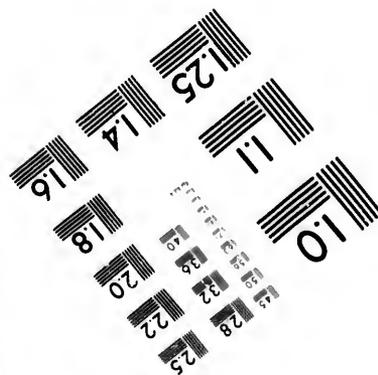
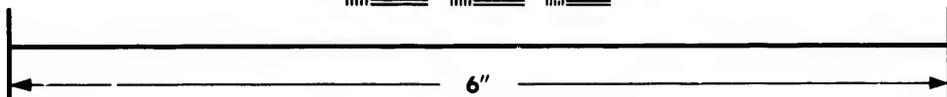
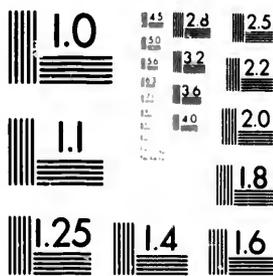


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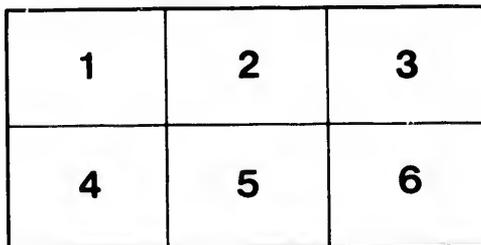
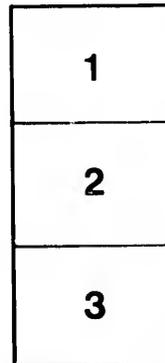
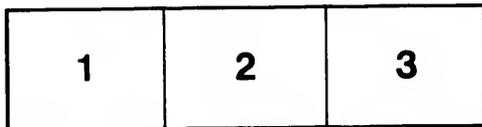
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*(IN CONNECTION WITH THE MONTREAL VETERINARY COLLEGE)*

BY

D. McEACHRAN, F.R.C.V.S.

PUBLISHED BY REQUEST OF

THE SOCIETY FOR PREVENTION OF CRUELTY TO ANIMALS, MONTREAL.

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# CAN ANIMALS REASON ?

## FACTS ADDUCED TO PROVE THAT THEY CAN AND DO.

### A PLEA FOR KINDNESS

#### In the Treatment and Care of Man's Dumb Servitors.

"Why every student of Veterinary medicine should study Psychology" was the title of the inaugural address by Mr. D. McEachran, F.R.C.V.S., at the meeting of the Society for the study of Comparative Psychology in connection with the Montreal Veterinary College. Principal McEachran spoke as follows.

Mr. Chairman and Gentlemen,—Your worthy president has invited me to say a few words to you to-night on this your first meeting for the present session, on the importance of the study of psychology in connection with the practice of your profession. "Psychology is the science of mind based upon the facts of consciousness." This science was first brought to public notice by Goclenius 1594, but it is only of very recent date that scientific men were bold enough to break down the barrier which would shut up the truth, and to come forward to declare that reasoning powers were not confined to man alone, but existed in degrees throughout the animal creation. Few men, I say, have been found bold enough to declare that reason and consciousness are attributes alike of mankind and the brute creation, and that the extraordinary evidences of intelligence which we are constantly witnessing are not due to instinct, but without doubt to that development of the mental faculties

which is nothing short of reasoning power, and which exists in different degrees, in different animals. As one of your teachers, I feel proud that my friend and colleague, Dr. Mills, has the honor of being the first to step out of the ranks of those who still attribute every evidence of reason to instinct; and in advance of his fellows he has founded this society, which, though it may have a small beginning, and may even be subject to the covert jeer and winking scoff from those whose narrow-minded and short-sighted intellects are incapable of grasping the importance of such a study, is sure to prosper. What more ennobling than the study of comparative psychology? Who can be cruel to the dumb companions of our earthly pilgrimage, after he has accustomed himself to look with interested attention on the evidences of reason and consciousness constantly exhibited by them? Who has studied the curious and intelligent actions of these dumb friends and has not been convinced that the difference between them and ourselves is one of degree only? I cannot do better here than quote for your edification from the late Dr. Chalmers, who in discussing the subject says:—

"The beasts of the field are not so many automata without sensation, and just so constructed as to give forth all the natural signs and expressions of it. Nature has not practiced this universal deception upon our species.

