A SHEPHERD'S PICTURE GUIDE TO DOG AGGRESSION THEORY

(AN INTRODUCTION)

BY

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Raspberry Ridge Sheep Farm, Bangor, PA

Carolyn & her German Shepherd Dog Blondie with Flock, 1994

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AUTHOR'S FORWARD

- I wish to mention here my heartfelt gratitude to all my students who have taught me so much over the years. You all deserve the very best outcomes!
- And a special thank you to Rob Dunning who supports me through each crisis— computer, dog, life, etc.
- Effective dog training will improve your dog's bad behavior. These 64 slides are intended to give you a theoretical framework for that training.
- To speed the recovery of a dog with a significant behavior problem, you should train your dog under the supervision of a willing dog trainer skilled in the use of positive reinforcement training techniques.
- I look forward to receiving your feedback.
  Positive reinforcement training– use it, don't lose it!

— Carolyn Wilki, Raspberry Ridge Sheep Farm, Bangor, PA
Feb, 2011
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WEBSTER'S DICTIONARY DEFINITION OF *AGGRESSION:*

1: *an offensive action or procedure*

2: *the practice of making attacks or encroachments.*

—The wording implies that something is practiced, habitual—LEARNED.

(In fact, just about all dog aggression problem behaviors are learned.

That's good news because what is learned can be unlearned by the dog—if the owner is open to applying new skills.)

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IS THE AGGRESSION LEARNED BEHAVIOR? *If yes— then training can help!*

Collect a History from the Owner. In the historical description:

1. Is aggression "growing" as a problem over time? → Yes, then learned.

A.) Is there a stimulus generalization or discrimination pattern in dog's pattern of aggression? → Yes, then learned.

B.) Widening or narrowing of place, objects, intensity, frequency, duration? →Yes, then learned.

2. Is the aggression occurring in response to identifiable stressors somewhere in dog's life? → Yes, then learned.

(If you think the answer is "no" so far, get a 2nd opinion from at least one other professional, behaviorist dog trainer)

NOTE: Many caring owners unwittingly stress their pets and cannot themselves identify their dog's stressors.

WAITING FOR THE MAIL CARRIER

Can you see the tension in this dog's face?

Typical Stressors that are Overlooked

1. punishment;

2. barrier frustration;

3. boredom;

4. nothing to chew on;

5. no or insufficient down time to relax or sleep;

6. other animals harassing the dog;

7. inconsistent or no clear behavior protocols taught by owners;

8. lack of positive attention from owners;

Typical Stressors that are Overlooked

9. insufficient mental or physical exercise;

10. dog cannot perceive any clear pattern of dog's calm behavior getting the dog what he/she wants;

11. attention from owners for dog's undesirable arousal behaviors;

12. owners unaware of when they actually are reinforcing the dog for behavior they don't really want!

A Shepherd's Picture Guide to Dog Aggression Theory

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IS THE AGGRESSION LEARNED BEHAVIOR? *If yes— then training can help!*

3. Is the aggression occurring in response to a correctable, physical condition? (motherhood, physical injury, hypothyroidism) ? → Yes, then training unlikely to help in the moment.

Correct the physical problem first!

4. Is the aggression happening *randomly and truly unpredictably?* → Yes, then something is truly wrong with the dog's wiring that training cannot fix.

[Note: "Randomly and truly unpredictably" does NOT refer to intermittent aggressive behavior. The aggression behavior is learned if there is a recognizable pattern of stimulus discrimination/generalization, even when the aggression behavior sometimes occurs, sometimes not, in the presence of the same stimulus in an unpredictable pattern of occurrence.]

Sleep

IT IS SO EASY TO FALL IN LOVE WITH A YOUNG PUPPY!

It’s cute, cuddly-snuggly, and sleeps a lot.

EVEN ADULT DOGS SLEEP A LOT.

But what happens when the dog wakes up?

2 Aggression Circuits in the Brain— defensive rage

Most dog lovers would agree that a dog grabbing the family cat by its head is NOT okay!

