Nordic Dog Symposium 2018

A beast of a feast

The weather system known as the Beast from the East certainly caught Europe's attention this year but could not compete with the enthusiasm of the Symposium's participants and speakers. Everyone made it, from as far afield as Australia and Taiwan, even though some were bleary eyed on Saturday. Despite the cold outside, the ice cream dispenser and popcorn machine in the conference lobby were as popular as ever. In addition to good food and beverages, we had the immense privilege of feasting on the know-how and expertise of a great line-up of speakers. It was a beast of a feast!

Join us again next year at Scandic Helsfyr hotel, Oslo
for another unforgettable experience!
Dog Symposium 2019
2–3 March

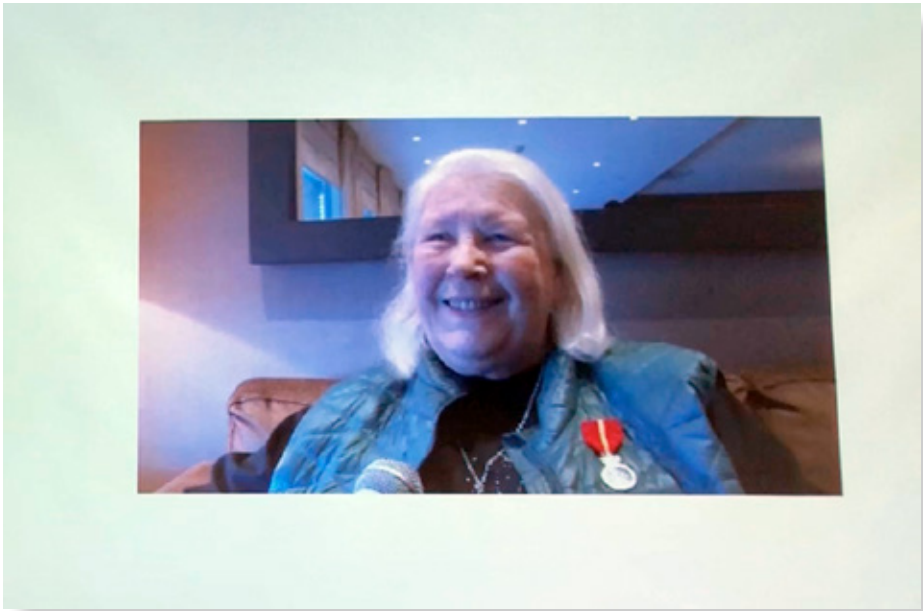
PART 1

This year's report is in two parts. Part 2 (Julia Robertson, Elaine Stavert, Anne Lill Kvam) should be ready in early April.

The speakers (from left): Anne Lill Kvam, Elaine Stavert, Cristina & Aurélien Budzinski, Julia Robertson, Winkie Spiers. Front: Turid Rugaas. Amber Batson had to leave early.

Turid Rugaas awarded the King's Medal of Merit

Saturday started with a lovely video presentation of Turid getting the King's Medal of Merit for her work with dogs. She was also presented with flowers (and a hug!) on behalf of the symposium.



Screenshot from the video of Turid receiving her medal

Turid thought she would just be having dinner with friends at the Tyrifjord Hotel on a Sunday in early January. That is, until Ståle Versland, the mayor of her community, entered the room and presented her with the King's Medal of Merit for her work promoting the welfare of dogs around the world. Turid has been helping dog owners for almost 50 years, has authored a number of books, and has helped produce several award-winning films.

"I was stunned! I would not have expected that!" said Turid to the reporter who covered the event. "It means a lot. Having worked so hard for so many years, it's not often one gets praised for most things. It almost never happens. Getting some feedback that I've done a great job is amazing!

"I've always known I had to do something with animals. Animals have always been my focus of interest, so I've tried to educate myself as much as possible to get the right background. I started having courses and consultations to help dogs with problems. I gave more courses, gained more experience, started developing methods myself, and have become very active in that area and known for it. Then I started writing books. Things have continued to develop, and I went international in the mid-1990s. It turned out that there was huge interest in the things I was doing everywhere. First and foremost, it was something new: There is another and better way to be with dogs that makes people feel better. They see that their dogs are getting better, they get a much better life together, and that's something many have appreciated."

Turid also says she has no plans to retire. "I'll hold on as long as I have breath, because when people ask me something, I try to help. I no longer have courses, as they are physically too demanding. But I do what I can to explain to people what they can do with their dogs, and I write books.

"It's amazing. I never expected this [medal] at all. It's so far out there, I just can't grasp it. I have to say a thousand thanks to those who started this here. I can't fathom how they got the idea at all, but I'm very grateful. It's very touching. It's fun and it feels very good to be appreciated. Thank you very much; I'm speechless! And that's a rare event, I can tell you!"

Congratulations Turid!

What's up dog?
A look inside the reactive dog's head

Amber Batson BVetMed MRCVS
United Kingdom

Amber Batson qualified as a vet from the Royal Veterinary College, London in 1999 and immediately developed a strong interest in animal behaviour. She undertook several qualifications in canine, feline and equine behaviour and welfare and consults and teaches in animal behaviour as well as providing welfare consultancy and legal advice for many national and international animal organizations.

Amber started by explaining why dog behaviour is such a major issue. During her 15 years studying dog behaviour, she has continued to see a constant increase in behavioural problems among dogs. In addition to aggressive behaviour, one of the biggest problems that people complain about is excessive barking. Worldwide, there is a rising number of stress-related medical issues as well. This results in large numbers of dogs being prescribed behaviour medication, or being given up on altogether.

Many of the behaviour problems that are seen in dogs today occur at times of high reactivity. Amber started by looking at what that means. The definition is: "Arousal that manifests as an external behaviour change occurring in the presence of specific stimuli." This means that the animal can be in a reactive state but only show it in the presence of certain cues, events, or things that happen in its environment. So a dog might only bark in the presence of loud noises, or only howl and pace and shred things up when left alone.

One of the best ways of understanding arousal is to have some grasp of its underlying physiology, what is going on in the animal when it is in an aroused state. Most of us are familiar with the "fight or flight" mechanism, freeze or run! This is caused by two things: activation of the sympathetic nervous system, and the presence of stress chemicals in our bloodstream that make it possible for us to move fast. There is also increased electrical activity in the brain.

Arousal is also linked to emotions, in dogs as well as in humans. Basically, these emotions fall into three groups: fear, frustration and excitement. Fear can be of potential threats, bad experiences, punishment, pain or disease. Frustration occurs when an animal is unable to meet its species-specific, inelastic (immutable) needs, such as getting enough sleep, being able to chew, or scavenging for food. These are needed for proper balance of the mind and body. Frustration also occurs when there is a loss of resources, or when the animal is unable to make choices. Excitement relates to predation, fast play, rebound opportunities (e.g. being let out of a crate after a long day) and sex. These are the three main underlying emotions that trigger arousal changes in the body.

The inability of a dog to make choices is a hugely frustrating aspect for them. For many pet dogs, making choices is a very infrequent occurrence. The owner decides when they are going to go for a walk, where they should be taken and at what speed. The owner decides what to feed them and when and how much, the owner decides if they are going to play or be left by themselves, and the owner even decides when (and if!) they can relieve themselves. The pet dog is probably the only species in the world that cannot decide when it goes to the toilet. Even cats get a nice tray, and pet birds and rodents relieve themselves where they are. Not being able to relieve oneself causes extreme frustration, particularly in young animals, and it is a contributing factor to arousal in many dogs.

