



Lilly Lecture of the
Center for the Human-Animal Bond
Purdue University School of Veterinary Medicine

Contemplation and Community: The role of animals and nature in the promotion of health

Lilly

Presented by

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January 21, 2008 • North American Veterinary Conference • Orlando, Florida

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For this essay, I want to address you as a clinician not as a researcher. For the past year I have been fully engaged in clinical psychiatry first at a veteran's hospital in Kerrville, Texas in the heart of the Texas Hill country. For the past month, I have been a civilian contractor for the Army at Fort Hood which is also in Texas near Austin. (The town was named after Stephen not Jane.)

In Kerrville, I acquired extensive experience treating Vietnam veterans with post-traumatic stress disorder (PTSD) and had somewhat lesser exposure to veterans of both Iraqi wars. At Fort Hood, I treat soldiers who are still in active duty despite their symptoms. I want to use the condition of post-traumatic stress disorder as a metaphor for talking about the uses of animals and nature in therapy and the fundamental principles which should underlie their deployment as a therapeutic tool.

PTSD also can serve as a way of talking about much of mental illness and most of the neurotic misery that plagues people who are not under the care of a psychiatrist or ranked among the emotionally disequibrated. Thereby, we can talk about the almost universal value of increasing our intimate contact with animals and the natural world that contains them and us.

First there are two misconceptions about PTSD which prevent us from seeing it as a metaphor for many other kinds of emotional problems.

1. Most of the soldiers I have treated did not break down in combat. They fought their battles with great bravery and were honorably discharged without any diagnosis of mental disorder. It was only after years, sometimes 20 years later, that they came to accept their problems as a war-related illness. One Korean veteran I treated came in after tearing off silver dollar-sized pieces of skin from his arms as he struggled in a nightmare to free himself from his captors' bondage. He had never received a diagnosis in all this time and accepted nightmares and other symptoms as part of his life.
2. The florid symptoms that occupy so much of the popular writing about the disorder — the flashbacks stimulated by a loud noise which causes them to act as if they were in combat, the nightmares, the amnesia for salient events in combat — are only the surface phenomenon.

The essence of the disorder is a sustained state of hyper-arousal. In mind

and body, the soldier responds as if he were still in a state of great danger, as if he were frozen in time in a kind of endless combat. This arousal is manifest in an emotional response as fear, anger, irritability, agitation, heightened suspicion of strangers, an impatience with routine, and an intolerance of the constraints of subordination at work. At the physiological level, there are all of the changes that accompany increased arousal with activation of the pituitary adrenal axis with all of the propagated alterations in patterns of blood flow, lipid and glucose metabolism. This physiology of stress-arousal waxes and wanes — even the most severely affected patient has his good days.

PTSD is like an insidious poison that slowly works its way through mind and body damaging both in many ways. The destruction can start with self-medication with drugs or alcohol and lead first to increased risk of death from accident or overdose. The addictive behavior interferes with the soldier's capacity to earn a living thereby isolating him from the company that work brings. Injection of drugs has led to an epidemic of hepatitis C among Vietnam veterans. Hepatitis C is frequently complicated by the effects of alcohol. The hyper-arousal and increased level of stress hormones

make these soldiers more prone to metabolic syndrome, and therefore type two diabetes and early cardiovascular and coronary disease. (Another poison of war — Agent Orange — has played a role in premature diabetes but that is another story.) All of these consequences are made worse by their lack of social support which can account for more than 11 percent of the variance in mortality from chronic disease.

The symptoms just described frequently deprive the soldier of the comforts of social companionship and support, place a severe burden on his family and make him resistant to help. He may fail on the job and find himself isolated from society, his children and even his wife. I should stop here for a moment to pay tribute to the wonderful women who stick by their very difficult husbands and give them what support and love they can. It is not an easy life task and many of them have nursed their husbands through many years of their PTSD symptoms, and the behavioral, pathological and social consequences of that disorder.

The social isolation is made worse because many of these soldiers cannot seek solace from others because of the horrible nature of the deeds they witnessed and, in some cases, had to commit in wartime. They cannot speak of these things — the true face of war — except to men who endured the same horrors. One veteran, who had a successful career and was a respected leader in his community — the disorder had not destroyed his ability to lead and to form friends — told me of one repetitive dream. “We were strafing a Viet Cong village and this girl, she could have not been more than 6 or 8, ran across our field of fire. She was dragging her younger sister by the arm. You have no idea what 50 caliber ammunition can do to a human body.” He spoke in a

detached tone of voice as if he were still in the dream and a few minutes later said, “I have not told anyone about that incident, I just say that I cannot remember my nightmares.” Not being able to speak the unspeakable — a reflection of the integrity of their conscience — sets them apart from even their closest loved ones complicating the process of letting the past go.

