



# **Understanding and Preventing Canine Aggression Mini Series**

## **Session Two: Preventing Aggression through Socialisation and Communication**

Stephanie Hedges BSc (Hons) RVN CCAB  
Canine Behaviour Counsellor



## **Understanding and preventing Canine aggression**

### **Session 2: Preventing aggression through socialisation and communication**

#### **Study notes**

#### **Reading body language to prevent and diffuse aggression**

All animals are primarily driven by the need to survive and procreate. This requires them to balance self-defence and the protection of valuable resources with minimising the risk of injury. Attempting to cause real harm to another individual runs the risk of retaliation, which may lead to injury or even death. Social species, such as dogs, have therefore developed ways to avoid this.

When faced with any kind of threat (or something they perceive as a threat) a dog will typically initially become still, stiffen their muscles and stare at the trigger. This may last a moment or be prolonged. They will then decide how to respond to the threat, based on all the criteria discussed in session 1. This may include the use of appeasing signals, threat signals or causing the target injury, which I will refer to as true aggression. The first two are intended to avoid the latter.

#### **The signals**

#### **Appeasing signals**

Appeasing describes behaviours used by a dog to communicate that he does not intend to challenge or use threat or true aggression towards the target. Dogs may use appeasing signals during initial greetings to indicate peaceful intentions, in the same way as people may smile or shake another person's hand. They are also used to pacify the target if the dog feels they are showing threat behaviour, with the aim of making them stop and withdraw. Some dogs may also use them to try and diffuse tension between others.

Some appeasing signals are stronger than others. Low level appeasing signals can be very subtle and are not widely recognised. They can therefore be easily overlooked. Low level appeasing signals can include:-

- Licking the lips or nose
- Yawning
- Chomping – this is rather like chewing a toffee
- Avoiding eye contact by looking away or turning the body away
- Leaning body weight away from the target
- A slow low wag of the tail
- Narrowing the eyes
- Sniffing or licking the target's muzzle or face
- Showing a narrow strip of the sclera, often described as whale or half-moon eye
- Furrowing the brow
- Panting
- Sitting down
- Shaking the whole body in the same way as a dog shakes himself when wet. This is thought to be caused by vasoconstriction or dilation.
- A submissive grin: this differentiates from a true snarl in that the dog tends to show all the gums surrounding the incisors and that it is usually coupled with other appeasing signals.

It is debatable whether some of these signs are deliberate appeasing signals or the physiological effect of fear or stress. However, they are all a sign the dog is worried by the other's behaviour and wants them to back away.

Stronger appeasing signals tend to be used where lower level signals have failed or the dog perceives a stronger threat. These can include: -

- Lowering the body – often referred to as cowering
- Tucking the tail. The tail may be still or wagging.
- Pulling the ears back
- Actively moving away. This is usually coupled with other appeasing signals such as cowering, creeping along with the tummy in contact with the ground or any of the milder appeasing signals already discussed. This ensures that the movement isn't misinterpreted as an attack.
- Trying to escape, if the dog is cornered or trapped
- Hiding
- Freezing – some dogs will refuse to move at all
- Elimination
- Rolling onto the side or back. This behaviour needs to be clearly differentiated from when a dog rolls on his back in play, for a scratch or to solicit a tummy tickle. When appeasing, dogs tend to lay partially on their side with their lower legs on the floor whilst lifting the upper legs, especially the hind leg, to expose the belly. They also tend to use other appeasing signals to make their intention clear. In comparison when dogs roll on their backs in play or to have their tummy tickled they tend to roll fully onto their backs and don't show other appeasing behaviour.

### **Threat signals**

Threat refers to communicatory behaviours used to suggest the dog is willing to use true aggression to defend himself or a resource of value to him. It includes all those behaviours associated with the everyday definition of 'aggression' up to but excluding actual harm, plus some others that are not so widely recognised.

Some threat signals are stronger than others. Lower level signals can be quite subtle so may be overlooked. Threat signals include: -

- Prolonged tensing of all the muscles in the body
- Prolonged staring at the target with a fixed gaze
- Standing with body weight forward. This indicates a readiness to move forward if necessary. This may include standing over the target.
- Holding the tail vertical. This may be still or wagging. An erect tail has often been suggested to indicate the dog is confident. However, although a vertical tail may be a signal of threat it can still be driven by fear.
- Holding the ears erect and forward: as with the tail this is often misconstrued as implying the dog is confident when he may in fact be fearful.
- Body blocking: standing in a position that prevents the target moving, approaching a resource the dog is trying to protect or performing some kind of action e.g. walking through a doorway. This is usually performed with other threat signals such as stiffness and staring.
- Mounting the target
- Circling the target

