Inside the Mind of a Traumatized Dog:

Does Canine PTSD exist, and if so, is it similar to PTSD in humans?

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Introduction

"Gunner is declared excess", wrote the Marines in August 2010. He was determined to be beyond salvation after a year of therapy and training because of his crippling PTSD. According to the Marines, he was too dangerous to send out on patrols. His last attempt to sniff out explosives ended with Gunner circling back to his trainer, hoping to play fetch. The heroic war dog, known for uncovering explosive booby traps and weapons, was sent home from Afghanistan. He continues to suffer from Canine PTSD today (Phillips). Canine PTSD is Post Traumatic Stress Disorder that affects dogs, just as it affects humans. While victims can be impacted by any traumatic and/or stressful event, dogs used in the military are the most common sufferers. However, because PTSD (which will refer *only* to PTSD in humans for this paper) was only confirmed in the 1980s, research of its impact on canines is extremely rare. Therefore, Canine PTSD, or C-PTSD, is widely debated. Its earliest research dates back to 2010, with the first major article written by the New York Times in 2011. Within the last five years, research has increased moderately, but researchers still battle with whether animals can suffer as humans can in relation to mental disorders. Diseases such as phobias and separation anxiety have been proven to affect dogs, which leads to the possibility of the existence of C-PTSD.

Henceforth, the following question will be addressed: "Does C-PTSD exist, and if so, is it similar to PTSD in humans?" As long as C-PTSD is not validated and understood or invalidated and determined to be a different mental disorder, victims remain hanging in limbo. A new disease would not be ignored among the global population, and thus should not be ignored when affecting animal victims. In order to determine the answer, this paper will first examine research and investigations concerning the existence of C-PTSD, as well as its existence amongst military dogs. To consider C-PTSD versus PTSD, PTSD will be discussed and then the details of both disorders will be compared and contrasted. By doing so, it will prove C-PTSD does in fact exist and, while it shares similarities to PTSD, C-PTSD has its own unique characteristics.

Emerging Research Surrounding C-PTSD

C-PTSD was only discovered a few years ago. Though it became a topic of interest in 2010 (Dao), no detailed research or studies were conducted specifically about C-PTSD for at

least another year or two. In 2011, an article written by Marc Bekoff for *Psychology Today* revealed how PTSD-like symptoms have been found in other animals. He cited that Dr. Hope Ferdowsian had found that chimpanzees show signs of PTSD after suffering from traumatic events such as maternal separation or social isolation. He cited how other studies have shown that circus elephants develop signs of PTSD due to abuse, as do whales kept in captivity. With this new information, C-PTSD became all the more probable and thus incited more interest. One study conducted in Japan the following year examined canines abandoned after the 2011 earthquake in Fukushima and found the following:

> Urinary cortisol levels of disaster and non-disaster canines (from Kanagawa) were taken and examined, and behaviors of both groups were documented. The results showed more extreme stress after ten weeks in the Fukushima dogs than in dogs from Kanagawa. Behavior of the Fukushima dogs was less aggressive, which reveals their stress manifested elsewhere. They also had lower levels of trainability and attachment to others, which is extremely important because PTSD patients have demonstrated impaired learning and the inability to bond with others. This draws a connection between C-PTSD and PTSD. The inability to learn and bond could be where some of the stress is manifested, as opposed to aggression (Nagasawa et al.).

In approximately 2013, more thorough research into C-PTSD in the United States finally began, according to Dr. Peter Scheifele, an associate professor and the executive director of the FETCHLAB at the University of Cincinnati. In a 2014 study, dogs with a history of abuse were compared against a control group who had no history of abuse using the C-BARQ, a method designed to assess canine behavior. The abused dogs were more fearful of strange humans and dogs, displayed aggressive behavior, had obsessive behaviors, and were hyperactive, among other atypical symptoms (McMillan et al., 102-105). Dogs with C-PTSD are more fearful and/or aggressive and have hyperarousal, which can include obsessive behaviors and hyperactivity. Hyperarousal, in simple terms, is a chronic state of fight or flight. Thus a link could be drawn between dogs who have experienced abuse and dogs who have C-PTSD. Professionals also began to band together to solve the puzzle of C-PTSD around 2013. Dr Walter Burghardt reached out to the National Public Radio and revealed that "human psychiatrists, statisticians and veterinary behaviorists [have] gathered at the [Joint Base San Antonio-Lackland]" where the Holland Military Working Dog Hospital resides "to discuss how war-zone dogs could be affected". Since 2013, more professionals have joined the conversation in the hopes of