BUT WHAT DO WE THINK OF THE PUPPY WHO GRABS THE RUBBER CHICKEN TOY?

(go to next slide)

2 Aggression Circuits in the Brain— predatory attack

SHOCKING TRUTHS:

1. DOG LOVERS LOVE DOGS NOT ONLY WHEN THEY SLEEP, BUT ALSO WHEN THEY AGGRESS
(when a dog's aggression occurs at the right time & place!).

2. THERE IS GOOD REASON TO LOVE DOGS FOR THEIR "GOOD" AGGRESSION!
(For example, the puppy grabbing the rubber chicken toy (above) is so cute!)

3. And aggression is a natural, normal emotion and behavior for any animal, even us humans.

Sleep

ALL PUPPIES START OUT AS GOOD DOGS.

BUT WHY DOES THIS HAPPEN?
Is it inevitable? *(I don't think so…)*

And how do most owners stop their dogs from unwanted aggression?

Let's Answer the Last Question First:

How do most owners stop their dogs from unwanted aggression?

In their efforts to control dog behavior,

about 40% of owners who seek veterinary help

aggress against their own dogs

and unwittingly create dog aggression problems.

(so, if you have tried disciplining your dog and it did not work, you are not alone!)

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DOG OWNER AGGRESSION = DOG AGGRESSION

"Nationwide, the No. 1 reason why dog owners take their pet to a veterinary behaviorist is to manage aggressive behavior," lead author Meghan Herron of the University of Pennsylvania said in a statement.

When asked in a survey what they already had tried to do to manage their dog's aggression, owners self-reported that:

43 percent hit or kick a dog,

41 percent growled at a dog,

39 percent physically force the release of an item from a dog's mouth,

31 percent alpha roll -- rolling the dog onto its back and holding it,

30 percent stare at or stare down a dog and

26 percent grab dog by jowls and shake.

CONCLUSION: PUNISHMENT DOES NOT WORK VERY WELL TO CONTROL CANINE AGGRESSION

--Story from REDORBIT NEWS: http://www.redorbit.com/news/display/?id=1640803;

Published: 2009/02/17 14:49:15 CST

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Why Go to The Vet? For Drugs?

- "Numerous studies concluding that popular antidepressants work by altering brain chemistry have now been contradicted (the drugs help with mild and moderate depression, when they work at all, through A PLACEBO EFFECT)."

  -- Sharon Begley, NEWSWEEK January, 31, 2011

Although I am all in favor of the placebo effect...

My short, bottom line is:

Drugs do not help dogs unlearn learned behavior problems, and aggression is learned behavior.

Why do I know anything about aggression?

I am a shepherd and an amateur science geek.

2 Aggression Circuits in the Brain— predatory attack

Importantly, shepherds do not ignore canine aggression;
we harness it to move, manage, and protect our flocks and herds,
to the benefit of the grazing animals.

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Some anthropologists theorize that the domesticated dog's very first jobs were to eat offal and guard ancient man's home and livestock from intruders.

Livestock Guardian Dog (aka "BWD" = Big White Dog) at work,
doing its ancient job of protecting the flock from wild animals and strangers.

As natural and instinctual as the job of protection might seem for a dog...

... this BWD in the golf cart refused to approach or mingle with the flock.

The dog was as afraid of the sheep as the sheep were of her!

Flock→

←Getaway Cart

A dog needs *experience* to learn when to be aggressive & what to protect.
Likewise, a dog needs *experience* to learn
when to relax and not to be aggressive.

2 Aggression Circuits in the Brain— predatory attack

Border Collie EYE

The dog's stare and stance of predatory threat moves, turns, or holds the livestock.

As natural as this and other herding behaviors are to a well-bred Border Collie, it still takes about two years of skillful training until the dog is able to function with consistent, trial-level proficiency at herding, under the control of the handler.