Stronger threat signals are usually used where lower level signals have failed. These may include: -

- Physical control such as pinning the target down using body weight or the jaw, using the mouth to control behaviour without applying pressure or showing menace, or putting the head over the other dog's neck.
- Aggressive barking. Threatening barks usually have a lower pitch and may incorporate a growl at the start or end.
- Growling. When used in threat growls usually have a lower pitch and are prolonged.
- Snarling. This may involve exposure of the molars, the incisors or both. It may or may not be coupled with growling.
- Snapping: this includes snapping the jaws close to the target. In most cases the dog deliberately hasn't made contact or caused injury, even if the target moved or took evasive action. The dog's reflexes are very fast and precise and so if they intend to bite they normally do.

## **True aggression**

The term true aggression has been used here to describe when a dog causes actual injury. Placing it in its own category ensures that it is recognised as being separate from appeasing and threat signals. Use of true aggression is a last resort. In most cases it can be avoided providing appeasing and threat signals are recognised, understood and responded to appropriately.

## **How signals are used in combination**

Typically dogs will start by using low level appeasing behaviour to try and diffuse a threat. If this fails the dog may then escalate to higher level appeasing. If this also fails some dogs will then progress to low level threat. Dogs may also learn over time that appeasing does not work and so start to skip this step and opt for threat as their first option. Where the target is seen to meet or escalate a threat signal the dog may then decide to back off and appease, or may escalate to higher threat. In extreme cases they may escalate to true aggression. As with appeasing, dogs that have learnt that low level threat doesn't work may opt to use high level threat or, rarely, to bite with no other warnings. The latter may also occur where they have learnt that warning signals such as growling or snarling lead to punishment or aggression from the target.

Mixed or constantly changing signals may suggest the dog is unsure what to do, has two conflicting emotions or that his emotional state keeps changing. An example is a dog that likes other dogs but has become fearful of them. He may initially show body language suggesting he is keen to approach and greet them, but occasionally intersperse this with appeasing or threat signals due to his worry they may show threat or true aggression to him.

Some of the appeasing and threat signals discussed so far can also be seen in other situations. For example a dog may lick his lips in anticipation of food or yawn when tired. The context the behaviours are seen in and the combination of behaviours used therefore needs to be taken into account.

The signals discussed here describe the most common way for dogs to behave in response to threat. However there will always be individual variation, as there is with all behaviour. Individual dogs can have their own behavioural quirks and use signals out of context or in an unusual way. Some dogs may also behave abnormally. This therefore has to be kept in mind when interpreting canine behaviour.

## **Preventing and diffusing threat behaviour**

Recognising the early signs of stress, fear or appeasing enables us to identify when our behaviour or a situation is causing the dog to become worried and so take steps to address this. This in turn prevents the dog escalating to threat or true aggression. In particular we need to be aware that common human behaviour such as staring at or leaning over a dog, or touching the back of the dog's neck, can mimic canine threat behaviour. Session three will discuss how to modify handling to prevent this.

## **Preventing aggression through socialisation and habituation**

### **What is socialisation and habituation?**

Socialisation is the process by which a puppy learns which species of animal he is, which other species are friends, foes or prey and the skills needed for positive social interactions. A puppy's sensitivity to socialisation is at its greatest between 3 and 7 weeks of age. Sensitivity then starts to taper and puppy's willingness to accept new species as friends gradually lessens, usually ending at around 13 weeks. The development of social skills will continue, however, enabling the puppy to continue learning acceptable behaviour around other dogs as he grows and matures into an adult.

Habituation is the process by which a puppy learns about the sights, sounds, smells and other sensations of everyday life. Up until the age of about 8-9 weeks a typical puppy has no fear of anything. At 9 weeks most puppies will start to show some fear of new experiences and will have a fully developed fear response by about 13 weeks. Anything a puppy experiences before the fear response is fully developed will normally be accepted as harmless. The puppy also develops the skills needed to cope with anything he is unsure of in later life during this period.

If a puppy has limited experience of other species or everyday sights, sounds etc. during this early period he will miss the chance to identify the things that will not harm him. As puppies can recognise differences between people, a failure to mix in a relaxed and friendly way with a wide variety of people may result in him growing up to be cautious or fearful of types of people he didn't meet at this time. Equally if a puppy has limited chances to socially interact with dogs of different types and ages throughout his development he may become fearful of other dogs or behave inappropriately around them as an adult. Perhaps more importantly limited or absent socialisation and habituation restricts the puppy's chance to learn how to cope with new things. This can then cause the puppy to react more fearfully to new experiences when he is older.

