

Reactivity?



What is "Normal" Behaviour

Just like humans do, dogs display stress signals as part of their normal day-to-day communication. Science has yet to fully decode the canine language, if that is ever possible, but the following table lists the stress signals that we are currently aware of:

i, ii, iii, iv

SIGNALS of MILD to MODERATE STRESS	SIGNALS of SEVERE STRESS
EYES	
Blinking	Dilated pupils (mydriasis)
Scanning the environment (as if for dangers)	Hard eye stare
Staring into the distance	Hyper-vigilance/hyper-alertness
FACE & HEAD	
Head shaking	Biting
Inability to make eye contact	Ears clamped back against the skull
Licking and mouthing	Facial tension ridges (forehead)
Lip licking	Flared whiskers
Looking away	Heavy panting & drooling
Lowering head and/or neck	Panting (heavy, with tight face)
Prickly whisker bed	Whale eye (eye turned away to display the white)
Smacking or popping of lips or jaws	
Tongue flick	
Turning away	
Yawning (when not tired)	
LEGS	
Paw lift	Stiff and/or braced stance
TAIL	
High, stiff tail	Tucked tail
Lowered tail	
WHOLE BODY	
Lowered body posture	Arched back
Moving backwards	Escape, or escape attempts
Scratching (as if itchy)	Freezing (tense, total stillness)
Shaking off (as if wet)	Hiding, or attempted hiding
Sneezing	Decreased closeness to preferred associates
Slow moving approach	Decreased self-grooming
Stretching	Increased closeness to preferred associates
Turning away	Increased self-grooming
Weight shifting	Profound change in eating/drinking
	Repetitive or ritualized behaviours

	Self-mutilation
	Stiff body posture
	Sudden, heavy shedding & dandruff
	Sweaty paw prints
	Tense facial muscles
	Trembling, shaking
	Urination, Defecation and/or Anal sac expression
VOCALIZATIONS	
Barking	Barking
Whining	Growling
Other (excessive or out of context)	Other (excessive or out of context)

What is "Reactivity"

There are no scholarly definitions of the term "reactive" as it pertains to dog behaviour. It has come to replace the term "aggressive". The reason for this change in terms has grown as the understanding of dogs' behaviour has grown to understand that what we used to call "aggressive" behaviour is almost exclusively based in fear.

What is "Aggression"

Neither is there a single, generally accepted definition of the terms "aggression" or "canine aggression". Overall (2013) offers the following definition:

"Aggression is best defined within a given context as an appropriate or inappropriate threat or challenge that is ultimately resolved by combat or deference." ^v

Aggression can be categorized in many different ways. Overall (2013) offers the following categories:

- Maternal Aggression
- Play Aggression
- Fear Aggression
- Pain-Related Aggression
- Territorial and Protective Aggression
- Inter-Dog Aggression
- Redirected Aggression
- Food-Related Aggression
- Possessive Aggression
- Predatory Aggression
- Impulse-Control Aggression*
- Idiopathic Aggression^{vi}

*The Dominance Myth

Under the heading "Impulse-Control Aggression", Overall (2013) also specifically comments on the "Dominance Myth": *"The most devastating advice ever given to people with dogs is that they 'dominate' their dogs and show the 'problem' dogs 'who is boss.' Under this rubric, untold numbers of humans have been bitten by dogs they have betrayed, terrified, and given no choice. For dogs who have an anxiety disorder that involves information processing and accurate risk assessment, the behaviors used to 'dominate' a dog (e.g., hitting, hanging, subjecting the dog to 'dominance downs', 'alpha-rolls', and other punitive, coercive techniques) convince that troubled, needy, pathological dog that the human is a threat with the result that the dog's condition is worsened."* ^{vii}

The now famous position statement by the American Veterinary Society of Animal Behavior (AVSAB) confirms the myth status of "Dominance Theory" by stating:

"Dominance is defined as a relationship between individual animals that is established by force/aggression and submission, to determine who has priority access to multiple resources such as food, preferred resting spots, and mates (Bernstein 1981; Drews 1993). Most undesirable behaviors in our pets are not related to priority access to resources; rather, they are due to accidental rewarding of the undesirable behavior."

and

"The AVSAB emphasizes that the standard of care for veterinarians specializing in behavior is that dominance theory should not be used as a general guide for behavior modification. Instead, the AVSAB emphasizes that behavior modification and training should focus on reinforcing desirable behaviors, avoiding the reinforcement of undesirable behaviors, and striving to address the underlying emotional state and motivations, including medical and genetic factors, that are driving the undesirable behavior."

