

## Chapter 2

### WHY DOGS HELP PEOPLE

What would you do if you saw someone drowning? Watch him fall into the water and wait to see if he surfaces? When the person doesn't come up, you might jump in to save him, breaking through the film of ice on the water. You swim towards the person as fast as possible because the cold is numbing your muscles to the point that you are almost the one drowning. The person is underwater, so you flail around and grab the first thing your hand touches. It's only a lock of hair, but clumsy with cold, you don't try for a better grip.

Imagine swimming back to the dock, pulling a person who weighs more than you and is even heavier with waterlogged clothes and boots, fighting to keep your grip on the slippery hair. Choppy waves whipped by the wind make swimming difficult, and the water keeps slapping your face and driving up your nose. Finally you reach the dock, and once the drowning man has grabbed the edge, you can release your burden. The last hurdle, before your strength fails, is to pull yourself out of the water and onto the dock.

You might jump into the water once, even though you know you are risking your own life. But what if the person you're saving weakens and before he can climb out, lets go and sinks again. Do you jump back into the water, out of breath, shivering with cold, and thinking you might drown in your struggle to save the man? Most of us would hesitate to jump the first time and many would not jump the second. But Patches, a Collie-

Malamute mix, twice jumped into a freezing lake to save the life of his owner, Marvin Scott.

The accident happened one December evening when Scott was trying to free his boat from ice. Because the boat was solidly stuck, Scott got a stick to push against the hull. He moved as close to the edge of the dock as possible but what he didn't see was a thin coating of ice that had formed on the planking. When Scott pushed the boat, he slipped and pitched forward, his feet catching on the platform. As they ripped free he fell into the water, tearing the tendons and muscles of both legs.

The pain in his legs and the shock of the cold water were so great that Scott didn't try to swim and he started sinking. Patches jumped into the lake immediately and pulled his owner back to the dock. The dog climbed out of the water once Scott had grabbed onto the dock. But, weak with the cold, Scott let go and started sinking again. Patches jumped back into the water and again dragged Scott to the dock. This time Patches' strength was spent and he was unable to climb out of the water until Scott helped push him up.

Scott was in the same predicament as before, weak and virtually paralyzed from the cold and pain. The effort needed to climb out of the water must have seemed impossible to rally and the dog didn't have the strength for a third rescue. Patches seemed to know that Scott needed more help because he grabbed Scott's sleeve and started pulling. This was the spark that Scott needed, and this time he managed to struggle onto the dock. The solid wood must have been a relief though Scott was far from safe. Hypothermia can start quickly in a wet, injured person exposed to the wind in freezing temperatures. But to Scott, whose injuries were so severe that he could not walk, the 300 yards to the house might as well have been 300 miles.

Patches was in no great shape himself. He had twice jumped into the water and his wet hair was freezing. Still he did not give

up. Patches took hold of Scott's arm again and started tugging. With this encouragement, Scott began to crawl up the path to his house. When Scott was almost at the house, his strength failed for good. Patches too had reached his limit and lay quietly at Scott's side.

Scott was close enough to see his wife walking past the kitchen window as she made dinner. He tried calling to her but she couldn't hear over the wind, and he had not been gone long enough for her to worry. As Scott fought to stay awake, he felt a rock under his hand, and knew he had one more chance. In a final effort, Scott threw the rock against the kitchen window. Mrs. Scott looked out when she heard the rock and saw her husband lying on the path.

Scott was in the hospital for over twenty-five days because of pneumonia and the injuries to his legs, but thanks to Patches he was alive.<sup>16</sup>

Patches' extraordinary behavior raises the question of what inspires a dog to risk his life for a person. Why would Patches jeopardize his own existence, not once but twice? Patches would have been unaware of the difficulty of swimming in the freezing, wind-blown lake the first time he jumped. But the second time, he knew. Yet Patches didn't hesitate to put his life in danger. Where does this heroic behavior come from and how did it develop? To find the answer, I examined whether heroism is unique to dogs and explored the kind of relationship between species that would inspire this level of devotion.