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2 Aggression Circuits in the Brain— predatory attack

German Shepherd Dog tending sheep,

MOVING along border to contain sheep in a graze to prevent them from leaving. This style of herding also takes about two years of skillful training until the dog reaches trial-level herding proficiency.

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Shepherds not only have unique experience with “good” canine aggression but also with “bad” canine aggression.

Sheep killed by an uncontrolled coyote or wolf, close relative of the dog. The fence did not help. The sheep’s other side is ripped away. There was nobody home during the attack– no person, no dog, no guardian animal of any type to protect the flock.

THE WEAPONIZED DOG

1. Canines aggress by using their **body positioning** and their **jaws of teeth**.

Especially when there is NO CONTROL over those jaws (or if you are the unfortunate target of a trained attack)-- the dog's aggression is undesirable.

2. The **acceleration** of a dog's body or body parts is what causes the most physical harm and pain to others. Dogs can pull or knock someone over with their bodies, but it's *the damage caused by the dog's mouth/teeth that is the usual concern*.

To cause damage, dog teeth either have to *accelerate* as they grab or re-bite, or grip and rip *while the dog's jaws are still clenched* as the dog pulls backwards (or is pulled backwards by humans).

The Weaponized Dog: INSIGHTS INTO AGGRESSION RE-HAB

- Uncontrollable dog behavior is potentially dangerous to the dog and to others.

- Training gives you and your dog desirable control.

Next slide →

The Weaponized Dog: INSIGHTS INTO AGGRESSION RE-HAB

- Teaching the dog *to slow down, to stop, to move away (not forwards)* on command is important in order to counter a dog's damaging aggression impulses.

- A dog that *slows down, stops, or moves away* is not accelerating/aggressing toward a target and cannot cause damage.

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Shepherds who use herding and guardian dogs know well that aggression can be helpful and even desirable in a dog.

1. Herding Dogs: Gather/Move/Control Livestock by

Eying,

Moving,

Not Moving,

Barking,

Gripping (biting).

These actions by the herding dog —even the non-action of not moving—

are threatening, aggressive,

and necessary for the dog to control livestock,

who often outweigh and outnumber the dog (and the shepherd).

2. Livestock Guardian Dogs: Protect livestock from wild animals and thieves by acting with defensive aggression against the intruders.

IMPRESSIVE DEMONSTRATION OF CONTROL, ISN'T IT?

10 Border Collies, 3 MOVING, 7 NOT MOVING, yet holding sheep tightly packed together within a dirt circle. 3 of the dogs are lying down.

Stationary postures (lie down, sit, stand/stay) can serve predatorily aggressive functions and are useful to a dog while herding, not only for resting.

Next slide →

2 Aggression Circuits in the Brain— predatory attack

Australian Shepherd Dog BARKING at cows to move them.

Next slide →

2 Aggression Circuits in the Brain— predatory attack

Border Collie gripping/biting cattle, invoking the ultimate in predator-prey behaviors that form the basis of the herding relationship between dog and livestock.

How much do you think these animals—dog and cows—each weigh?

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Greeting committee at a farm.
Welcome!?
Guardian dogs can be quite effective as non-electronic, “green,” crime deterrents.

Next slide →

Many canine aggressive behaviors are useful to the shepherd.

- However, punishment used to stop unwanted aggression in herding training can result in undesirable, defensively re-directed aggression or fear behaviors that pop out, sooner or later, either in herding or in other contexts.

Paddle to stop dog from gripping

Dog responds by moving away from paddle and trying to bite sheep.

This is one example of how a predatory attack behavior (chasing) can be converted into a worse behavior of defensive rage (unnecessary biting).

I Base My Approach to ALL Dog Training on Anatomical Fact*:

Brain Anatomy studies reveal ONLY Two Circuits for Aggression Behavior.

** Most other shepherds are unaware of the existence of these two aggression brain circuits. I am aware only because I am an obsessive reader and amateur science geek (with a dusty psychology degree earned long ago).*

1. All aggression behavior runs on either one of two neuro-anatomical brain circuits, not both circuits at the same time.