The time activity budget

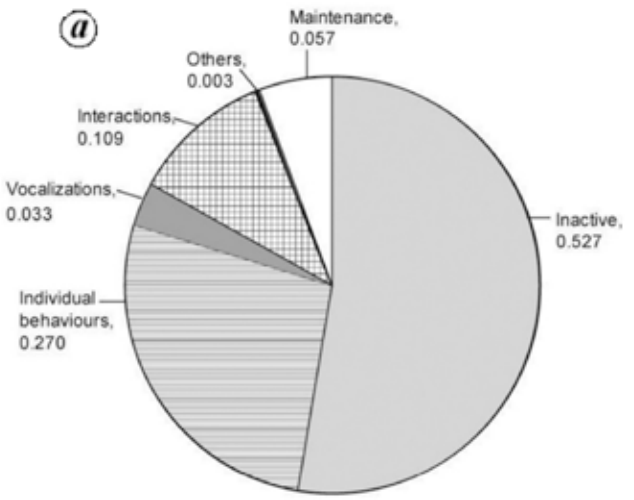
Amber described a hugely interesting study done in 2014 by Majumber called "A dog's day with humans". The study is freely available online. The study, done in India, looked at free ranging dogs who do not live with humans but rather interact with them without any kind of restriction. They are given food occasionally but are free to come and go as they please. The study is not perfect, because they could only study the dogs for about 18 hours a day. Being in India, it wasn't safe for them to be out observing dogs at night. However, the study gives a very good idea of how dogs that are not restricted choose to live their lives.

Some of the results were amazing. More than half the time, the dogs were engaged in *inactive* behaviours like sleeping and resting. It is probably more than that, because they would also be doing that at night. Almost one third of the time was spent walking around quietly, 10% was sniffing around, playing quietly and interacting. Another 6% was spent scavenging, chewing, and going to the toilet. A very small amount of time (3%) was spent vocalising. They only saw *two* cases of a dog chasing something, and in both cases it was a calf, of which there are many in India. However, the calf did not get caught or eaten so it is uncertain whether it was predation or play. In all of their 1941 observations, there

was not a single case of aggression. Ever. In its natural state, therefore, around half of of a dog's active time is spent interacting intentionally with others, predominantly with other dogs but also with people. Most of it is spent just calmly walking about. There is negligible chasing, and aggression is pretty much non-existent. That is a far cry from what we put our pet dogs through every day.

neighbour lets it out for a few minutes at lunchtime to relieve itself. Then the dog is home by itself again for another four or five hours. The owner comes home, takes the dog to the park to chase a ball or frisbee, then comes home and feeds the dog, which lasts another minute or less. The owner then goes out for the evening and the dog is home again by itself for another couple of hours. The owner comes home and

Behavioural category	Behavioural subcategory	Behaviours included
Inactive		Sleep, laze, sit
Maintenance		Groom, scratch, defecate, urinate, drink, eat, eat grass, chew object, food search, forage, sniff garbage, beg, follow, receive food
Vocalizations		Bark, growl, howl, angry bark
Dog–dog interactions	Aggressive	Attack, chase, fight, submit, bite
	Affiliative	Mock bite, play, allogroom, sniff dog
	Indirect	Mark, angry bark
Dog–human interactions	Affiliative	Submit, beg, follow, wag tail, receive food
Individual behaviours		Stand, alert, watch, run, walk, jump, inspect object, sniff



Screenshots from the study by Majumber et al. 2014

Scavengers, not hunters

A range of studies have shown that given free choice, 90% of a dog's day is spent in calm behaviours. That includes eating and chewing, drinking, some type of play, grooming one another, resting and sleeping. Of course there is some arousal, especially if a dog is hungry and needs to get at its food quickly. There are small amounts of predation, but the studies have shown that dogs are predominantly scavengers, not hunters. And of course they do get aroused if they are playing fast with one another for a short time or if they need to defend themselves or move away from something quickly. There is sexual arousal as well, but these aroused behaviours only make up 10% of the total ethogram (species-specific behaviour). They are also social sleepers. They don't necessarily have to be in physical contact with one another, but definitely in the presence of other dogs (or people). Dogs that are alone tend not to sleep very well.

How does that compare to our pet dog? The average pet dog's day might go something like this: The owner wakes up in the morning, takes the dog along for a jog or a run alongside a bicycle, for maybe an hour. The dog is fed, which takes about a minute or less. The owner goes to work and leaves the dog alone for four or five hours. If the dog is lucky, a

watches TV with the dog for another hour or so. Finally, the dog is let out to relieve itself for a few minutes, before being left alone to sleep in the kitchen overnight. And the next day, it starts all over again. European studies have shown that between 50 and 90% of dogs suffer from separation anxiety, so this is certainly worth thinking about.

Understanding calmness

Behaviours and emotions are driven and affected by chemicals inside our body, particularly chemicals inside our brain. We call those neurotransmitters. But there are chemicals in the bloodstream too, which we call hormones (that doesn't mean only reproductive hormones).

There are different chemicals in the brain and in the bloodstream when an animal is aroused compared to when that animal is calm. Chemicals of arousal include dopamine, noradrenaline and glutamate. Chemicals of calmness in the brain, on the other hand, include GABA and serotonin.

Chemicals of arousal	**Chemicals of calmness**
In the brain:	**In the brain**:
Dopamine	GABA
Noradrenaline	Serotonin
Glutamate	
In the bloodstream:	**In the bloodstream:**
Adrenaline	LESS adrenaline
Cortisol	LESS cortisol

Arousal

When a dog is aroused, the messages travelling through the nerves (sympathetic nervous system neurotransmitters: dopamine, noradrenaline and glutamate) and those travelling through the blood (hormones: adrenaline and cortisol) increase the heart rate, raise the blood pressure, and stimulate muscle activity and tension. They switch the body to fast-fibre use so the dog can move quickly. That is why, if a dog bites in that state, it will probably be a fast, hard bite.

Calmness

When a dog is calm, the messages travelling through the nerves have different chemicals (parasympathetic nervous

system neurotransmitters: GABA and serotonin), which have the effect of REDUCING the arousal hormones already travelling through the blood (adrenaline and cortisol).

Simply put, the sympathetic nervous system turns things up, and the parasympathetic nervous system turns things down, using different chemicals in the brain to turn up or turn down the amount of adrenaline and cortisol in the blood.

The body has evolved to find a way of prioritising switching itself back off, in order to survive. When a dog runs in a predatory chase, which is very rare when it is living naturally, one of two things happens: It either fails to catch what it was chasing, in which case it stops running and goes back to investigating its environment, or it catches the prey and then lies down to eat it and chew. Sapolsky outlined this very well in his book "Why zebras don't get ulcers", which is well worth reading. Unfortunately, in many cases, pet dogs are kept at high levels of arousal all the time: regularly chasing balls, going for runs, being taken to agility classes etc. without the possibility to really calm down and have proper, deep, rapid-eye-movement sleep.

Homeostasis

The body tries hard in any way it can to come back into balance (homeostasis or equilibrium).

On a day-to-day basis, every species has evolved to find its balance in different amounts and types of activities. For dogs, that means approximately 90% of calm, the bulk of which involves inelastic activities – things that HAVE to be done to find balance and keep the body in working order. This means keeping themselves safe, eating in a dog-specific way, calmly and socially, chewing, going to the toilet to get rid of waste products, maintaining body temperature, and sleeping.

It's a bit like a set of scales, except that in the case of the dog, they should not be balanced equally. The dog evolved to have 90% calm and 10% arousal.

Long-term potentiation

Two common terms we use to describe long-term potentiation is "use it or lose it" or "practice makes permanent/perfect". Amber used the idea of a path in a field to explain what this means.

"I often use this analogy for people, particularly with my clients, of walking on a footpath. When you walk on the footpath, the very first day you walk across this field, if no one else was using it, it would just be grass. You would walk on that path, and when you come back and do it tomorrow, you might just about be able to see where you walked yesterday. Over several days, you will start to wear a path in the grass, to the point of where maybe after using it for one to two weeks, you will end up with an actual physical path in the grass. Now it is easier to walk on that smooth path than it was to push your way through the grass. That is actually what we mean by long-term potentiation. By using the pathway, we've made it stronger and we've made it more obvious. That is physically what happens in the brain.

