and more aggressive by participants, they were still willing to adopt black cats as pets (Jones and Hart 2020).

- **Cats can fall from high places without getting hurt**

Unfortunately, this is not the case. Cats who fall from high places risk a wide range of injuries, and occasionally these can be fatal. Not surprisingly, injuries worsen as the height of the fall increases (Vnuk et al 2004).

COVID-19

- **It's possible to catch COVID-19 from pet cats**
- **it's possible to catch COVID-19 from pet dogs**

We're still learning about COVID-19 because it's so new, but there have been no reported cases of a pet cat or dog transmitting COVID-19 to a human. According to the US Centres for Disease Control and Prevention (CDC), however, there have been a few reported instances of cats and dogs catching COVID-19 from close contact with an infection person. If you have COVID-19, the CDC recommends isolating from your pet, just like you would from other people in your household. Fortunately, animals usually have only mild symptoms if they catch COVID-19. Serious COVID-19 disease in animals seems to be extremely rare (Centres for Disease Control, nd).

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Dogs

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