

Animal Management, Local Government and Dog Aggression: The imperative of understanding canine behaviour and the subsequent improvement of animal management operating procedures

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Dog aggression can be a problem for dogs, for dog owners and for those who have to deal with its consequences in society. Understanding the biology of canine aggression and then implementing relevant management, prevention and solutions will reduce the incidences of dog aggression.

Canine aggressive behaviour is the expression of the emotional states of anger or fear, occurring due to a combination of genetic, physiological and environmental influences. Some dogs are more likely to be aggressive due to factors such as pain or other medical conditions; due to lack of experience of particular situations or negative experiences: due to the provision (or perception) of limited resources: or due to redirected or attention-seeking situations.

For the pet owner and animal behavioural professional, solving aggression problems involves a combination of short-term management solutions and long-term therapies. The reduction of canine aggression in society requires a long term strategic approach combining many stakeholders including dog breeders, pet owners, animal professionals, government bodies, researchers and the general public.

Paper

Dogs are faithful companion animals. Their willingness to defend us, our property and our resources may endear them to us but can, at times, make life difficult. On occasion dogs may display a growl, a lunge, a bite or even a full-scale dog attack. This behaviour then becomes a problem for owners and for society to deal with.

Understanding the biology of canine aggression including its definition, causes and measurement, then implementing relevant management, prevention and solutions will reduce the incidences of dog aggression.

Canine Aggression

AGGRESSION IDENTIFIED

Aggression can be defined as behaviour that has the intention of inflicting physical damage on another individual. When the interests of two or more individuals conflict, the potential for aggressive behaviour exists (Righetti, 2012).

Aggression is identified in a variety of ways, both by owners and by animal behaviour specialists. Definitions of aggression types may be based on:

- The subject (owner-directed aggression, dog-to-dog aggression, stranger aggression);
- The situation (territorial aggression, food-related aggression, predatory aggression, maternal aggression, social aggression);
- The emotions and intentions of the dog (fear-related aggression, dominance aggression; status-related aggression, pain-related aggression);
- The underlying cause (medically related aggression, fearful aggression, resource related aggression, redirected aggression).

An aggressive canine encounter can frighten or traumatise the victim, injure or even result in death. Aggressive behaviour is, however, a normal part of life for many animals and is a successful evolutionary strategy, as it helps animals defend their resources. It is, however, rarely tolerated in human society.

AGGRESSION EXPLAINED

Aggression is an outward expression of a dog's intense emotions – emotions such as anger or fear. These feelings alert animals to a potentially threatening situation and they may also be felt to lesser extents as dislike, wariness, displeasure, or irritation. The emotions themselves, although they may cause severe internal stress, are rarely dangerous to others. It is when the animal acts on their emotions that danger may result.

Genetic influences & physiological expression

Aggressive behaviour, like most other behavioural traits, has a genetic component. Dogs may inherit a tendency to be aggressive or a tendency to be more fearful than the average canine. Genetic influences may also be linked to the animal's gender, with male dogs responsible for more attacks (Gershman et al 1994, Shuler et al 2008).

Genetic influences, however, do not act alone and their expression is influenced by the animal's experiences in life. Thus breed specific legislation, since it essentially addresses only one genetic aspect of aggressive behaviour – the breed, cannot result in an accurate removal of potential aggressors from society.

Behavioural expression of aggression

When dogs encounter a threatening situation, most will communicate their anger through body language displays. These may include a range of symptoms including barking, growling, lunging, nudging with muzzle, biting or attacking. These behavioural responses often follow a progressive order, moving from one stage to another when the threat remains. Not all dogs will show each stage, however. An active aggressive response, such as a fight, is often a last resort for many animals.

Understanding likely environments and conditions that lead to the expression of aggression in dogs may help reduce this unwanted behaviour. For instance, aggressive incidents are more common in summer (Rosado et al, 2009), among young children (Beaver et al, 2001; Overall & Love, 2001; Ozanne-Smith et al, 2001) and in homes, rather than public places (Thompson, 2004). By being aware of these factors, it may be possible to reduce the likelihood of dog attack or at least to minimise the chances of dog bites occurring by effective management.

Aggression causes

A variety of factors may result in the display of aggressive behaviour by dogs (Righetti, 2012). These may include:

- Negative experiences which lead to the dog feeling threatened whenever the experience occurs.
- Pain or medically-related factors, including brain tumours, neurological problems and thyroid disorders.
- Limited resources, where essential such as food, shelter and companionship may be low or must be competed for (at least in the dog's mind).
- Redirected aggression where the object of the attack was not an intended recipient but unfortunately was in the path of an attack intended for others.

- Attention seeking, where dogs learn that by nipping, lunging or other threatening behaviours, that they get human attention.