2. The names of the two aggression circuits:

    1. Defensive Rage
    2. Predatory Attack

4. As you will see, there are many more behaviors than just aggression behaviors governed by these two aggression brain circuits.

5. In general, to train a dog to be well-behaved and friendly, I want to encourage a dog to use its desirable, controllable, predatory attack behaviors and avoid provoking ANY behavior governed by the defensive rage circuit.

1. Defensive Rage

2. Predatory Attack

Next slide →

2 Aggression Circuits in the Brain

Brain Anatomy studies reveal

ONLY Two Circuits for

Aggression Behavior

1. All aggression behavior runs on either one of these two circuits *(diagram on right →)*.

2. When one of these 2 circuits is turned on, it immediately sends the inhibitory neurotransmitter GABA to the other circuit which then inhibits all the behaviors of the other circuit. ***It's either one type of aggression or the other—not both at the same time.***

3. **The names of the two aggression circuits:**

1. Defensive Rage

2. Predatory Attack

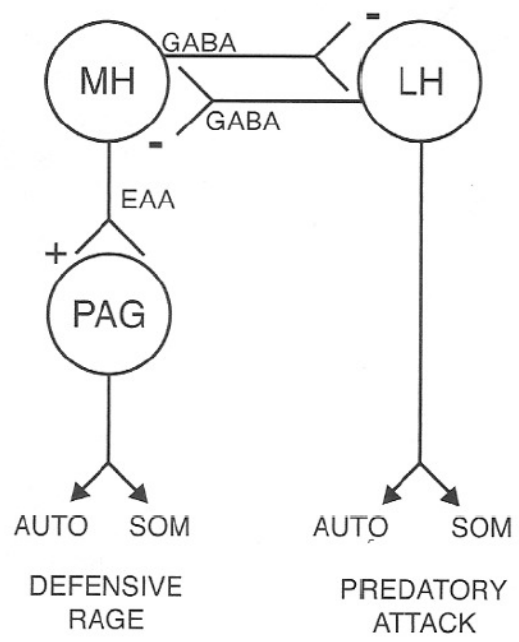

FIGURE 3.12 Model depicts relationship between lateral hypothalamus (LH) from which predatory attack is elicited, and the medial hypothalamus (MH) and its projection target in the PAG over which defensive rage is elicited; excitatory amino acids (EAA) comprise the neurotransmitter. The medial and lateral hypothalamus are related by reciprocal inhibitory pathways that are mediated by GABA. Auto, autonomic component; som, somatic component of the attack response.

--From **The Neurobiology of Aggression and Rage** by Allan Siegel, 2005.

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Characteristics of the Two Aggression Circuits in the Brain

Defensive Rage Circuit

- Governed by Medial Hypothalamus
- Pugilistic attack on conspecific
- Behaviors counter perceived threat
- Fight Behaviors
- Flight Behaviors
- Freeze Behaviors
- Dominant/Submissive Behaviors
- High Sympathetic nervous system tone
- Piloerection
- Vocalization/growling

Predatory Attack Circuit

- Governed by Lateral Hypothalamus
- Quiet biting attack directed toward prey
- Hunting Behaviors
- Play Behaviors (defined as animals interacting without harming one another)
- Eating Behaviors
- Some Sympathetic tone at high end
- Some Parasympathetic tone at low intensity behaviors

These Two Circuits Control Many Related Behaviors, Not Just Aggression!

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DEFENSIVE RAGE—So-named because scientists perceived that the animal's aggression arose out of a sense of threat to the animal—a defensive aggression.
The reflexes and behaviors of Fight/Flight/Freeze, Dominance/Submission all run on this same brain circuit– the **defensive rage circuit.**

The behaviors illustrated in this photo are supported by the defensive rage circuit and help a dog survive in times of perceived emergency.
There are lots of unfamiliar dogs meeting here–
who knows what issues they bring with them?