"Now that we've made the pathway stronger by using it several times, it is also the path of least resistance, which means it is easier for me to walk that pathway than it is to use an alternative route. This is where behaviourally, from a reactivity point of view, we have to be aware. Because if the dog is using lots of aroused pathways and lots of aroused behaviours, they are the ones with the strongest paths, they are the paths of least resistance. That's the way the dog will choose to behave, because it's the strongest, easiest pathway to take in the brain. The only way we can get that dog to change its behaviour in the long term is to let the grass grow back on this pathway. When you stop walking that pathway, the grass will start to regrow. But you have to stop walking the path to allow the grass to grow."

In other words, the pathway that causes arousal has to be made weaker (long-term depression, but not the kind of depression that means being sad). Amber told us about how she learned French in school and was pretty fluent, to where she could hold conversations with French people. Some 35 years later, not having used it, she has pretty much forgotten it all. But pathways created in the brain, although they can be made weaker, can never go away. So if she were to go back and study French again, she would learn it a lot faster than she did the first time.

SLEEP

Sleep is one of the most vital, immutable, inelastic behaviours needed by all species, although they need it in different amounts. A dog is a polyphasic sleeper, meaning it gets its sleep in many short periods throughout a 24-hour period. Then again, a horse only gets about 15 minutes at a time in deep (rapid-eye-movement, REM) sleep. They sleep a total of about two hours in 24. That is because the horse is a prey animal. Amber showed a photograph of her pony sleeping on its side in a field, watched over by another horse that was standing, and two others who were lying on their chests, awake but drowsy (slow-wave sleep). After a while, they would change over and the pony might become the sentinel, watching over the others. That is why a horse does better in e.g. an open field than in a closed-in stable where it doesn't have a sentinel, and because it cannot see the area, it is more difficult for it to get REM sleep. People, unlike dogs and horses, are monophasic, getting their sleep in one block of about 7-8 hours.

Sleep is defined as a natural periodic state of rest for the mind and body during which complete or partial loss of consciousness occurs.

Types of sleep

Physiologically, sleep is divided into slow-wave sleep and rapid eye movement sleep. They are very different, and they are involved in balancing different elements of the dog's physiology.

Slow-wave sleep is called sleep of the brain. The electrical waves in the brain are really slow. It is all about slowing down the brain electricity. Amber drew the analogy to a laptop, which can start getting hot after a while. Shutting the lid puts it in sleep mode to stop it from overheating. It is believed, though not proven, that slow-wave sleep literally prevents the brain from overheating.

Rapid-eye-movement sleep, or REM sleep, is the opposite. The brain is even more active than when we are awake. Contrary to slow-wave sleep, in REM sleep the body is essentially paralysed from the neck down. This refers to the postural muscles, the ones that would allow you to run away or jump through a window in your sleep if you thought (as thriller-fan Amber often does) that you were being chased by zombies. That is why, when you fall asleep e.g. on a plane, your head falls to one side and jerks you awake. Similarly, dogs can wag their tails and twitch their paws when they are in REM sleep, but they can't sit or stand up. REM sleep is thought to be very important in the processing of memories, and even in practising running away from zombies! There is a reduction in the activity of the amygdala, which is the "centre of reactivity" and is what makes us vigilant. That is why people who are sleep deprived (and probably dogs as well) tend to be much more reactive and irritable. The skin also becomes much more sensitive; people who are suffering from lack of sleep often complain about feeling pins and needles in their skin, and they do not enjoy being touched or hugged. We can well imagine that this would affect our dogs similarly.

During REM sleep, the core muscles in the body are paralysed from the neck down.

Sleep deprivation

This has been the subject of a number of studies in people. The main side effects of sleep deprivation include: increased risk of infections, inability to regulate body temperature, changes in metabolic rate, poorer body-care such as dogs grooming one another, weight gain or weight loss, perceptual distortions, greater reactivity to sound and touch, and more difficulty learning.

In the dog, sleep patterns and quality affect the reactivity of the amygdala, that part of the brain that reacts to potential threats, parasympathetic nervous system control, stress levels (affecting reactivity and new learning), and the ability to process and consolidate new memories.

Sleep for success

So how do we get dogs to sleep well? The most important thing to consider is that safety comes first. You are never going to sleep well if you're worried about something in your environment. For dogs, that means being social. It doesn't mean necessarily being with other dogs; it can be with people. People often say that their dog sleeps best when he is touching part of their body. He may sleep on their feet or with his head on their leg. This flies in the face of suggestions in recent years that dogs should never be allowed to sleep on a person's bed because they might start trying to rule the roost. Such nonsense is guaranteed to prevent dogs from getting good quality sleep.

Another thing dogs like is elevation. It is thought that when dogs sleep off the ground, smells rise up and there is less blocking of sound. So if they smell or hear something potentially threatening while they are asleep, they only have to lift their head and they can scan a much greater area than if they were on the ground. This allows them to assess their surroundings without having to get up. It's the same with people; if we hear something during the night and we have to get up to check it out, we become much more awake than

if we just lift up our head, see that there is no threat, and put our head down again. It doesn't mean that our dogs have to be in bed with us; people who have dogs sleeping on an elevated surface near their bed report that it works well. That is why they love to sleep on our sofas, not only because it is where we sit a lot of the time, but because they are elevated. It has nothing to do with wanting to take over our universe.

PLAY

Behaviourally, play is defined as engaging in an activity for enjoyment, recreation, or the development of life skills where there is no adulthood consequence. In other words, you can have a go at something without having to suffer the consequences that you would if you were an adult.

Play is an essential part of learning, especially in puppies and adolescent dogs. They are practising the use of their body, but also learning how to run away from potential threats, not only chase prey. Dogs also maintain their fitness through play, learn bite inhibition, and practise future reproductive skills by mounting one another.

Play is also part of the normal ethogram. It is one of the few times that there is a rise in arousal levels, during short periods of faster play or running zoomies. However, it really only lasts for at most two or three minutes before they will offer something else, even if they return to it after a few moments. Play is also good for group cohesion. And after playing, they will go off and sniff around.

Play patterns

Dogs play with one another, doing a lot of wrestling and chasing, and they will play with objects. They will also play by themselves – tossing, pouncing on and catching objects, or they might spin round or run around something. Often, solitary play is a precursor to social play: One dog will start playing with something and the others will go and join in. Dogs don't tend to do a lot of solitary play, because often others will come and investigate and will all join in together.

How dog owners play with dogs

Compare that to how owners tend to play with their dogs. Pet shops are full of toys for dogs, and mostly they tap into chase. It's all about balls, sticks and frisbees, and squeaky toys. Laser pointers have also been hugely popular, although this is diminishing a bit now. Some people do a bit of rough-and-tumble and tugging, but mostly it is about chasing. Squeaky toys tap into the dog's predatory pathways. It could be that a squeaking toddler will set off a similar response, although a lot of other factors come into play in that. Most dogs can contextualise, so a dog that chases a ducks in a park is not necessarily going to attack a child. Amber went into this in a lot more detail than can be summarised here.

Food in toys is done a lot, and it can be great given the dog's scavenging nature. However, in some cases it can cause frustration if a stressed dog is hungry and it needs to pick up tiny pieces of food here and there. Amber likened it to her going to a Chinese restaurant and being given a bowl of rice with chopsticks.

Dogs are scavengers, not grazers. Giving a stressed, very hungry dog tiny pieces of food can lead to frustration.

