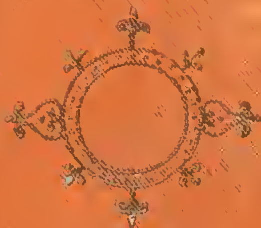
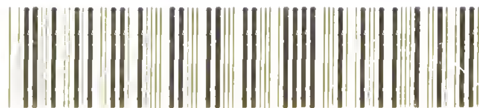
Plea for Mercy to Animals



By

Dr. MACAULAY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Cowper – interesting.

PLEA

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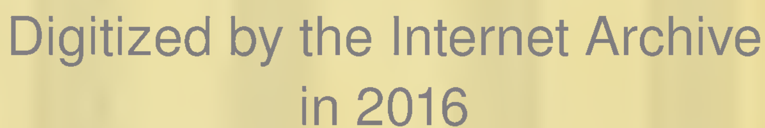
MERCY TO ANIMALS.



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PLEA

FOR

MERCY TO ANIMALS.

I.—Claims of the Lower Animals to Humane Treatment from Man.
II.—Various Forms of Needless Suffering inflicted by Man.
III.—Means of Prevention, Legal and Educational.
IV.—Vivisection, and other Experiments on Living Animals.

BY

James Macaulay, A.M., M.D. Edin.,

Editor of the "Leisure Hour."

"Not one of them is forgotten before God."

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"There is implanted by Nature in the heart of man, a noble and excellent affection of mercy, extending even to the brute animals, which, by the Divine appointment, are subjected to his dominion. This, moreover, we may be assured of, that the more noble the mind the more enlarged is this affection. Narrow and degenerate minds think that such things do not pertain to them, but the nobler part of mankind is affected by sympathy."

LORD BACON.

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PLEA
FOR
MERCY TO ANIMALS.

I.

CLAIMS OF THE LOWER ANIMALS TO HUMANE TREATMENT FROM MAN.

THE term "cruelty to animals," in the following pages, includes all kinds of ill-usage and needless suffering which the lower animals undergo at the hand of man. Comparatively a small proportion of this suffering is caused by wanton cruelty. To inflict pain in cold blood, or for the sport of the thing, may well be called not only inhuman but fiendish. The very name of humanity implies some relation to the better feelings of our nature; while inhumanity points to that unmixed spirit of evil by which man is degraded. A disposition to take delight in the infliction of pain for its own sake, is so far repugnant to the sympathies even of man's fallen nature, that our efforts are to be directed more against ignorance and thoughtlessness than against wilful cruelty.

The different kinds of animal sufferings must be dealt with in different modes. Where these are inflicted by wilful cruelty, stern repression is needed, and the helpless creatures must have such protection as the law can give. In the punishment of offenders of this class, the present penalties are not always

suitable nor sufficient. Compared with a small fine or short imprisonment, it is thought by some that corporal chastisement would be more powerful as a deterrent, as it would certainly be the punishment most fitting for those who wantonly inflict pain. In other cases our weapons must be educational rather than repressive. If the injuries are caused by ignorance or by thoughtlessness, we must point out the reality of the suffering, and try to awaken sympathy for dumb animals; teaching also that want of thought does not release from moral responsibility and just blame. If the injuries are incidental, and produced in the pursuit of some justifiable end, as in destroying animal life for the uses of man, we have to see that there be as little suffering as possible. The advancement of human knowledge and happiness may rightly supersede the claims of the lower animals, but we must examine how far these benefits are real. The advancement of the healing art, for example, might warrant the adoption of experiments on living animals, but we must be satisfied that the results of vivisection are such as justify the practice of it, and that these results can be obtained in no other way.

It is only in recent times that this subject has obtained due attention. In ancient times, there was among the nations no recognition of common brotherhood, and little sympathy for man, as man; and no sense of those claims which the children of one great family have upon each other for justice and mercy. Patriotism was the most liberal of their virtues, and within a sphere so contracted it would be in vain to look for humanity to the brute creation. With the exception of a passage in Plutarch's Life of Cato the Censor, a brief reference in one of Cicero's Familiar Letters, and a few other allusions, I do not know of any protest in the classical writers of antiquity against cruelty to animals. On the contrary, the pages of

historians and poets abound with descriptions of the most cruel amusements. We are told that in the horrible scenes of carnage in the Roman amphitheatre women took as intense an interest as men, and even gave the signal for the death of the combatants. Well might St. Paul, in his description of the world before the advent of Christ, crown the black catalogue of the crimes of heathen nations by declaring that they were "full of murder, implacable, unmerciful" (Rom. i. 29, 31). The delight taken in the barbarous games of the circus was probably in his thoughts, where not only beasts were tortured, but human victims murdered for the sport of Roman citizens. And when the same apostle describes "the fruits of the Spirit," as exhibited by the Christian converts, he speaks of mercy, kindness, gentleness. The disposition of mind is the same, whatever the objects upon which it is exercised. These heathens were cruel, whether looking on the combats of men or of the lower animals. And we thus understand the principle conveyed in the ancient Hebrew proverb, "A righteous man regardeth the life of his beast; but the tender mercies of the wicked are cruel."

