



## Behavior Consultant and Trainer Dr. Laura Donaldson Explains How Slow Thinking Is Lifesaving for Dogs, Plus Cognitive Reappraisal



**Dr. Laura Donaldson is a highly certified trainer and behavior expert who created Slow Thinking is Lifesaving for Dogs. She teaches dogs to slow down their thinking so they can truly assess a situation before reacting (or overreacting).**

► **Before I ask you about your unique behavior program, I want to ask how your friends and colleagues responded to your decision 15 years ago to retire as a tenured professor to pursue working with dogs full time?**

LOL, most of my colleagues' comments would be unmentionable in public. Those who weren't responding with unmentionables were in strong disbelief. When I was first hired at Cornell University (located in Ithaca, New York, US), we rented a house for several years before we bought our own place in an area called Freeville—so named because it refused to incorporate in the early 1900's along with the rest of the upstate New York Finger Lakes region. Even then, I regularly received warnings from my colleagues about moving to what they considered the hinterlands and how that would hamper not only my career but also my life more generally. I, on the other hand, was deliriously happy because I finally had somewhere to keep my flock of Navajo-Churro sheep and could train my working Border Collies at home rather than always driving elsewhere. When I decided to opt for "phased retirement," I was half-time for five years and only taught one semester per year. This is when I established Four Paws, Four Directions Dog Training & Behavior Consulting LLC and began working in earnest as a canine behavior consultant. Once I retired fully from academic life and became a Cornell professor emeritus, I did hear from colleagues who would have loved to do likewise but couldn't (or wouldn't) for a variety of reasons. I, however, decided to follow my passion and I have never regretted that decision.

► **You have said in interviews and webinars that a dog’s cognition is on par with human cognition. Could you elaborate on how they are similar and how they are different?**

A complete answer to this question would take another book! Thankfully, we have researchers, such as Gregory Berns, who have published a significant amount on this subject from a research-oriented, neuroscientific perspective. I will try to answer the question from my own perspective as a practitioner, an academic, and a long-time companion to more than a few much beloved, working Border Collies. As background, however, I want to highlight a *New York Times* opinion piece that Berns wrote entitled “Dogs Are People Too” (2013).<sup>1</sup> In this mini-essay, Berns describes how his use of awake neuroimaging such as fMRIs should become a watershed moment in how societies regard dogs. He particularly waxes eloquent on the similarities between human and canine versions of a brain region situated between the brainstem and the cortex called the caudate nucleus. The caudate nucleus plays a key role in producing those positive emotions we feel when contemplating the things we love like chocolate ice cream, swimming in a cold lake, and cuddling with our dogs. Berns notes that many of the same things that activate the human caudate nucleus also activate the canine caudate. I quote him at length here: “Neuroscientists call this a functional homology, and it may be an indication of canine emotions. The ability to experience positive emotions, like love and attachment, would mean that dogs have a level of sentience comparable to that of a human child. And this ability suggests a rethinking of how we treat dogs. Dogs have long been considered property. Though the Animal Welfare Act of 1966 and state laws raised the bar for the treatment of animals, they solidified

the view that animals are things—objects that can be disposed of as long as reasonable care is taken to minimize their suffering. *But now, by using the MRI to push away the limitations of behaviorism, we can no longer hide from the evidence. Dogs, and probably many other animals (especially our closest primate relatives), seem to have emotions just like us. And this means we must reconsider their treatment as property* [emphasis mine].” I would argue that this includes reconsidering the use of shock collars and other punitive technologies like prong collars, the use of which has long been justified because dogs allegedly occupied a rung below humans on the “great chain of being.” Not any longer—and this is precisely why the issue of cognitive parity between dogs and humans is so profoundly important.

In 2016, Cook, Spivak, and Berns published a study<sup>2</sup> using “awake neuroimaging”<sup>3</sup> to measure and document canine impulsivity. The results of this research enabled the authors to theorize a parity “between human and canine neurobehavioral mechanisms for control and support the dog as a comparative model for better understanding maladaptive behavior in humans.” This echoes the conclusions of the caudate nucleus research because it showed (literally, via the fMRI [functional magnetic resonance imaging] scans) that dogs and humans possess remarkably similar neurobiological mechanisms not only for exercising self-control but also for experiencing positive emotions. I should quickly note that talking about *cognitive parity*, or the close cognitive similarity of dogs and humans, does not mean that dogs “think” like humans through the medium of verbal language. The term *parity* instead implies strong parallels between dogs and humans in how they process information from the environment and then use this information to make decisions about their behavior. Several

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1 Gregory Berns, “Dogs Are People, Too,” *New York Times*, October 5, 2013, <https://www.nytimes.com/2013/10/06/opinion/sunday/dogs-are-people-too.html>.