Patches' behavior has a parallel in nature. Many animals help other animals, especially their close relatives. (The term "animal" as used in popular writing is not entirely correct as it usually refers to "non-human animals." I decided to use "animal" because the term non-human animal is awkward. However, there is the danger that it lets us forget that people are animals and that the same principles apply.) Scientists call such behavior altruism,

that is, helping another with no obvious benefit to oneself. (I stress “obvious” because there is almost always a hidden benefit for the helper animal; the more precise term is “apparent altruism.”) We usually associate heroism only with human altruism, and altruism in other animals usually consists of acts that are helpful rather than heroic. But dogs clearly behave in ways that can only be described as heroic. I believe that the unique relationship between dogs and people is what shaped helpfulness into heroism. Helping people, whether by saving lives or working on a farm, is how dogs first gained, and now hold, our protection. And this protection is what has ensured the success of the domestic dog, *Canis familiaris*, in an age of disappearing species.

### **Altruism and Heroic Behavior**

Researchers have described altruistic behavior in many different animals including birds, squirrels, wolves, and even vampire bats. We may not think of vampire bats as generous but female bats commonly share food with each other. Bats who have hunted successfully often regurgitate a little dinner for fellow bats who were not so lucky. This help is critical because vampire bats can starve to death in as little as three days.<sup>17</sup> Vampire bats are not the only unexpected altruists, prehistoric saber toothed cats may have shown similar behavior.

Christopher Shaw, a paleontologist at the George C. Page Museum in California, hypothesized the existence of helpful behavior to explain mysterious breaks found in some saber-toothed cat bones from the La Brea tar pits. The bones showed healed breaks from injuries that were severe enough to have required a long convalescence, during which the cat could not have hunted. Shaw speculates that other cats may have allowed their injured companions room at kills or even brought them food. His idea is not so far-fetched given that this behavior has been seen in modern lions.

Social animals cooperate and help each other in many different ways, and their cooperation benefits the entire group. The full vampire bat today is the hungry bat tomorrow. Members of a wolf pack gain protection from other wolves and also have more food choices—a moose, out of reach for a single wolf, is fair game for a pack. In addition, wolf cubs can survive the death of both parents because the pack will take care of them. Sharing food is nice and adopting orphans commendable but these behaviors don't compare with the life-saving heroism seen in dogs. However, there are examples of animals other than dogs putting themselves in danger to help.

Several species of ground squirrels have what are termed alarm calls. When squirrels see a predator, they call out and warn the group. This behavior carries some risk. A study of Belding's ground squirrels found squirrels that gave alarm calls were eaten more frequently than quieter members of the group.<sup>18</sup> There are also examples of risky bird behavior. According to Dr. Theodore Barber in his book *The Human Nature of Birds*, crows have been known to stay near an injured crow despite the presence of hunters nearby. He also describes an incident where a hunter wounded a crow, and the scattered flock returned and attacked the hunter.

Actions that put an animal in danger, like squirrels sounding the alarm, certainly look like the same type of behavior as dog heroism but there is a major difference. Altruism in animals often occurs between closely related animals. This is why the risky behavior is not at odds with "survival of the fittest" and is also not altruistic in the most selfless sense of the word. According to evolutionary theory, passing on genetic material is the underlying drive of all animals and is ultimately what shapes behavior. The "winners" are animals that are successful parents.

To the gene, the individual doesn't matter, only the genetic components. So, for the gene's purposes of being passed to the

next generation, it does not matter if an individual dies, as long as the genes survive. The continuation of genes in close relatives, such as a sister, or several cousins, is almost as good as the individual surviving. So, assistance among relatives, or kin selection, helps an individual's genes by increasing the survival chances of related animals.