The problem with fast play

The problem with fast play is that it increases arousal chemicals in the brain and body. This can be part of an undesirable process called trigger stacking, or sensitisation. Activities or events that frighten or thrill, with the result of an elevation in adrenaline, leads to what we called being "adrenalized". During fast play, a lot of adrenaline is produced. So, if we go back to the pet dog's day, the owner takes the dog out running for an hour. During that fast running exercise, the dog is going to be producing quite a lot of adrenaline. Then the dog goes home and gets to eat its food for approximately one minute. It is full of adrenaline. Given that up to 90% of dogs have separation anxiety, by being left alone it continues to be pumped full of adrenaline. Every noise will startle it, and when the newspaper finally comes through the letterbox, the dog grabs it. But that event started early that morning with upping the dog's adrenaline, for example on a run, with no opportunity for it to really come back down. So, by the time a dog is presented with a stimulus like a child poking it with a stick accidentally in play, the dog snaps.

The other problem with fast play is long-term potentiation: strengthening of pathways in the brain through repeated practice.

Fast play is followed by a reduction in blood sugar, which means a reduction in the amount of sugar in the brain.

Behaviour is moderated by the prefrontal cortex, which enables the animal to have a rational response to a stimulus. But for the prefrontal cortex to work properly (and enable self-control), it needs to be full of sugar. That is why free-ranging dogs do not spend a lot of time engaging in fast exercise. It is how they have evolved to manage.

So what should dogs be doing instead? We were very fortunate this weekend that the other speakers addressed that question in detail, from walking and social walks to nosework type exercises. We need to tap more into the scavenging element of our dogs.

New calm experiences

It is important for dogs to have new, calm experiences. This can include things like learning to go through a tunnel or pushing their way through a sheet, or walking on a slightly wobbly plank, over different-feeling surfaces, through shallow water, warm or cold water, moving water, etc. It is also important to introduce them to slightly unusual new stimuli. This should of course be started from a distance, and the dog should be allowed to decide whether he wants to approach. It's really easy to set up things that the dog might have met in the past but in slightly different ways, like an electric toothbrush under a cushion on the floor in the lounge.

Scent work is also very important. Amber talked briefly about how she does this with her dogs, using scented flowers that her mother makes.

The more new, calm experiences a dog has, the better it is for its brain physiology.

Problem solving and fear reduction

Two important studies done by Marcella Zilocchi and her colleagues (2013, 2016) show that problem solving reduces fear in dogs. Amber described these fascinating studies in some detail. It appears that problem solving involves use of the prefrontal cortex of the brain (the "common sense" part that modulates our responses to cope with fear and other emotions). As Amber put it, it is that part of the brain that asks whether punching your boss is really such a good idea, even though you strongly feel like doing so. Thus it not only helps dogs with self-control, it also helps them "learn to learn".

NEUTERING AND REACTIVITY

An impressive study done very recently (published in February 2018) in a massive population of over 15,000 dogs has shown that castration of male dogs may increase the likelihood of aggression developing in some individuals. Male dogs castrated between 7 and 12 months of age were 26% more likely to show aggressive behaviour towards strangers. The study is available to read in full online. It is quite lengthy but well worth the time. Notably, one of the co-authors is James Serpell, who would not, according to Amber, lend his name to a study unless it was of very high quality.

[Aggression toward Familiar People, Strangers, and Conspecifics in Gonadectomized and Intact Dogs. Farhoodi et al., 2018]

https://www.frontiersin.org/articles/10.3389/fvets.2018.00018/full

There was an informative, lengthy discussion on the pros and cons and methods of neutering dogs, especially among the vets present, who brought their own valuable experiences to the discussion.

There are alternative ways of neutering dogs that do not involve removing organs themselves, such as doing a vasectomy instead of a castration, but it is something that needs a great deal more consideration. Amber believes that the situation in built-up areas, for example, where male dogs are consistently surrounded by females in heat without having access to them, warrants careful thought. It is a hugely frustrating way of life for these dogs. Overall, though, castration, especially done between 7 and 12 months of age, is not a great idea. Kauffman and colleagues found the behaviour of neutered dogs to be more reactive and less emotionally stable at times of stress, in a paper they published last year. So, at times of stress, neutered males are more reactive than unneutered males. We partly know that that is because testosterone reduces activation of the stress pathway.

From the female perspective a lot of tests have been done. A paper published in 2006 showed that spaying bitches (in this case a full ovariohysterectomy) still remains the most common way of neutering females and has been shown to increase reactivity in German shepherds when done between

5 and 10 months of age. At the moment, nobody has actually homed in on the female dog as much as on the male dog, but the Farhoodi study could very well change that.

The amygdala and memories of fear

The amygdala is where a lot of fear-based memories are stored. So, if we have a fear-based reactive dog, those memories are accessed instantly. It is possible that the amygdala is where fear and pain memories are stored in a different way than other memories. It affects the ability of a dog to learn something new. If we are trying to teach the dog that it is okay to be at the vet's, but it has previously experienced fear of going there, the instant access to those memories in the amygdala makes it virtually impossible to override them with something else that needs to travel from a slower part of the brain. This is why long-term potentiation (walking that pathway in the field) is so important. We have to find a way for those dogs not to practise the behaviour at all, particularly while we are teaching it something new.

Disease and arousal

A brand-new study by Fagundes et al. (2018) has shown that among dogs who are reactive to noises, such as gunshots, around 80% of them have pain somewhere in their body. That is an astounding figure. That is why, when dealing with reactive dogs, we should encourage owners to have them checked out by a vet, but it can be tricky to diagnose pain.

Amber told us about a dog she had seen recently who had quite bad separation anxiety and reactivity to noises. When she took his history and examined him, she found that he had neck pain. An MRI of his spine revealed that he had a partially prolapsed disk in the neck. After receiving pain-relieving medication for several weeks, according to the owner the dog was totally different. He was not only playing with their other dog, which he had never done before; he also seemed much happier. They had always thought that he was just a quiet personality. In addition, his sound sensitivity had almost stopped, and his separation anxiety had virtually vanished. Pain is a big thing that we have to consider.

Increased brain electricity through things like full or partial seizures must always be considered, and that can be difficult. Digestive abnormalities, for example, are also really important, which would be addressed by Elaine Stavert the next day (see part II of this report). There are also diseases, like Cushing's Disease, which raise cortisol levels, and cancer, which raises e.g. calcium that makes the brain more reactive. Therefore, it is crucially important that diseases are considered in the reactive dog.

Amber closed with a recap of everything we had covered, and tips for success in recognising problems and encouraging calmness in our dog. Some of these tips would also be covered in the following talks about calm walks and nosework, really making this weekend something to write home about.

How to organize and run a social walks class

Winkie Spiers
United Kingdom

Winkie works professionally as a dog trainer and behaviourist in London. In addition, she speaks at seminars and conducts workshops in the UK and abroad on a variety of canine subjects for professionals and members of the public. Her first book 'How to Handle Living With Your Dog' was published in 2008 by ShortStack Publishing.

After Amber's fascinating and intellectually challenging talk, it was time to sit back and relax with Winkie's charming and informative presentation on social walks. This fit right in with Amber's talk on the dog's ethogram, and how calm walks and sniffing make up a significant portion of the dog's daily budget in addition to sleep and just lying around.

Winkie began by saying that she believes that social classes are one of the main things that really help dogs with problems and reactive dogs. She has been running her social walk classes now for over 10 years and working as a professional dog trainer for 15.

A social walk class can be defined as a class of dogs and people who meet up to walk, socialise and learn together safely.

Recently, Winkie asked some of her clients what they think of her social walk classes. One of them said that she believes it brings friendship and that her dog really enjoys it. Another client, whose 7-year-old dog Winkie has known since it was a puppy, has enjoyed the social walking classes so much that she is learning to become a dog trainer herself and has recently become a member of the PDTE. Her dog is now one of the best mentors in the class. Winkie explained that she tries to pair up sensible adult dogs with more fearful, reactive or younger ones.

A mix of dogs is very important. More experienced, balanced dogs can be used to mentor less confident ones.