In speaking of cruelty among heathen nations, whether in ancient times or in our own day, we do not forget apparent exceptions. The old Egyptians protected and even worshipped certain animals, and in India the destruction of any animal life is by some regarded as an impious crime. But this is utterly distinct from the habitual spirit of gentleness and mercy arising from principle, not from superstition. Of all ancient nations, and of modern people not Christian, the Jews alone, in their laws and institutions, had regard to kind treatment of animals, and this was because such treatment was specially enjoined by Divine precepts. Of the enactments in the Jewish code we shall speak presently. It was not, however, till the Gospel of Christ had brought a revelation for all the

world instead of for one nation, that the true spirit of Divine love and compassion was diffused among men. The prejudices which once opposed the progress of this Divine goodwill are continually lessening. The barriers offered by difference of nation, of country, of race, have been gradually removed; and it is not surprising that the exercise of compassion should be extended beyond the equally arbitrary limit of our own species.

There is a remarkable passage in the works of Jeremy Bentham, applying the principle of natural law to the rights of animals. It is quoted by Sir Arthur Helps in his "Talks about Animals and their Masters." "The day may come when the rest of the animal creation may acquire those rights which never could have been withheld from them but by the hand of tyranny. It may come one day to be recognised that the number of legs, the villosity of the skin, or the termination of the *os sacrum*, are reasons insufficient for abandoning a sensitive being to the caprice of a tormentor. What else is it that should trace the insuperable line? Is it the faculty of reason, or perhaps the faculty of discourse? But a full-grown horse or dog is beyond comparison a more rational as well as a more conversable animal than an infant of a day, a week, or even a month old. But suppose the case were otherwise, what could it avail? The question is not 'Can they reason?' nor 'Can they speak?' but 'Can they suffer?'"

It is well, however, to establish the duty of humanity to animals on the broad ground of religious principle; not natural religion only, but the religion of the Bible. Very little good will be done if the subject is regarded merely as a matter of law and of police. Not thus can we deal with the subject in the education of the young, or in appealing to public opinion. There is no plea for kindness to animals so strong as that it is harmonious with the spirit and the doctrines of Christianity.

"There is one aspect," says Dr. Chalmers, in the peroration of his eloquent sermon on the subject, "there is one aspect in which the duty of humanity to the lower animals may be regarded as more profoundly and more peculiarly religious than any one virtue which reciprocates, or is of mutual operation among the fellows of the same species. It is a virtue which oversteps, as it were, the limits of a species, and which, in this instance, prompts a descending movement on our part, of righteousness and mercy towards those who have an inferior place to ourselves in the scale of creation. The lesson of this duty is not the circulation of benevolence within the limits of one species. It is the transmission of it from one species to another. The first is but the charity of a world. The second is the charity of a universe. Had there been no such charity, no descending current of love and of liberality from species to species, what, I ask, would have become of ourselves? Whence have we learned this attitude of lofty unconcern about the creatures who are beneath us? Not from those ministering spirits who wait upon the heirs of salvation. Not from those angels who circle the throne of heaven, and make all its arches ring with joyful harmony, when but one sinner of this prostrate world turns his footsteps towards them. Not from that mighty and mysterious visitant, who unrobed Him of all His glories, and bowed down His head unto the sacrifice, and still, from the seat of His now exalted mediatorship, pours forth His intercessions and His calls in behalf of the race He died for. Finally, not from the eternal Father of all, in the pavilion of whose residence there is the golden treasury of all those bounties and beatitudes that roll over the face of nature, and from the footstool of whose empyreal throne there reaches a golden chain of providence to the very humblest of His family. He who has given His angels charge concerning us, means that

the tide of beneficence should pass from order to order, through all the ranks of His magnificent creation; and we ask, is it with man that this goodly provision is to terminate,—or shall he, with all his sensations of present blessedness, and all his visions of future glory let down upon him from above, shall he turn him selfishly and scornfully away from the rights of those creatures whom God hath placed in dependence under him?

"We know that the cause of poor and unfriended animals has many an obstacle to contend with in the difficulties or the delicacies of legislation. But we shall ever deny that it is a theme beneath the dignity of legislation, or that the nobles and the senators of our land stoop to a cause which is degrading, when, in imitation of Heaven's high clemency, they look benignly downward on these humble and helpless sufferers. Ere we can admit this, we must forget the whole economy of our blessed Gospel. We must forget the legislation and the cares of the upper sanctuary in behalf of our fallen species. We must forget that the redemption of our world is suspended on an act of jurisprudence which angels desire to look into, and for effectuating which the earth we tread upon was honoured by the footsteps, not of angel or of archangel, but of God manifest in the flesh. The distance upward between us and that mysterious Being, who let Himself down from heaven's high concave upon our lowly platform, surpasses by infinity the distance downward between us and every thing that breathes. And He bowed Himself thus far for the purpose of an example, as well as for the purpose of an expiation,—that every Christian might extend his compassionate regards over the whole of sentient and suffering nature."