Dogs and people may be the best of friends but they are not "kin" by a long shot. Can a behavior seen predominantly in close relatives be similar to a behavior between two different species? And would this behavior be reinforced by the same mechanism as real kin selection given that the saved person, no matter how loving a pet owner, will never personally pass dog genes onto the next generation?

Dog heroism comes from wolf behavior, which is true kin selection. However, since dogs and people are unrelated, the behavior is now more like reciprocal altruism, which occurs when an unrelated animal helps another with the expectation of being helped in the future. Useful and heroic dogs are certainly helped by people in return for their efforts. Good herding dogs get food, housing, and even medical care, and their puppies are in demand. Beloved companion dogs may have a standard of living as high as a person's. Because the behavioral traits associated with helpfulness increases a dog's survival and reproduction, these traits would occur more frequently over time.

Dogs are also not unique in working with another species. Just about every type of organism from algae, to plants, to insects, and of course, vertebrates have such relationships. Some of the relationships are helpful to both species (mutualism), others benefit one but harm the other (parasitism), and others benefit one and have no effect on the other (commensalism). The number and complexity of relationships shows that working with another species can clearly have advantages for improving the survival of a species.

For the dog, altruism has been a successful strategy. Dogs live almost everywhere in the world. There are 53 million dogs in the United States alone. Although some canines flourish without man's help, the coyote has been expanding its territory ever since Europeans arrived in North America, others are not so lucky. The dog's closest relative the wolf is gone from most of its former range and many species such as the Florida black wolf and the Great Plains wolf are extinct. Joining with man may have been the ultimate survival effort for the wolf's genes, the wolf may disappear, but its genes live on in modern dogs.

It is not clear whether human or dog benefits most from the relationship. Domestic animals give food, physical strength, and hair or leather. Dogs contribute a much wider range of services, from the familiar herding, hunting, guide dogs and police work, to truffle sniffing and therapy. (And yes, dogs are also used as food and for their hair.) Unlike horses, technology is not replacing dogs. Some dog jobs, such as herding, may be declining but at the same time others are expanding. Machines cannot outperform a good police dog, and Beagles remain one of the most efficient ways for the Department of Agriculture to find contraband food at airports.

The first guide dog school in the United States, the Seeing Eye, began over fifty years ago when Frank Morris teamed up with Buddy. Today there are schools in every part of the country, from the Eye of the Pacific Guide Dogs in Hawaii to Southeastern Guide Dogs, Inc. in Florida, and thousands of teams graduate every year. Helping the blind was just the beginning. Now there are hearing ear dogs and service dogs who help their physically disabled owners by retrieving, pulling wheel chairs, opening doors and turning on lights. In agriculture, in wartime, on the beat, and for the disabled, dogs save lives, help people make a living, and improve the quality of life.

The benefit of owning a pet dog is more subtle but no less

valuable. Several studies have shown that petting or being near a dog can reduce stress and lower blood pressure. Researchers at the State University of New York at Buffalo measured stress during a verbal arithmetic test and found that the presence of a friend caused increased stress and decreased performance while a dog in the room had the opposite effect. The person did not have to touch or pet the dog. Simply having the dog nearby lowered stress and improved accuracy.<sup>19</sup> Other research has shown blood pressure decreases when a person pets a dog.

A significant correlation between pet ownership and survival rates in the year after a heart attack has also been documented. Twenty-eight percent of a non-pet-owning group of patients died in the year following hospitalization for a heart attack. Only six percent of pet owners died in the year after hospitalization. The study included all types of pets, but most were dogs.<sup>20</sup> Improved health is not the only benefit provided by dogs. One study found that pet owners are considered more likable than non-pet-owners, and dog owners more likable than cat and bird owners.<sup>21</sup> It is only fitting that the highly social dog would also improve an owner's social standing.

Like altruism in other animals, being helpful has helped the dog. However, there is a fundamental difference between altruism in dogs and altruism in other animals: domestication. This difference might account for the jump from helpfulness to heroism. Dogs may have originated from a wild animal but for centuries the single greatest influence on dogs, on the way they act, look, and think has been their close contact with people.