All of these dog behaviors in the 6 photos below are governed by the defensive rage circuit in the brain.

Figure 1: Submissive Behavior/Freeze

Figure 2: Flight Behavior

Figure 3: Submissive/Fearful Behavior

Figure 4: Dominance and Submissive Behaviors

Figure 5: Dominance displays pre-fight

Figure 6: Fight behaviors

Defensive Rage, Before & After

BEFORE

AFTER

Same dog, before and after a "threat" (small, quiet Border Collie, out of frame) arrived. This GSD is the only one who perceived the BC as a threat and reacted aggressively.

Note the pilo-erection of the hair over the shoulders in the after picture. You will not see the "hackles up" so clearly in dogs with long, rough, curly, or extremely smooth/short hair coats.

Next slide →

2 Aggression Circuits in the Brain— defensive rage

Sometimes a head turn is just a head turn.

But when the dog's head turns away as something approaches, this is usually a behavior governed by the defensive rage circuit—the beginning of fear/flight.

Come too close, corner the dog, or threaten the dog, and the dog might aggress.

Next slide →

Does this dog “know” he has done something wrong? We don’t know.
We humans can see and hear, but we cannot read minds.
For sure: The dog is displaying fear behaviors towards the approaching stimulus (man).

This is an example of freeze (fight/flight/freeze instincts), submissive behavior.
The dog is inhibiting his behavior, neither running away nor aggressing (yet).
These behaviors are governed by the defensive rage circuit.
The dog perceives a threat.

Defensive Rage

Question: Isn't it good for a dog to be submissive? At least the dog is not biting!?

Answer: No. ***The problem with submissive behaviors, flight/freeze behaviors, fear behaviors (not to mention fight and dominance behaviors) is that they all run on the same defensive-rage circuit.***

1. The brain wires up and builds its neural networks on a use-it-or-lose-it basis.

2. Punishment and the threat of punishment cause dogs to act submissively. All of the submissive behaviors are governed by the defensive rage circuit in the brain.

3. The more the defensive-rage brain circuit is used by the dog, the more likely that ANY of the behaviors on the defensive-rage circuit– including aggression behaviors— will be used in the future by the dog to process new situations. By forcing the dog to act submissively, you increase the likelihood of undesirable aggression and/or fear behaviors in your dog's future.

4. The alternative to the use of punishment and submissive behavior in dog training is to use pure positive reinforcement training to wire the dog's emotional and behavioral responses through the dog's desirable predatory attack brain circuit. The pure positive reinforcement training strategy avoids using or strengthening the undesirable defensive-rage brain circuit.

2 Aggression Circuits in the Brain— defensive rage

Although the behavior might be inhibited—submissive or fearful, the stress built-up in the dog can end up being re-directed as aggression in another context— towards a being or thing that the animal perceives as being smaller or more vulnerable than itself. *("Stuff rolls downhill…")* (Photos 1, 2, 3 & 5)

Or the stress might result in a new fear towards a new stimulus (Photo 4).

Or the stress can be directed inwards and create "learned helplessness," (doggy depression)

And/or make the animal physically ill. (Photo 6)

Photo 1: Re-directed aggression to person

Photo 2: Re-directed aggression to sheep

Photo 3: Re-directed to things--redecorating

Photo 4: Re-directed fear to new thing (doggy PTSD)

Photo 5: Waiting for mail

Photo 6: Stressed out dog

QUICK HITS FROM SCIENCE

Experience has a powerful effect on the expression of aggression…

- Although breeding and dog raising practices count, don't blame the dog's genetics for bad behavior! There is no gene that dooms a dog to undesirable aggressive behavior.
- Experience can reprogram the brain's DNA and make the animal calmer (or more aggressive)!
- For the dog, glucocorticoids (stress hormones) are behind aggression, not testosterone. Neutered male dogs or females can still present significant aggression problems. (It's the testosterone if you are a male sheep/ram or other barnyard animal!)
- You can reduce the likelihood of a dog's aggression by removing sources of unnecessary stress:
  - 1.) Confusion,
  - 2.) Punishment,
  - 3.) Lack of a job/protocol,
  - 4.) Dog's lack of control over his environment,
  - 5.) the reinforcement of the dog's neurotic aggressive and fearful behaviors.