In the same spirit as this noble appeal of Chalmers are the words of a distinguished man of science, Dr. George Wilson. "There is an example as well as a lesson for us in the Saviour's

compassion for men. Inasmuch as we partake with the lower animals of bodies exquisitely sensitive to pain, and often agonised by it, we should be slow to torture creatures who, though not sharers of our joys, or participators in our mental agonies, can equal us in our bodily suffering. We stand by Divine appointment between God and His irresponsible subjects, and are as gods unto them. . . . They have taught us a lesson of obedience to God, and He has taught us a lesson of kindness to them. We shall be worse even than the forgiven debtor, who showed no mercy to his fellow, if we wrong servants who have excelled us in faithfulness, or fail in compassion for the dumb creatures of God, which He has committed to our care.

> 'He prayeth best who loveth best
> All things both great and small;
> For the dear God who loveth us,
> He made and loveth all.'"

A high place in Christian ethics is here given to the duty of humanity to animals, but not too high when we consider that virtues and vices depend on the state of the mind, and not merely on the objects upon which they are exercised. "To do justly and to love mercy" are two of the great and comprehensive requirements of religion, and the sphere of their obligation is not limited to our dealings with our fellow-men. Man may imagine for himself a scale of guilt founded upon his idea of the relative importance of these objects, but in the eye of the common Father of all there can be no such distinction. "Man looketh to the outward appearance, but the Lord looketh on the heart." It is to the character and the internal disposition that He looketh, whether in denouncing His doom upon the unmerciful, or in announcing His promise to the merciful that they shall obtain mercy.

It may seem strange that, if this is so clearly an obligation of

Christian duty, the general recognition of it should have been so tardy. But it is not strange when we remember how slow are the triumphs of Divine love over human passions and interests. It is only in recent times that slavery and the slave trade have been regarded by common consent as contrary to the spirit of Christianity; and many evils are still countenanced among nations nominally Christian. We need not wonder, then, at the tardy recognition of the claims of humanity to animals as a moral duty.

The Jewish religion, while adapted to an earlier dispensation and a peculiar people, had the same Divine Author and origin as the Christian religion. Hence the sacred writings of the Old Testament, except where relating to matters national or ceremonial, are equally binding in respect to moral and practical questions with those of the New Testament. In the Old Testament are many statements and precepts on the subject of humanity to animals. Let us briefly consider, first, some special enactments in the Jewish code of laws, and then various other passages in the Bible, which give the highest sanction of religion to the duty we are enforcing.

In the Mosaic code of laws there were several special precepts by which mercy to animals was enjoined. For instance, Deut. xxii. 6, 7: "If a bird's nest chance to be before thee in the way in any tree, or on the ground, whether they be young ones, or eggs, and the dam sitting upon the young, or upon the eggs, thou shalt not take the dam with the young: but thou shalt in any wise let the dam go"—that is, whether you take the young for food or any other use, in any wise leave the mother. It is enough to lose her brood; let her have her liberty, and the chance of other young ones in their place.

In the same group of laws we read: "Thou shalt not see thy brother's ass or his ox fall down by the way, and hide thyself

from them: thou shalt surely help him to lift them up again" (Deut. xxii. 4). And again: "If thou meet thine enemy's ox or his ass going astray, thou shalt surely bring it back to him again." This is partly to teach goodwill even to an enemy; but with it is mixed up the duty of compassion for its own sake: "If thou see the ass of him that hateth thee *lying under his burden,* and wouldest forbear to help him, thou shalt surely help with him" (Exod. xxiii. 4, 5).

In Deuteronomy xxii. 10, we read: "Thou shalt not plough with an ox and an ass together;" a rule of mercy, teaching that the work should always be adapted to the strength of the animal employed. In Deut. xxv. 4, the precept, "Thou shalt not muzzle the ox when he treadeth out the corn," teaches that animals, when engaged in the service of man, should be treated with indulgence and kindness. The apostle Paul quotes this precept, and shows that God did not appoint it for the sake of oxen only, but that every labourer is worthy of his hire: and thence deduces the obligation of men to exercise justice in properly rewarding those who labour for their benefit, and especially who labour for the good of their souls. This use of the precept, so far from weakening, seems to confirm its obligation in reference to the lower animals. It proves that the same principles of equity are expected to apply to the relations between all God's creatures, and that the rules of justice and mercy are of universal obligation.