## **How the Dog Came to Be**

Thousands of years ago, our ancestors brought wolves into their communities and ever so slowly, a new species, the domestic dog, emerged. Like Goldilocks' little bear, the wolf was just right—not too big, didn't soil the den, and stayed awake during the day. The similarities between the hunter-gatherer society and

wolf packs helped this transition. Both species lived in small, highly social groups, hunted cooperatively, and stalked the same game.

No one knows exactly why wolves and people first got together. Some think the beginning was not very noble, with wolves hanging around camps to forage through garbage heaps. Others picture playful wolf pups brought home to amuse children. This would make companionship the wolf's first function. Another theory is that the relationship started as a working partnership, perhaps first with hunting and then more complex jobs as the dog evolved. We will never know if the dog was first a scavenger, a companion, or a worker. What is clear is that the wolf's social nature made a relationship possible and gave the dog the characteristics that we most value: the ability to follow a leader, cooperate with others and communicate, and the desire to protect their group.

These social traits are what make the dog accepted and helpful and are the basis for heroic behavior. Communication is a key element in the relationship. Dogs and people both use body language, facial expressions, and voice to communicate, and the two species often understand each other. Dog owners can interpret dog emotions such as excitement or fear, and dogs are excellent at reading human moods. Some dogs even imitate human smiles. My parent's dog, Micro, smiles when he greets them at the gate. He pulls up his upper lip to expose his front teeth and draws his mouth back. The result is a grimace, but he means well.

Following a leader and working with others have been equally important to the dog/human relationship. I doubt that the domestic dog would have evolved had the wolf refused to take direction. Social traits gave the wolf the potential to be a dog, but it is only through the passage of time that the dog became so much a part of our society that heroism became possible.

The dust and bones of archeological evidence places the dog as a separate species at least 10,000 years ago. One of the earliest sites with clear evidence of the dog as part of human society is a grave in Israel. The grave contains a human skeleton whose hand rests on the bones of a small puppy.<sup>22</sup> Fossils that can be positively identified as canine and not small wolves are commonly found at sites dating from 7,000 to 10,000 years ago. Dog fossils from this period are found the world over, including England, Israel, Turkey, North America, Europe, and Asia. At 10,000 years old, the dog is the oldest domesticated animal. The next closest is the cat, which dates back about 5,000 years. But new evidence indicates that the dog may be far older.

Biologists recently took a genetic approach to the question of when dogs became dogs. As animals split into different species, their DNA becomes increasingly different. The longer the species have been separate, the greater the difference. Thus, the DNA of species that separated from a common ancestor 1,000 years ago has more similarities than the DNA of species whose common ancestor was 10,000 years in the past.

Researchers at the University of California in Los Angeles used this fact to estimate when the dog became a separate species from the wolf by measuring the differences between dog and wolf DNA. The number of differences between dog and wolf DNA were too great for the changes to have happened in a 10,000 year span. The researchers estimate that the changes in dog DNA required at least 100,000 years.<sup>23</sup> The conclusion that dogs have existed this long is controversial and the implication truly amazing. Modern man evolved as a separate species no earlier than 100,000 years ago and more likely only 40,000 years ago. If dogs are 100,000 years old, it would mean that modern man, *Homo sapiens* has never existed apart from modern dog, *Canis familiaris*.

Many species form symbiotic relationships and some species

cannot survive without each other. When the dodo bird became extinct, an island tree *Calvaria major* stopped reproducing. Apparently *Calvaria major* seeds don't germinate without being first eaten by a dodo. The first *Calvaria major* seed to sprout in 200 years pushed up its little shoot in 1973 after a botanist thought to feed seeds to turkeys.<sup>24</sup> While people do not have this level of dependence on dogs, they have influenced our society. Once farmers had herding dogs, they could keep much larger flocks, and sled dogs made the first polar explorations possible. Dogs have also played a role in wars. Big mastiff-type dogs were one of the more effective weapons used by the Spanish to subjugate the Indians of the New World.