Many factors can trigger aggression. These include excitement (Sherman et al, 1999) and confrontational approaches by humans (Herron et al, 2005; Hsu & Sun, 2010). Aggression often occurs within households and has been associated with factors such as female households, large families and dogs being kept outdoors (Hsu and Sun, 2010) as well as a lack of obedience training and being fed from the dinner table (O'Sullivan et al, 2008). Household aggression may, however, rarely be reported.

Similarly, fights by dogs within households are rarely reported, although these tend to be more severe than those between unknown dogs (Sherman et al, 1999). Stranger-directed canine aggression has been linked to rural areas, large yards and more family members (Hsu and Sun, 2010). This type of aggression may have more in common with dog-to-dog aggression than it does with owner-directed aggression.

More and more research is being conducted into factors associated with dog aggression so it is likely that we shall continue to improve our understanding. Most of this research, however, is conducted overseas and we may not be able to draw entirely the same conclusions from our situation as those drawn overseas. Most research is also conducted after the aggression event. It may be equally or more useful to look at predictive factors for aggression and to examine why some dogs do not attack.

Solutions for aggressive behaviour

Aggressive behaviour in dogs can be reduced and/or managed by a combination of short-term management techniques and long term behavioural therapy (Righetti, 2012).

SHORT-TERM MANAGEMENT OF AGGRESSION

Management of aggression is essential to prevent any other animal being injured. Strategies for management include:

- Relocation of the dog to areas where it is not possible to attack or where it has less aggression or anxiety-provoking stimulation.
- Use of anti-aggression and/or controlling devices such as muzzles, leads and head halters.
- Calming agents including veterinary medication and herbal medications.
- Human intervention during or just prior to an attack.

- Avoidance strategies such as walking away, remaining quiet and still and avoiding eye contact between dogs or between dog and human.

While one or more management strategies are necessary to prevent injury or to lessen the consequences of an attack, these strategies are rarely a long-term solution. They are, however, useful for prevention of immediate attack and may be used by people who may encounter potentially aggressive dogs, including council animal management officers, veterinary staff, dog groomers and others. Appropriate training in dog body language and behaviour and in appropriate interactions with dogs may need to be given. Animal management operating procedure may need to be revised and/or updated regularly, as knowledge on dog aggression improves.

LONG-TERM SOLUTIONS FOR AGGRESSION

To reduce canine aggressive behaviour in the long term, a range of possibilities are possible, depending on the cause of the underlying problem. Long-term solutions include:

- Desensitisation by gradually exposing the dog to the situation that provokes the fearful or angry response. Improvements have been made in dog-to-dog aggression cases after only 10 days of therapy (Orihel & Fraser, 2008) but need to be continued in the long term.
- Training the dog to perform alternative, more acceptable, behaviours.
- Activity, routines and diets that meet the dog's needs and ensure no threat or competition for resources (food, toys, shelter and/or attention).
- Veterinary care including diagnosis and treatment of potential medical conditions which may result in the expression of aggressive behaviour, in addition to regular check-ups.

Long-term measures are vital to the reduction of aggressive behaviour in any individual animal but, as these processes are not without danger, they should be overseen by an experienced behavioural professional. For people that work with dogs, or encounter them on a regular basis while working, it is often not necessary to actually implement long-term solutions but it is imperative to inform dog owners that such options are available.

Prevention of canine aggression in society

In addition to reducing aggression at an individual dog level, it is essential that we reduce this unwanted behaviour at a society level. This, of necessity, involves a co-operative approach between the various stakeholders involved including:

- Dog breeders - to ensure that desirable behavioural traits are bred (King et al, 2012) and that early developmental and environmental factors, which may predispose dogs to specific behavioural traits are understood and monitored (Freedman et al, 1961; Webster, 1997).
- Pet owners - to ensure that suitable pets are chosen and that environmental influencers, such as socialisation and training, are understood and implemented.
- Researchers - to assess and evaluate which canine behavioural traits are desired and can be bred, developed and assessed; to monitor the incidence of canine aggression and its influencing factors in society; and to monitor the effects and effectiveness of legislation on canine aggression.
- Trainers and behaviourists - to work on a one-to-one basis with owners of aggressive dogs and those with the potential to be aggressive. This may involve temperament testing and subsequent therapies.
- Government bodies - to collect information about dog aggression incidents, to introduce and implement legislation and to educate pet owners on options available to reduce canine aggression.
- Public - to educate themselves and to be educated on dog behaviour and reducing the likelihood of being on the receiving end of dog aggression. This may require a coordinated approach of delivering educational programs, which are evaluated and constantly improved (based on research findings), delivered by professionals and volunteers.

A united and comprehensive approach to dog bite reduction is a view echoed by many organisations (eg. AVA, 2012) and involved bodies around the world. The cooperation of all stakeholders in the human-animal relationship will ensure that the human-canine bond remains positive in the future.

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