

## **The relation of man to the animal world.**

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72, Grosvenor Street, Grosvenor Square,  
W.

Oct 11. 1895

Dear Mrs Sherrington

Having left my night

shirt behind me, my good entertainers  
have been kind enough to send it  
home - I will forget the name of  
Mr Dancy daughter & therefore will  
be good enough to thank her on  
my behalf, - At the same time  
to offer her my very best thanks



for so kindly taking care  
of me - I am much indebted  
<sup>to the family</sup>  
~~to them~~ for their hospitality for all the  
quite unknown to them they promised  
upon me the highest Christian ~~for~~ virtues  
In when a stranger they took me in

I must not allow you to say  
that later all men I forget my  
right that - I put this down  
to the bad discipline of the housemaids  
who are taught to be ~~Q~~ today - when

I went into my bed room I put  
my night shirt & all my things on  
the chairs ready for packing - Before  
my return the tidy housemaid replaced  
my garments & put my cap into the  
ward robe - I have known of

seeing a house maid ~~to~~ 'tidying-up'  
the books I am reading are laid on a tray -

I leave the drawing room tables with papers

or magazines & when I return she  
is made tidy - causing the master

to blaspheme - Please do not

educate house maids to 'tidy up'

kindness a word for yourself

I need not tell you that I had no very



Good happy time. It gives proof

I only regret that the pressure of Affairs

did not allow me to spend another

Day - <sup>with you</sup> I must compliment you on

your household management - how

sweetly you entertained your guests &

what a beautiful luncheon you gave

us. - your husband was the hero

of the occasion. which must make you a little

proud. The 'Times' mentions Sherrington

Drum. - I hope they will not let them

be musical instruments as Sherrington is

Wladman to beat his own Drum.

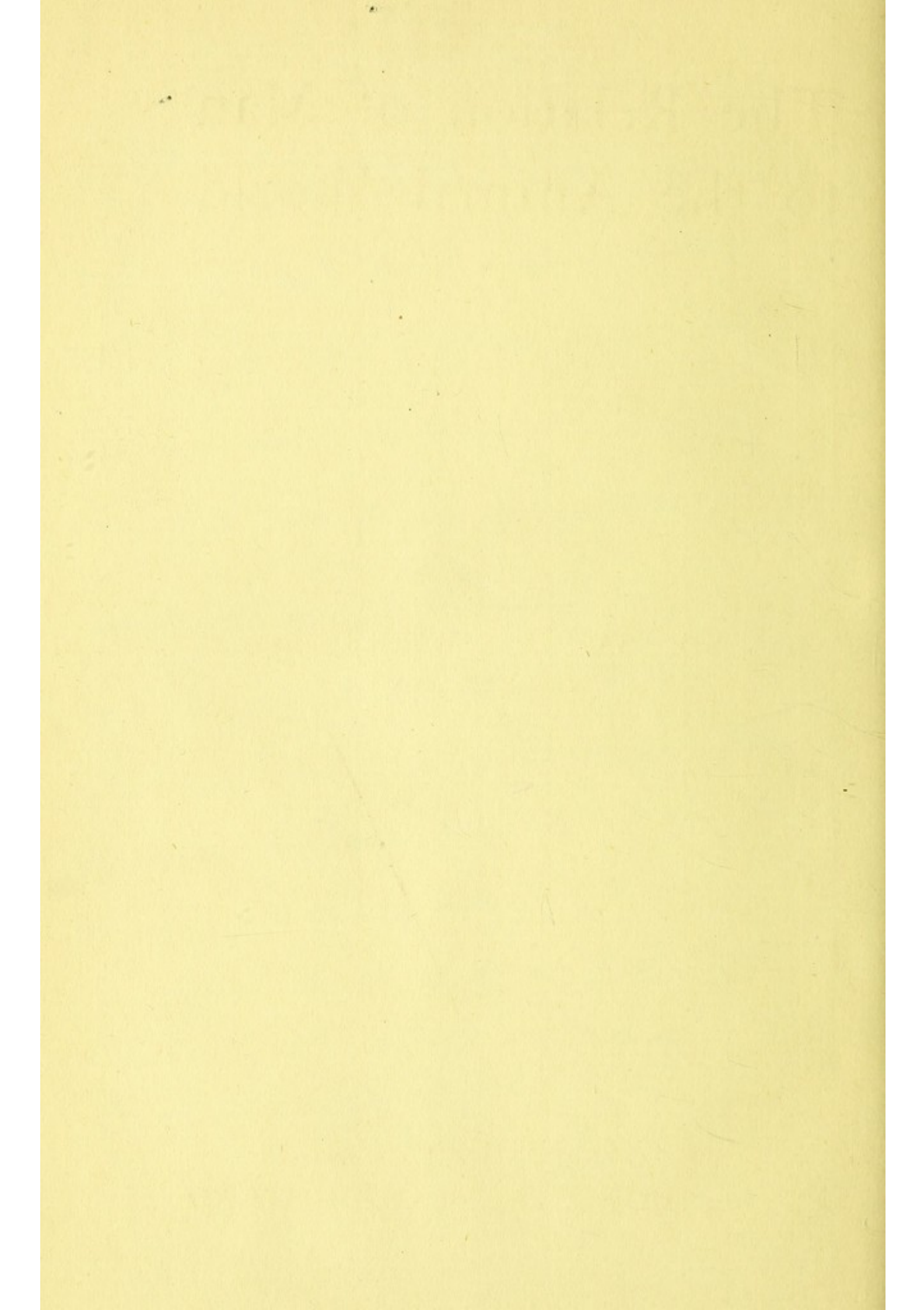
Forever - Yrs Intensely

Samuel Wilks

D. Therrington F.R.S.  
With Sir Samuel Wilks'

Kind regards





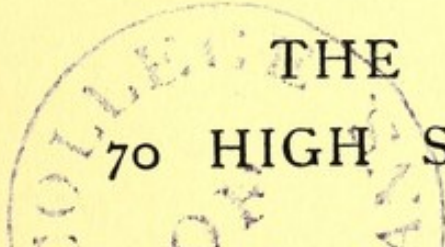
# The Relation of Man to the Animal World