Dogs find it more difficult to live without people. Feral dogs that have never known an owner often depend on garbage heaps for food. One study of Italian feral dogs, found that reproduction alone could not keep up the size of packs, and that the feral dogs recruited village dogs to bolster their numbers.<sup>25</sup> Given this level of dependence, it is no wonder that gaining help from people is vitally important to dogs, and that dogs will employ almost any measure, including heroism, to continue their relationship with people.

### **Heroism and the Individual Dog**

The actions of individual dogs are not explained by the innate desire to cooperate with people as thoughts of evolution do not consciously motivate individuals. Patches didn't stand on the dock thinking, "I should help because the Scotts will take better care of me and my future offspring." Downing that chocolate éclair comes from feelings of hunger and not the thought that "without food I will die and be unable to reproduce." But when helpfulness toward people increases a dog's survival, then the characteristics that made the dog helpful are "selected" and passed onto the next generation.

This process is complex because so many variables influence the selection of characteristics and the subsequent evolutionary changes that create and define a species. We can't go back in time to watch dogs evolving, but the results of a long-term fox breeding experiment in Russia shows us how the process may have worked.

Russian scientist Dmitry K. Belyaev theorized that many physical characteristics of domestic dogs are related to the selection of behaviors. In 1959, he started an experiment to test his hypothesis by breeding silver foxes for tameness. Belyaev ignored physical characteristics and only bred tame-acting foxes, usually less than ten percent of each litter. The result after 40 years, 45,000 foxes, and 35 generations is a tame fox that is docile and seeks contact and affection from people. In other words, the foxes act doglike. Interestingly, they also look doglike. The tame foxes have piebald and brown mottled coats, blazes, floppy ears, and rolled tails. All characteristics typically found in dogs and not wild foxes.<sup>26</sup>

This does not mean that heroic dogs have floppy ears but shows how the selection for specific characteristics, such as tameness, influences the development of a species. No single "altruistic response," like the well-defined herding behavior of collies, was selected for in dogs. Rather, altruism comes from a variety of behaviors that depend on the type of dog, the individual dog, and the situation including the instinct to protect pack and territory, working behaviors, self-protection, and maternal instinct. The enhancement during domestication of the helpful attributes of these behaviors is what ultimately led to heroism.

I also believe that emotion is an important trigger in many situations. Dogs are quite sensitive to people's emotions, and this sensitivity helps ensure that dogs continue to carry out the strategy of helpfulness. Dogs that respond to human emotion are more likely to be helpful, and therefore, more likely to be

bred, meaning that the trait would have been passed along and amplified over time. Responsiveness to human emotion is also why many cultures consider dogs to be friends.

In his book, *The Compassionate Beast*, Morton Hunt identifies empathy as one of the personality traits associated with altruistic people. Hunt found that empathetic people who “easily sense what others are feeling and vicariously share that feeling are more likely to be altruistic.” Dogs are so sensitive to human emotion, that negative emotions can make them sick. According to veterinarian Michael Fox in his book, *Returning to Eden*, emotional stress in dogs can cause physical illnesses such as psychosomatic hives, itching, seizures, bronchospasms and asthmatic attacks, gastrointestinal disorders, refusal to eat, and compulsive eating. Fox describes the physical deterioration of two Golden Retrievers caught in the middle of the angry violent breakup of their owners’ marriage. The dogs continuously paced and whined, and licked and chewed at themselves until they had open sores on their legs. They did not recover until months after their owners separated.

Dogs clearly respond to their owner’s mood, but is this empathy? I doubt that dogs are empathetic in the way that we use the word for people, and probably don’t put themselves in another’s place. But if empathy means that the dog’s behavior reflects the owner’s emotions, then dogs are empathetic. Dogs are excited when their owner is happy and act depressed for an unhappy owner. If you apply the duck test, “if it looks like a duck and acts like a duck, it is a duck,” the dog could be considered empathetic. By sharing emotion, a dog can suspect danger and may be motivated to act if their owner is afraid.