These Divine precepts, taken along with such passages of Scripture as describe God's watchful care over all His creatures, ought to give us higher views of our relations to the animals that serve us or are useful to us, and ought to inspire us with more of that goodwill which is so widely diffused over the creation. So far is the merciful regard of the Creator to the

lower animals declared, that in the covenant with Noah they are specially mentioned; and in the institution of the Sabbath they are to share the advantage of the day of rest from toil and labour. "Six days thou shalt do thy work, and on the seventh day thou shalt rest: that thine ox and thine ass may rest, and the son of thy handmaid, and the stranger, may be refreshed" (Exod. xxiii. 12; Deut. v. 14).

Other passages might be cited, as where harmless cattle are mentioned along with innocent children, as being regarded by the Almighty when He averted His judgments from guilty Nineveh. "And should not I spare Nineveh, that great city, wherein are more than sixscore thousand persons that cannot discern between their right hand and their left hand; *and also much cattle?*" (Jonah iv. 11).

Enough has been said to prove that kindness to animals is a duty enjoined by the precepts of the Bible. And besides these direct precepts, we find some of the most touching representations of the interest God takes in our welfare, and of His love to mankind, given under the figure of the kindness due on our parts to the lower animals. The love of the Saviour of the world is denoted by that of a tender and good shepherd: "He shall feed His flock like a shepherd: He shall gather the lambs with His arm, and carry them in His bosom, and shall gently lead those that are with young" (Isa. xl. 11; John x. 11).

It is true that God has given to man "dominion over the fish of the sea, and over the fowl of the air, and over the cattle, and over all the earth" (Gen. i. 26; ix. 1–3). But the dominion thus conferred is not absolute. It is limited by the eternal obligations of justice and mercy, even in matters not included in special precepts of the Scriptures. It is also to

be regarded not only as a right but as a trust. On this point we quote some sentences from a remarkable speech by the great Lord Erskine, when he was trying to induce the Government of his day to legislate for the protection of animals from cruelty : " That the dominion of man over the lower world is a moral trust, is a proposition which no man living can deny, without denying the whole foundation of our duties. If in the examination of the qualities, powers, and instincts of animals, we could discover nothing else but their admirable and wonderful construction for man's assistance ; if we found no organs in the animals for their own gratification and happiness,—no sensibility to pain or pleasure,—no grateful sense of kindness, nor suffering from neglect or injury,—no senses analogous, though inferior to our own ; if we discovered, in short, nothing but mere animated matter, obviously and exclusively subservient to human purposes, it would be difficult to maintain that the dominion over them was a trust : in any other sense at least than to make the best use for ourselves of the property in those which Providence had given us. But it calls for no deep or extended skill in natural history to know that the very reverse of this is the case, and that God is the benevolent and impartial author of all that He has created. For every animal which comes in contact with man, and whose powers and qualities and instincts are obviously adapted to his use, Nature has taken care to provide, and as carefully and bountifully as for man himself, organs and feelings for its own enjoyment and happiness." " The animals are given for our use, but not for our abuse. Their freedom and enjoyments, when they cease to be consistent with our just dominion and enjoyments, can be no part of their natural rights ; but whilst they are consistent, their rights, subservient as they are, ought to be as sacred as our own."

In the same strain as those eloquent arguments of Lord Erskine are the words of the gentle and genial poet Cowper:—

> "The sum is this: if man's convenience, health,
> Or safety interfere, his rights and claims
> Are paramount, and must extinguish theirs;
> Else they are all, the meanest things that are,
> As free to live, and to enjoy that life,
> As God was free to form them at the first,
> Who in His sovereign wisdom made them all."

Other motives of a religious bearing might be urged in behalf of our dumb clients. The fact of their being the creatures of God ought to secure our kind and humane treatment of them. "Ask now the beasts, and they shall teach thee; and the fowls of the air, and they shall tell thee: or speak to the earth, and it shall teach thee: and the fishes of the sea shall declare unto thee. Who knoweth not in all these that the hand of the Lord hath wrought this? In whose hand is the soul of every living thing" (Job xii. 7–10). God has made the sun, the skies, the air, free to all His creatures; and man should not wantonly shorten the little day of pleasure, nor interrupt the lowly bliss of those creatures to whom the Creator has given the enjoyment of life. Hear what Paley says in his "Natural Theology," in the chapter on "The Goodness of the Deity":—"It is a happy world after all. The air, the earth, the water, teem with delighted existence. In a spring noon, or a summer evening, on whichever side I turn my eyes, myriads of happy beings crowd on my view. 'The insect youth are on the wing.' Swarms of new-born flies are trying their pinions in the air. Their sportive motions, their wanton mazes, their gratuitous activity, testify their joy, and the exultation which they feel in their newly-discovered faculties. A bee among the flowers in spring is one of the most cheerful objects

that can be looked upon—so busy, so pleased; yet it is only a specimen of insect life, with which, by reason of the animal being half domesticated, we happen to be better acquainted than we are with others. The whole insect tribe, it is probable, are equally intent upon their proper employment, and under every variety of constitution gratified, and perhaps equally gratified, by the office which the Author of their nature has assigned to them."