"These poor animals just look, and tremble and give forth every indication of suffering as we do. Theirs is the distinct cry of pain—theirs is the unequivocal physiognomy of pain. They put on the same aspect of terror on the demonstration of a menaced blow. They exhibit the same distortion of agony after the infliction of it.

The bruise, or the burn, or the fracture, or the deep incision, or the fierce encounter with one of equal or superior strength, just affects them similarly to ourselves. Their blood circulates as ours; they have pulsations in various parts of the body like ourselves; they sicken and grow feeble with age, and finally they die just as we do. They possess the same feelings, and what exposes them to like suffering from another quarter—they possess the same instinct with our own species. The lioness robbed of her whelps causes the wilderness to ring aloud with the proclamation of her wrongs, or the little bird whose household has been stolen fills and saddens all the grove with melodies of the deepest pathos. All this is palpable to the general and unlearned eye, and when the physiologist lays open the recesses of their system by means of that scalpel under whose operation they just shrink and are convulsed as any living object of our own species, there stands forth to view the same sentient apparatus, furnished with the same conductors for the transmission of feeling to every minutest pore upon the surface. There is unmix'd and unmitigated pain; the agonies of martyrdom, without the alleviation of the hopes and sentiments whereof they are incapable. The attention does not lighten their distress as it does that of man, by carrying off his spirit from that existing pungency and pressure which might else be overwhelming. There is but room in their mysterious economy for one inmate, and that is the absorbing sense of their own single and concentrated anguish, and so on that bed of torment, whereon the wounded animal lingers and expires, there is an unexplored depth and intensity of suffering which the poor dumb animal itself cannot tell and against which it can offer no remonstrance, and an unfold, an unknown amount of wretchedness, of which no articulate voice gives utterance. But there is an eloquence in its silence, and the very shroud which disguises it only serves to aggravate its horrors."

What noble sentiments are here inculcated by this great and good man! Who among us does not feel moved by the deep pathos of his portrayal of the suffering animal? Gentlemen, at the outset of your careers, it is well that you should keep the facts ever before you, that you are assuming very important and, in a moral sense, responsible positions when you become ministers to the sick and suffering animals who have not powers of communicative intelligence; and it is unquestionably your duty to study well the degree of intelligence and capability of comprehension possessed by those dumb and patient animals which are the objects of your care. If the subject is new to you—if you have not yet had your thoughts directed to the observation of

#### EVIDENCES OF REASONING POWERS

in animals, pray lose no time in beginning. Every day will open up new evidences of intelligence and consciousness under circumstances which preclude the idea of their

being due to instinct alone, from the fact that the circumstances calling forth these evidences are entirely new to the animal. I will give you a single illustration from different species. Take for instance the case of the martin, which was related to me recently by a particular friend, Mr. Hugh Paton, and which occurred at his country house, ten miles from Montreal, a year ago. The wood-work to which a martin had attached her nest having to be removed, left the bird homeless at a time when she was just about to lay her eggs, causing great disappointment to the pair of birds, which was plainly expressed by the commotion they made. A little grey-bird which had for several years built her nest in an adjoining hedge was sitting on four little eggs. The martin finding her own nest gone and having to deposit her eggs somewhere, bethought herself of her little neighbor and probably asked her consent to allow her to deposit her egg in her nest. Whether the consent was given or not, the martin was seen to take possession. She ejected one of the smaller bird's eggs to make room for her own large one. Then she left her neighbor in peace. We can hardly suppose that the little bird was unconscious of the change. Yet she did not retaliate; she continued her sitting till she hatched her own as well as the martin's young one, and we can understand how her troubles increased. If the egg was too large for the nest, how must the young bird have filled it? Yet, strange to say, by one means and another she not only managed to house the foster child, but to feed it too. Now, we know that the food on which she feeds herself and her young ones is very different from that on which the martin feeds, and no doubt like a good mother she would feed her family proportionate to their requirements. But would not the big fellow starve on what would feed the little ones? Yet we find that she not only gave him the right kind of food, but in sufficient quantity; for we are told that he developed into a full-fledged martin, and no doubt is to-day forming an important member of a community of martins.