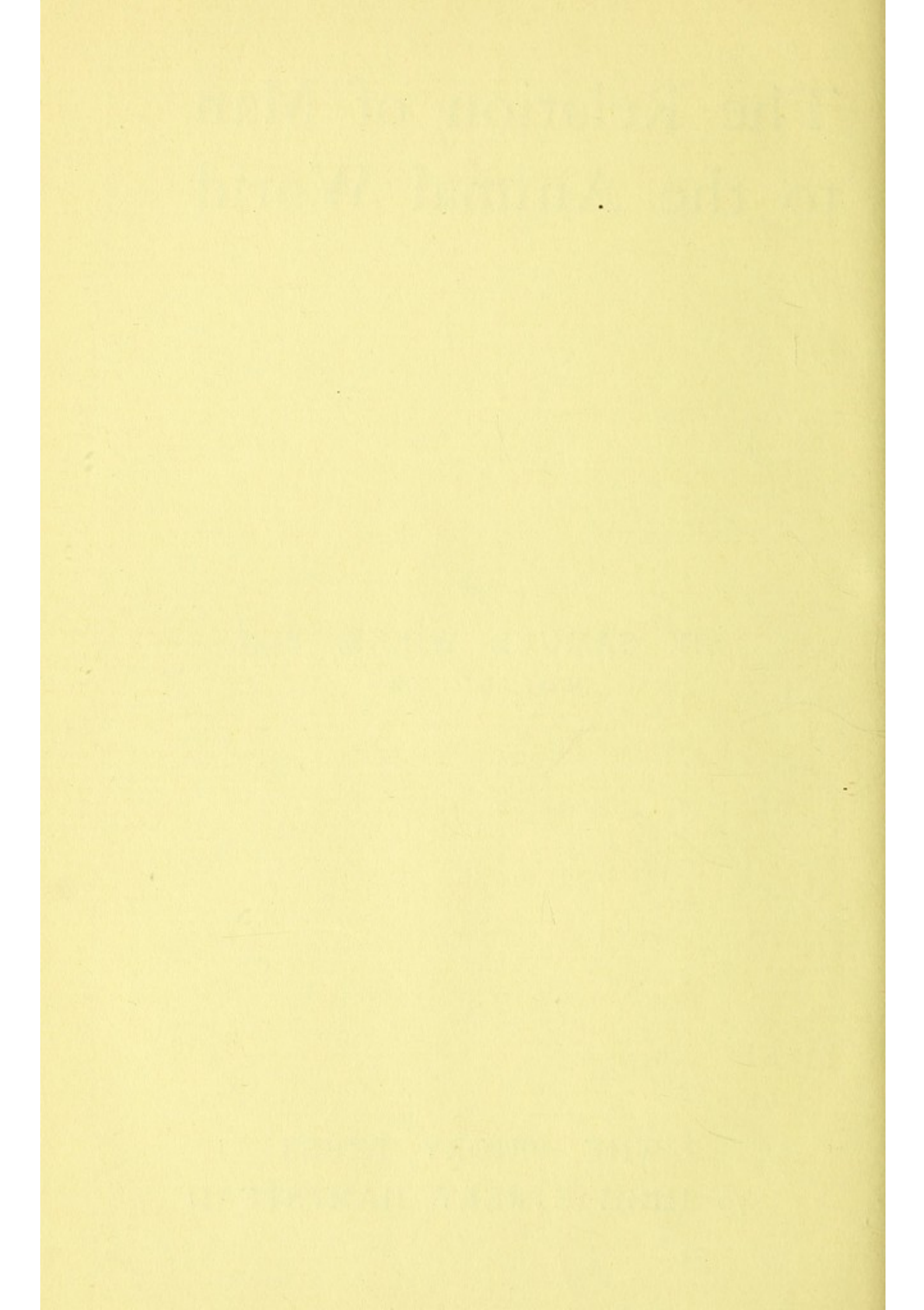
BY

SIR SAMUEL WILKS, BART.,

M.D., LL.D., F.R.S

THE PRIORY PRESS  
70 HIGH STREET HAMPSTEAD

A circular library stamp is partially visible in the bottom left corner, overlapping the text. It contains the word "COLLEGE" at the top and "HAMPSTEAD" at the bottom, with some illegible text in the center.





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## Preface

I HAVE been often asked to republish an address which I gave a few years ago at the "Church Congress" at Folkestone, on the subject entitled "Do the interests of mankind require experiments on living animals." In accordance with this request, I have reproduced here that portion which stated what our position with regard to the treatment of the animal kingdom had been before this new question arose, and this I have expanded to make it more intelligible to the general reader.

HAMPSTEAD,

S.W.

*June 1907.*



## I.

## Introduction

THERE never was a time when the treatment or care of a particular class of lower animals was not brought before the notice of the British public as a question of the most urgent importance. At the same time there have always been those who would regard the wider question as trivial compared with their own particular fad. On enquiry it becomes evident how very little the majority have considered this wider question of our relation to all animals generally, and how ill-informed most people are as to what is going on in their very midst. I have found it therefore most difficult to discuss a very important and burning question relating to animals owing to this ignorance of facts, although there are some who are not ignorant, yet are unwilling to discuss these facts, assuming that all our time-honoured customs must be right. I have written, therefore, the following pages not for the purpose of questioning the right or wrong of any particular case, but to bring before the reader what our actual position is as a nation towards the lower kingdom of animals.

In opening the subject of man's relations to animals we at once enter upon the question whether the animals were made for the use of man or whether the latter have independent rights of their own. The first view is upheld, many suppose, by words in the first chapter of the Bible, when God created man, male and female, and said, "Be fruitful and multiply and replenish the earth and subdue it; and have dominion over the fish of the sea and over the fowl of the air and over every living thing that moveth upon the earth." Of course this does not in any way touch the question of kindness



to animals. This belief which I mention, seems to have been once the prevailing idea amongst the best educated people in our country, who were so impressed with it that animals were not described in schools, as they now are, in reference to their form and structure, suitable to their habits, but only as if they were made for man. I remember when a child a book being put into my hands containing pictures of animals, and the first was that of an ox. The book described how the flesh was made for our food, the skin for leather for our boots and shoes, the horns for various articles in common use, and so on; and at the present time I am sorry to say, our children do not get better lessons whilst walking in the streets; in fact, some persons consider such lessons very demoralizing. They see portrayed on the walls a splendid bull being led by a smiling little girl as if she had a love for it, but she is really a hypocrite and is only thinking of herself and her stomach, for she holds in her hand a pot inscribed "essence of beef." As there seems to be great competition amongst the purveyors of this delicacy we have had a variety of fine posters drawn on the walls, the purport of all being the same: to inform passers-by of the superior excellence of a certain beef juice. Nevertheless, a great advance has been made of late in teaching children that every part of the animal has been constructed for its own purpose—as the form of the body and legs and the functions of its digestive organs—so that they may get a glimpse into the mechanism of the greatest wonder in the world and learn how all the various structures of the ox of which I have been speaking are made out of the grass of the field.