The fact of God's providential care of the lower animals, their preservation as well as their creation by God, ought to secure their kind and humane treatment. In the beginning of the world, we read of the provision made for them as well as for man. "To every beast of the earth, and to every fowl of the air, and to every thing that creepeth upon the earth, wherein there is life, I have given every green herb for meat" (Gen. i. 30). The wants of all living creatures are before the Lord, the preserver of man and of beast (Psa. xxxvi. 6). "The eyes of all wait upon Thee; and Thou givest them their meat in due season. Thou openest Thine hand, and satisfiest the desire of every living thing" (Psa. cxlv. 15, 16). "He giveth to the beast his food, and to the young ravens which cry" (Psa. cxlvii. 9). "Consider the ravens: for they neither sow nor reap; which neither have storehouse nor barn; and God feedeth them" (Luke xii. 24). And again: "Behold the fowls of the air: for they sow not, neither do they reap, nor gather into barns; yet your heavenly Father feedeth them" (Matt. vi. 26). "These wait all upon Thee; that Thou mayest give them their meat in due season. That Thou givest them they gather: Thou openest Thine hand, they are filled with good. Thou hidest Thy face, they are troubled: Thou takest away their breath, they die, and return to their dust" (Psa. civ. 27–29).

This is the language of poetry, but it is also the language of fact, for we are assured that not even a sparrow falls to the ground without our Father, and "not one of them is forgotten before God," in whose hand is the breath of every living thing. It is not by miracle they are sustained, nor is there special providence in the fall of a sparrow; but God has wonderfully adapted the scenes of nature to the life of His creatures. "He causeth the grass to grow for the cattle, and herb for the service of man." "He sendeth the springs into the valleys, which run among the hills. They give drink to every beast of the field: the wild asses quench their thirst. By them shall the fowls of the heaven have their habitation, which sing among the branches." Well may man, as the great high-priest of nature, lift up the song of wonder and of praise: "O Lord, how manifold are Thy works! in wisdom hast Thou made them all: the earth is full of Thy riches. So is this great and wide sea, wherein are things creeping innumerable, both small and great beasts." "Sing unto the Lord with thanksgiving; sing praise upon the harp unto our God" (Psa. cxlvii. 7).

As God provides the sustenance for all living things, so He has implanted instincts in His creatures adapted to their infinitely varied conditions of life. The most interesting and instructive part of the study of natural history—far above the mere describing and classifying to which some naturalists confine themselves—is the observation of the habits and instincts of living creatures, in the preservation of their life and continuance of their species on the earth. Some men of science have seen in these wonderful instincts only the operation of material laws, ascribing life itself to the random play of lifeless atoms. But in a loftier and devouter spirit Addison has thus referred to the subject: "There is not, in my opinion, anything more mysterious in nature than this instinct in animals, which thus

rises above reason, and falls infinitely short of it. It cannot be accounted for by any properties in matter, and at the same time works in so odd a manner, that one cannot think it the faculty of an intellectual being. For my own part, I look upon it as upon the principle of gravitation in bodies, which is not to be explained by any known qualities inherent in the bodies themselves, nor from any laws of mechanism; but, according to the best notions of the greatest philosophers, is an immediate impression from the First Mover, and the Divine energy acting in the creatures" ("Spectator," No. 120).

Very much has been written concerning Instinct as distinguished from Reason. The distinction and definition will not be found so easy as might at first be thought, at least if we may judge by the great variety in the statements of naturalists and metaphysicians. Dr. Johnson in his Dictionary gives two definitions, the first referring to instinct as existing in man: "Desire or aversion in the mind, without the intervention of reason or deliberation." The second definition is what at present is to the point: "The power of determining the will of brutes." And he quotes, as example of the use of the word, from Pope—

> "The philosopher avers
> That Reason guides our deeds, and Instinct theirs:
> Instinct and Reason how shall we divide?"

How, indeed! But for ordinary purposes we can get sufficiently clear division. The most concise definition of instinct we have seen is: "Spontaneous impulse to certain actions, not accompanied by intelligence." Another author says it is "a capacity for performing certain actions which conduce to some useful purpose, but of which purpose the animal is itself ignorant." A third writer has it: "A natural impulse to cer-

tain actions, which animals perform without deliberation, and without having any end in view, or knowing why they do it." By Messrs. Kirby and Spence, in their "Entomology, or Elements of the Natural History of Insects," Instincts are said to be "those unknown faculties, implanted in their constitution by the Creator, by which, independent of instruction, observation, or experience, and without a knowledge of the end in view, they are impelled to the performance of certain actions tending to the well-being of the individual and the preservation of the species."