There are stories about friendly dogs correctly identifying that a person is a threat. Sometimes the dog may be reading the behavior of the threatening person or may be responding to the emotions of the person being threatened. In one story, a woman

named Iris who rescued a large Labrador Retriever mix, quickly found out just how helpful a dog can be. On a December morning, Iris found the dog tied to a fence in Brooklyn wearing toy antlers. Beside him was a sign saying that his name was Barney and asking for a home by Christmas. Iris couldn't leave the dog and loaded Barney into her car, thinking that she could find him a home since her small apartment was out of the question. Shortly after starting out, her car had a flat tire. When Iris went to check the tire she foolishly set her purse on the hood and two teenagers who were walking by immediately grabbed it. Iris took off after the boys and Barney followed. He ran past Iris, and grabbed one of the boy's pants leg causing him to drop the purse.<sup>27</sup>

When I first read the story, I focused on Barney helping a virtual stranger. But then I wondered how he knew what to do. Many dogs think that running is a game and would have run with Iris and jumped up and grabbed at her. But Barney understood that this was no game and that the boys were the ones to catch. Remember, Barney knew Iris all of about twenty minutes when the incident happened. I think that Barney could read some of the anger or upset in Iris and this is how he correctly assessed the situation.

Perhaps a rare dog does actually feel sorry for a person, which would explain the actions of Tim, a German Shepherd. According to a *New York Times* article, eleven year-old Charles Bossman almost lost his life when he and a friend, Salvatore Mussella, skipped school one day to explore an abandoned tenement house on Mott Street. The boys were inside the building when a wall collapsed, trapping Bossman under a pile of bricks. Mussella was unhurt and ran home to hide in bed. The dog, Tim, was walking nearby with two friends of his owner when the wall collapsed. Tim rushed to the building and started digging in the debris directly over Bossman. Passersby, attracted by Tim's digging, quickly pulled Bossman from the rubble. Although se-

verely injured and very frightened, Bossman made a full recovery.

Tim probably initially responded to the unusual sound of the falling wall. German Shepherds are excellent watchdogs and notice atypical events. But watchfulness does not explain why Tim targeted the area over the frightened Bossman, while ignoring an uninjured homeless man who was also trapped by the fallen wall. There is other evidence of Tim's sensitivity to people. According to an interview with Tim's owner, "If some friend of his [Tim] is drunk, Tim won't let any one near him. He follows him down the street and makes sure he gets home all right."

Dogs are rewarded for apparent altruism, which would reinforce the behavior. I suspect that Tim's owner made much of Tim's tendency to guard his drunk friends and thus reinforced the behavior. Likewise, dogs that are friendly with people are rewarded by being petted and getting attention, which encourages their positive attitude. The act of being helpful may also make the dog feel good. Important behaviors such as eating are usually enjoyable so that the behavior will continue. According to Professor James Hare at the University of Manitoba, although feelings are difficult to measure, it is likely that feeling good in a situation comes from the selection for relationships that have proven beneficial. There are a number of natural hormones and chemicals, like the body's opiates, that reinforce pleasure or good feelings. So it may be that for dogs, a positive feeling internally reinforces helpful behavior.

At this point, many readers will be muttering "anthropomorphism" and reject completely any comparison of dog and human emotions and personality. This is not an unexpected response given our long attempt to deny animal emotions. But the reality is that while animals are not humans, they have emotions and these emotions influence their behavior. The denial of animal emotion is perhaps strongest in the scientific commu-

nity. Modern science has long sought to strip emotional content from the actions of animals and ignores observations to the contrary. But scientists have not always been so phobic of animal emotion.