## II.

## Killing Animals for Food

THE sight of dead animals appearing as if they were directly made for man's use, is always before our notice in the butchers' shops. The sight is a very striking and conspicuous one in our Hampstead main streets. This show of large quarters of beef and rows of headless bleeding sheep is loathsome, barbarous and degrading. In the more civilised city of Paris all these things have been hidden from public gaze for a very long period. With us it was only quite lately that Bond Street, the parade of fashion, with its establishments full of all the richest and finest ladies' adornments, had in it a shop filled with the carcasses of bullocks and sheep. But, fortunately, these horrible sights have not quite hardened our hearts for when a flock of lambs has passed down the High Street on its way to the slaughter-house, I have heard the voices of children exclaim, "those dear little lambs," and sometimes I have even heard, "How they do cry," called forth by the lambs' plaintive bleating during their struggling reluctance to enter the narrow gate leading to the shambles. The bleat certainly seems to differ from that which is heard when they are gambolling in the fields. I have also seen a little boy stop and gaze at a calf hanging up by its hind legs, with its skin and head still there, and then go up to it and tenderly stroke its head; he has afterwards passed on, being quite unaware that his action was perceived. I might here mention that the oval ornamental markings seen on the back of the sheep in the butchers' shops are executed by the slaughterer's knife, while the skin muscle retains its contractibility, after the animal itself has generally been dead for half-an-hour. Of course the skins of the slaughtered animals are used



for our boots and shoes, being first made into leather by being soaked in the tan-pits of Bermondsey and other places.

Calves until late years were carried to the butcher by being tied down flat in carts with their heads hanging down, which they constantly moved about when struggling to be free.

Then we have the poultry shops with their wonderful display of birds, such as pheasants, grouse, partridges and other game ; as well as chickens and turkeys and some smaller birds lying in a dead heap or prepared for the table. Sometimes there is a cage crowded with quails just arrived from Holland or other foreign parts. Rabbits also in large number, reminding us of what we have heard described by those who live near rabbit warrens ; how distressed they have been at hearing the nocturnal cries of the mutilated creatures when caught in the traps.

Next door we may perhaps see the fishmonger's. He also has a beautiful show of creatures taken from the sea or river. Splendid salmon enlisting the admiration of sportsmen and others, as they gaze at their enormous size and weight. Then in due season may be seen a heap of mackerel just arrived from Hastings or some near place on the coast. As we regard them in their freshness they present one of the most glorious sights in the streets of London, exhibiting in their varied shades of colour glittering in the sun a spectacle not outvied in splendour by the diamonds, rubies and other precious stones in the neighbouring jewellers' shops. But with these pleasanter sights there stands a basket of lobsters writhing perhaps in pain, as they lie slowly dying with their gills gradually drying up from being so long out of water. We see there also the crimped skate telling us that this muscular contraction must have occurred under the knife when the tissue was alive, but it may be that both the catcher of fish and the dealer consider



all fish dead when out of water. It is difficult to say positively when a fish is dead, but, nevertheless it is not a pleasant sight to see a fisherman lift out of his boat, fish still wriggling in his hand, taking up his knife and dressing them for the market, some of them being skinned, and others, if flat fish, being trimmed into shape by cutting off the sides or edges and then thrown into a heap.

I merely mention these things to prove that we have asserted our right to catch or snare all animals for our food. If we preferred to eat them alive like some of the lower animals, no one would object ; at present we only perform this act in the case of the oyster, sprinkling it with a little pepper and vinegar before we swallow it.

### III.

## Killing Animals for Clothing

SOME animals are sought entirely for the sake of their skins, in order to make fur garments to wear. The best hunting grounds are in the northern regions where from the coldness of the climate the furs are the best and warmest. Ermine and expensive sables being only bought by wealthy ladies the ships of the Hudson's Bay Company which make their annual trips bring home a most valuable cargo of furs, the produce of the hunters' captures. I never yet met a lady, however kind she was to animals, who did not assert her right to pay a handsome price to the man who should send out to Siberia or elsewhere to bring home these skins for her to wear.

Nor have I ever heard of any objection to the whale fishery. The sending out from Hull and elsewhere ships carrying men skilled in harpooning the whale, in order to



get the blubber to provide oil for our lamps. But little of this is done of late owing to the scarcity of the whale which has now become almost extinct in the old fishing grounds, just as the buffalo in America, is now all but gone. In speaking of the so-called rights of animals, one might think that every animal had a right to its own skin.

If sealskins are in fashion and consequently much in request by rich women, the seals are killed in shoals. The method adopted for their slaughter, which renders them a bleeding mass, is horrible to conceive, and is not edifying to read about. If we require a very superior warm quilt, we obtain it by robbing the eider duck's nest. I need only mention the name of osprey feathers, to remind readers of the vexed question of cruelty in reference to herons and egrets. Ostrich feathers come from birds cultivated on African farms.

#### IV.

### Maltreatment for Fashion

THEN, besides killing animals for our food, we do many things to their discomfort and some even which must give them pain. The bull being a fierce animal, we try and manage him by making a hole through his nose and then inserting a metal ring to which is attached a thong; sometimes his horns are cut and brass knobs put on them to prevent him using them injuriously. Next the docking of horses must undoubtedly be cruel, and yet ladies will be seen driving a fine pair of horses in the parks with stumpy tails, and they never perceive how wrongful is their conduct towards these animals. The horse, which is so much troubled with large flies during the hot weather, is able to reach, with his head thrown



round, a considerable part of the front of his body just the point which his tail can reach when switched forwards from behind. In this way he can generally wipe off any noxious fly from his body. I imagine the lady Jehu never considers when the horse is moving the stump of his tail in vain, that she has sanctioned the cutting off his long brush of defence against these irritating flies. When the subject was mooted at some society, I think it was said that the docking was not done to serve any other purpose than that of fashion. I believe the cutting the horse's tail at the root in order to form a cicatrix and so make it stand out, once practised in some Horse Guard regiment, has now been given up. But the bearing rein is not yet discarded, and this, with the bit in its mouth, covering a fine handsome horse with foam, does not suggest to the lady in the carriage any unkindness to the horses. When she is spoken to on the subject, the usual answer is that she leaves these matters to the coachman.

As regards horses, besides their being put to ordinary work, they are used for military purposes, and therefore mount our cavalry regiments, drag our cannon and enter into battle with the enemy where they may be killed by hundreds and die lingering deaths on the battlefield.