These latter definitions are correct so far as natural impulse and absence of plan are concerned, but it is not so certain that the animal is always unconscious of what it is doing, or ignorant of the object in doing it. A more accurate definition we venture to give: "Instinct is a natural impulse prompting to action, without instruction or experience, for the preservation of the individual or the continuation of the species." This definition includes instinctive actions in man as well as in the lower animals, and does not exclude such knowledge, or motive, or voluntary exertion, as will often be found to accompany actions which must still be described as instinctive. In cases, to be presently mentioned, of variation or modification of instinct, it cannot be said that the animal acts without intelligence and will, though, it may be, without experience and instruction.

Take for example the mode of birds building their nests. A pair of young birds, taken from the dam, and separated from all other birds, will in due season prepare a nest with as much skill as if they had been brought up with birds of the same species, and had practised nest-building for many successive springs. As a general rule, every species of bird has a mode of nidification peculiar to itself, so that a schoolboy would at once

pronounce on the sort of nest before him. This is the case among fields and woods and wilds; but near towns, the nest of a chaffinch, for instance, has not so finished and elegant an appearance, nor is it so beautifully studded with mosses and lichens, as in a more rural district; and the wren also, near towns is obliged to construct its house with straws and dried grasses, which do not give it that rotundity and compactness, so remarkable in the rural edifice of that little architect. Again, the regular nest of the house-marten is hemispheric, but where a rafter, or a joist, or a cornice may happen to stand in the way, the nest is so contrived as to conform to the obstruction, and becomes flat, or compressed. In these cases there is room for choice of materials and variety of construction, implying a measure of intelligent will, and not blind impulse only. But the work is so far in accordance with the habit of the species as to be rightly called instinctive.

Instinct cannot therefore be described as an *involuntary* impulse. Under ordinary circumstances it acts under natural law, which produces uniformity of action; but there are deviations from this uniformity, sometimes, indeed, caused by material conditions, but at other times undoubtedly the result of will or voluntary action modifying natural law. Still, the action is impulsive, or impelling to a defined end, and is carried out without previous experience or direction from other individuals of the species.

Many remarkable instances of modifications of instinct are described in Kirby and Spence's "Entomology," among the insect tribes.

There is a beetle, the *Geotrupes vernalis*, which rolls up pellets of dung, in each of which it deposits its eggs; and in places where it meets with cow or horse-dung only, it is constantly under the necessity of having recourse to this process. But in districts where sheep are kept, this beetle wisely saves

itself the labour, and ingeniously avails itself of the pellet-shaped balls ready made to its hands which the excrement of these animals supplies.

A caterpillar, described by Bonnet, which, from being confined in a box, was unable to obtain a supply of the bark with which its ordinary instinct directs it to make its cocoon, substituted pieces of paper that were given to it, tied them together with silk, and with this improvised material constructed a very passable cocoon.

Some species of the humble-bees roof their nests with a vault or coping of moss. Huber covered with a bell-glass a nest of one of the common species (*Bombus muscorum*), and the glass being placed on an uneven surface, he stuffed up the interstices with a linen cloth. The bees finding themselves in a situation where no moss was to be had, tore the linen cloth thread from thread, carded it with their feet into a felted mass, and applied it to the same purpose as moss, for which it was nearly as well adapted. On another occasion some humble-bees, confined in an open box on the top of which the cover of a book was laid, tore the cloth off the book-cover, and adapted the fragments for roofing their nest.

Huber, the most unwearied and successful observer of the life and habits of bees, has recorded many instances of the ingenuity and variety of resource of these insects, in adapting the form and size of their cells to the particular places or circumstances of their work.

In one case he placed in front of a comb which the bees were constructing a piece of glass. They seemed immediately aware that it would be very difficult to attach it to so slippery a surface; and instead of continuing the comb in a straight line, they bent it at a right angle, so as to extend beyond the slip of glass, and ultimately fixed it to an adjoining part of the wood-

work of the hive which the glass did not cover. This deviation, if the comb had been a mere simple and uniform mass of wax, would have evinced no small ingenuity: but you will bear in mind that a comb consists on each side, or face, of cells, having between them bottoms in common; and if you take a comb, and having softened the wax by heat, endeavour to bend it in any part at a right angle, you will then comprehend the difficulties which our little architects had to encounter. The resources of their instinct, however, were adequate to the emergency. They made the cells on the *convex* side of the bent part of the comb much larger, and those on the *concave* side much smaller than usual, the former having three or four times the diameter of the latter. But this was not all. As the bottoms of the small and large cells were, as usual, common to both, the cells were not regular prisms; but the small ones were made considerably wider at the bottom than at the top, and conversely in the large ones! What conception can we form of so wonderful flexibility of instinct? How, as Huber asks, can we comprehend the mode in which such a crowd of labourers, occupied at the same time on the edge of the comb, could agree to give it the same curvation from one extremity to the other? or how could they arrange together to construct on one face cells so small, while on the other they imparted to them such enlarged dimensions? And how can we feel adequate astonishment that they should have the art of making cells of such different sizes correspond?