2 Peter F. Cook, Mark Spivak, and Gregory Berns, “Neurobehavioral Evidence for Individual Differences in Canine Cognitive Control: An Awake fMRI Study.” *Animal Cognition*, 19 (2016): 867.

3 Berns and his research group used only positive reinforcement techniques to teach dogs how to enter the fMRI apparatus and then to stay unrestrained within the tube. If dogs chose to leave the apparatus or showed any signs of stress, all measuring stopped.

of the most important cognitive parities between dogs and humans—and the ones addressed in my Slow Thinking is Lifesaving for Dogs program—are *slow thinking* as well as what I have described as *fast-twitch thinking* (FTT).

While readers may recognize the term fast thinking, I also call it fast-twitch thinking because this phrase more accurately describes the muscle memory characteristics of fast thinking. The muscles of mammals, including humans and canines, are composed of fast- and slow-twitch fibers. While slow-twitch fibers are associated with long duration, muscle contraction, and endurance, fast-twitch fibers enable quick, powerful contractions, albeit for much shorter periods of time. This is precisely how FTT functions because it is blazing fast, usually involuntary, and requires minimal cognitive effort. While FTT lubricates society as we know it—do you really want to think about which way to twist open a doorknob or which direction to read this paragraph?—it can also be very misleading. “First impressions,” otherwise known as fast-twitch thinking, can and do lead to inaccurate conclusions, including social stereotyping. Like humans, dogs also use fast-twitch thinking. For example, dogs on leash who bark and lunge at every dog they encounter are engaging in a form of FTT that many people label as “reactive” behavior. Such behavior is largely automatic and its cognitive distortions (“every other dog I see is dangerous and going to hurt me”) function very much like cognitive distortions in human perceptions. When caretakers, handlers, and dog training professionals fail to recognize the cognitive underpinnings of canine “reactive” behavior, they also miss a critical component of helping dogs feel safer, develop more socially appropriate coping skills, and enjoy a better quality of life. This is one reason why I believe the Slow Thinking is Lifesaving for Dogs program is so important. It also provides a great transition to the next question!

► **Your program might appear radical to some in the industry because it demonstrates a massive switch from the old-school method of trainers working to change behavior first and change thinking second. Your program teaches that we can indeed change thinking first and that, in turn, changes behavior. I am enthralled with this idea! Do you feel it is a radical change of course? Are you finding this method works faster than traditional methods?**

Apropos of Gregory Berns's insight about how technologies like fMRI dissolve “the limitations of behaviorism,” I endorse his conclusion that “we can no longer hide from the evidence.” The inner processes of both canines and humans have now become both observable and demonstrable. Far from making a radical change, I'm just following the science! There can be no doubt that changing thinking also permanently and positively changes behavior. Indeed, the documented success of human-centered Cognitive Behavioral Therapy (CBT) testifies to this truth. The American Psychological Association's Division of Clinical Psychology has declared that CBT is as effective—and often even more effective—than other forms of psychological therapy, including psychiatric medications. These experts argue that “CBT is an approach for which there is ample scientific evidence that the methods . . . actually produce change.” Because of the close cognitive parity between humans and canines, I am very confident in believing that these statements also hold for dogs.

There are several basic principles at work in a cognitive approach. First, behavior issues often originate in distorted, unhelpful ways of thinking; second, learned and well-rehearsed patterns of dysfunctional behavior contribute to psychological problems; third, both dogs and people with behavior issues CAN learn more adaptive coping mechanisms without resorting to laborious and often difficult to implement desensitization/counterconditioning protocols. That serious behavior issues like aggression frequently result from a subject's misreading of social cues explains why desensitization/counterconditioning sometimes



**Helping dogs develop slow thinking habits allows them to relax and reframe their thinking so they can more accurately evaluate the world around them.**

underwhelms as a therapeutic approach, especially in non-human animals. I explore this process intensively in my article, “Behavior Matters: Counterconditioning and the Cognitive Revolution.”<sup>4</sup> Rather than counterconditioning’s focus on reciprocal inhibition, my Slow Thinking program emphasizes subjects learning the cognitive skills of disengagement and calm, accurate information processing. A wonderful example of this is Cognitive Reappraisal (CR), which is a cornerstone of my Slow Thinking program.