## V.

### Sport

THEN arises the question about the morality of hunting and shooting. The custom is considered cruel by some, and universally so in the case of stag-hunting, which is now abolished. In considering the question we must again remember the fundamental principle of our constitution :



that although the highest of animals we still are animals and retain the instincts of hunting for our prey. In his primitive state man went forth from his hut to procure food for the family, and at the same time felt an exhilaration in the pursuit, breathing the fresh air and exercising his limbs. There used to be a rhyme sung to children by their mothers : " Little baby Bunting, father's gone a hunting, to get a little rabbit skin to wrap the baby Bunting in." Herein lies, I think, the whole philosophy of hunting. Whilst the woman is at home taking care of the children and looking after household affairs, the man has gone out to provide food and clothing for them. This instinct remains in civilized life and especially in those countries most suitable for its practice. Our forefathers laid out the New Forest for the purpose of hunting, and the Scotch nobility at the present time possess large tracts of heath for shooting and deer-stalking. There can be no doubt that hunting is a sport which most country gentlemen delight in, not only for the excitement of the run over rough country with its hazards and the emulation to be the first in, but they enjoy the exhilarating sounds of the baying of the dogs with the hunstman's horn and tally-ho. I believe hunting and shooting are instinctive and most enjoyable pleasures ; therefore that they can never be abolished by Parliament whilst Britons retain their present characteristics. And just as we cultivate and domesticate animals for our food, so we shall breed foxes and game for the pleasures of sport.

The cruelty side of the question presents a difficulty which never can be solved. Why was nature made so cruel and even as we should say, wicked, is a riddle which it is impossible to answer. We are certainly struck by the natural affection which animals possess for their young, but in other respects animals commit every possible crime in the human sense. So it seems perfectly true, as Huxley maintained, that there is



no evidence of an ethical code existing in Nature. It was a puzzle and riddle to Darwin, and he gave up the attempt at any solution. He saw the struggle for existence and that the weakest go to the wall, and thus the best and typical animal survived at the expense of the weaker ; or, as Tennyson puts it, in speaking of Nature:

“So careful of the type she seems,  
So careless of the single life.”

That human beings should possess a higher state of morality than that which is seen in nature the outcome of a divine almighty Being, is a continuous puzzle. The poet Blake was most distressed by this thought, and could not avoid giving expression to it in his verses. Some of the lines often quoted run thus :—

“Tiger, tiger, burning bright  
In the forests of the night,  
What immortal hand or eye  
Could frame thy fearful symmetry ?  
Did He smile His work to see ?  
Did He who made the lamb make thee ?

The puzzle remains. I have seen a lady fondling her favourite cat in the garden after which it went into a shrubbery close by. Presently a little scuffling was heard and the cat jumped out with a fluttering bird between its teeth, the mistress exclaimed, “you horrid creature,” and struck at it with her parasol, but the cat was too quick and jumped amongst the bushes with its prey ; yet this lady must have known the cat’s nature.

Nature’s methods in this respect are so horrible and cruel to us, that it has become a question whether children should be allowed to see the wild creatures at the Zoological Gardens fed, even if the animals they eat are dead, like the mice provided for the owls. But some of the larger serpents will not, it is said, depart from their instincts and will only take living animals for food, and it



is this spectacle which it is proposed to forbid by law. It is a wonderfully instructive sight however for the scientific man when he sees a boa constrictor swallow an animal larger than its own head. This is accomplished by the bones of the head being made separate and moveable, being only joined by a tissue which is elastic, so that when the serpent lays hold of its prey as a rabbit, the head gradually expands over its prey, until it become enormously enlarged, and carrying the eyes with it.

A sight like this is most rightly considered to be an improper exhibition for the public, and so its prohibition was asked for lately in the House of Commons, and even more than this—to make it illegal to give the serpents living creatures for food. This would be a curious climax to our law against cruelty to animals; that the assisting in the performance of a natural law or as some would maintain, a divine ordinance, is to be stopped by Act of Parliament and pronounced illegal.

## VI.

### The Use of Eggs and Milk

I will now just mention the case of eggs and milk for food as showing how dependent we are on animals for our daily sustenance. These articles have become of so great necessity for our aliment that I do not see how possibly they could be dispensed with, and this being the case, no one ever seems to have raised the question as to our moral right to use them.

I have already said that every part of an animal serves some purpose in its own economy and nothing is made for any other animal; for example, the albumen of the egg is the material from which the young chick grows, its embryo being seen as a speck at one end of it. Milk,



in like manner, is secreted in the mamalia by glands formed for the purpose, and for the feeding of the young ones by the mother before they are capable of obtaining nutriment for themselves in the outer world, or able to digest and assimilate it.

It is evident therefore that we rob the hen's nest when we take her eggs to eat, making her continue to lay when we remove them, by the device of the nest egg. In like manner we rob the cow when we take away the calf just born and drink the milk for ourselves. This may cause the cow much anguish, and there are reasons to think that it does. There being no doubt that animals know when they are pregnant, and so make preparations for the care of their offspring, as birds do in building their nests. This knowledge is often very manifest in the case of the bitch. The cow undoubtedly knows when she will shortly be a mother ; she recognises the young calf when it comes into the world, as her own, licks it and hastens to suckle it. Next the farmer or his man steps in, takes away the calf, generally to kill it, and then proceeds to milk the cow for his own benefit. The milk is made to continue to flow for some months by giving the cow good food and milking it less often than the calf would have naturally done. The consequence is that instead of the udder remaining comparatively small as it would be in the natural state, it becomes greatly distended so that when the cow returns home to its shed twice a day, it is too glad to be relieved of its burden and stands perfectly quiet whilst it is milked. It should be remembered that the milk is naturally only secreted during the time the calf is dependent upon the mother ; if the calf wished to prolong the habit, the cow drives it away and informs it in his own language to get its own living. We all recognise the tone of the voice when the cow calls the calf to it. In either case after a time the milk becomes deteriorated and unfit for nourishment just as it does in a woman when both she and the baby suffer from



too long suckling. The cow has then to bear again and to renew a fresh flow of milk. I mention this for those thoughtless persons who seem to regard the cow as a milk-making machine which can go on working for ever or until it is worn out. Although it is difficult to know how we could live without milk and its products of butter and cheese, we ought to realise the fact that we are guilty of robbery, unless we shelter ourselves under the plea that animals were made for our use by the Great Creator. It is true that in the very earliest history of the Bible we read of animals being sacrificed for the good of man not only for his transgressions but for the rites of worship; the youngest and best amongst the flocks and herds being chosen for the purpose. And yet even then a note of sentiment would sometimes enter in, for during the harvest festival it was commanded, "Thou shalt not seethe a kid in his mother's milk." When we consider that milk is used for the nourishment of children and for the sick, besides being a constituent of so many of our meals, it may seem fastidious or almost absurd to throw any doubt on our moral right of using it. I myself cannot conceive how we can do without it, but this forgetfulness is only a confirmation of the fact how we have completely settled the question as to our rights over animals in order to obtain any good for ourselves.