That these adaptations, however varied and ingenious, are to be ascribed to instinct, modified instinct, and not to intelligent action, must be admitted. For the most extensive and exact knowledge would be necessary to the workers for the performance of such labours, if a result of reason and knowledge. Suppose a man to have acquired by long practice the art of

modelling wax into uniform hexagonal cells, it would take him months of toil to acquire skill to adapt his work to such variations as are frequent among bee architects, even if he were gifted with a clear head and a competent store of geometrical knowledge; and if destitute of these requisites, it may be safely asserted he would never succeed at all. "How, then," says Mr. Kirby, who quotes Huber's observations, "how can we imagine it possible that these difficult problems can be completely and exactly solved by animals of which some are not two days old, others not a week, and probably none a year? The conclusion is irresistible—it is not Reason but Instinct that is their guide."

A remarkable form of instinct is that which leads animals to make their way to remote places, without the possibility of aid from sight, or smell, or other senses. In migrating animals and birds, this instinct is common to the whole species; but there are also many instances on record of strange journeys performed by animals whose usual habits are home-keeping. The late Mr. J. K. Lord, an accomplished naturalist and genial writer, narrated the following instances in the pages of the "Leisure Hour."

"I once had a favourite spaniel, called Sport. He was lent to a friend, who came to fetch him. Sport was placed in a dog-cart, and driven to my friend's residence, a distance of over twenty miles. The cart was so made that air could freely get in for the dog to breathe, but by no possibility could any part of the road be seen during the journey. On his arrival Sport was tied up with a rope under the manger in the stable. During the night the dog gnawed his rope, made his escape through a broken window, and he was discovered early in the morning succeeding his departure, sitting, weary, hungry, and bedraggled, outside the door of my own residence. Now the question which

naturally presents itself is, how did the dog find his way back along a road not one foot of which he had ever seen before? The remembrance of particular objects noted by the way could not have guided the dog, simply because he had no opportunity afforded him of seeing them.

"I once, while living in the Far West, rode a horse from my camp across a prairie to an encampment of squatters, a distance of more than twenty miles. A river of some width was crossed on the route, the horse being ferried over in a large boat. The animal had never travelled the road previously, nor had it ever run upon the prairie, and yet during the night it contrived to break its tether line, and in the dark to find its way back to our camp; and, what is more strange, the horse actually swam the stream it had, during the day, been ferried over in a boat. By what means, it may be asked, did the horse contrive to find its way over a grassy waste never trodden by it previously to a given point so far distant? There was no path or trail, and in the dark the horse could not, except by smelling, have retraced its own footprints."

Many similar anecdotes are on record, to which the following authenticated cases may be added. A horse was turned out in some marshes adjoining the Thames. The distance in a straight line from his owner's house was only a few miles, but he had to be sent a long way round to cross the bridge. In less than twenty-four hours he made his appearance at the stable-door dripping wet, having swam the river and taken a straight line home.

During the life of the celebrated sportsman the late Sir Richard Sutton, a draft of young hounds was sent up to London by waggon, from the kennel near Lincoln, and there put on board a vessel to go abroad. While the ship was dropping down the Thames one of them jumped overboard and swam

ashore. Some weeks after, it made its appearance at the kennel half-starved, and covered with bites bestowed upon it by its more fortunate fellows. I regret to have to add that it was killed immediately, so many valuable hounds having recently been destroyed in that pack by madness, that the huntsman was afraid to take it in.

Some years since a dog-fox was run to ground on Hatfield Heath, near Ashford, Kent. When dug out he was found to have some remarkable white spots about him, therefore the Earl of Thanet had him sent to his seat in Westmoreland—Appleby Castle—a distance of 300 miles, and turned down. A fortnight afterwards the same fox was killed near Hatfield—his native place.

"Not very long ago," says one writer, "I saw a cow bought at a farm auction. About six o'clock in the evening she was sent off home by the purchaser, and was placed in the yard, a distance of fifteen miles from her former home. At six o'clock the next morning she was found back in her old shed, quietly chewing the cud, and waiting to be milked as usual.

"I once purchased a brood of ducklings, about a month old, without the hen that hatched them. I took them home and placed them, as I thought, safely in a pig-pound. In the morning I found they were all gone, and I discovered them snugly huddled together at their old quarters, at the other end of the village, in the nest in which they were hatched. A labourer told me he had met them in the street, homeward bound, at four o'clock A.M., as he was going to work. They had not been off the premises where they were bred before."

There seems no doubt that Providence has bestowed on animals an instinct which we do not possess, and can therefore with difficulty comprehend or explain. By this instinct birds of passage find their way to the remotest regions, and return to

their old haunts, guided by some power beyond that of sight or other outward senses.