understanding C-PTSD and to conduct more research, as it is extremely scarce. This research helps to demonstrate the existence of C-PTSD as well as how it is seen in military dogs.

C-PTSD in Military Dogs

Further evidence of the existence of C-PTSD is seen among military canines. As early as 2010, military canines were sent home with the symptoms resembling PTSD. One in particular, Mike, was sent home with a fellow soldier because he could no longer work with his condition (Kershaw). These select few, such as Mike, quickly turned into over 32,000,000. In 2012, five percent of the 650,000,000 employed military canines were found to have C-PTSD (Huntingford). Their diagnoses was reached based on displayed symptoms that are commonly seen in PTSD. Such symptoms include avoiding certain objects, people, and places that trigger memories, changes in mood--especially anger and depression--and hyperarousal (Dao). The key to the diagnoses was that the dogs had not displayed symptoms prior to employment or in earlier employment, which means the symptoms had to develop while working with the military. Upon seeing PTSD-like symptoms develop *after* working with the military, veterinary professionals saw little other options.

Though the victims of C-PTSD exhibit much of the same symptoms as PTSD, the greatest indicator is when a canine is reluctant to perform the task it was trained to do (Dao). For example, as most military canines are used to sniff out explosives, those with C-PTSD will cease searching and refuse to continue. Mike suddenly stopped sniffing for explosives, which led to a preliminary diagnosis of anxiety. Despite being placed on Prozac, he displayed utter distress in the war zone. He became nervous and eventually stopped eating. Finally, he was diagnosed with C-PTSD, due to such unusual behaviors, upon returning home (Strum). Dogs do not simply cease to do as they were trained, unless there is a negative experience tied to the task, which has further strengthened the argument for C-PTSD. Skeptics of C-PTSD tend to believe that victims of C-PTSD are merely stressed out or nervous. However, especially with military dogs, this is not the case. Even if extreme stress or nervousness is categorized as acute or chronic stress, these disorders are vastly different from PTSD or C-PTSD. Chronic stress does develop after a traumatic event but due to the sense of loss of control and unfollowed expectations one normally

expects (Baum et al.). Chronic stress symptoms may occur with certain symptoms of PTSD, as seen in a study done with residents of Three Mile Island. Residents who lived 35 miles away from Three Mile Island experienced more symptoms of chronic stress and mild symptoms of PTSD than those who lived 80 miles away (Davidson and Baum). However, simply because there is a link between chronic stress and PTSD does not mean that the two disorders are the same. PTSD derives more from the emotional and mental trauma and an individual's own feelings about the experience. Very little has to do with control. Dogs, in particular, rarely experience control in a situation and usually are trying to inwardly understand the experience and are suffering from "mental scars". However, acute and chronic stress can be used as a predictor for PTSD to be developed later (Brewin et al., 360). With the multiple studies into the existence of C-PTSD and the number of victims currently impacted in the military, it is becoming harder to argue against what science is saying. C-PTSD is a real disorder. Fortunately, it appears C-PTSD will be validated before long.