Another client said that it's really lovely to be able to talk to people who are going through similar situations. When people have a dog with problems they often think they are the only ones in the world with a problem dog. Being able to meet in a safe space with other people who have also experienced problems can be really reassuring.

BASIC RULES

There are a few basic rules concerning social walk classes. They are only open to people and dogs who have had one-on-one training with Winkie or attended her puppy socialisation course. All dogs have to wear a good harness and have a long lead. Winkie can lend them to people if they don't have them. It is important that owners book the walk in advance, and if they have been away for a while, they should explain why they wish to return. One client wanted to come back to classes after three years because his dog had started to attack other dogs in the park! A social walk class would definitely not have been the right place. So, it is always important to ask people if they have any particular needs or problems. There must be no shouting, hitting or yanking, and there must be a good distance between dogs. Observation of the dogs and their calming signals is crucial. A mix of dogs is also very important. However, there have been some challenging classes where there were dogs who didn't get on, or there were too many dogs in the class.

STRUCTURE

There are four classes per week, with two or three trainers per class whom Winkie has trained. The number of participants in a class is strictly limited, and care is taken to ensure a good mix of dogs in each class. There should not be a lot of frightened and reactive dogs all in the same class, because it just wouldn't work.

It is also important to set the dogs up for success. An information sheet is sent out to all clients before they come to class, so they know what to expect, but they will also have done puppy classes with Winkie or one-on-one training. All clients also have ongoing free phone and email backup if they want it.

Winkie tends to explore potential sites for walk classes with her own dogs in advance. She shared about one time when

her dogs discovered an abandoned rabbit hutch, and that was an ideal place to take the next class! Winkie teaches clients to think about things really from the dog's point of view and to find interesting things for them to go and explore.

An abandoned rabbit hutch is a facinating thing to explore!

Social walk classes always start and finish in the same place. There is easy parking and it is quiet. Years ago, Winkie used to try and do social walk classes in different places, but it just confused everybody. In central London, this seems to work best.

At the beginning of each class, Winkie asks each client if they have any specific things they would like to cover. She sets up the classes depending on how busy things are around them. She doesn't run classes during rush-hour or when children are let out of school. It is also important to find shade on a hot day or shelter from the weather if it's really bad. Walking the same areas regularly with her own dogs keeps her up to date on any changes, such as building works. It is a good idea to have an alternative plan, as things can change.

It is important to avoid off-lead dogs as much as possible. All of the social walk classes are on lead. Because they are in central London, there is nowhere where dogs can safely be off lead. It would also be too difficult for a lot of the dogs involved. Being in an area where there are loads of dogs chasing balls and going crazy would certainly not help. And everyone needs to have treats, water and poo bags for their dog.

The objective is to feel safe and enjoy being together

Winkie talked about a dog that was rescued from Romania and has benefited tremendously from social walk classes. She was about two or three years old and had been driven all the way from Romania and collected from a petrol station on a motorway in England. She had been a street dog and was extremely afraid of people. Living in a flat had really been a struggle for her. The owners had two one-on-one sessions with Winkie, then joined the social walk classes. This dog has immense dog skills but an immense fear of people. In the social walk classes, they could ensure that nobody in the class was going to approach her or touch her. They have now been coming for nearly four years and the dog has changed unbelievably. She goes up and sniffs new people who come to class. She knows that they will not touch her, and she has become superbly confident. She is also coping very well with living at home. The couple who own her are about to have a baby, and because she is afraid of new things, they brought the pram to the social walk class so that her first experience of walking with the pram would be with all of her friends in the class. It went very well. Dogs can be set up for success in all kinds of ways.

Teach people to recognise calming signals, communication and stress

People need to understand their own dogs and other people's dogs, and to recognise when a dog isn't feeling very comfortable in a certain situation. Observation is important to ensure that each dog feels safe and is happy and confident in what they are doing. If a dog is not coping, they give more space, slow down or even split the class into two smaller groups.

What is taught in class is not always what people want to learn!

A lot of people want to teach their dog to play fetch and lots of other bits and pieces, which Winkie is not going to teach.

Safety and life skills are the focus of the class, because these are things that the dogs are going to have for life. To just be able to walk confidently and calmly with other dogs and people is an enormous skill that many people just don't seem to be able to understand. It is important to let the

dogs sniff and explore in their own time. Because in London there are lots of roads, it is important for dogs to feel safe and comfortable around roads and streets. If there is going to be any off-lead type activity, like practising recall, they do it on very long lines. However, the most important thing is teaching confidence, so they learn to cope with all kinds of different challenges. It is also about teaching people to make good decisions for themselves and their dogs. The good thing about having other people helping in classes is that owners don't always tell you everything. Having several helpers can be very revealing in post-class discussions. Different people tell different class helpers different things!

Improving dog/human relationships

The relationship between the dog and the human is the most important thing. Winkie spoke about a young dog that is in a family with a child with special needs, and coming to the weekly classes really helps the dog cope with what is otherwise a stressful environment. Often, just an hour a week where people think about their dogs is very much better than not having that one hour.

Making new friends

Dogs come along to make new friends, and a lot of people also get to know each other very well. They then also tend to meet outside the classes, so the dogs and the people start having an extended network of friends. Having people together who have been in the classes gives them more confidence, in an area where people are frantically throwing balls and doing agility, to do less with their dogs.

All ages and sizes welcome

It is useful for small dogs to feel safe and confident around bigger dogs, and for bigger dogs to understand and be comfortable around small ones. Winkie talked about a Weimaraner that had become addicted to ball chasing but has now become a really good mentor in their classes, especially for puppies.

A lot of people in London just drive to the local park and let their dogs out, and are never comfortable with them walking on the street. In fact, streets are much more interesting for dogs than parks, because often there are a lot more smells. Street dogs everywhere in the world tend not to be in parks or out in the countryside, but on pavements in the busiest areas. It tells us where dogs would prefer to be.

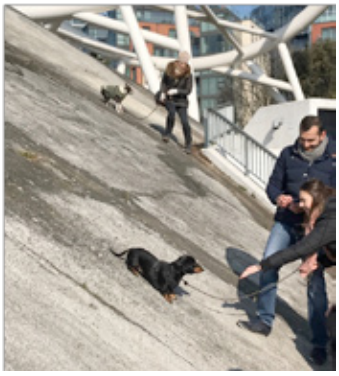
Puppies aged about 16 weeks onwards can take part in the social walk classes. They do so generally for the whole hour, but it is a very slow walk. It would normally take a person 15 minutes to walk it. If a puppy gets tired, it can go home early.

Some dogs are afraid of busy roads. There is a lot of noise, pollution and vibrations from traffic, so having social walks really works for them.

They go out in all weathers, if the dogs don't mind. It depends very much on the individual dog.

There is a variety of terrain. For example, there are subways that go under the roads, in which case people go up and down steps while ensuring plenty of space between dogs. Nowadays, for dogs who cannot do steps, there is always a ramp on the side. It is very useful for dogs to be able to go up and down steps. Sadly, many dogs are not allowed upstairs in the home or even to get up on the furniture.

Hills and slopes are also a possibility. Winkie uses a grassy area in the middle of a large roundabout near her home. They go there quite a lot because there are no other dogs around. They often do a treat search there, because social eating is such a lovely thing for dogs to do. It is a very calming social skill, and it teaches dogs not to guard around food. Many dogs live on their own, so they never have the opportunity to do social eating. They also visit concrete slopes, but only for dogs who want to. In the picture below, the little dog has his legs really splayed out, which is almost like doing dog Pilates. It takes a little bit of balance and coordination to hold that position. It's also good for people!