Appropriate and Inappropriate Aggression

Overall (2013) further suggests that the following considerations can serve to help evaluate whether a dog poses a risk:

1. Aggression can be appropriate.

Examples of appropriate aggressive responses include if the owner is being attacked, in which case we would expect the dog assist in protecting his owner, and if the dog is being attacked, tortured or abused, in which case fighting back would be an appropriate response.

2. 'Interspecific' or 'intraspecific' interactions.

Dogs can play quite roughly with their mouths and paws when they play with other dogs. This is appropriate, because dogs have fur and thick skin. When playing with humans, however, we need to teach our dogs that such rough play can cause us injury. If we neglect to teach the young puppy that playing too rough is inappropriate, the dog may grow up playing too roughly, and he may unintentionally cause injury to humans. This can happen, for example, when the human thinks the rough play with the 10-pound puppy is cute, but then finds the same behaviour problematic in the 100-pound adult dog. Unfortunately, it is usually the dog, not the human, who pays for the human's error. Inconsistency in responses from the owner can cause confusion in the dog. If corrections are used, the human-animal bond may break down, and the animal may be left feeling confused, frustrated or fearful of the owner.

3. Aggression can result in threats or in a contest and either can be paths to some form of resolution.

Threat displays exist so that full-out aggression, which is expensive both for the individual and the species, can be avoided. Eventually, in any altercation, either someone ultimately backs off and there is a negotiated truce, or there is a battle to the death. ^{viii}

Overall (2013) states that *"The vast majority of problematic behaviors and true behavioral pathologies are rooted in anxiety and the neurochemical/neurophysiological response to that anxiety."* ⁽¹⁰⁾

This is confirmed by my own experience, from working with the rehabilitation of dogs that have bitten or otherwise act out inappropriately.

Inappropriate aggression occurs when either the context is wrong or the degree of force is excessive. For example, a dog that attacks a person that is hugging his owner may *believe* that he is acting appropriately if he has not been given the opportunity by the owner to learn from puppyhood that people hugging each other is nothing to worry about. From a human perspective, however, the attack is highly inappropriate. If, following the dog's inappropriate reaction to the hug, the owner reacts with corrections, the human-animal bond may break down, and the animal may be left feeling confused, frustrated or fearful of the owner.

The same dog defending his owner from an attack by a home invader is considered a hero. The difference between these scenarios lies in the provocation, or "trigger", that causes the behaviour, and how this trigger is perceived by the dog:

- A dog that does not understand that hugging between humans is appropriate may believe that it is a physical attack and react defensively of his owner.
- A dog that has been educated through early puppyhood socialization (or later) to understand that hugging is appropriate and nothing to worry about, will be unlikely to react inappropriately when seeing people hugging each other.

Consequently, in order for us to be able to expect of dogs that they do not react with inappropriate aggressive displays, we need to:

- breed dogs from individuals with sound temperament;
- make sure that dogs receive appropriate early puppyhood socialization, particularly between 3-16 weeks of age;
- protect dogs from serious, aversive events (both in socialization and in training); and
- provide dogs with a safe and harmonious living environment that meets their needs.