PTSD is treated with many drugs in a bewildering number of combinations, but everyone knows the single cause that must be addressed if the disease is to be ameliorated or cured. Mind and body, these soldiers are trapped by their past experience in battle. Their brains and their bodies have been altered by their living as if the past were present and future. The way out of that situation is to bring their emotional state into the present. For most of us, including these veterans, the present moment is not filled with danger. It becomes clouded with anger and fear only when they live in the past or a future colored by their past.

If these veterans could let go of the past and see they were safe, at least as safe as the rest of the people who surround them, they would lose that terrible tension and experience peace that the present — truly lived — can offer. Being mindful, living fully in the present and really seeing, feeling, hearing, touching and smelling the events of the moment is the key to their achieving some peace with the world. What we are learning to offer these patients is the opportunity to be mindful, to live mindfully.

Again to anticipate the direction of this essay, I am suggesting that the millions of years we have been dependent for our survival upon reading the signs written in the tissue of plants and the behavior of animals has created a disposition in our minds to pay attention to

life. For a much longer time, life has shaped itself so it captures the eye. Nature in her glory is not dun gray — it is colored to catch the eye as “shining from shook foil, ... like the ooze from oil,” as Gerard Manley Hopkins put it. We are better at being mindful, at paying attention to the present, at being ‘there’ when we are surrounded by living nature and animals.

Many of these veterans have found one way of alleviating their pain — at least for some part of the day and some segment of their lives. They have their animals and their life away from people in the brush and woods of the rural landscape. As other clinicians who have worked with me have already observed, these veterans with PTSD are attached to their animals and find some sort of peace when interacting with them. The examples from my practice were many and varied. A veteran who had struggled with PTSD for 15 years without help, who only came in because of an Agent Orange induced neuropathy, felt truly comfortable only when he was with his birds. He raised cockatiels and love birds to supplement his pension. He built all of his own flight and nesting cages and said he could individually identify every pair of his 100 breeding love birds. That’s how attentive he was to their behavior and appearance. He liked talking about his birds and the most recent tale he told me was of one male love bird who learned to wedge the shell of a seed in the outlet of his drinking bottle so he could enjoy a shower. He watched that bottle for days until he found out how that particular bird was creating a little luxury for himself.

Another veteran found the same kind of relaxation by being with his chickens. I inquired about his hobby when his cell phone rang with a rooster’s squawk. He somewhat bashfully admitted that the chickens were roosters, and he raised

game birds for a hobby. Whatever the morality of his animal husbandry — he found peace in breeding and training his birds. Also, he could tolerate the close contact with strangers when he was at contests but not in other circumstances. Another raised donkeys in his 14 acres of land as well as enjoying hunting feral pigs and deer for the table. The last time I talked to him he wanted to fence his land to raise exotic deer. Other veterans have adopted a lifestyle in which they work for ranchers and in return for their home — usually an old recreational vehicle parked somewhere in the out-back — mend fences and clear cedar for the owner. Of course they live in a large part off the land by hunting and gathering of sorts. They would not be able to tolerate any other kind of work or lifestyle — their anger and anxiety would prevent them.

As you would anticipate, the veterans were attached to their dogs. Although I have been listening to people talk about how much they love their animals for 30 years, one disabled soldier surprised me by saying he hoped he would die before his dog passed away, a trope I previously had heard said only by men about their wives. The particular problem with patients with PTSD and their dogs, is that they tend to isolate themselves with their animal, rather than letting their animal bring them in contact with other people. In some sense the veteran's dogs were like the average person's cat — a creature of the home. Of the 100 or more patients I have seen with PTSD only one asked if he could use his animal like a service dog to help him negotiate social situations. However, when he was home and there were visitors, he tended to take his dog and isolate himself in his room. The peculiar family role of pets in this disorder can be illustrated by one man with chronic insomnia who spent hours patrolling his house

with a gun. I asked him if he slept better if his dog was present. He said "No!, he would welcome any intruder. I have to protect him."