PTSD Overview

PTSD is only slightly more well-known than C-PTSD. PTSD was validated in the 1980s, in particular due to the number of affected soldiers after the Vietnam War (McGirk). Because of its recent discovery, little is known about PTSD. However, research concerning the mental disorder is on the rise--with a focus on treatment--due to the steady number of victims. While PTSD can be caused by any sort of stressful or traumatic event, the majority of those affected are active military members and veterans. In April 2009, a Rand Corp. study revealed, on average, 1 in 5 service members in combat tours return home with symptoms of PTSD or major depression (McGirk). Investigating which symptoms a potential victim is suffering from is one aid when it comes to a diagnosis. Psychiatrists and psychologists look for the following list specifically: one symptom of recurring memories, one symptom of avoidance, two symptoms of arousal or extreme reactivity (anger), and two symptoms involving changes in cognition or mood (Post Traumatic Stress Disorder). These criteria can be demonstrated through multiple symptoms, typically through alcohol or drug abuse, emotional "numbness" with occasional bursts of rage, depression, nightmares or flashbacks, in extreme cases murder or suicide, avoiding certain

situations, lack of relationships with others, trouble remembering details of the experience, paranoia, and hyperarousal (Symptoms of PTSD). Professionals also turn to the DSM-V to ensure all criteria is met. The DSM-V sets requirements which can include details regarding the event, details which victims may be exposed to after the event, and presenting criteria regarding 'destructive behavior' after the event. (Post Traumatic Stress Disorder). After receiving a diagnosis for PTSD, the suffering individual goes through treatment, the most popular method being Cognitive-Behavioral Therapy. Cognitive-Behavioral Therapy has two different methods called Cognitive Processing Therapy (CPT) and Prolonged Exposure Therapy (PE), according to the Department of Veterans Affairs' National Center for PTSD. CPT involves understanding how to handle distressing thoughts and what they mean. Its four main parts are learning about the specific symptoms of PTSD from which the victim may be suffering, becoming aware about thoughts and feelings, learning skills to help deal with individual thoughts, and understanding new changes in beliefs (Cognitive Processing Therapy). Exposure therapy helps "decrease distress about a trauma". PE is a type of exposure therapy with the following four main parts: education about PTSD and treatment, breathing methods to increase relaxation, real world practice with situations that are difficult to approach because of the trauma, and talking through the trauma (Prolonged Exposure Therapy). The Department of Veterans Affairs' National Center for PTSD has stated both methods are extremely effective for combating PTSD. Having now examined C-PTSD and PTSD, the two will be compared and contrasted.

Similarities and Differences Between C-PTSD and PTSD

C-PTSD has both similarities and differences to PTSD. One aspect where dogs and humans differ is with flashbacks or dreams. It is impossible to comprehend what a dog is thinking. Humans can verbally express it, yet dogs are incapable of such communication (Pajer). Therefore, it is impossible to determine the existence and/or extent of flashbacks or dreams in canines, whereas this is a definite symptom of PTSD. Diagnosis is also extremely different. The symptoms a dog is displaying may not be enough to result in a diagnosis because the dog cannot verbally communicate what s/he is experiencing. Dr. Scheifele has said he uses ERP techniques to diagnose the dogs he is working with instead. An ERP technique is a measured response of the

brain to a sensory or cognitive stimulus, though he specifically uses Negativity Mismatch, which consists of an echoic memory test. The subject must differentiate between sounds of the same tone and a random, deviant tone; although, such a simple task can be difficult when all of the sounds appear loud, painful, and high. This condition, hyperacusis, is not uncommon in victims of PTSD (and C-PTSD). In one study, response to loud tones was measured before and after cognitive-behavioral therapy of women with PTSD. Prior to therapy, loud tones were painful and unable to be distinguished from one another. However, 72% of the women responded positively to the therapy and saw a decrease in symptoms, one of which was the reduction of hyperacusis (Griffin et al., 25, 27-28). Because of the theme of hyperacusis in PTSD and C-PTSD victims, Negativity Mismatch has had great success. However, it is not usually used with victims of PTSD, and a DSM-V diagnosis is more common. Still, the greatest difference may lie in the treatment of C-PTSD and PTSD. While both disorders require therapy, the methods of therapy are different. While those with PTSD require Cognitive-Behavioral Therapy, dogs with C-PTSD undergo different kinds of therapy called desensitization therapy and counter-conditioning therapy. Desensitization "gradually accustoms an animal to a stimulus to which it initially has an undesirable response". Counterconditioning "is the process by which a response that is physiologically and behaviorally incompatible with the undesired response is induced" (Cromwell-Davis). Which therapy is chosen is, however, much like how the therapy for PTSD is chosen. It depends on the individual's preferences and the nature and intensity of the experience.