#### WAS IT INSTINCT

that caused that martin to betake herself to the friendly nest of her housekeeping neighbor? I think not. It was clearly a train of thought in consciousness. The egg had to be laid. Her own nest was gone; she had no time to build another. She may have tried her own tribe, but they would allow

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of no intrusion. She argued therefore: I will try Mrs. Greybird; if she refuses me I am stronger than she and I can take forcible possession, and acted accordingly. We can well imagine how the poor little greybird would puzzle her head to account for the enormous size of her young one, and wonder more at his apparently enormous appetite, and then again she must have tried various kinds of food before she hit upon the right one.

#### THE CAT.

Was it instinct that prompted the cat to call in the assistance of her older kitten in the case related to me by Professor Osler? The cat belonged to a member of his family, and he was witness to the extraordinary evidence of reasoning. She had three little kittens about a week old, when she disappeared, and was gone for two days—evidently had been shut up somewhere. When she returned the mammary glands and nipples were swollen hard, and the little kittens tried in vain to extract their nourishment from them. In the house was a half-grown kitten of a former litter, and the mother was seen to coax and persuade it to suckle, which it did to the mother's infinite relief, and the swelling and hardness thus removed, she returned to the starving little family once more, and again dismissed the older kitten. Was it instinct, I ask, that led to the train of thought which determined the cat on the action? Was it not the reflection—the thinking back and the sequence of the argument—that led her to do that which was not instinctive, which was not the effect of generations of instinctive action, but which was simply a very wise suggestion arising from intelligent consideration.

#### THE DOG.

Evidences of reasoning powers in dogs are so constantly occurring in our own experience, and so frequently related by others that I need scarcely wait to illustrate them in dogs. You need not go further than the college hospital, where the little terrier dog "Major" frequently gives evidence of reasoning powers which cannot be doubted. As some of you are aware, whenever a horse happens to get loose in the night this dog will not only drive him back and keep him in his stall, but will keep up an incessant barking under the grooms' rooms until he is obliged to get up and secure the horse. And this once done he retires quietly, satisfied that

all is right! On one occasion, evidently without his knowledge, owing to the stable being full, a horse had been tied and bedded down in the passage way of the stable, shortly after it was closed up. This irregularity was discovered by "Major," and he at once summoned the groom, who had to show the dog that the horse was tied and tell him that it was all right; and being thus satisfied he retired to rest and made no further alarm that night. What instinct could produce such trains of thought as are here illustrated? Does this dog not know by his intelligent faculties, in other words is he not conscious that a horse occupying a stall should be tied; that he should at least not be free to roam around the stable? We find that he takes no notice of a horse untied when in a loose box; he is evidently conscious of the difference between a stall and a loose box. He has learned from observation, a chain of reasoning in fact, that the groom is the person whose duty it is to tie up the loose horse. Hence he calls him, and seeing the halter readjusted and securely tied, he argues that everything is all right and he can go to sleep.

#### THE COW.

In the domestic condition the bovine species are not permitted that degree of freedom which usually calls forth the evidences of reasoning powers which in the wild or semi-wild condition they constantly exhibit. Take, for instance, a cow with a young calf on the trail from Montana to Alberta which was discovered one morning, as the herd was being started, with a broken leg. The mother, with that strong maternal attachment which these cattle usually possess, could not be induced to leave it. Yet, wild and undomesticated as she was, she remained behind the herd, a restless and anxious spectator of our manipulations in the act of applying splints and bandages temporized on the prairie, to the fractured metacarpal bones of her calf. After being bandaged it was allowed to suckle, and be caressed by the mother, who offered less resistance when it was again caught and lifted into the calf-wagon, in which were others too young to travel with their mothers. After seeing it thus satisfactorily cared for, she willingly allowed herself to be driven forward to the herd and comported herself as if freed from all anxiety for her young one, till the noon halt was made, when she at once came bellowing back to the wagon,