Winkie tries to ensure that each class has a mix of different ages and sizes so that even a tiny breed has a calm adult mentor in class, somebody they can feel safe with. It means that their first experience of being with other dogs is a calm one. Too often, their first experience is going into the middle of a big open expanse of grass off lead, with everyone zooming around all over the place. It is far too much for some dogs and they get very frightened. The danger in the city is that if a little dog gets frightened and is off lead, it will flee. Every week there are stories of dogs that run out of the park and get lost or run over. It is important to make sure that they are safe and that they learn good skills from adult dogs. They learn through mimicking.

Each class aims to give safe interactions and teach observation of calming signals and stress. Dogs can of course play

The dogs will go out in all weathers, provided they are happy with it. It depends on the individual dog.

with each other a little bit in class if they want to, even though they are not off lead. Mostly, however, the adult dogs will step in to stop it before the humans realise it has gone on for too long. The advantage of having adult dogs present is that one learns so much from them!

Winkie told us about a little fox terrier who can be a bit of a handful sometimes, still being very young, but the dog from Romania is great at calming him down. This gives him an opportunity to learn more respectful behaviours. If he was just with other young dogs all the time, he wouldn't learn anything enjoyable.

One little dog who was signed up for the puppy classes was not helped by them in the slightest. Although his owners have had dogs for about 40 years and feel they know a lot, by the time they came to the puppy class they had not treated the puppy very well. He was very frustrated and bullying other puppies. Winkie suggested that they would come to the social walk classes, and he has done very well. However, Winkie is still struggling with the owners! Because there are several helpers in each class, they can deliver a consistent message to the owners, and things are improving gradually for that little dog.

Social eating: the treat tree

The treat tree is a great favourite. It enables dogs to get up on their back legs if they are strong enough and have enough balance. It is really useful in getting them to use their body. If a dog has any food anxiety, they will have their own tree. When Winkie is setting up the tree, they can come and start licking almost immediately; she doesn't make them wait, because it increases their frustration. Alternatively, someone will go and set up the treats while the dogs are busy with something else. Even young boxers and Labradors find this very tiring. Some will sleep for the next two days.

Treat every dog as the individual that they are

One young dog who comes to the classes struggles with other adolescent boys. Winkie just ensures that there are no other adolescent boys in the same class. If it does happen, they maintain a good distance between them. One little dog that came to class had been used in terrible ways as a puppy and is now in a very loving home. She started off being very worried about other dogs, but now has some dog friends that she finds very comfortable to walk with. She doesn't do it very often, because it's a bit too much for her; she comes about once every six weeks and that is enough for her.

Social eating is one of the nicest things a dog can do.

Teaching to allow dogs to explore together and walk slowly sniffing as they go

People go very slowly and explore as they go. Everyone is very worried about letting dogs explore rubbish, but it's what they like to do! Just standing still and letting them "read the newspaper" is useful. An example that is sometimes used to explain this is asking the owner how they would feel if they were looking at an interesting shop window and somebody grabbed them and dragged them off. Winkie will sometimes actually do that, and when the owner reacts to being pulled by the coat, she explains that that is how it feels for the dog. It is important for people to know that it doesn't feel good.

Dogs are allowed to sniff and even taste puddles. If it has rained recently, there is absolutely nothing wrong with tasting a puddle. It is not so much needing a drink as much as exploring what's in it. Of course, in a car park where puddles are likely to contain oil, petrol or antifreeze it may not be such a good idea.

WHEN NOT TO COME

A dog will not do do social walk classes if he doesn't enjoy it. For example, if it is raining and the dog doesn't like rain, especially if the dog makes it clear that he doesn't, then they should go home.

If the dog is ill or in pain it should not come to class. Also, if it is a very hot day, Winkie will cancel the classes for the sake of the dogs. Female dogs in season may not come, nor can dogs that have recently been stressed, such as moving to a new house or going to the vet.

Treat search

A favourite spot for Winkie's classes to do a treat search is on the big roundabout near her home, especially because it is sloped and makes the dogs use different groups of muscles. In addition to the fact, of course, that they will not be interrupted by other dogs. Winkie also does treat searches there with her own 17-year-old dog, who has gotten really good at coordination. Winkie recommends that treat searches should be done at least once a day for all dogs.

Social walk classes really work for some dogs

Winkie related the story of a young dog that was taken away very young from its parents. It was very possessive around toys, because the owners used to take them along on walks.

He hated all other dogs and would pin them down, including puppies. He was stealing balls from other dogs in the park, and other dogs would bark at him and try and mount him. He also had an immense number of allergies. After a one-on-one with Winkie, things improved in their home life, but the first social walk class was not a success because he is owned by two people and only one of them came, and it was the person who has the least to do with him. Her handling skills were terrible and quite old school. The dog was quite reactive and didn't cope very well. The next time, Winkie made sure that both owners came, and the result was completely different. He is now able to walk and sniff with other dogs. He hasn't barked at any dogs, he is able to do treat searches in the proximity of other dogs, and it has made him change quite quickly. However, both of his owners need to be there. It is important always to see who is bringing the dog to class, because in London many people have nannies or au pairs and friends, children or other relatives.

Different breeds and different needs!

Winkie talked about a collie who had been got from a farm at six weeks of age. She first met him when he was six months old and he was obsessed with everything. He loved everything that moved, did a lot of ball play, pulled on the lead, and barked and spun around at everything: runners, cars, dogs, leaves, etc. and he would eat absolutely anything. Even at a great distance, and after several one-on-ones, they could not get far enough for him not to react to other dogs. They went back to one-on-one training, and now he has regular social walks, but only with Winkie's two lurchers. He can now pass other dogs on the pavement and is ignoring scooters, joggers, cars, sirens, and even leaves. They have come a very long way, but the social walk classes for him were a complete disaster. It was too much for him, and possibly always will be.

Winkie also stressed that except for one rescue dog, none of the dogs on her walks are neutered, which fits in nicely with what Amber was saying in her talk.

Gentle activities

Getting on a log takes courage, balance and curiosity. Winkie talked about a little Dachshund that was reactive to other dogs, but when she got on a log there was no problem. She just loved it. Such a simple and easy solution.

Winkie's class also has seasonal fun, including Easter egg hunts with quail and hen's eggs. Of course, this depends on whether the dogs have any health issues, in which case people will bring their own items. With breeds that love to find things, the search can be made more complicated.

However, during most social walk classes things are kept simple; otherwise it confuses people.

Importantly, dogs only take part in things that they choose. For example, getting up on benches, logs etc. Puppies and young dogs just watch and are not encouraged to take part, but they can go and explore and see what the others are up to. Often, watching others makes them want to go and do it as well, but it depends on whether or not it is going to be suitable for them. Dogs learn that they are allowed to get up high and do different things; it is a way for them to solicit attention. It's almost like saying, "Hey, look what I can do!"

Learning from each other

A very good component of classes is that owners get to meet others with the same problems. They can feel that they are not the only person in the world, because owners with a problem dog are often very sensitive and feel that they are bad people because of their dog. Of course they are not; some people just get a dog with problems, like a puppy that is far too young. It is very reassuring for them to meet others in the same situation. During the classes they spend time sitting down and doing very little, and the dogs really enjoy that. But getting people to stop and sit down on a walk is actually quite hard! There are some men who come along who are professional trainers, and initially they are very frustrated at the slow speed. They do get better with time, and it is also important for human stress levels to slow down.

Teaching dogs to think before they act

This is something Amber touched on in her talk. For Labradors, many people think that the first thing they should learn is to chase a ball and retrieve it. It teaches dogs to react without thought. If you are young, with a fit and strong body, careening around the park at speed with nothing going on in your head is like a runaway train. It is incredibly dangerous, they can knock people over and they can harm themselves. It doesn't seem to be very popular to teach dogs to think before they act.