## VII.

### The Unsexing of Animals

HAVING so far regarded the fact of our using animals for food, we must now speak of the mutilation to which we subject them for the purpose of obtaining their flesh in the easiest and cheapest manner. The trouble they would have caused us if they had preserved their sexual char-



acters would have been very great, but now all their desires and appetites being got rid of with the exception of eating, we can turn our oxen and sheep into beef and mutton with greater facility. They are therefore unsexed when young, the males being emasculated and the females in many cases spathed. We are so accustomed to see these monsters of our own creation that I never observe any one stop and pity them as they pass along the street to the shambles. These gawky creatures, mostly of reddish brown colour, go stumbling along and bellowing like cows, having also long drooping horns intended for the cow to protect its young calf from danger, as Gilbert White describes. This is the creature into which we have converted the bull for our own purposes. Is there no word of pity for it from the lover of animals? If this epicene be specially fed it may be converted into a huge shapeless mass and obtain a prize at Smithfield. It finally reaches its destination in the butcher's shop and is seen decorated with ribbons.

Sheep are treated in a like manner. The young rams are emasculated and converted into wethers. They then possess no functions or appetites to divert them from eating and chewing the cud; they grow fat, and when killed produce mutton chops with a good border of fat which is so much appreciated by epicures. I do not know which is generally preferred, the mutton of the ewe or the wether.

Swine are treated in the same manner—not only the boars but the sows are often castrated or spathed by the removal of the ovaries. This, I believe, is done especially for fattening purposes, as the sows after the operation put on more adipose tissue, but whether their fellows, originally the males, make superior bacon, I have no knowledge.

Then as regards poultry, they are not left untouched, for as capons are asked for by customers, the young cocks are emasculated, and then they grow plump and tender



and become very delicious eating. Horses as a rule are all gelded, the entire horse being kept only for breeding purposes. It is said that the organs are removed by the knife, and the bleeding stopped by the cautery. The operation is said to be very painful and often done by unskilful persons, but I have no personal knowledge about horses. It is difficult to obtain very accurate information on the subject, but I am told that anæsthetics are seldom given as they entail extra expense.

As regards dogs and cats, not much is done in the direction of unsexing. Bitches which dwell in the house, or, as we say, domesticated, are sometimes spayed in order to prevent them coming into season, which would be attended by disagreeable consequences in a household. As regards cats: as some ladies are very fond of large quiet "Toms," they are emasculated when kittens.

I have read sometimes in the newspapers that speeches have been made at meetings connected with cruelty to animals, in which the belief has been expressed that some of our national calamities demonstrate the anger of God on account of the tortures inflicted by the experiments made on his poor dumb animals. If there was reason to believe that the Creator showed his indignation for such things, I should think it far more probable that it is on account of our interfering with his great law so well described in the first chapter of Genesis, where it is stated that every living thing is composed of two sexes, and God said it was good and commanded them to replenish the earth. It is impossible for us to imagine a world made differently. As regards ourselves, as human beings, all our pleasures and enjoyments, as well as our griefs and sorrows, are bound up with the relationship of men and women. A world without this distinction of sexes is not imaginable. What scene is more delightful in the spring than to see the love-making and pairing of the birds. As the sun rises higher every day in the heavens and warms the earth, we see the brown bare branches of



the trees throw out their buds and flowers until they are clothed in such wondrous beauty as seen in the apple tree. At the same time the birds appear; some putting on their best plumage for courting; and when the union is arranged they build their nest, both male and female being actively engaged in the work until it is complete. Then the hen lays her eggs, unremittingly keeping them warm, and waits quietly for the progeny to appear. Most of the lower animals at this period of the year are roused up and prepare for the breeding season. Everything speaks of fecundity. Well might the Psalmist exclaim, "Thou renewest the face of the earth." I think, therefore, it is not surprising that some persons in their affectionate regard for the lower animals see the created world moving on, and consider that this is our greatest sin, or at least the greatest act of cruelty we practise towards them; the unsexing them so as to deprive them of all the pleasures and delights of their fellows, and convert them into mere feeding creatures for our own purposes. This subject is not a pleasant one to write about, and much less to speak about, but it cannot be overlooked, when one is considering the question of our relation to the lower animals. If it is put in the background from modesty or ignorance, it might well be considered, as it is by some, an act of hypocrisy on the part of the self-called lovers of animals, to hide out of sight a form of cruelty to which they assent.

Although it is impossible to acknowledge the rights of animals when we as a nation have agreed to use them in any way we choose for our advantage, we might admit the principle that if kept alive to enjoy personal liberty they might be permitted the full enjoyment and pleasure of using all the faculties with which they have been endowed. It may be answered, as is sometimes done, that an animal cannot lament a pleasure it has never enjoyed. Such an opinion opens the door to various other acts of mutilation which might be practised on animals for man's use or



greed, I can imagine, for example, a cheap way of making *foie gras* by a horrible treatment of young geese. We may ask, What is an animal's pleasure? We can only suppose that it corresponds with what happiness signifies in ourselves. Herbert Spencer defines Happiness thus : "To the healthful performance of each function of the mind or body attaches a pleasurable feeling. And this pleasurable feeling is obtainable only by the performance of the functions ; that is, by the exercise of the correlative faculty. Every faculty in turn affords its special emotion, and the sum of these constitutes happiness."

That animals have a great pleasure in life or mere existence is a fact without doubt. Not only is it very obvious in young creatures, like the kitten playing with a ball, the lambs gambolling in the field and dogs running a race together, but we see it also in birds, the lark singing as he to "Heaven's gate ascends," and in the songsters of our gardens and woods. Travellers tell us there are certain parts of South America where they have seen and heard a number of birds singing in concert. They certainly understand what is meant by the joy of life.

