

'Why do dogs chase livestock? unpublished December 2019

Why do dogs chase livestock?

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Introduction

It is a normal behaviour for dogs to chase moving objects, in particular other animals, be that wildlife or domesticated animals (livestock). However, there are various mis-conceptions as to why they do this. This first section in this paper address the four main factors that influence this behaviour. These are influential at the species, breed and individual animal level.

First, at species level, is the role of evolution and the association of pleasure and movement required to obtain food.

Second is the influence of selective breeding of dogs to perform different tasks for humans. This has been based on selecting to enhance/reduce aspects of the Food Obtaining Action Sequence, commonly referred to as the stalk-chase-kill sequence. This explains why certain breeds are more pre-disposed to chase livestock than others.

We then move to consider the role of owners and professionals in shaping a dog's behaviour. The third section considers the individual dog's experience in terms of training, physical exercise, owner-dog interactions and the provision of appropriate outlets for natural behaviours, including those involved in the Food Obtaining Action Sequence.

The final section considers management and the prevention of opportunities for chasing. These relate to escape from property and the need for a co-operative association between owners and livestock keepers (and wildlife reserve managers) regarding signage and associated management of the dog when on walks.

Conclusion and recommendations then follow.

Evolution: Pleasure

The primary evolutionary reason for a dog to chase animals, including livestock is to kill for food. This may still be the case for feral and strays. But hunger is not the only motivator for chase, even in feral and stray dogs. Indeed, the pleasure of the chase of itself is a motivator for hungry animals to try again when they fail to catch their prey. This is clearly illustrated in the pet dog.

The modern pet dog is generally well fed, if not overfed, so chasing livestock is not to fulfil this primary need. Why then do dogs chase livestock? The answer is simple – they enjoy it. Indeed, it is precisely this chase – pleasure connection that is employed in 'legitimate' dog games such as fetching a ball.

Predatory chase for sheer pleasure is an impulsive action with no real goal in mind. The action of the chase stimulates the part of the dog's brain which is associated with arousal

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and the seeking system and overshadows the parts of the brain associated with conscious decision making. The act of the chase, i.e. the running and pursuit of a moving object, releases the pleasure-seeking neuro-transmitter Dopamine into the dog's brain, which is highly rewarding. This dopamine "pleasure burst" becomes associated with the action of chasing, and the stimulus that initiated the chase, be that a squirrel, a ball or a sheep. This is the reason dogs will become repeat offenders. It is not because they have tasted blood, but because the dog becomes addicted to the emotional high resulting from the behaviour, the thrill of the chase.

Chasing is intrinsically rewarding. Intrinsically rewarding behaviours are very difficult to interrupt. Many will have seen the You Tube video of the dog Fenton chasing deer in Richmond Park. The dog was 'in the zone' and completely oblivious to his owner's frantic calls (<https://www.youtube.com/watch?v=3GRSbr0EYYU>). The difficulty of interrupting intrinsically rewarding behaviour is further exacerbated if the animal (human or nonhuman) has become addicted to the behaviour and the pleasure 'high' that it provides.

Genetics and Breed Differences: The Dog's Food Obtaining Action Sequence

This is a co-ordinated set of movements involving both voluntary and reflex actions. The normal sequence is:

Scent – Track – Eye – Stalk – Chase – Grab Bite – Kill Bite – Dissect – Consume

We have purposely bred different breeds to have more developed elements of the action sequence than others, with some traits being reduced to a minimum depending on the intended role of the dog. For example, scent hounds have elevated Scent –Track part of the sequence and the rest of the sequence minimised. However, herding and hunting breeds such as collies, German Shepherds and terriers will be highly likely to chase, and the terriers will have a well-developed grab and kill bite instinct.

Therefore, the way a dog reacts around livestock is partly down to their individual genetics and their action sequence. There have been reports of dogs just chasing sheep until the sheep reach a point of exhaustion, but there is not a single dog bite on the sheep, suggesting the chase element was the most highly developed. Other reports are of dogs bringing down sheep and partially dissecting and consuming them. Even very small dogs will enjoy a chase, though likely on smaller animals such as chickens.

However, the whole sequence is there in EVERY breed, including those often considered as 'lap-dogs'. Thus, ANY dog, be it pedigree, crossbreed, or mongrel can chase wildlife or livestock and become addicted to this behaviour.

The difference in genetic predisposition to certain aspects of the food obtaining action sequence, plus the fact that the chase itself is intrinsically rewarding, explains why many livestock chasing incidents do not involve the dogs causing actual physical harm such as bite wounds. However, not all dogs chase even if their genetics mean they are predisposed to. The final element regarding how a dog behaves is its individual life experience.

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Experience: Is it about lack of Training and/or lack of Physical Exercise and Mental Stimulation?

It is misleading to attribute such intrinsically rewarding behaviour simply to a lack of exercise and training. For most dogs, even those you consider to be well-adjusted and well-trained dogs, whilst there is a small window to recall the dog before this chase begins, once the chase is on, they are very much in the pleasure zone and not listening to any interruptions and recall may fail. Genetics and experience work together to produce behaviour.

That does not mean dogs cannot be trained to recall from ‘the chase’. However, this takes many hours of work, over many months, from puppyhood through to adulthood. The first phase, in puppyhood, provides the grounding of recall training. However, frequently during adolescence issues arise relating to the dog’s compliance that are a consequence of the natural brain and behaviour changes associated with this stage of development. Owners need to understand and attend to these changes with dedicated training effort if recall is to be maintained at adulthood.