Learning to cope with life's many challenges

When a dog experiences something new with friends, the first experience can be a very happy one. First impressions are lasting impressions. Often, people who have mobility issues may be coming directly towards the dog, which is always going to be frightening. Therefore, it helps if owners can learn to curve almost immediately and avoid yanking or pulling. Parallel walking is also something that can be used. Young dogs like to be out in front. They often don't know where they are going, but they are in a big rush to get there! There is nothing wrong with letting them be out in front. So parallel walking can be done in parallel, but some dogs prefer to be behind other dogs, or in front if they are young. The main thing is for each dog to be able to do what feels most comfortable for it. Plenty of space is crucial. It means that during a social walk class they may get quite stretched out, but if there is something interesting to sniff and they get very close in order to do so, it is important to watch for tension in the body. However, they should not be restrained, because that creates frustration.

Nice areas can be found in the most unexpected places. For example, Winkie has found a patch of long grass between a prison and a busy road. Nobody walks their dogs there!

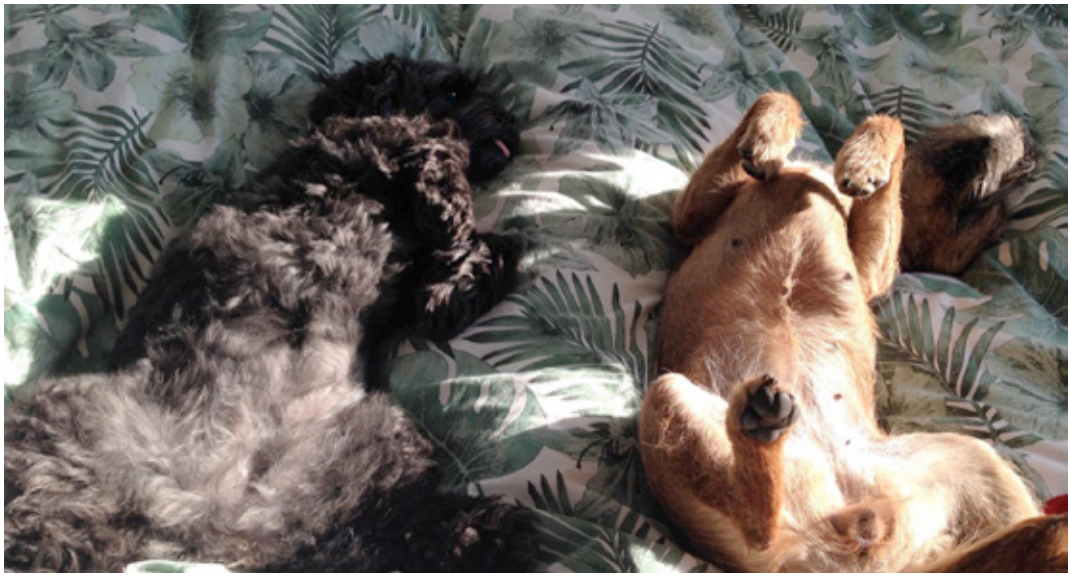
People ask a lot of questions on a walk. It really is about people training, rather than training dogs. It is training people to give their dogs a nice experience out walking. People in class are not allowed to be on their phones. Winkie said that her classes are getting slower and slower!

Finding places to go is not as hard as it sounds. Winkie lives in London and always find places where she can walk without ever seeing another dog. One can walk around in an industrial area or go to a shopping mall when it is closed (in certain countries). There are so many options that living in a city is not a barrier.

SLEEP

Clients must be reminded of the importance of sleep after a social walk class. It is incredibly tiring. People often think that because their dog hasn't had a good run, they need to take it for another walk. They don't need to come early to run around before class, and they certainly don't need to run around afterwards. Telling people that, and getting them to try it, they come to realise that less is so much better.

Taking things slowly is a great life school for everyone. Certainly, many of us who took part in the weekend needed a lot of sleep when we got home! Our heads and hearts were filled with so many fun and interesting things. Many thanks to Winkie for sharing her experience with us.



At the heart of the walk

Aurélien and Cristina Budzinski
France

Aurélien & Cristina are canine behaviour consultants in France. Former students of Turid Rugaas, they use their knowledge to assist dog owners gain a better understanding of their animals. They created the Dogbrochures.com project to help people diffuse better information about dogs all over the world.

In this fascinating talk, Cristina and Aurélien continued on the topic of taking our dogs out for a nice, calm walk with plenty of sniffing. And they showed that it works!

The first idea was to compare different kinds of walks from the point of view of the pulse. Dogs can be walked on a short leash, on a long leash, or unleashed. They did not include any equipment that limits the freedom of the dog, such as a 20 cm leash.

TPR

Certain vital functions can be measured such as the temperature, pulse and respiration. The study by Aurélien and Cristina focused on the pulse.

In the dictionary, pulse is defined as the rhythmic dilation of an artery that results from beating of the heart. The pulse can go up during an activity or if one feels emotion or stress. Aurélien quipped: "I'm talking to you now and my heart is going up! It's normal; it is the job of my sympathetic nervous system. But it can go down when I am resting and relaxing during digestion. Then it is the job of my parasympathetic nervous system." Amber explained it very well in her talk on Saturday morning.

They decided to focus more on variations than numbers, because the normal pulse can be very different depending on the source. Also, it is important to remember that there are a whole host of pathologies and diseases and exogenous factors like humidity and temperature that can influence the pulse.

Study protocol

The main idea was to make observations on different types of walks and record the dog's pulse. It was decided to film the sessions and compare whether there is any correlation between the dog's pulse and other indicators. It was a very simple protocol: five-minute walks on a 1.5m short leash, on a 5m long leash, and unleashed. The different kinds of walks were done randomly, and there was a "warmup session" for all the dogs to get them comfortable with the equipment.

Context

The session was done in calm environments to minimise distractions like cars or bicycles and other dogs, and other variables influencing the data. The walk was done in a new place for each dog, because a new place means mental stimulation.

Rules

Rules were set up so that the walk could be done in good conditions for the dog. There was no pulling on the leash; there was to be no reaction if the dog pulled; the owner had to be relaxed; the dog was allowed to sniff; the person stopped as soon as the dog stopped; walking was done slowly at approximately one step per second; nobody spoke to the dog or caught its attention; and most importantly, the dog was allowed to enjoy the walk.

Participants

Fifty dogs participated in the study. There were all kinds of breeds aged from 5 months to 15 years, and very different types of dogs. Some of them were used to being walked every day, some never; some were unleashed every day and some never. There were males and females, everything from Chihuahuas to Cane Corsos.

Equipment

The chosen harness was one that releases the shoulders, with a 5m long leash and a short 1.5m leash. For measuring the pulse, Polar electrodes were attached to the harness and linked to a smartphone data-collection app created by Aurélien. The video was synchronised with the data to produce graphs, so it would be easier to understand the variation of the pulse.

A lot of different graphs were produced and they were all different depending on the dog and even on the session. The graphs were coloured such that the normal pulse range was green and changed to orange or even red as the pulse went up.

Visually, it was fascinating to see the video and the graph underneath, with a moving dot (indicated by the red line) showing the pulse synchronised with the video in real time. It was clear to see what the dog was doing as the pulse moved up or down.

For each participant, the minimum, maximum and average pulse were recorded. The minimum pulse recorded was 72 bpm and the maximum pulse 238 bpm. There were a lot of high pulses, but actually this can be quite normal because at some point the dog got excited by something, or perhaps a little scared, but this only lasted a few seconds. One reason that focus was placed on within-dog variation rather than inter-dog comparison is because e.g. smaller dogs can have a faster heart rate than bigger dogs and dogs can be in a different state of health, among other things. The average pulse was 148 bpm. One dog had an average pulse of 223 bpm. They initially thought that it perhaps never went out and therefore got overexcited on walks, but it turned out not to be the case. It was a dog that went out every day. The owner was quite reluctant over the rules set up for the walk; she did not want to walk slowly, as she normally moves very fast on her walks without stopping. This was a good opportunity to help her understand how much a small dog like hers has to trot or even run to keep up. The graphs were very helpful for her to understand that her dog was not coping as well as she thought.