### **Managing socialisation and habituation**

Ensuring a puppy has a wide range of non-strongly aversive experiences during this most sensitive developmental period is perhaps the most important thing an owner can do for their puppy. This has to be balanced with protection from disease until the puppy's vaccinations are complete. However the two are not mutually exclusive and good socialisation and habituation is as essential to the puppy's long term survival as protection from disease.

Socialisation and habituation needs to be managed from birth. Clients should therefore be advised to check what steps their puppy's breeder takes to facilitate this. It should also continue beyond the end of the most sensitive period of 3-13 weeks: development continues until full adulthood at 2-3 years of age and so experiences should continue to be managed until emotional maturity.

Socialisation and habituation does not need to be onerous: -

- A puppy can socialise to variations of a species, such as people of different appearances or behaviour and dogs of different breeds, with as little as five minutes exposure a day to different people and dogs.
- A puppy can learn to accept any variation of a species after meeting as few as 10 different types of people or dogs.
- A puppy only needs one new experience a day to enable him to cope with novelty in adulthood
- Naturally occurring stimuli are the most effective but recordings can help where this isn't practical e.g. fireworks outside of firework seasons

### **Socialising to people**

Puppies should meet a variety of different people during their sensitive period, including people of different ages, sizes, appearance and behaviour. People visiting the house to help socialise the puppies should be asked to remove outdoor footwear and coats and to wash their hands before entering the puppies' pen. They should get down to the puppies level and allow the dam and puppies to approach and initiate the interactions. They can then fuss the puppies as they normally would or allow them to climb on their lap. All contact should be calm and gentle but the way in which the puppies are fussed or greeted should only be limited by the puppies' responses. Very young children can be allowed to watch the puppies from outside the pen or play alongside them on the other side of a barrier.

The range of people a puppy has the opportunity to meet can be expanded by carrying the puppy outside of the house until their vaccinations are complete. The client should only allow people with clean hands and no dog or vaccinated dogs to fuss their puppy and should ensure only one person fusses their puppy at a time to avoid overwhelming him. They should avoid passing the puppy to another person unless the puppy initiates this himself and should monitor the puppy's body language throughout. If they see any signs of stress or appeasing they should take the puppy out of the situation. They can then try again in a quieter situation on another day and ask the person to approach from the side, to avoid eye contact and to let the puppy approach and touch them rather than the other way round. If the puppy is still fearful the client should be advised to seek help from an accredited behaviourist.

## **Habituation**

Puppies should be exposed to a range of household sounds from around 2-3 weeks of age. These should include those that may trigger a stress response in later life e.g. the washing machine, vacuum cleaner, lawn mower or hair dryer. Puppies bred outdoors or in isolated rooms in the house, such as a breeding room, utility or conservatory, are at particular risk of not habituating to these sounds and so need to be actively exposed to them on a daily basis. Recordings of less accessible triggers, such as thunder or fireworks, can also help. Once the puppy is older he should also be exposed to new outdoor experiences such as being carried or walked in towns, the countryside and suburban areas and different types of transport.

The client should allow the puppy to initially explore new things in his own way. They shouldn't try to push him closer than he seems comfortable with and should ensure he can get away from anything he is worried by. They should take him out of the situation if he shows signs of stress or appeasing, and then try again another day a little further away from the trigger. The client can also try exploring the trigger themselves to show it is safe. If the puppy's fear persists the client should be advised to seek help from an accredited behaviourist.

## **Socialising to other dogs**

Puppies ordinarily develop olfactory recognition of other dogs via their dam and/or siblings. If a puppy is orphaned it is important to compensate for this by exposing him to dog odours, either by being in the same room as other vaccinated dogs or by using scented cloths.

Puppies develop social skills during play with their siblings and interactions with the dam. Interaction between puppies, both in the litter and with unrelated puppies and older dogs, must be supervised to ensure bullies aren't encouraged and to prevent worried puppies becoming more so or learning to use aggression to control other dogs. Tips for supervising interactions between new puppies or puppies and older dogs are as follows: -