Jean Donaldson (1996, 2005) agrees in her best-selling book "The Culture Clash":

"So, a major element of the culture clash between dogs and humans is differing perceptions of what constitutes a threat. The most commonly uttered phrase following a bite is that the dog bit 'unprovoked', or 'suddenly, for no reason'. This is because the number one bite provocation in domestic dogs is some variation on a behavior we humans consider unprovocative, or even friendly, approach or reaching out with a hand. We are mired in the belief that the friendly intention behind this gesture is read and understood by all dogs."

and

"What's important to understand is that bites are rarely cases of abuse or trauma, but failures of omission: not enough was done to get the dog prepared for life in a human environment. Desensitizing dogs to approach and handling must be actively installed to proof them against spooking. Dogs who bite people or are afraid of people are usually behaving like normal animals. To understand why dogs bite for reasons indiscernible to most owners, it is first necessary to understand socialization." ix

Why Dogs Bite

The bite is the dog's last line of defense, and occurs when no other defensive signals are heeded.

While the dog, *Canis lupus familiaris*, is a domesticated species, dogs are not born tame. A poignant example of this were the dogs living in the Zone of Alienation at Chernobyl, Ukraine, after the 1986 nuclear disaster. These dogs were said to behave as if wild and to have a very large flight zone when encountering humans, because they have not been socialized to humans when young. ^x

Lack of appropriate early puppyhood socialization appears to be one of the most common causes of behaviour problems in dogs. Euthanasia for behaviour problems is the most common cause of death in dogs under three years of age. ^{xi}

To prevent bites from occurring, dogs need to be socialized to, or imprinted on, all the different kinds of people, dogs and environments that they are expected to be able to interact appropriately with as an adult, while they are still young (before 12-16 weeks of age).

Jean Donaldson (1996, 2005) states:

"Dogs are unaware that they've been adopted into a culture where biting is considered a betrayal of trust and a capital offense. Incredibly little is actively, consciously done to reduce the probability of biting. Flight-bite is the dog's hardwired program for increasing their distance from anything that spooks them. Dogs, like most animals, are extremely aware of and constantly manipulating social distance. There are only two ways to do this: move yourself away or get the other guy to move away, plan A or plan B. Getting the other guy to move away is the function of aggression."

and

"Which plan an individual dog chooses first (threaten or run) is a function of his genetic predisposition and learning history. Dogs will do what tends to have been successful in the past. They will also, if plan A is not working, switch without hesitation to plan B. Cornered dogs switch to threat display. Dogs spooked by your presence into behaving aggressively will turn and run if aggression doesn't work. It is a matter of great urgency when the 'increase distance' alarm goes off in a dog's head. Genetic predisposition simply makes one plan or the other more likely and influences how likely the dog is to spook in the first place, all other things, such as how well socialized he is, being equal. An important piece of the puzzle that is missing in mass education is information about the seemingly innocuous events and contexts that most often elicit spooking in domestic dogs." ^{xii}

Dogs that are already fearful need to be protected from the things that cause them distress until they have learned not to fear these things any longer. This includes walks, so that they can relax and enjoy the walk rather than being in an increased state of arousal, worrying about where the next "danger" is going to come from.

If a fearful dog is corrected for acting out (barking, growling, biting), the outward behaviour may be suppressed, but the internalized fear may become heightened, and one day the dog may be expected to "snap".

The "Stress Escalation Ladder", formulated by Turid Rugaas, a Norwegian behaviour specialist famous for coining the term "Calming Signals", serves to illustrate how dogs' reactions may escalate until they reach the level where they bite. ^{xiii}



From "What Is My Dog Saying" by Carol A Byrnes CPDT

A well socialized dog with a stable temperament will stay longer in the green area (Displacement behaviors, Calming signals), while there may be many reasons why a dog with a social handicap could slide up through the various levels more quickly. We sometimes hear of dogs that "bite out of the blue". Typically, this is not actually the case, but instead, the people present and witnessing the incident have not recognized the increasing signs of distress from the dog.

For example, *growling should be appreciated* - "thank you for giving me a warning that you are uncomfortable!" - rather than punished. By giving a warning growl, a bite can be prevented.

Commonly, however, owners punish their dogs for growling. In the unlikely event that the punishment is successful and the dog no longer growls, we now have one less warning signal that the dog is about to snap, literally and figuratively.