I should like to say in this place that the expression "a poor dumb animal," is a misnomer. Dumbness with us is a consequence of deafness which is really a disease, and does not imply any inability of the larynx to make sounds, nor anything wrong in the brain preventing its capacity to govern it. Thoughts and words coincide, corresponding in force and number. Talking implies intellectual capacity, placing words and their inflections together to be understood by another rational creature. But animals are not possessed with the mental power to do this ; still they make noises and utter sounds which imply certain feelings and which are quite understood by their fellows ; indeed, they have become quite intelligible to us, especially the cries of the mother when calling to her young. Probably some of the more intelligent have a great number of sounds well understood by one



another. When a number of rooks are seen on a tall elm cawing together, and presently one unfortunate individual of their number is set upon and picked to death, it looks as if it was the verdict of a deliberative conclave. Then language depends upon gesture as well as upon vocal utterance ; with human beings it is often the most forcible part of language, and this is used largely by animals. It is frequently the mode of communication between ourselves and any domestic animals. If dumbness can be appropriately applied to an animal because it cannot express itself like an intellectual being, it does not require our commiseration, therefore, I say, the expression, "poor dumb animal," is a misnomer.

## VIII.

### Experiments on Animals

Now I must speak on the question of using animals for experiments, that is, for providing cures for diseases both of man and themselves, and for purposes of scientific research in physiology. As regards the first object I will give an example in order to afford an explanation to those who are ignorant of the methods adopted. I give the case of the introduction of the serum of an animal into a patient who is suffering from a disease from which the animal providing the serum has been rendered immune. Contagious diseases, it must be remembered, have always been regarded as specific, because when caught the symptoms of the giver and receiver were exactly alike. What this contagious principle consisted in was unknown, but it was generally believed to be some gaseous emanation from the lungs or skin. When the microscope began to be used, there were discovered in infected persons, small bodies foreign to the system ; these were separated and



found to be living particles, for being placed in an animal liquid they would grow and propagate. To these the name of bacteria was given. If these again were injected into an animal by means of a needle syringe they would produce symptoms resembling those of the human being as far as the difference of structure of man and a rabbit for example would allow. Then after the animal had recovered from the disease, if it was again injected with the same specific bacteria, no effect would be produced, the rabbit had acquired a perfect immunity, just as a human being does when he has once suffered from a specific disease, and cannot have it again. For example he does not catch small pox, if he has previously had the cow pox, which is a modified form of the disease after it has passed through the cow, and called vaccination. Jenner proved this by what might be called an experiment. Two regiments of militia were ordered to be inoculated with small-pox after the manner introduced into England by Lady Mary Montague, but it had no effect or did not "take" in a few men in each regiment who had been inoculated from the cow according to Jenner's method. In connection with the discovery of a specific virus or poison, in some of the diseases of animals, the serum or antitoxin of those suffering from them have been introduced into healthy ones and produced complete immunity. In the case of the cattle plague at the Cape this has largely been done to the great advantage to farmers as well as to the diminution of suffering to the animals.

Now having stated in the preceding pages what our position is in reference to the lower animal world, and having determined the question as to our right to use them for our own advantage, both for food, raiment, and other purposes, it is difficult to see what good reason can be given for our not making use of them also for what seems to be a much higher purpose, *i.e.*, the cure and prevention of disease, both in man and animals. I might mention



here that the fear of meeting mad dogs has been put an end to by the persevering energy of Mr. Long, who was much assisted in his work through the carcasses of all suspected mad dogs being sent to the Brown Institute to be examined by inoculation, the subjects being, I believe, rabbits. No reasonable objection was offered to this method except by a very few persons who considered it wrong to sacrifice the life of an animal under any circumstances whatever for the good of man.

If now we turn to the other question of making use of animals for the purpose of advancing scientific research in physiology, we find there are two very opposite opinions. Probably many are opposed to it on the plea of cruelty, although all animals experimented upon are placed under the influence of anæsthetics if any operation is undertaken. I agree myself in the opinion held by the late George H. Lewes that the cruelty and torments often spoken of in connection with experimentation are due to the words and expressions commonly used in speaking of it, which always suggest the cutting up a live animal with a knife with the necessary accompaniment of blood. The vision of a knife, a gaping wound and gushing blood is certainly not a pleasant one.

The principal opposition against the use of animals for scientific research comes from those who do not make much use of the word cruelty, but stake their objection on its inutility. It has been said that men are born either Aristotelians or Platonists, and the direction of their minds towards science or philosophy are so different as to be often totally at variance. It therefore happens that the opponents to experimentation for physiological purposes, of the better educated classes, are to be found almost solely amongst the literary and artistic community and to these may be added those of the legal profession and the clergy. In various memorials appertaining to the want of greater opportunities for research, and on the other hand by the opponents of experiments on animals



as not only cruel but useless, the division of these two classes is most remarkable. The moral difference between them is difficult to discern, although so many see in it a purely moral question, as some perceived immorality in Pasteur and Lister, whilst others regarded them as two of the greatest benefactors to man and animals that the world had ever seen.

There is a class of persons mostly of a very devout and religious type who consider all our study of nature as trivial and useless in comparison with the contemplation of the Almighty in the greater world of spiritual and moral life and in the worship of Him. What concerns us most, they say, is our conduct towards our fellow creatures and questions of social life. We cannot fathom, they also say, the meaning, or unloose "the burden of the mystery of all this unintelligible world," and that our so-called scientific discoveries give us only a peep into the depths of the infinite wisdom. It was in some such terms that a friend explained away his ignorance of all late scientific advances. There are those also who have no hesitation in declaring that the man of science holds a lower position than the one who soars into the heights or sounds the depths of philosophy, and even, indeed, that he is of lower capacity and holds an inferior position in the intellectual world. Many of the opponents of the use of animals for scientific research only argue against it by going into rhapsodies over the higher culture.

It is curious to read in the same newspaper an article showing that the progress of science has advanced in greater measure during the Victorian reign than in the whole of the previous history of the world, and in the same paper shortly before, a letter from a well-known *litterateur* lamenting how for many years past we have been sadly deficient in producing any great men equal to those of past times. The writers were looking with different eyes.



When a well-known opponent of physiological research was told of some results which had been obtained, he declared that he did not care a straw about them. But there are persons, however, on the other hand who have an equally strong desire to dip into the secrets of nature, and they possess as intense a love for research as some of our painters and musicians have shown, who, when children, secreted themselves in remote places to indulge in their favourite pursuits of drawing or playing musical instruments. The great naturalist, Audubon, told us that when in the forests of America he one day found a new species of bird, he began to jump about for joy ; and lately I read of a German professor who had heard of a remarkable fish to be found only in one of the rivers of Australia, so that when his summer holiday came he took voyage to the nearest port in Australia and then by road conveyance searched the country for the specified river. He at last found his treasure, put it in a bottle, and returned straight home.