Two important conclusions should be drawn from these clinical vignettes. Any animal-oriented therapeutic effort would have to accomplish two goals. First, sensitize the patients that they are using their animals to achieve a relaxed state of mindfulness, and teach them to extend that outward direct orientation as a self-conscious effort to enhance the effect of nature. Secondly, encourage them to take advantage of their animal's ability to make a human-to-human social process less fear provoking, and help them understand how their own fears stand in the way of social relationships.

If we explore the literature on these two concepts — the effects of animals and nature on our ability to direct our attention outward and suppress the internal repetitive scripts that impede our ability to pay attention — and keep us in an imperceptive aroused state, we find that unlike other areas of therapeutic research the evidence is relatively dense. To review some of it briefly:

1. Any relatively neutral stimuli that directs attention outward lowers blood pressure and heart rate.
2. Contemplation of a fish tank lowers blood pressure and reduces pain perception consequent to dental surgery.
3. Looking at natural scenery promotes recovery after stress.
4. Having a hospital room with a view of a park with trees lowers pain perception and speeds recovery after surgery.
5. Patients who were given a dog after being diagnosed with early hypertension had blood pressures in the normal range at a follow-up visit.
6. The presence of a dog can reduce

the physiological activation induced by reading aloud or performing mental arithmetic.

7. Work with children showed that contact with nature could decrease their agitation and make them more goal directed, less symptomatic in the presence of an environment rich with animal life.

To these more or less scientific observations we can add the host of literary references which suggest that nature has the power to induce tranquility, enhance the senses, and dissipate the cloud that worry and anticipation cast over the faculties of perception.

Having established that animals and nature have the selective ability to call forth our attention, it remains to cite the experimental evidence that animals can act as a social facilitator and increase the probability of pleasurable interaction free of the tension that social encounters between strangers usually has for some of us. That evidence is of two kinds: representations of people are more favorably perceived if an animal is present in the picture and the presence of an animal increases the frequency with which strangers will approach each other.

Now the conclusion from all of this clinical data supported by experimental observations, is not only a hypothesis that animals and nature are good for people with PTSD, but an inference that such therapy has a more general application. It can deal with that part of human pain which is resident in our tendency to listen to repetitive scripts in our mind that generate anxiety, anger and depression and not pay attention to the present moment — which is most of the time benign, if not pleasurable. Those who speak about the value of meditation and mindfulness are not addressing their observations to a narrow group of unfortunates who are tortured by singularly unpleasant memories. They are

addressing all of us who have trouble being in the moment, enjoying what we have because of the unpleasant and frequently erroneous scripts about our past that we play for ourselves in a continual theatre of pain. It also follows that we use this suspect data to generate worry about the future which by definition is not affecting us now. For many of us the present is being crushed between these two millstones of the past and future until it is almost annihilated.

We must recognize that animal-assisted therapy, nature therapy, horticultural therapy and meditation have a single common aim — the induction of a state of mindfulness where the person is acutely aware of the present moment and has his attention directed outward thereby suppressing the internal script that maintains them in a state of unpleas-

ant activation. This commonality should be recognized and the technique that is best for an individual person should be used. As part of the recognition that mindfulness is the aim of therapy, AAT and nature therapy should be structured to make people aware of the value of a mindful life, and the patient should be encouraged to extend the experience through whatever means he can.

We should acknowledge that our evolutionary history with animals and nature produced the modifications in brain behavior which made our capacity for meditation possible — what Benson calls the Relaxation Response. This is the evolutionary basis behind our capacity to meditate. Then interaction with nature can be recognized as another way of practicing mindfulness. The two paths — that of breathing and that

of being in nature — can be recognized as complementary and synergistic. The Lilly Lectureship will be devoted, in part, to exploring how the concept of animals and the sacred have intersected over prehistoric and historic times and how a new synthesis may have great possibilities for both our own health and the health of the planet.



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He is perhaps best known for a published landmark study demonstrating that the social support of companion animals could increase the survival rate of patients during the first year after a myocardial infarction.

Katcher is the recipient of the country's first National Institute of Mental Health training grant to educate veterinary and human health professionals about the health value of contact with companion animals. He also received the Delta Society's Distinguished Service Award in 1987.

He received his undergraduate degree from Williams College and his medical degree from the University of Pennsylvania. He took his psychiatric residency at the

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