Charles Darwin thought that the intelligence and behavior of animals and people were similar, differing by degree and not substance. Darwin's close associate, George Romanes, promoted this view in his 1882 book *Animal Intelligence*. According to Romanes, dogs have a more developed "emotional life" than any other animal and he uses the sensibilities of well-treated dogs to illustrate his point:

Pride, sense of dignity, and self-respect are very conspicuously exhibited by well-treated dogs. As with man, so with the friend of man, it is only those whose lines of fortune have fallen in pleasant places, and whose feelings may therefore be said to have profited by the refining influences of culture, that display in any conspicuous measure the emotions in question. 'Curs of low degree,' and even many dogs of better social position, have never enjoyed those conditions essential to moral refinement, which alone can engender a true sense of self-respect and dignity. A 'low life' dog may not like to have his tail pulled, any more than a gutter child may like to have his ears boxed; but here it is physical pain rather than wounded pride that causes the smart. Among 'high-life' dogs, however, the case is different. Here wounded sensibilities and loss of esteem are capable of producing much keener suffering than is mere physical pain; so that among such dogs a whipping produces quite a

different and a much more lasting effect than in the case of their rougher brethren, who, as soon as it is over, give themselves a shake and think no more about it.

Although most will not accept Romanes' characterization of "high life" dogs, there is a move to once again accept animal emotions or as one animal behaviorist told me "scientists are coming out of the dark ages." Several researchers frustrated by the attitude of the scientific community have recently written books about the emotional life of animals. In *The Human Nature of Birds*, behavioral scientist Theodore Barber concludes that this inflexibility of thought has interfered with the accurate study of animals. "I and virtually all other scientists have been blocked by the official taboo against anthropomorphism from perceiving the nature of reality..." In the book *When Elephants Weep* the authors criticize how anthropomorphism is charged whenever animal emotions are discussed. "But to ascribe to an animal emotions such as joy or sorrow is only anthropomorphic error if one knows that animals cannot feel such emotions. Many scientists have made this decision, but not on the basis of evidence."

Thus science is slowly accepting what dog owners already know: dogs have emotion and respond to emotion. The warmth of their emotion is what attracts pet owners to dogs. When I was little, my dog Flip always comforted me when I was upset. My current dog, Blitz, tends toward the introspection of a German Shepherd and is easily upset. When Blitz seems down, we can cheer him up by singing his special jingle:

Two bits, four bits, six bits a dollar,  
all for Blitz, stand up and holler.

By the end of the tune, Blitz is happily jumping around and

barking. The singing has the same effect on my small son (who is not denied emotion) and he too jumps around and claps when we sing Blitz's song.

The response of dogs to human medication shows that dog and human emotions are similar on a physiological level. Depressed and anxious seeming dogs respond to medications prescribed for people with the same complaints. Depressed dogs and people act alike. They lack energy, have a loss of appetite, and sleep excessively. Depressed dogs often perk-up when given human antidepressant medicine. Of course, dog depression is not identical to a person's because dogs have different thoughts, experiences, and perceptions. I doubt that the depressed dog is thinking, "I am ugly and fat and my life will never improve. I am a failure at work and my spouse is going to leave me." The depressed dog may be just as unhappy as a depressed person but the emotion would have a distinctly canine flavor.

Accepting that dogs have emotions does not mean that people and dog emotions are identical. However, people do tend to interpret dog emotions based on their own feelings, biases and experience. This tendency can lead to misinterpretation. Almost all dog owners have accused their dogs of acting guilty after they catch them on the couch or surrounded by trash from an overturned garbage can. Almost every dog trainer denies that dogs feel guilt and explain that the dogs are reacting to the owner's anger or anticipation of punishment. The assumption that the dog knows he has done wrong leads to ineffective punishment, such as the owner reprimanding the confused dog long after the deed was committed. But just because we don't fully understand dog emotion does not take away from its influence on dogs, and emotion may be one of the more important triggers for dog heroism.