There are still plenty of men of the stamp of Harvey, the discoverer of the circulation of the blood, of whom it is said that during the battle of Edgehill "he withdrew under a hedge and tooke out of his pocket a booke and read, but he had not read very long before a bullet of a great gun grazed on the ground neare him, which made him remove his station." The legacy which he left to the Fellows of his College was to follow his example and "search out the secrets of nature by way of experiment."

There can be but little doubt if anything should happen to diminish the opportunities of scientific research in this country it would be a very dire disaster. At present it is not sufficiently encouraged. This has been well said by a distinguished professor in reference to the inauguration of new methods of study at Oxford University. He says, "our schools are almost all under the control of men whose faculties have been developed



only on the literary side, and unfortunately our universities have failed hitherto to appraise training in scientific method as of consequence to the community and in this country research work does not form an integral part of university education as it does in Germany. The consequences of this neglect are dire and far-reaching."

Few greater men has England produced than Gladstone, but he never seemed to take the slightest interest in the material world around him. He once gave an address to young men on education, and he spoke of the languages, the philosophy, the religion of the ancients and the same of the moderns, but he said not a word about the study of nature, or told them to look at the stars above or the earth beneath.

I might inform my readers that it would be impossible for a medical student to learn his anatomy in England if it was not for our intercourse with our neighbours, since it has long been illegal to make a human skeleton in our country, so we have to procure all our bones from France. It is fortunate that the bones of French men and women do not differ materially from those of the English. The supply is not due to the *entente cordiale*, for we give a full price for them, and when I had the charge of a museum I had also to pay duty, and which is not to my knowledge remitted. It would be a most disastrous occurrence if legislation should in any way also hamper the progress of physiology.

The *Times* newspaper quite lately in noticing the death of two medical veterans spoke of the light thrown of late years on subjects in which they were both interested as teachers, and of the real nature of a disease of which they were then quite ignorant. It says, "at no previous time in the history of the human race has an interval of sixty years been marked by so vast an increase of our knowledge of the causes of disease and of the means by which the operation of these causes can be controlled." It is worthy of remark that this statement



is absolutely true, and that the period of the Victorian era, which has shown greater progress in medicine than any in the whole world before, exactly coincides with the period in which the great work of the experimental method has been practised, or at all events, was included in it. It would be very remarkable if it were a mere coincidence. It is almost impossible to conceive it. It is to be hoped that all educational authorities will bear this in mind.

## IX.

### Domesticated Animals

AFTER considering all these questions and stating how we regard the animal world below us, as if made for our own advantage, we must look on the other side and observe how as a nation we are fond of animals, behave kindly to them and make them our pets and friends. This is in great part owing to the strong attachment they form for everything they have been brought up with from their early days and in following old habits. The dog shows this quality very markedly, but it is as strong towards Bill Sykes as for the Prince of Wales ; also it forms a great attachment to many other creatures with which it has lived, even to cats. We see the same affection in horses towards their master, to the groom, or to any animal which inhabits the same stable. Birds like parrots become very dejected when the house in which they live becomes silent by the departure of the members of the family for the holidays, and hail them with noise and delight on their return. But in spite of our affection for our own pets and favourites, I think it must be confessed that we as a nation do not treat the whole race of animals with the consideration which they deserve. In spite of our love of a particular dog, every day stray dogs are



taken to the different police offices in London and the suburbs, in great numbers. If not claimed they are sent to the Dogs' Home at Battersea, where they again remain a short time, waiting for owners, and failing this, the unknown, amounting to 20,000 a year, then pass through the lethal chamber to the final crematorium. With these facts before us, I think it cannot be rightly asserted that we as a community have much thought or care for dogs. I must say much the same about horses, although we profess to have a great love for them, and this no doubt is shown towards those of our own which we are in the habit of riding or driving; yet when from age or altered appearance we sell them, they often pass into less tender hands and leaving their warm stable and good food, they have to end their days by pulling heavy vans or tradesmen's carts, their homes being miserable and their food scanty and poor. It is not a pleasant sight to see an old horse labouring under a heavy load which one recognises as an old friend once living in luxury.

Yet with all this we must look at the favourable side of the treatment of our domestic animals. We might regard this from their own point of view if they could acquaint us with their feelings. Let us compare the inmates of a farmyard with the wild animals outside. Instead of having to obtain a precarious living they have the very best food provided for them, water to drink and good stables and byres for their shelter. The sheep are penned in at night and provided with food, the poultry are well fed and housed, and when the end comes, which they do not foresee, the ox is, for example, suddenly struck down as it were by a stroke of lightning, the shortest and easiest of deaths; I use the expression lightning, metaphorically, meaning of course the pole-axe. In the case of game, the pheasants seem to enjoy a happy life having no knowledge or fear of the coming battue.

It may be safely said that, in comparison with some



other countries, we are kind to animals and that no intentional cruelty, with the exception of individual cases, is practised towards them. We all intend well, although we may differ in the meaning of the word cruelty. At the same time it is quite certain that we are all agreed in opinion as to our absolute right to make use of them as we choose for our own advantage. We agree as a nation to kill them for food previously mutilating them for the attainment of this object. We may also take their skins for raiment, and from birds their wings and feathers for personal adornment. In considering our rights over animals we are very much influenced by our own views and feelings towards them. If we choose to call some living creatures by the name of vermin, then we feel we are quite justified in killing them or even exterminating them if possible ; but still they are God-made creatures and may form a very important part of the economy of nature. The toad we avoid as a loathsome reptile, and as regards blackbeetles we only discuss the best mode of killing them. This seems to be because their appearance is disagreeable, but the garden beetle and cockchafer we have no objection to handle and treat kindly. If animals are noxious we are obliged to kill them for self-protection consequently we are trying to exterminate them, as, for example the Indian cobra. Nevertheless, the construction of the venomous apparatus with which this serpent is armed shows as much design as the human eye which is the usual organ spoken of to prove creative design. The poison bag with its tube opening into a groove or passage down a pointed tooth is a very cleverly arranged apparatus for its purpose. I think it may often be noticed in the reports of the Society for the Prevention of Cruelty to Animals that some animals are more favoured than others.