I like to describe CR in terms of the three “Rs”: rethinking, revaluing, and reframing. Cognitive reappraisal involves thinking differently about stimuli in a way that diminishes the intensity of negative emotions and changes the meaning of emotionally evocative stimuli. CR has a range of beneficial effects, including reduced emotional intensity, reduced startle responses, reduced behavioral

avoidance, and reduced amygdala activation.<sup>5</sup> Both PET (positron emission tomography) and fMRI have supplied hard data that CR directly influences amygdala circuitry. Studies of healthy human individuals that have been corroborated and duplicated many times over show that cognitive reappraisal reliably decreases amygdala activation when subjects encounter negative emotional stimuli. This finding turns much received wisdom about behavior on its head. Here, thinking alters neurobiology rather than biology determining thinking.<sup>6</sup> This strongly suggests that CR is transformative and highly effective at reducing negative emotions in the context of stress.

I want to end my response by telling the story of Gildin, whose name means “spark of silver” in the elvish language invented by J.R.R. Tolkien in his *Lord of the Rings* books. Gildin is a 15-year-old Jack Russell Terrier who was rescued from Bulgaria by Susanne, a professional dog trainer based in Austria and a student in my online Slow Thinking course. According to Susanne, who gave her full consent to sharing Gildin’s story, “there are no words for the suffering he had gone through—over a decade of hiding in a tiny wooden hut, sleeping in his own dirt, living off scraps he collected at night, when the other, bigger dogs at the shelter were resting. From humans, he obviously knew only neglect and violence. Gildin showed clear signs of severe PTSD when he arrived, completely unable to engage with his environment, except for short outbursts of defensive aggression. He had no communication skills, was impossible to touch, froze at the mere sight of dog or human alike and slipped into learned helplessness on many occasions.” Susanne worked hard to help Gildin recover some semblance of confidence in his world and was making good progress. However, shortly after Gildin began to recover, he was diagnosed with cognitive

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4 Laura E. Donaldson, “Behavior Matters: Counterconditioning and the Cognitive Revolution.” *APDT Chronicle of the Dog* (Summer 2018): 44–47.

5 Laura Campbell-Sills, Kristen K. Ellard, and David H. Barlow, “Emotion Regulation in Anxiety Disorders,” in *Handbook of Emotion Regulation, Second Edition*, ed. J. J. Gross (New York: The Guilford Press, 2014), 393.

6 FYI, the amygdala is thought to be a central processing region for activating the body’s response to fearful or threatening stimuli, including negative arousal as well as fear-related behaviors.



**15-year-old Gildin has learned successful coping behaviors late in life thanks to Dr. Donaldson's program.**

dysfunction. At this point, Susanne wondered if and how the Slow Thinking is Lifesaving for Dogs program could help Gildin: "How could it work with a dog who might suddenly forget where the garden door is, or simply not know that the tasty stuff in his bowl is for eating and who doesn't know day from night?" Despite these difficulties, Susanne decided to try my Slow Thinking program with her geriatric, traumatized, and often confused rescue dog.

On leashed walks, Gildin usually reacted to scary stimuli (people, dogs, moving cars, etc.) with flight rather than fight (that is, he attempted to run away and hide): "So, that's where slow thinking came in. I had to adapt many things because of his cognitive dysfunction, of course." While Gildin might not remember single training steps or game sequences, with the help of Slow Thinking protocols, an "old, traumatized dog with severe dementia has found his way back into this world—taking part, making decisions, and exploring his environment. If you are ever asked if Slow Thinking works with ANY dog—yes, it does." Susanne reports that recently when they were taking a daily walk, Gildin was approached by a big dog who was being overtly confrontational. Rather than running away, Gildin instead "stood and watched. It was so obvious that he was thoroughly considering the situation instead of giving into his first impulse. Then, the most amazing thing happened. He looked at me, and then moved on in our chosen direction in a polite curve through the field next to us. Right past the other dog, who was barking and growling. That was perfect cognitive reappraisal in practice. I was so proud of him." I can only nod and agree with her assessment. Cognitive reappraisal is a powerful process that helps even those dogs whose lives have been affected as significantly and traumatically as Gildin's. I salute this little dog's bravery and courage as well as the skill and tenacity of his human. It would be hard to find a story that more poignantly illustrates the power of thinking to change not just a subject's behavior, but also their lives.