- Allow the puppies to approach and greet each other and monitor body language.
- Observe for play signals such as a play bow, pounce, jumping from side to side, rocking horse gait, or turning in a 360° circle
- Monitor body language throughout the play bouts, which should be relaxed with soft faces, bent legs, open mouths and relaxed sweeping tails.
- Observe for equally matched play bouts. Puppies should take turns who chases who and who is on their back during wrestling bouts. If one puppy is always on top, is pinning the other down or is chasing the other for a prolonged period interrupt the session.
- An element of mounting is common in play but where this is repeated or the puppy being mounted looks concerned interrupt.
- Play normally stops and starts during which each puppy responds to the others signals. If there are no natural gaps in play bouts separate the puppies briefly and look for mutual play signals suggesting both want to start again.
- If either puppy looks still, stiff or is showing signs of worry separate and test whether both parties want to play again
- Play is normally fairly quiet. If it gets too noisy this suggests over excitement, fear or aggression and so needs to be interrupted.
- Stop play if one makes the other squeal and the play doesn't naturally stop as a result
- Ensure either puppy can withdraw at any time and separate by calling or luring the puppies away from each other in a calm and jolly way if any aspect of the play is unacceptable. If this isn't effective gently pick up the puppies and carry them away, then direct them onto something else fun e.g. a tug toy.
- If you are unsure whether or not to break up the session separate the puppies and then release the least confident of the two. If he returns to play this suggests he didn't find it worrying.
- End play sessions as soon as one seems to be tiring or if they become over excited. Further play sessions can be allowed after a suitable rest or when the puppies have calmed down.

Ensure any puppies or old dogs the puppy is exposed to are vaccinated. Also ensure any classes the puppy attends that allow interaction between puppies is supervised by an appropriately accredited trainer or behaviourist.

## **Special cases**

Good early socialisation and habituation is critical to the development of a well-balanced adult dog. Although learning continues lifelong a lack of appropriate experiences in the puppy's most sensitive period can be difficult or impossible to undo. There is therefore no time to be lost where a puppy's early development has been adversely affected. It is therefore advisable to recommend a client seeks advice from an accredited behaviourist as soon as possible in such cases. Puppies at particular risk include: -

- Puppy farmed or farm bred puppies
- Hand reared puppies or those separated from the litter early
- Puppies that have a substantial period of early illness or that have been excessively confined in their sensitive period
- Puppies showing elevated levels of fear that do not pass within a day or two of exposure to a new experience or environment.

## **Commands for communication and control**

Teaching a dog basic command words enables the owner to guide their dog's behaviour and so control or prevent unwanted behaviour. For example a recall command ensures the dog does not run off and a 'sit' command can be used to interrupt and redirect all kinds of unwanted behaviour in puppies and older dogs. Being able to direct a dog's behaviour in this way not only reduces the chance the dog will be punished but also lessens the likelihood the owner will become frustrated with their dog and so shout at them or handle them roughly. Physical punishment, owner anger and mishandling are all strong influences over the development of defensively aggressive behaviour in dogs. As such teaching core commands can, in the long term, prevent the development of aggressive behaviour.

## **Operant conditioning**

How a dog learns was discussed in session 1. Here we will look at how the natural process of operant conditioning can be modified to teach a dog to perform certain behaviours in response to command words.

Operant conditioning is the process whereby an animal modifies voluntary behaviours according to their learnt outcome. If they learn the behaviour has a good outcome they will repeat it. If they learn the behaviour has a bad outcome they will avoid repeating it. Operant conditioning occurs naturally through 'trial and error'. A dog will try a behaviour to see if it gets the desired outcome. If it does the dog will then repeat it whereas if it doesn't they will try something else. Although the majority of operant conditioning arises naturally, people can also use this method of learning to manipulate an animal's behaviour using rewards and punishments.

## **Rewards and punishments in operant conditioning**

Rewards and punishments form an intrinsic part of training using operant conditioning. However the terms can be confusing, partly because they have colloquial as well as scientific meanings and also because so many different terms are used to describe them.

In operant conditioning a reward is something that increases repetition of the behaviour the dog sees as having triggered the reward. This can occur by giving the dog something he wants or by stopping something he doesn't want at the time he performs the behaviour to be encouraged. Rewards are also called 'appetitives' or 'reinforcers'. The term reward will be used for simplicity.

In operant conditioning a punishment is something that decreases the repetition of the behaviour the dog links it to. This can occur by applying something the dog doesn't want or by taking something he does want away when he performs the behaviour to be deterred. Punishments are also called 'aversives'. The term punishment will be used.

One way to illustrate how rewards and punishments work is by placing the four ways these can be delivered in a table (see table 1). This shows how rewards can increase behaviours by adding something the dog wants or taking away something they don't want, and punishments can decrease repetition of behaviour by doing the opposite.