## X.

## The Souls of Animals

I CANNOT overlook an objection which some persons have to the ill treatment of animals, and that is that they possess souls like ourselves. A work to this effect was published a few years ago in support of the doctrine of the rights of animals. The author came to his conclusion by observing that the highest in the scale had the power of reasoning, of appreciating kind words, and the possession of a will and other mental faculties. He did not suppose that they reached the standard of similar attributes in man, and probably the souls of animals had a development corresponding with that of the body according to the words of the Apostle Paul. As in the present day the doctrine of evolution is not only applied to our physical frames but to the functions also, the various faculties of the human mind can be followed downwards until we arrive at the first trace of their existence. This reasoning of course starts with the hypothesis of the real existence of a soul in man, for if we pass from below upwards and call the apparent intelligence of an insect, instinct, and regard it as a part of its mechanism, and then continue this method of argument upwards until we arrive at man, his so-called soul becomes only the function or result of the working of the brain. This puts us on the horns of a dilemma. We must remember too that there is the doctrine of metempsychosis or the belief that the soul may pass from one animal to another and that the human soul may frequently suffer a transmigration into some animal to which we have been attached. Although there may be but few who hold this doctrine in its entirety, it is not infrequent to find persons very strongly persuaded that the uncanny cat, for example, when gazing at them is the embodiment of a departed



relative or friend. A well-known writer, now deceased, who was constantly speaking in defence of animals, was thought to hold opinions of this kind, although he never distinctly expressed them. The believers in the doctrine of transmigration of souls would certainly be influenced by their belief, in their treatment of animals.

It may be remembered that Pierre Loti in one of his novels speaks of sitting in his cabin with a cat by his side who, he was sure, was looking at him, sympathising with him and divining all his thoughts.

One great difficulty in clearing the ground in order to get a good foundation for argument is that with many persons the soul is made identical with the vital principle, as in the statement in the Bible that "God breathed into his nostrils the breath of life, and he became a living soul," or in the Emperor Hadrian's apostrophe to the soul, rendered by Pope, "Vital spark of Heavenly fire." This supposed identity of the soul with the principle of life was a very displeasing thought to Coleridge, who published a small book entitled the "Theory of Life," which seems to be too little known. He says: "Life supposes a universal principle in Nature with a limiting power in every particular animal, constantly acting to individualise and as it were *figure* the former. Thus then, life is not a thing—a subsistent hypostasis—but an act and process. The very fact that the powers peculiar to life in living animals include cohesion, elasticity, etc., show that they are homogeneous and that both the classes are but degrees and different dignities of one and the same tendency. Unless, therefore, a thing can exhibit properties which do not belong to it, the very admission that living matter exhibits physical properties includes the further admission that those physical or dead properties are themselves vital in essence, really distinct but in appearance only different or in absolute contrast with each other." Coleridge considered that the subject of living matter came into the domain of physiological



research, for the thought of the life in connection with "mucor" or mould was most repugnant to him. The association of a living principle with the soul was equally disagreeable, for it would oblige him to speak of the soul of the oyster. It may be worthy of notice that the investigations which Coleridge maintained should be undertaken by the physiologist have been denounced as impious by several objectors to experimentation on animals.

I think the opinion held by most persons, although very vaguely, is that the soul and vital principle are distinct; that the latter or vitality exists in all animals and is bestowed upon them by their parents, and it is this which departs at the time of death. This also exists in man, but in addition he has a soul; so that we human beings have within us two immaterial forces at play, the one permeating the whole body, the other governing it and directing it in all its actions.

In ordinary conversation we speak of the life and the soul as one and so at death they depart together. In the Catholic Church the belief is that the soul is present in the child from the very time of conception, and therefore if it cannot be born *per vias naturales* it is baptised *in utero*. The English law does not recognise a child as a living being until after it is born and has breathed.

#### NOTE.

I am not aware whether divines and theologians have agreed upon the question of the first union of body and soul but have left it open for discussion by philosophers and others. As no dogmatic teaching exists that I am aware of, there are those who cannot conceive of anything which is eternal having a beginning. Consequently the doctrine much held by some of the older divines is that the soul or spirit came from God and returns to Him again. Law, in the last century, said that, as thinking and willing are eternal, they never had a beginning, but came from a self-existent God. This is the true ground for freedom of the will and thought. They are eternal and divine powers, so the human being began with God, and afterwards when a self-conscious life began it fell away



and became corrupt and finally returned to God of whom it is a part. The old poet, Vaughan, describes this in his "Retreate." Wordsworth also in his beautiful "Ode to Immortality," says, there are times when "Our souls have sight of that immortal sea which brought us hither." I believe a very similar doctrine is to be found in Hinduism—that the human soul is of the same nature as the "Supreme Soul," and its ultimate destination is its being united again with the Supreme Soul.

## XI.

### Conclusion

IN concluding my case showing what our actual relations as a community or nation are to animals, I intended to say nothing more, my object being to remind some of my readers and to inform others what the real facts are. I have stated these more fully for the benefit of those who, whilst airing some pet scheme in reference to animals, so often speak of the latter's rights. I have shown that no appeal of this kind can possibly be made since all of us have totally ignored the existence of any such rights. I have nothing to say for or against this position which we have taken up in dealing with the animal world, and confess that I am not able to find any substitute for it. It is perhaps somewhat remarkable to see how the very best men appear to be altogether ignorant of their own position and action concerning it, and so are thoroughly content. For example, I heard a sermon preached on "Sunday observance," and the parson, to make it practical, entered into some particulars, and amongst other things, as he was denouncing Sunday trading, advised the congregation to follow his example by taking in a double quantity of milk on Saturday and boiling a part of it to keep until the following day. I suppose it was owing to his mind being so intent on keeping the Sabbath holy, that he never offered any advice about the milking of the cow on that day. I men-



tion the instance as showing how imbued we are with the belief in our right conduct towards animals that a thoroughly good man never doubted his absolute right to take the milk belonging to the cow for himself.

If anyone should ask what position I adopt myself towards the animal world, I can say no more than that I submit tacitly with others to the present arrangement, which our forefathers have made for us. I have no alternative for it, except as to some minor details. There is, first of all, the fact that being constituted animals, we must act as other animals do, prey upon our inferiors for food, and with our superior intellect we do more and utilise them for various other purposes. We use horses, for example, for draught and also to assist us on the field of battle. Being thus the animals' masters, there is no reason why we should not make use of them as an agency for curing disease ; and by careful scrutiny also endeavour to find out the secrets of Nature and look a little deeper into the mysteries of life. This has been felt so important of late that " Nature Study " has been introduced into the list of subjects to be taught in elementary schools. Therefore there can be no further wrong inflicted on the animal world by bringing wild animals to the Zoological Gardens, where they can be seen in their natural form and beauty. Included in this same right we may possess caged birds for our own pleasure.

For my own part, always having been a student of natural history, I have had a great love for animals of all kinds. I am therefore delighted with the prospect of all children being taught about their structure and their habits of life. This will bring with it a corresponding affection which will no doubt display itself by a greater tenderness and kindness towards them. The future outlook for the animal world is a good one.



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