By punishing the growling, owners may teach their dog that when he is in a sticky situation, he cannot count on the owner to help but that instead the owner may turn on the dog, too. This may cause the dog to become even more "aggressive" next time, because the thing that made him growl (something that worried him, like a strange dog or person), now makes the owner react badly to him, too, so he is going to be even more worried about it and wanting to keep it away from himself (thus reacting with aggressive displays). Corrections and punishment may also teach the dog to fear the owner and thus cause the human-animal bond to break down.

Dogs learn what works and what does not work; if a dog's more subtle stress communication signals, such as the ones here labeled "calming signals", "stress reactions", and "freeze" (the yellow "focus" stage) go unheeded, i.e. the dog's opponent does not respond appropriately by backing off, the dog will learn that these signals have no effect.

If the signals are no longer effective, the dog may learn to go directly to the stage where his signals do work, even if that is the bite. Biting is the dog's last resort.

The Severity of Dog Bites

There are many dog bite scales to guide us when classifying and interpreting dog bites. None are based in scientific research, but are rather based on experience and opinion. The one that is most commonly used has been published by Association of Professional Dog Trainers (APDT) as "Dr Ian Dunbar's Dog Bite Scale".^{xiv}

What If We Can't Fix It?

When faced with an extensive behaviour modification programme for a severely reactive dog, it is in no way a "failure" to consider re-homing - or even euthanasia. Helping a dog overcome his or her fears and anxiety is not only hard work, but it requires your attention and efforts on a daily basis. This means that your other commitments, to family, studies or work, may suffer. However, if such a commitment is not possible, your fearful dog's quality of life may suffer.

You will need to invest a significant portion of yours and your family's time and resources into your dog's management and rehabilitation programme. It may involve significant changes to your family's lifestyle. If not every member of the family is on board with a project that may even last for the life of the dog, and if your family's lifestyle is such that it precludes keeping the dog in a stress-free environment (presence of children, another dog in the household that the fearful dog is worried about, neighbourhood dogs or people, noises, etc), your dog may suffer chronic stress and you may well drive your dog further into a chronic state of anxiety and only postponing the inevitable decision.

There is no shame in giving up a dog for rehoming, or even for euthanasia. On the contrary, it may be the greatest act of love that the dog was ever presented with.

If and when you make such a decision, whether it be euthanasia, rehoming, or keeping your dog and attempting to work with the problem for a limited time or for an indefinite time, understand that only YOU can make that decision. Do not let extended family, friends, work colleagues, dog trainers, or even veterinarians criticize your decision. You are the expert on yours and your family's life. You are the one that is charged with your dog's welfare.

Once you have gathered all the information and know all the variables, YOU are the expert.

ⁱ Handelman MEd CDBC, Barbara: "Canine Behavior - A Photo Illustrated Handbook" 2nd Ed 2008, pp. 251-256.

ⁱⁱ Overall MA VMD PhD DACVB CAAB, Karen L: "Manual of Clinical Behavioral Medicine for Dogs and Cats" 2013, p. 47.

ⁱⁱⁱ Byrnes CPDT, Carol A: "What is My Dog Saying?" 2008 (CD), slide no. 72.

^{iv} British Small Animal Veterinary Association: "BSAVA Manual of Canine and Feline Behavioural Medicine Second Edition" (2009) Editors: Debra F Horwitz DVM DipACVB and Daniel S Mills BVSc PhD CBiol FIBiol FHEA CCAB DipECVBM-CA MRCVS, pp. 14-15.

v Overall MA VMD PhD DACVB CAAB, Karen L: "Manual of Clinical Behavioral Medicine for Dogs and Cats" 2013, p. 172.

vi Overall MA VMD PhD DACVB CAAB, Karen L: "Manual of Clinical Behavioral Medicine for Dogs and Cats" 2013, pp. 179-224.

vii Overall MA VMD PhD DACVB CAAB, Karen L: "Manual of Clinical Behavioral Medicine for Dogs and Cats" 2013, p. 219.

viii Overall MA VMD PhD DACVB CAAB, Karen L: "Manual of Clinical Behavioral Medicine for Dogs and Cats" 2013, p. 605.

ix Donaldson BSc CPDT, Jean: "The Culture Clash" (1996, 2005), 2nd ed., James & Kenneth Publishers, Berkley, CA, pp. 57-58.