The **Predatory Attack Circuit** enables a canine predator to find, catch, and eat dinner with friends.

Predatory Attack— This is the aggression brain circuit which controls *the quiet biting attack on prey (predatory attack was the 1st behavior discovered on this circuit; hence, the circuit's name)*, *hunting behaviors*, and also ***play behaviors*** *(which are defined as behaviors which allow two animals to interact without injury)*, and *eating behaviors*.

This is the brain circuit to rely on when training any dog and especially when rehabbing a dog with an aggression or over-reactivity behavior problem.

A hunting dog with deep nose, on the trail. Notice the tail sweep to the right.

These wolves chasing a moose are another example of
predatory attack behavior in action.
Some sympathetic and parasympathetic nervous system tone
are both present in many high-arousal, predatory attack behaviors.
Notice the wolf tail sweeps to the right,
and the wolves' cooperative chase pattern—
they each cover different parts of the ground surrounding the moose;
they are not focused on the same exact spot on the moose;
and they are not fighting about who goes first.

2 Aggression Circuits in the Brain— predatory attack

The dog owner usually gets to decide if predatory attack behavior is a problem.

The dog is chasing a child. Do you think this dog's behavior is a problem? Why?

Next slide →

2 Aggression Circuits in the Brain— predatory attack

Is this a problem predatory attack behavior?

Yes, if it is out of control. No, if it is trained behavior, asked of the dog's owner.

This ancient Border Collie is bringing sheep back to the shepherd.

The dog can be called on or off sheep by the shepherd,

and the dog is immediately responsive.

(Therefore, this is not problem predatory attack behavior.)

2 Aggression Circuits in the Brain— predatory attack

Is this a problem predatory attack behavior?

Yes, if it is out of control.

No, if it is trained behavior, asked of the dog's owner.

If the dog can be called on or off the game of catch-the-frisbee,

and the dog is immediately responsive, this is not problem behavior.

Next slide →

2 Aggression Circuits in the Brain— predatory attack

Is this a problem predatory attack behavior?

(If you are a squirrel, the answer is "yes!")

If you are the dog's owner, the answer is, "Yes, if it is out of control."

If the dog can be called on or off the game of squirrel-watching,

and the dog is immediately responsive, then this is not problem behavior.

TRUE!

When I was growing up, our family dog had a "job"—keeping the squirrels treed when she was outside watching.

She could be called back inside, and the dog was responsive. Her squirrel watching behavior was not a problem.

After the dog died, the neighborhood squirrel population exploded, and then squirrel behavior became the problem.

As an acceptable focus for high-energy, predatory attack behavior:

The 21th Century Predatory Object Of Choice for Many American Pet Canine Predators (aka Your Domesticated Dog)

That's a ball, dude!

(but you can use any toy, rope, or even food if you throw or move it– any inanimate, moving object can be prey-like if it moves.)

CONTROL THAT LOVABLE PREDATOR! Teach the dog a time, a place, an acceptable object for predatory focus, and, **most importantly**, multiple, discriminatory cues for how the game is played with ***Stops, Slows, and Moving Away, and Calm-focused Behavior commands built-in***— game on/game off!

IF YOU TEACH CONTROLS IN YOUR PLAY-GAME, YOU CONTROL THE PREDATOR.

Play is behavior controlled by the predatory attack circuit in the brain.

Play is defined as two animals interacting without harming one another.
Here, two dogs race each other in the snow.

Tug-of-war can be played by multiple dogs.

These dogs are getting some good exercise.

Imagine the branch as a bison carcass, and you can see why tug skill is useful to the wild canine predator and can be a necessary, cooperative activity when carving up dinner (not just competition). Is this healthy play?