C-PTSD and PTSD share similarities as well. As mentioned, both canines and humans tend to share symptoms such as hyperarousal, avoiding objects, people, and places that trigger memories, and changes in mood, especially anger and depression. Nevertheless, the symptoms of C-PTSD, just as with PTSD, do vary depending on the specific individual and his or her experiences. Treatment of C-PTSD and PTSD may differ in terms of therapy, but one common strand runs through both methods of treatment. On numerous occasions, PTSD and C-PTSD victims require medication as well as therapy. About 80% of veterans in 2012 who underwent treatment were prescribed medication. 89% were given antidepressants, 64% were given anxiolytics/sedative-hypnotics drugs, and 34% were given antipsychotics (Mohamed and Rosenheck). Dogs are frequently given medication to combine with therapy, most often

antidepressants. Most antidepressants are safe and can help manage symptoms of PTSD, as seen by the staggering amount of veterans given antidepressants during treatment in 2012. As mentioned, Mike the service dog was originally prescribed Prozac to deal with the anxiety symptoms of his C-PTSD. Another common drug given to dogs combating C-PTSD is Xanax, according to Dr. Scheifele. The strongest similarity is perhaps the incredible number of aforementioned victims who served in the military. Military experiences are the most common cause of C-PTSD (Huntingford) as with human veterans. Anywhere from ten to thirty percent of veterans have PTSD, depending on which war. Vietnam ranks the highest with thirty-one percent (Post Traumatic Stress Disorder). The average falls at about twenty percent, according to the Rand Corporation study (McGirk). Overall, C-PTSD and PTSD have similar characteristics but are still different enough that the disorders are completely separate conditions.

Conclusion

Though it has only recently received attention, C-PTSD haunts as many animals as PTSD in human beings. It is especially widespread in canines used by the military. C-PTSD both retains its individual characteristics, yet shares certain aspects of PTSD seen in mankind. As C-PTSD exists and affects dogs much in the same way PTSD affects humans, there is little reason to hesitate to give victims treatment. More research must be conducted to understand the condition under which dogs suffer to give an even further understanding. Furthermore, the research must be put toward finding a treatment to relieve canines of the tribulation of living with PTSD. Gunner currently lives with Dan and Debra Dunham, his progress slow and steady. The only reason he has had success is the immense patience of the Dunhams, who are also healing alongside Gunner because of the heroic death of their son Jason, a fellow Marine (Phillips). Gunner cannot make all of the progress he needs until C-PTSD is acknowledged as a true mental disorder for which canines can receive psychological treatment. He awaits a cure for his condition, and until then, must face the battle each day with his new owners.

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Works Cited:

Baum, A., L. Cohen, and M. Hall. "Control and Intrusive Memories as Possible Determinants of Chronic Stress. : Psychosomatic Medicine." *Psychosomatic Medicine: Journal of Biobehavioral Medicine* 55.3 (1993): n. pag. *LWW*. American Psychosomatic Society, May-June 1993. Web. 11 Apr. 2016.

Bekoff, Marc. "Do Wild Animals Suffer From PTSD and Other Psychological Disorders?" *Psychology Today* (2011): n. pag. Web. 18 Mar. 2016.

Brewin, Chris R., Bernice Andrews, Suzanna Rose, and Marilyn Kirk. "Acute Stress Disorder and Posttraumatic Stress Disorder in Victims of Violent Crime." *American Journal of Psychiatry* 156 (1999): 360-66. *American Journal of Psychiatry*. Mar. 1999. Web. 11 Apr. 2016.