attracted in a measure, no doubt, by the bel-  
lowing of the calf; and there she manifested  
the greatest solicitude for the little cripple.  
When the time came for another start she  
made no objection to its being caught and  
lifted into the waggon, and again went quietly  
on with the herd. And thus she  
comported herself to the end of the  
journey, never attempting to allure the  
calf away, as others whose calves were not  
cripples would do; but patiently and will-  
ingly allowed it to be placed in the waggon.  
The little fellow himself, after a few days,  
seemed to understand and appreciate the  
service, and when the time came that he  
could dispense with the waggon-ride she  
continued to care for him in a manner  
plainly showing that she understood his in-  
capacity for fatigue. Was it instinct that  
taught that cow that she could leave her  
disabled calf without anxiety after being de-  
posited in the waggon, and taught her to re-  
frain from the savage attack which  
these wild cattle are apt to make in  
defence of their young? Did she not reason  
and deduce conclusions? Did she not  
argue? Was she not conscious that her  
calf was disabled and could not follow her?  
Was not her alarm decreased and gradually  
removed when by observation she learned  
to understand that it was assisted by our  
efforts, and was not left behind but being  
carried forward in the waggon? And did  
she not feel satisfied by these reflections that  
when feeding time came she would only  
have to look for that particular waggon  
(there being three similar ones on the drive)  
and there she would find her cherished little  
one? I am convinced, too, from observation,  
that in them memory is an important factor  
in their psychological development. This  
is plainly seen in the difference of the de-  
portment of a young cow when her first  
calf is caught to be branded, as compared  
with the cow advanced in years who has  
witnessed the operation repeatedly. She  
has learned by experience that resistance is  
vain, and that her calf will be restored to  
her.

#### THE HORSE.

Who amongst you cannot call to mind  
evidences of reasoning powers in horses.  
Perhaps no faculty is more fully developed  
in them than memory. Every day of our  
lives we have their powers of memory—re-  
membering things—brought before our no-  
tice. Drive a horse once to a place by a  
special road, and he will remember both the  
road and the place for a very long time

afterwards. Over and over again I have  
observed the mare which I have been driv-  
ing for a number of years, show the utmost  
intelligence in following the round of visits.  
I have often been struck with what could  
be nothing else but reasoning, when for  
some cause or other I would drive up to the  
office door before her usual time of being  
unharnessed and fed; she would manifest  
no desire to go to her stable, but when the  
feeding hour had arrived she had only to be  
headed towards it to rush impetuously, thus  
showing the utmost impatience to get into  
the stable. Does not the mare keep  
count of the time in some way—else how  
would she know the exact time for feeding?  
It is not due to hunger, for I remember well  
when driving on the prairie, in 1884, a friend  
and myself going north from Montana into  
Alberta, picketed our horses every night  
close to our tent, and every morning at  
4 o'clock these horses would come to the tent  
door, as near as the picket would allow  
them, and would neigh repeatedly till we  
got up to feed and water them. 'It was not  
hunger, for they were invariably on the  
finest of grass and were full to repletion. If  
you teach a horse a good habit he will never  
forget it. On the other hand, teach him a  
bad one and it is the same? Do a  
horse a service and he is ever  
grateful; do him a wanton, cruel injury,  
and be not surprised if he never forgets and  
is never satisfied till he is fully revenged.  
That service may not be unattended by pain  
if followed by relief, as in the instance  
of a horse on which I once performed the  
operation of lithotomy. Before the operation  
his suffering was intense, his temper irrit-  
able; in fact he was vicious and dangerous  
to approach. After the operation, which  
was successful, the relief was immediate,  
and the gratitude of that horse was almost  
human in its demonstration. He became  
docile as a dog and never offered the least  
resistance to us when subsequently dressing  
him.

CONSCIOUSNESS OF THEIR OWN HELPLESSNESS  
under certain circumstances is clearly mani-  
fested. For instance, only within a few  
weeks a carriage horse on being driven to  
the races shied and dropped into an excava-  
tion about two feet wide and six feet deep,  
in which he was wedged by a protruding  
rock, sitting on his haunches like a dog with  
his head and fore feet up on the road.  
Numerous carriages and tramways passing  
and repassing, which almost touched his  
head and feet, yet his patience, and his

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consciousness of his own helplessness, were manifest to every onlooker, and in striking contrast to the senseless shouting and impractical suggestions of the crowd that surrounded him. For the purpose of freeing his leg from the rock which wedged him in he was pulled back and turned on his back on two inclined planks, a position most unnatural and uncomfortable. Yet that horse conducted himself with a patience and a consciousness which could not be called instinct. It was reason; and as I stood there waiting the arrival of a derrick, by means of which he was hoisted up, I could not help remarking that the poor dumb brute down in the hole, helpless and mute, exhibited far more intelligence than the unreasonable and unreasoning specimens of humanity which for the most part surrounded him! Was not that horse conscious of his helplessness? Did he not reason within himself: It is useless for me to attempt it; I cannot get out of this; I must wait patiently till I am assisted out? And he did. Take the changing of a horse from one stable to another; for instance, my own horses had for years been accustomed to go to my stable in rear of my house; in fact, they knew no other and recognized it as their home. They would, if headed in that direction, or turned loose, go directly there; but, I removed to another house on another street and within a few days they had learned that this new place was their home, and they no longer desired or tried to go to the former place. Was that instinct or reason? Do they not argue within themselves that if the former stable was no longer their home, but that all their friends had moved to the new place and that was their home too?