Observations

Short leashes have a restricting effect on the movement of dogs and can prevent them from communicating properly with their environment. For example, they cannot curve properly, or cannot move away if they are afraid of or startled by something. This can cause micro-tension and muscle stiffness. This is perfectly in line with what Julia Robertson talked about the following day (see Part II of the Symposium Report). A long leash, on the other hand, allows the dog to move more freely, or it at least creates a semblance of some freedom. And it gives more choices for the dog to sniff and explore. Unleashed, the dog has unlimited choices, total freedom of movement, and can decide when it takes breaks. This was well illustrated by some videos of the same dog on a short leash, long leash, and unleashed. Just between a short leash and a long leash there was an amazing difference. Unleashed, the dog spent more time sniffing calmly. This was true of most dogs during the study. Most owners assumed that they would run all over the place if unleashed, whereas what they actually did was sniff.

Another dog showed evident signs of stress and frustration on the short leash, with frequent panting and turning. On a long leash, the change was instant. She was more relaxed, and although she was a bit uncertain, there was a clear difference. They counted the number of turns she made, and on the short leash there were no less than 20 with almost no breaks. On the long leash there were only six, or 70% less. Unleashed, she did five turns. So the greatest difference was between a short leash and a long one.

Sniffing

The amount of time that dogs spent sniffing was counted based on the video recordings. One dog when on a short leash spent 48 seconds sniffing. On a long leash, he spent 114 seconds sniffing, and unleashed he sniffed for 125 seconds. Again there is a big difference between a short leash and a long leash.

The pattern was similar in another dog. The amount of time spent sniffing on a long leash was two-and-a-half times more than a short leash.

In stressed dogs, the difference was even more marked. One dog spent only 10 seconds sniffing on a short leash, and unleashed he spent seven times more. In this case, the difference on a long lease was not as huge, but still important. For this dog, being unleashed was clearly much better.

When we take our dogs for a walk, it is THEIR walk, not ours!

Another dog spent only 3 seconds sniffing on a short leash, which is only 1% of the 300 seconds of a 5-minute walk. A long lease was much better, but not sufficient. However, she is much better now and the stress levels have come down.

Taking an average of all the participants, unleashed is best for lots of reasons. For example, it allows far more choices. Also, it allows more freedom of movement, the importance of which Martin Fischer clearly demonstrated at the Dog Symposium last year. However, when a dog cannot be unleashed, a gentle walk on a long leash is a good compromise. Sniffing will occur roughly three times more than on a short leash on average.

Focus on the pulse

In the most fascinating part of the talk, Cristina and Aurélien showed the videos of dogs' heart rates on walks. It was amazing to see how sniffing lowered the dog's pulse even while it was walking. The greater the sniffing intensity, the more the pulse dropped. The pulse would drop during sniffing, but if there was something really very interesting that the dog sniffed deeply and intensely, the pulse plummeted. This is a good reminder that when we take our dogs for a walk, it's our dog's walk, not ours!

Behaviours and pulse

Excitement and frustration

Sniffing lowers the pulse, but the pulse can also rise, and this is normal. It can increase for both good and negative reasons. A little dog that got very excited over something in the grass showed that the pulse was shooting up, although it was a fun experience for the dog. One dog got very excited when it saw a little stream by the side of the road, as he loves water.

Rolling on the ground dropped the pulse rate. There was a question from the audience as to whether the monitor being on the dog's back could have affected the result. However, it was not always in the same place.

Stretching was very important in lowering the pulse.

Chewing grass had a very calming effect on all the dogs that we saw. It was amazing to see how much it had an effect on the heart rate. One owner was worried as to whether she should let her dog eat grass. When they showed her what happens to the pulse, she was convinced. In fact, it was the little dog with a worrying heart rate, and she benefitted greatly from this. The pulse rate even went down when the dog was walking.

Scratching the ground

Scratching on the ground was a fascinating finding that very few people think about. After peeing or pooing, whenever a dog scratched on the ground, the pulse shot up. It seems to have a very exciting effect. When Aurélien and Cristina were setting up their equipment and trying it out on their Cane Corso, they were out in the forest and passed a bicycle. When they got home and looked at the graph, they saw a high, sharp peak and were sure it was due to the bike. However, when they compared it to the video, they saw that the peak occurred when the dog was scratching the ground, not at all in relation to the bike.

Another set of video clips showed the rise in the pulse compared to the number of scratches, indicated by a pawprint. The higher the number of scratches, the greater was the rise in heart rate.

Which has more effect on the dog – emotional or physical factors?

Although it is known that physical movement raises the pulse, the dog's emotions seem to have a greater impact. A video of a dog running really fast showed that the pulse curve stayed pretty flat. In another clip, a dog was visibly startled by something and the pulse shot up, but as the dog was running away it went down.

Shaking off something was very effective for the dog too, and it was one of the behaviours they saw the most. When the pulse shot up due to something interesting or slightly scary to the dog, as soon as he shook himself, the pulse dropped back down immediately. Shaking it off seems to have a self-calming effect.

A table was created with the results of all the shakes observed, totalling 144, to see whether it happened more

on or off leash. There was no difference. They also measured how long it lasted, and generally it was around two seconds. However, it always decreased the pulse, by up to 36%. The average pulse decrease was 10%. Eighty per cent of the dogs shook it off during the 15-minute recording, but before, during or after the recordings, almost all the dogs did so.

The daily walk

The second part of the study involved daily walks that were not always in ideal conditions. They therefore visited the participants in their homes and followed them on their daily walks. The goal was not to show what not to do with your dog. Instead, they chose to give some advice to the owners on how they can cope with their daily situations, and how to react if something happens. It was also an opportunity to analyse the impact of human behaviour on the dog. The videos therefore showed the pulse of the dog and that of the owner as well.

A stranger bending over the dog caused a big increase in the pulse rate of the dog. As soon as the person stopped, the pulse normalised. One clip showed what happens when there is or isn't curving. A dog living in Paris was passing two people coming towards it on the pavement. The pulse rate went up as they approached, but as soon as they had passed the pulse went back down. As another person came towards the dog the pulse went up again, but this time the person turned off the pavement to cross the street and the dog's pulse dropped.

This confirms the work done by Agnes Vaelidalo over the past few years, which shows the marked effect of curving on a dog's heart rate. She also has videos on her website.

For the human, walking on the street had no effect on the heart rate, but for the dog it was clearly an adventure.

In another clip, the dog's pulse was on a roller coaster whereas the owner's rate stayed flat. When the dog, which is reactive to other dogs, spotted another dog, its pulse response was triggered as soon as it saw the dog. If the owner was thinking of doing something about it, it was already too late; the dog's pulse had gone up. However, what one can do is not make things worse. It is better not to react and instead take the dog out of the situation. On the way back home, they had to pass a house with a dog that their dog normally reacts to. They had no choice but to go that way, so Cristina suggested that she hold the leash and the owner walk between the dog and the house, and use the hand signal. The owner was a little clumsy with her hand signal; nevertheless, with her doing that and Cristina leading the dog into a curve, the dog's pulse went down.

A final clip showed a dog that copes pretty well with anything that can happen on the street: barking dogs, people, cats, whatever. The pulse stayed within the green zone, but rose on two occasions. What were they? The first one was scratching the ground after a pee, and so was the second one.

To conclude, we should provide our dogs with the best conditions for a nice walk, on a long leash if freedom is not possible. We should walk slowly and wait for our dog when he stops. We should let him enjoy his walk and do what he needs to do: sniff, eat grass, chew something, roll on the ground, or shake it off. It all has a purpose, and it is all for our dog's well being.

Thank you, Cristina and Aurélien, for this fascinating and eye-opening talk!