If the dogs can be called away and are immediately responsive, you have some assurance that this is healthy play!

Your dog's immediate responsiveness to your command should be a major training goal.

Next slide →

This game of tug-of-war looks mighty friendly and largely symbolic.

Sometimes, it really is not whether you win or lose, but how you play the game!

Next slide →

2 Aggression Circuits in the Brain— predatory attack to defensive rage?

Two adult dogs interacting together without harm = play.

However, dog lovers often disagree about how to interpret the grey areas of dog play. For example, if one dog plays "keep away," with the ball, seemingly to assert his dominance over the other dog, is that play, possession guarding, or social (rank order) testing? Or do we have to wait for some physical harm to know? The ears and faces of these two dogs as well as their body positioning are "iffy."

Next slide →

My bottom line: If any of these dogs can "lie down" or "come" on command within 0.5 seconds while "playing," then the behavior likely is healthy, controllable play. Fast responsiveness from the dog to a command is *a good training goal to keep in mind and work towards!*

Photo 1

Are these dogs playing if nobody gets bitten?

I doubt any of the photos on this slide illustrate healthy, controllable play behavior.

Photo 2

How about these two?
If the dog on the left nips a shoulder, is that still playful?

Photo 3

At some point, play behaviors governed by the predatory attack circuit can switch and become defensive rage behaviors, as *Photo 3,* above, illustrates— a play scene gone bad at a dog park.

This human is training these 3 dogs,
reinforcing them for calm, focused behavior and stand and sit-stays.

Not moving **can be a predatory attack behavior, trained or not.**

The 3 dogs and human are interacting
without harming one another = *play*.

Next slide →

This human, 2 dogs, and a cat are interacting without harming one another = *play*.

In fact, the human is training and reinforcing the dogs and cat

for calm, focused attention, emotion, and behavior.

Training can be a form of play for dogs, cats, and their humans.

2 Aggression Circuits in the Brain— predatory attack

Games like chase, tug-of-war, or fetch—
even mutual fetch– can be healthy play, if they are controllable– with cues to start, interrupt, and stop the game; with cues that teach the dog to slow, stop, or turn away from the game's object.
Games like chase, tug-of-war, and fetch are all forms of predatory attack behavior.

2 Aggression Circuits in the Brain— predatory attack to defensive rage

Although eating is governed by the predatory attack circuit,
EATING IS NOT ALWAYS THE RIGHT ANSWER FOR GOOD DOG BEHAVIOR.
For example, (Counter) Surf and Treat
(when the dog jumps up to the kitchen counter to serve himself/herself).

I wonder if this is where they hid my training schedule?

Wishful Thought Balloon….

Question: If you discipline, yell at, punish this dog, what can happen?
Answer: You switch the dog from its predatory attack circuit
into its defensive rage brain circuit,
making defensive rage aggression more likely in other contexts!

2 Aggression Circuits in the Brain— predatory attack to defensive rage?

More predatory attack behavior (but…)

Eating dinner should be relaxing, under parasympathetic nervous system control. However, although this dog is lying down and seems to be in the middle of eating (and eating is controlled by the predatory attack circuit)….

…something has disturbed this dog's dinnertime—the dog has stopped eating. Note the awkward head turn (away or towards something?), not in line with the dog's body, and the tension in the face, around the mouth, and ears. The dog is not eating but still grasps its food between its front paws. For some reason (off camera), this dog has moved away from pure predatory attack circuit behavior into defensive rage behavior.

Brain Circuitry Insights Into Aggression Re-hab

- The brain wires up its circuits as a distributed neural network, on a “use it or lose it” basis.
- The more a brain circuit is used, the stronger it becomes, and then the more it will be used. The less a circuit is used, the less it will be used, and the weaker it becomes.