#### ADVANTAGES TO STUDENTS.

Gentlemen, I might multiply instances of reason in horses, but time forbids. I must now proceed to the second part of the subject—the advantages to you as students and practitioners of veterinary medicine to be derived from a study of the psychology of those animals on which you practice. We will take, for instance, your canine patients, which are usually domestic pets, fondled and talked to, nay, treated like children, thereby producing in them a very pronounced psychological development. Timid and sensitive to a degree, a cross look, a loudly-spoken word, a rough or unwarned approach, will throw the little sensitive creature into a state of nervous excite-

ment painful to behold. On the other hand, approach him quietly or confidently, with a mild tone, gently caress him, with patience you will overcome his timidity. Sit down quietly beside the owner; engage in a conversation in an ordinary tone, and in few minutes you will be able to read the true manifestation of symptoms free from the changes which excitement will produce. Few persons or animals show more consciousness under surgical treatment. You must all have noticed how quietly a dog with a broken leg will submit to have it put up in splints. During the past summer a Newfoundland dog was sent here to have a fractured tibia bandaged. He was brought by a cabman, who was in the habit of driving the owner for many years. He informed me that the dog was an uncontrollably vicious one; that even the owner at times could not fondle him; yet to his surprise, this dog, feeling his helpless condition, was conscious that we were trying to relieve him, and never during the putting up of the leg, nor after it was done did he exhibit anything but gratitude by those bright, dark intelligent eyes of his. Never cause unnecessary pain to a dog. He will bear necessary pain; will submit himself willingly to a surgical operation, but it is seldom that he will forget or forgive an injury wantonly and unnecessarily inflicted. As the humane physician must approach his child patient gently and kindly, so should you your intelligent sensitive canine patients. As the parent would and should resent any rude or harsh treatment of the child by the medical attendant, so should the owner of the dumb patient interfere on his behalf with any member of the profession who would not treat them kindly. Again, in them the sense of taste is acute, and they enjoy sweets and palatable morsels as we do; therefore you should always bear this in mind when prescribing for them, never to nauseate them by nauseous prescriptions. Make it a rule for pet dogs to taste the mixture and think whether or not you yourself could swallow it without nausea. The dog is very subject to vomiting, and an unpalatable compound may do him harm instead of good; if vomited certainly its therapeutic action is lost. Members of our profession are too apt to forget the necessity for prescribing mixtures which are swallowed voluntarily.

#### IN DEALING WITH HORSES

never forget that you are dealing with intel-

liger animals—animals with feelings akin to our own, as far as their consciousness has been developed. Of course animals, like men, differ in the degree of development of the attributes of rationality. The thoroughbred horse, and the trotter, the lady's saddle horse, and the family pet, are all more intelligent, owing to being better educated, than the coarse-bred drudge; yet all have reason—all think. Doubtless they connect ideas and draw inferences, form attachments, exhibit great affection, and have their likes and dislikes, according as they are well or ill-treated. You must, if you would be a successful practitioner gain the confidence of your patient, just as the children's physician must by kindness gain theirs. You can see this illustrated daily. A person who is not a horseman goes up to a horse in such a way as to frighten him, because he has not learned the meaning which horses attach to certain motions. Let a horseman go up to the same horse with a confident manner, using a lively, encouraging expression, putting his hand confidently on his neck, and the horse at once recognizes in this stranger whom he has never seen before a person in whom he can place confidence. A man who is unaccustomed to horses goes up to a strange horse in a stall, usually with his mouth shut holding his breath—and his hands extended—with the result probably of being kicked in pure self-defence by the startled animal. Never approach an animal without first warning him by a friendly word; satisfy him that you mean no harm; show confidence in him—and he will judge you correctly, and will trust you. Show fear and want of confidence and he is quick to read your thoughts. This you will see daily in the administration of medicine and performance of operations on horses. The expert, confident practitioner will have no trouble in administering medicines, whereas the timid non-confident man will meet with all sorts of difficulty by the want of confidence felt by the intelligent horse who is quick to read and know his inexperience.