This raises two issues, how much attention the owner pays to the dog on a walk, and how much emphasis is placed on a chase recall in dog training classes.

Many owners have more interaction with their mobile phone or human companions than they do with their dog on a walk. This is also true for those who jog / run with their dog... again these owners are not interacting with or engaging the dog’s attention. Thus, there is a lack of control and the dog frequently leaves the owner to find its own amusement, catching them up later. If the owner is not interacting with and watching their dog, the dog is not under control. If they come across a field of livestock, the owner has lost that all-important small window to call the dog back before the chase ensues.

Dog trainers should be advising their clients of how to develop strong relationship with their dogs, beyond the use of food, which will lead to a greater obedience and a reliable recall. This means teaching them how to make walks interactive (McBride, 2019). Further and importantly, trainers should include recalls from distractions in the outdoors as part of their class structure. This should include how to keep the dog’s interest and attention with the owner through play and practising known trained commands on the walk. Owners should be strongly advised that, if they are not keeping an eye on the dog and the surroundings, the dog should be on lead.

Even though owners seek professional help by attending puppy and dog training classes, there is an insufficient emphasis placed on building the relationship between dog and owner and the importance of a good recall under any conditions. This reflects the standard of trainers, and other related professionals in an unregulated industry (McBride & Montgomery, 2018).

It is also a reflection on modern dog ownership that most pet dog owners are not prepared to, or do not understand the need for putting in the time building up the distraction level to achieve a good recall. Alternatively, as indicated above, it is very likely they have not been advised about how to go about this nor been supported in this task by the trainers whose class they have attended.

Recall training is an aspect of training that needs effort throughout the dog’s development from puppyhood, through adolescence to social adulthood.

There is an important role here for industry to lead by example. Professional bodies of trainers and behaviourists should consider the skill requirements of membership in regard to both recall and interactive walk education and training.

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The Kennel Club should consider including “recall under distraction, outside” in the Kennel Club Good Citizens Scheme, namely, a real life walk scenario, outside around livestock. This should be repeatedly tested in puppyhood, in adolescence and at adulthood.

Management: How do dogs escape and when to be on lead?

One of the shocking statistics from North Wales Police is that two-thirds of the attacks on livestock were from dogs who had escaped from the house or garden.

However, this statistic raises the question of whether there are regional variances in the number of attacks involving dogs who have ‘escaped’. Whilst it is more customary in remote rural areas for dogs to roam more freely about their property and environs this will not be the case in more semi- rural or suburban areas where road traffic is heavier. This highlights the need to gather regional data, which could result in different approaches to the solution for different types of area.

The biggest management issue in respect of pet dogs and chasing is how they are able to have the opportunity to chase. This is either due to escape from property or not being under close control in the vicinity of livestock/wildlife.

- a. Inadequate fencing: Dogs are opportunists and if they find a route to escape, no matter how well trained and exercised they are, they will still follow their curiosity and impulses, especially if they have had a history of chasing livestock or have a well-developed prey drive. This may include climbing over or digging under fencing. The garden and the approach to a home should both be secure.
- b. Escape through lack of training: It may be that the dog has not been taught an alternative behaviour to running out of the front door if it is opened. Responsible owners should be ensuring that the area the dog escapes into is secure. This may mean an internal air-lock system, such as a dog gate. If you live near a busy road, you make sure your dog can’t escape onto it and the same mentality should be encouraged to apply in areas where there are livestock.
- c. Not being on lead, or under close control around livestock: To enable owners to know when they need to take close control of the dog requires **clear and current** signage as to where livestock are located. This requires co-operation from farmers, other livestock keepers and wildlife trusts (who graze livestock or have conservation needs for dogs to be on lead).

It must be that warning signage is put up (and taken down) appropriately. Simply leaving signs up for weeks at a time when there is no livestock encourages disregard by owners who see the signs as irrelevant and all too frequently misleading. This in turn reduces the compliance with the warning, (which may simply no longer be noticed) and thus increases the likelihood of incidents.

Basic psychology of persuasion indicates that signage is more likely to be obeyed if reasons are given, such as pregnant sheep or sheep and lambs in field. This principal should also be applied to notices regarding the picking up faeces, explaining issues of for example Neosporosis leading to abortion in cattle and Sarcocystosis leading to neurological disease in foetal lambs.

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Compliance will be further enhanced if indications of alternative, temporary routes around livestock areas are also provided.

Conclusion and Recommendations

Whilst it is possible to train a dog to come back mid chase, it requires hours of practice and we should accept it is not something the average pet dog owner is going to do. *However, that should not stop a focus on including interactive walks and recalls from distractions as part of training classes for dogs of all ages.*

The main solution is ‘management’ to avoid the dog being in a position where it can chase livestock.

This means ensuring houses and gardens are escape proof and not allowing the dog to take itself off for an unsupervised walk or part of a walk. Steps should be taken to encourage owners to interact with their dogs on walks and facilitate them to be able to manage their dogs on a walk.

It is suggested that “recall under distraction, outside” should be included in the Kennel Club Good Citizens Scheme, namely, a real life walk scenario, outside around livestock. This should be repeatedly tested in puppyhood, in adolescence and at adulthood.

It is suggested that those professing to be trainers have to demonstrate their ability to train recall under distraction as part of any industry regulation or training organisation standards.

It is suggested that livestock keepers are encouraged to maintain currency of signage regarding livestock location.

Further Reading

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