Next slide →

Brain Circuitry Insights Into Aggression Re-hab

- "Use it or lose it"— I want to encourage a dog to use the healthy, desirable, controllable behaviors governed by the dog's predatory attack circuit not its defensive rage circuit.
- I don't want to strengthen both desirable and undesirable behaviors. That will happen if I continue to discipline/punish the dog for bad behaviors and/or let the dog run wild while adding in some good re-hab training. I will get "Dr Jeckyl and Mr. Hyde" dog behaviors– some improvement but the bad dog behaviors will appear at unpredictable times. I don't want that.
- I can strengthen desirable brain circuits and dog behaviors by selectively and frequently reinforcing the emotions and behaviors I want at a high rate while ignoring and minimizing the occurrence of emotions and behaviors I don't want. *Neurons that fire together, wire together– Hebbian Rule.*

Next slide →

Brain Circuitry Insights Into Aggression Re-hab

- The brain functions as a distributed processing network with *millions* of connected neurons composing each network.

- *Millions of connections*….Aggression re-hab takes time and patient repetitions to wither away one undesirable emotional-behavioral network while building a competing, desirable network in your dog's brain. (But it shouldn't take millions of training reps to do this !)

- However, your dog's aggression problem did not spring up overnight. It took time to develop. It won't go away overnight. But it will go away with diligent training effort.

Next slide →

this

HOW

that

or

"But we have already been to dog obedience school, and he still won't leave Fluffy alone!"

can lead to…

GRAB THE CAT!!!

THE EMOTIONAL STATE YOU CREATE FOR YOUR DOG WHILE TRAINING DOES MAKE A DIFFERENCE.

When you get the dog to behave through coercion, it hurts the dog psychologically and physically. You are punishing the dog. Your relationship with the dog "you love" is at least partially based on threats and hurts.

You strengthen the dog's **defensive rage circuit. It can activate quickly, but it doesn't turn off nearly as fast because it takes time (hours) for its associated autonomic nervous system response to simmer down.**

You then make the dog more likely to use aggression in other contexts.

We can't say exactly where, but the stress you create with coercive training -- "**showing the dog who's boss"**— will inevitably come out somewhere, psychologically or physiologically, usually in other contexts.

*(Of course, if you **never train** the dog, you can also get this!)* →→→

2 Aggression Circuits in the Brain— without using defensive rage circuit

How can you train a dog without activating his/her defensive rage circuit?

BRIEFLY:

IGNORE WHAT YOU DON'T LIKE.

Yes! That's a clicker!

REINFORCE WHAT YOU DO LIKE. A LOT!

The picture (on the left) with all the angles, dust, and action makes a terrific herding photo-op. But this is an example of out-of-control chasing behavior you don't want to see in herding.

Don't punish it. Don't even bother to say "No!" Minimize its likelihood of causing damage, but ignore it.

If you are a savvy trainer and can ignore behaviors you don't like AND frequently reinforce (with a clicker or "good") behaviors you do like—such as widening away from stock and moving at a steady pace—in a meaningful way, your dog easily can learn to be a high-in-trial herding dog. You can use these training principles to train your dog to behave well at home, too. You teach the dog by rewarding desirable predatory attack behaviors.

Positive Reinforcement Training— *Use it (don't lose it)!*

The 3 dogs in the right picture were trained with pure positive reinforcement training— that means with no force, no compulsion, no "no's," no need to wake up the defensive rage circuit.

Below,
that's no happy puppy smile.
The pup has tension
in his face, lips, ears, and tail.

"Please, don't hit me!
You are already yanking my chain!"

Their expressions tell you everything.

Positive reinforcement training– use it (don't lose it)!

← Sheep

← Herding Dog

Director's Chair →

Even the hardest working canine predators need their rest.
Sleep gives them a chance to consolidate what they have just learned.
You, too!
Count your sheep, your dogs and other blessings; train, observe, and think; learn to stay patient; and never give up hope.
(THE END) zzzzzzz.....
— Carolyn Wilki

← Back to sleep

← Back to the Beginning