Table 1: Rewards and punishments in operant conditioning

	<b>Reward</b> <i>Increases repetition of the linked behaviour</i>	<b>Punishment</b> <i>Decreases repetition of the linked behaviour</i>
<b>Positive</b> <i>Adding something</i>	<b>Add something desirable</b> Give the dog something that evokes pleasure e.g. food, play or attention	<b>Add something undesirable</b> Apply something that causes fear or pain e.g. physical punishment, check chains, electric shocks or fear inducing noises
<b>Negative</b> <i>Taking something away</i>	<b>Take away something undesirable</b> Stop applying the thing that causes fear or pain e.g. physical punishment, check chains, electric shocks or fear inducing noises	<b>Take away something desirable</b> Stop giving the dog the thing that evokes pleasure e.g. food, play or attention

Both rewards and punishments only work if they are delivered correctly. This means they must be delivered consistently, at the right time and at the right intensity.

### **Timing, consistency, intensity and saliency in operant conditioning**

To be effective the reward or punishment must be given as, or immediately after, the animal is performing the behaviour it is intended to influence. If it is given at any other time the animal will associate the outcome with whatever he is doing at that time. The reward or punishment must also be applied consistently. If the outcome is only given sometimes it will take much longer for the dog to make the association. Inconsistency can also affect motivation. For example if an owner tries to encourage their dog to go to his bed when visitors arrive but only occasionally rewards him for doing so then the reward offered for obeying might be outweighed by the intrinsic reward the dog gets from greeting the visitors.

The intensity and saliency of the outcome must also be appropriate for it to be effective in modifying behaviour. If a reward is small or something the dog doesn't value then the motivation to repeat the behaviour to get it is lessened. Equally if the positive reward is too big the dog may quickly tire of it, after which the value of the reward will reduce. In the same way, if a positive punishment is too mild or something the dog doesn't see as unpleasant his motivation to avoid repeating the behaviour will be reduced. However if it is too strong the stress triggered may interfere with his ability to learn. It may also trigger the 'fight or flight' response. This will be discussed in more detail below.

The intensity of the reward or punishment delivered also has to compete with the intrinsic reward that comes from the behaviour the dog would choose for himself. For example the reward for not stealing or punishment for stealing food needs to outweigh the intrinsic reward attained by doing so.



## **Core training**

The core commands that may be useful for a dog to learn are as follows: -

- Sit
- Stay
- Recall
- Drop
- Leave
- Loose lead walking

The standard steps in training any command are as follows: -

- Start somewhere quiet so the dog isn't distracted. Keep training sessions short and frequent and always start and end each session with something easy
- Use a treat to lure the behaviour, then give the treat reward it
- Repeat until the dog is performing the behaviour easily for the lure, then start to add a name to it by saying the intended command word *as the dog performs the behaviour*. Still give the treat as a reward.
- Once this has been practiced for a few days stop using the lure and trial using the word paired with the behaviour as a command instead. If the dog obeys give a treat.
- Start to practice in gradually harder situations e.g. more distractions, further away etc

There are multiple resources demonstrating individual commands. However this is a very practical skill so it is advisable to seek the advice of an accredited trainer or behaviourist to help develop this.

## **The risks with positive punishment**

As discussed above, using positive punishment by making sure the dog has an unpleasant experience each time they perform an unwanted behaviour will reduce repetition of the behaviour. However, aside from any personal aversion to and ethical arguments against its use, there are also a number of risks associated with positive punishment. Of particular relevance here, it is known to trigger aggression in some cases.

## **How does positive punishment trigger aggression?**

Punishment prevents repetition of a behaviour by teaching the dog that the behaviour results in something unpleasant happening that they want to avoid. In negative punishment the outcome they want to avoid is the loss of something of value e.g. not getting the food treat or being excluded from the owner for a moment. In positive punishment the outcome they want to avoid is the addition of something unpleasant, typically pain or fear. It is sometimes argued by advocates of these methods that the positive punishment is not unpleasant to the dog. However, it is irrefutable that if a positive punishment method changes the dog's behaviour then the dog does find it unpleasant: if they didn't then they wouldn't want to avoid it next time and so it wouldn't change their behaviour.

As with all operant conditioning, for the positive punishment to work it needs to be delivered consistently at the right time and at the right level of aversion for that particular dog. If it is not given consistently and at the right time, then the dog will not understand the reason for the punishment. He will then see this as the owner causing them pain or fear, without knowing how to avoid it happening again. This can cause anxiety, as the dog starts to anticipate the punishment at any time and feels unable to avoid it. It can also trigger defensive aggression. An excessively strong punisher can also trigger the fight or flight response and so defensive aggression.

It is very hard for even the most experienced trainer to deliver every punishment at the right time consistently and to be able to calculate the precise level of intensity to deter behaviour without triggering fight or flight. Therefore, given the risks associated with its use, and the efficacy of the alternatives, accredited behaviourists invariably recommend positive punishment is avoided.