#### HOUSES ARE CREATURES OF CIRCUMSTANCES.

Look at that little colt, the pet and darling of the whole family, fondled and petted by them all—the object of ceaseless care and attention, in whose future the head of the house counts for achievements which will give him pleasure and profit. He has a comfortable, happy home, till on trial he is

found too slow, and so he is sold for a small price. He passes into a cruel heartless trainer's hands, who is bound to "take out what's in him." No more fondling now; nothing but hard work, the free use of the whip and spur. Sore in body, dejected in spirit, lamed from over-work, he is again sold. He passes into the hands of one after another, till he is doomed to end his miserable life as a drudge in a night cab or pedlar's waggon. Do you not think that that poor animal, in whom memory is so prominent a faculty, thinks often of former happy days in colthood's pleasant hours when he knew nothing but joy and gladness. I think he does, and often heaves a sigh when he thinks of his now miserable fate. Gentlemen, let me urge you to treat all your patients kindly. Never wantonly inflict even the least pain, either by medicinal agents or surgical operation. Many of our profession, unthinkingly no doubt, cause hours or days of unutterable, at least unuttered, anguish by blisters. Some practitioners order a blister to the throat, sides or legs with as little hesitation as they would cold water. Gentlemen, let each of you who have not experienced the pain, the hours or days of suffering caused by a blister, apply one to your own body to-night, and you will have a fuller conception of the suffering they cause, and you will ever after hesitate before applying them empirically and unnecessarily, as is so often done. So, too, with other remedies, such as firing and blistering, and many operations, necessary and unnecessary. The application of a hot iron, the cutting with a sharp knife, all cause pain. The very infliction of these tortures is often accompanied by violence which terrifies the poor animal. Imagine a timid young person, roughly caught, bound and burned with a hot iron. Which do you think would affect him most, the mental strain or the bodily pain? Such a shock to a nervous system might dethrone reason and leave the person a wreck for life. Now the same occurs in a minor degree in your patients. Very often the shock to the nervous system is more severe to a horse than even the cruel operation. In all your operations on horses never forget their highly developed nervous system and their sense of feeling. Do unto them as you would wish to be done to, or as you would act to a human friend. Never speak harshly to an intelligent horse, or other animal, much less apply the cruel lash which bruises the skin, causing

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pain which continues for hours. If the law could be so altered as to enable lash for lash to be inflicted on the inhuman wretch who flogs a poor intelligent, sensitive horse, the practice would soon cease. Never cause pain or discomfort, by the use of unnecessary restraints, such as the bearing reins, particularly

WHAT IS CALLED THE OVERDRAWN CHECK,

which is a disgrace to modern civilization, and neither ornamental nor useful in more than one case in a thousand. Gentlemen, in conclusion, let me beg of you as future practitioners of veterinary science to think deeply of the intelligence, the sense and the reasoning faculties which exist in all lower animals, and in them as in men in varying degrees. Never become so careless or callous as to deal with them as if they had no feelings, no likes and dislikes, which you can, at least, avoid outraging without detriment to your operation. Nay, on the contrary, learn from the first to gain the confidence of your patients, as well as your clients. The latter will come as a sequel of the former. Never do or allow to be done, if in your power to prevent, a cruel thing to a dumb animal, which you would resent were it inflicted on yourself or your loved ones. I may have digressed from

psychology and merged into the prevention of cruelty, but gentlemen who can be cruel to a rational being possessed of attributes of mind and body similar to, though less highly developed, to our own, yet who has not the language to express it?

"Will none befriend that poor dumb brute?

Will no man rescue him?

With weaker effort, gasping mute,

He strains in every limb,

Spare him, O spare, he feels, he feels

Big tears roll from his eyes;

Another crushing blow; he reels,

Stagger, and falls, and dies.

Poor jaded horse, the blood runs cold,

Thy guiltless wrongs to see;

To heaven, O starved one, lame and old,

Thy dumb eye pleads for thee.

Thou, too, O dog, whose faithful zeal

Fawns on some ruffian grim,

He stripes thy skin with many a weal,

And yet thou lovest him.

Shame, that of all the loving chain

That links creation's plan,

There is but one delight in pain,

The savage monarch—man.

O cruelty! who could rehearse

Thy million dismal deeds,

Or track the workings of the curse

By which all nature bleeds?

Thou moucest crime! thou coward sin!

Thou base, flint-hearted vice!

Scorpion! to sting thy heart within

Thyself shalt all suffice.

The merciless is doubly curst,

As mercy is twice blest!

Vengeance, though slow, shall come—but first

The vengeance of the breast."

—*Moncton Milnes.*