I believe that dog empathy or the sharing of emotion comes directly from their social pack instinct because it is a trait that

would have strengthened the effectiveness of the pack system. Empathy is one of the traits that gives dogs the desire to help, and through evolution and breeding this trait would have been selected and amplified. Pack instinct also gives dogs their instinct to protect, another trait that makes dogs heroic.

In the dog, many natural behaviors have been modified for specific tasks. Wolves rarely bark, a trait that has been enhanced in dogs to make better guards. Hunting behaviors, such as pointing, were developed in gun dogs, and natural stalking behavior modified into herding moves. Many of the traits that make the dog a valuable worker contribute to heroism. The connection between heroism and working traits is apparent in the way that some breeds are more heroic than others. This connection is further explored in chapter four.

Self-preservation is the motivation for some rescues, such as dogs who bark when a fire starts in the house. The fear response that causes a dog to bark at a fire may make the dog nervous in a less threatening circumstance. This anxiety may be what triggers the dog to act even when the dog does not understand the seriousness of the situation. There are numerous stories of dogs getting help for unconscious people. In these cases, the dog is obviously not responding to the person's emotions. Most likely the dog's unease at the person's strange behavior triggers the action. This unease is probably why Grinch, a Collie-German Shepherd mix, saved the life of his owner's sister.

Grinch was owned by Teresa Fedek, whose sister Patty was diabetic. Patty was visiting Teresa one night, and late that evening, when everyone was asleep, she collapsed in the hallway from low blood sugar. This is a life threatening condition for a diabetic and Patty could have passed into a potentially fatal coma. Fortunately Grinch heard Patty and investigated the unusual situation. Something about Patty, perhaps her odd position in the hall or abnormal raspy breathing, upset Grinch. He went into Teresa's

bedroom and stood by her bed whining until she woke up. Teresa immediately heard the sound of Patty breathing and realized what had happened. She gave Patty orange juice, a simple remedy that may have saved her life.<sup>28</sup>

Another strong instinct that may be a factor in some rescues, especially ones involving children, is maternal instinct. The behavior of mothers protecting their young is legendary. In wolf packs, all pack members, both male and female, care for the cubs. Female dogs also have a protective maternal instinct, although domestication has virtually eliminated this responsibility in male dogs. Interestingly, after a female has been in heat, progesterone can stay in the body for up to two months and cause maternal behavior. During these false pregnancies, some dogs will protect a “litter” of objects such as shoes or toys. It would make sense that during this twice-yearly event female dogs would be more protective than usual.<sup>29</sup> Maternal instinct seems a likely explanation for the heroic behavior of Heidi, a German Shepherd-Doberman mix. Heidi was with her family in their front yard when their toddler dashed into the street just as a car came down the road. Heidi rushed to the child, grabbed her pants, and pulled her from the car’s path. Heidi’s action didn’t come from a bond with the family; she had been adopted from an animal shelter only three days before the rescue.<sup>30</sup>

Maternal instinct is most apparent in responses to immediate danger, such as Heidi’s behavior. But perhaps this instinct triggers more complex behavior. Think of the importance to a wolf pack of the members protecting the cubs in a variety of situations, such as flooding near the den or a lack of food, and not just the immediate danger of a predator. If this is the case, maternal instinct may trigger more complicated rescues, like the Fox Terrier who saved one of her puppies from an unsuitable home.

The puppy had been given to a little boy in the neighbor-

hood. The boy got permission to have a dog only after badgering his parents for months. His father didn't really want a dog, and insisted that the puppy sleep in the basement. Of course the puppy cried and howled all night long. The morning after the puppy's second sleepless night, the boy's mother was in the kitchen when she heard a scratching noise. She opened the door and the mother dog walked in, picked up the puppy by the scruff of the neck, and carried it back home.

Some of the unique aspects of the dog's relationship with people, such as helpfulness and sensitivity to emotion, are less extraordinary when considered against the background of thousands of years of evolution. Certainly this is plenty of time for the dog's strategy of getting help from people to be fully integrated into the dog's nature and refined so that special behaviors, like heroism, would develop.