"Cognitive Processing Therapy." *National Center for PTSD*. Department of Veterans Affairs, 14 Aug. 2015. Web. 11 Apr. 2016.

Cromwell-Davis, Sharon. "Understanding Behavior - Desensitization and Counterconditioning: The Details of Success." *Compendium* 30.11 (2008): n. pag. *VetFolio*. Vet, Nov. 2008. Web. 11 Apr. 2016.

Dao, James. "After Duty, Dogs Suffer Like Soldiers." *The New York Times*. The New York Times, 01 Dec. 2011. Web. 05 Apr. 2016.

Davidson, Laura M., and Andrew Baum. "Chronic Stress and Posttraumatic Stress Disorders." *Journal of Consulting and Clinical Psychology* 54.3 (1986): n. pag. *PsycNET*. APA, June 1986. Web. 11 Apr. 2016.

Griffin, Michael G., Patricia A. Resick, and Tara E. Galovski. "Does Physiologic Response to Loud Tones Change Following Cognitive–Behavioral Treatment for Posttraumatic Stress Disorder?" *Journal of Traumatic Stress* (2012): 25-32. *Ebscohost*. Web. 5 Apr. 2016.

Huntingford, Janice. "Post Traumatic Stress Disorder in Dogs." *Integrative Veterinary Care* (2012): n. Pag. 2012. Web. 18 Mar. 2016.

Kershaw, Sarah. "A Soldier and His Combat Dog Both Returned From Iraq with PTSD — and Found Support in Each Other." *The Washington Post*. The Washington Post, 2 July 2015. Web. 7 Apr. 2016.

Lloyd, Ryan. "Four-Legged Warriors Show Signs Of PTSD." *NPR*. NPR, 11 Mar. 2013. Web. 11 Apr. 2016.

McGirk, Tim. "The Hell of PTSD." *Ebscohost*. Time Magazine, Nov. 2009. Web. 5 Apr. 2016.

McMillan, Franklin D., Duffy, Deborah L., Zawistowski, Stephen L., & Serpell, James A. (2015). Behavioral and Psychological Characteristics of Canine Victims of Abuse. Journal of Applied Animal Welfare Science, 18(1), 92-111. Retrieved March 2, 2016, from Taylor & Francis Online.

Mohamed, Somaia, and Robert A. Rosenheck. "Pharmacotherapy of PTSD in the U.S. Department of Veterans Affairs: Diagnostic- and Symptom-guided Drug Selection." *The Journal of Clinical Psychiatry* 65th ser. 69.959 (2008): n. pag. *ResearchGate*. APA, June 2008. Web. 11 Apr. 2016.

Nagasawa, Miho, Kazutaka Mogi, and Takefumi Kikusui. "Continued Distress Among Abandoned Dogs in Fukushima." *Nature Journal* (2012): n. pag. 11 Oct. 2012. Web. 18 Mar. 2016.

Phillips, Michael M. "Shell-Shocked Dog of War Finds a Home With the Family of a Fallen Hero." *The Wall Street Journal*. Dow Jones and Company, Inc., 6 Oct. 2010. Web. 31 Mar. 2016.

"Post-Traumatic Stress Disorder." *NIMH RSS*. Department of US Health and Services, Feb. 2016. Web. 05 Apr. 2016.

"Prolonged Exposure Therapy." *National Center for PTSD*. Department of Veterans Affairs, 14 Aug. 2015. Web. 11 Apr. 2016.

Strum, Lora. "SOLDIER, COMBAT DOG SHARE PTSD DIAGNOSIS, ROAD TO RECOVERY." *The States News Service*. N.p., 20 July 2015. Web. 7 Apr. 2016.

"Symptoms of PTSD." *PTSD: National Center for PTSD*. Department of Veterans Affairs, 13 Aug. 2015. Web. 02 Apr. 2016.

Scheifele, Peter Skip. E-mail interviews. Apr. 2016.

"Treatment." *National Center for PTSD*. Department of Veterans Affairs, 14 Aug. 2015. Web. 11 Apr. 2016.