x Dr Ray Coppinger, presentation at the 2013 SPARCS conference in Redmond, WA. (Society for the Promotion of Applied Research in Canine Science)

xi American Veterinary Society of Animal Behavior: "AVSAB Position Statement On Puppy Socialization" (2008), available for download from <http://avsabonline.org/resources/position-statements>

xii Donaldson BSc CPDT, Jean: "The Culture Clash" (1996, 2005), 2nd ed., James & Kenneth Publishers, Berkley, CA, pp. 56.

xiii Byrnes CPDT, Carol A: "What is My Dog Saying?" 2008 (CD), slide no. 72.

xiv "Dr. Ian Dunbar's Dog Bite Scale (Official Authorized Version) - An assessment of the severity of biting problems based on an objective evaluation of wound pathology" published by The Association of Professional Dog Trainers (undated), available for download from <https://apdt.com/wp-content/uploads/2017/01/ian-dunbar-dog-bite-scale.pdf>
(see next page)



Dr. Ian Dunbar's Dog Bite Scale (Official Authorized Version)

An assessment of the severity of biting problems based on an objective evaluation of wound pathology

Level 1. Obnoxious or aggressive behavior but no skin-contact by teeth.

Level 2. Skin-contact by teeth but no skin-puncture. However, may be skin nicks (less than one tenth of an inch deep) and slight bleeding caused by forward or lateral movement of teeth against skin, but no vertical punctures.

Level 3. One to four punctures from a single bite with no puncture deeper than half the length of the dog's canine teeth. Maybe lacerations in a single direction, caused by victim pulling hand away, owner pulling dog away, or gravity (little dog jumps, bites and drops to floor).

Level 4. One to four punctures from a single bite with at least one puncture deeper than half the length of the dog's canine teeth. May also have deep bruising around the wound (dog held on for N seconds and bore down) or lacerations in both directions (dog held on and shook its head from side to side).

Level 5. Multiple-bite incident with at least two Level 4 bites or multiple-attack incident with at least one Level 4 bite in each.

Level 6. Victim dead.

The above list concerns unpleasant behavior and so, to add perspective:

Levels 1 and 2 comprise well over 99% of dog incidents. The dog is certainly not dangerous and more likely to be fearful, rambunctious, or out of control. Wonderful prognosis. Quickly resolve the problem with basic training (control) — especially oodles of Classical Conditioning, numerous repetitive Retreat n' Treat, Come/Sit/Food Reward and Back-up/Approach/Food Reward sequences, progressive desensitization handling exercises, plus numerous bite-inhibition exercises and games. Hand feed only until resolved; do NOT waste potential food rewards by feeding from a bowl.

Level 3: Prognosis is fair to good, provided that you have owner compliance. However, treatment is both time-consuming and not without danger. Rigorous bite-inhibition exercises are essential.

Levels 4: The dog has insufficient bite inhibition and is very dangerous. Prognosis is poor because of the difficulty and danger of trying to teach bite inhibition to an adult hard-biting dog and because absolute owner-compliance is rare. Only work with the dog in exceptional circumstances, e.g., the owner is a dog professional and has sworn 100% compliance. Make sure the owner signs a form in triplicate stating that they understand and take full responsibility that: 1. The dog is a Level 4 biter and is likely to cause an equivalent amount of damage WHEN it bites again (which it most probably will) and should therefore, be confined to the home at all times and only allowed contact with adult owners. 2. Whenever, children or guests visit the house, the dog should be confined to a single locked-room or roofed, chain-link run with the only keys kept on a chain around the neck of each adult owner (to prevent children or guests entering the dog's confinement area.) 3. The dog is muzzled before leaving the house and only leaves the house for visits to a veterinary clinic. 4. The incidents have all been reported to the relevant authorities — animal control or police. Give the owners one copy, keep one copy for your files and give one copy to the dog's veterinarian.

Level 5 and 6: The dog is extremely dangerous and mutilates. The dog is simply not safe around people. I recommend euthanasia because the quality of life is so poor for dogs that have to live out their lives in solitary confinement.

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