In a broad general sense we say that man has reason, and brutes have instinct. This does not, however, imply that intelligence is not the moving power in many of the actions of animals, any more than that instinct is not the moving power in many of the actions of man.

In the early stages of human existence there is a large proportion of instinct, with only a small portion of reason; as years advance, there is a greater proportion of reason, but still with admixture of instinct, which continues throughout life. All the involuntary actions and functions of the human body are, in a sense, instinctive. Even in regard to some actions which are strictly voluntary, such as walking or swallowing, these are the results of early instinct, strengthened by exercise or habit. An infant, immediately after birth, swallows the mother's milk, by instinct using the same muscles which afterwards are moved by the will. The early instincts are subjected to a law of the animal economy, according to which motions occurring at the same time, or in immediate succession, become so connected, that when one of them is reproduced the other has a tendency to accompany or to succeed it. We call this the law of association. To this law of association that of habit is nearly allied, the power of which is exercised on the mental as well as the corporeal functions. By these laws many of the actions of man are determined, without direct or conscious exercise of the reason or the will. In fact, they may be regarded rather as instinctive than as rational. In man the powers of instinct prevail in the early stages of existence. In the imbecile and the insane, these actions of instinct prevail over those of reason throughout life.

In comparing the faculties of different classes of animals, we find that the two powers of reason and instinct generally exist in a kind of inverse ratio to each other. The higher the organisation, especially of the brain and nervous system, the larger the proportion of intelligence; the lower the organisation, the larger the proportion of instinct. In no class of living creatures, for instance, are the operations of instinct more varied and more marvellous than in the insect tribes. They have exquisite organs of motion, yet with such organisation of the nervous system that they cannot possess intelligence, and are denied even sensation by some physiologists. The fact of their spontaneous movements, however, attests the possession of sensation and will, although these are feeble compared with the intense power of their instinctive functions. The arguments for the automatism, or merely mechanical movements, of even the lowest tribes of insects, only come from theorists, and seem absurd to every practical naturalist who studies their life and habits.

As we advance upward in the scale of animated nature, the admixture of intelligence with instinct is constantly apparent. Every naturalist, every sportsman, and indeed every observer of animal life, can give hosts of illustrations of the intelligence of creatures whose life in the main is at the same time governed by instinct. Let us give a few examples. Archbishop Whately, in his interesting "Lecture on Instinct," tells of a cat which lived many years in his mother's family, and whose feats of sagacity were witnessed by the narrator's mother, sisters, and himself. "It was known, not merely once or twice, but habitually, to ring the parlour bell whenever it wished the door to be opened. Some alarm was excited on the first occasion that it turned bellringer. The family had retired to rest, and in the middle of the night the parlour bell was rung violently. The sleepers were startled from their repose, and

proceeded downstairs with pokers and tongs to interrupt, as they thought, the predatory movement of some burglar; but they were agreeably surprised to discover that the bell had been rung by pussy, who frequently repeated the act whenever she wanted to get out of the parlour." "It is quite clear," adds Dr. Whately, "that if such acts were done by man, they would be regarded as an exercise of reason; and I do not know why, when performed by brutes, evidently by a similar process, as far as can be judged, they should not bear the same name. To speak of a cat's having an *instinct* to pull a bell when desirous of going out at the door, or of an elephant's lifting up a cannon and beating down a wall at his driver's command, would be to use words at random."

A young lamb had become entangled in a brier hedge. Its own struggles, and the efforts of the mother, persevered in for a long time, were unavailing to set it at liberty. Finding at length that additional help must be obtained, the parent set off at a rapid pace across three large fields and through as many hedges, bleating in a most piteous fashion. In the last field were a flock of sheep, to whom she no doubt told her trouble, for she shortly returned, attended by a large ram, who used his powerful horns to some purpose, speedily dragging away by them the encircling briers, and freeing the captive. ("Leisure Hour," 1870, p. 125.)

The sheep is generally considered inferior in intelligence to most other animals, but the following anecdote, given by the editor of the English edition of Cuvier's "Animal Kingdom," is creditable to its sagacity, as well as to that of the cow, another animal whose intelligence is apt to be underrated.

"During an afternoon's walk with a friend on a hill near Coventry, we observed several sheep gazing steadfastly in the face of a cow that was grazing. Their fixed attitudes attracted

our attention, and as we came up the cow suddenly raised her head, and the sheep opened a way for her; she did not proceed more than a dozen yards before she reached a ewe, which, hitherto unnoticed by us, had fallen over on her back and was unable to recover herself from that perilous situation. The cow placed the tip of her horn close under the side of the animal, and gave a slight toss, so dexterously managed as to enable the ewe to get instantly on her feet."

The story of "Greyfriars Bobby" is widely known, but if it is new to only a few of my readers it is worth briefly retelling. A poor labouring man died, and was buried in the old Greyfriars Churchyard, Edinburgh. It was a plain, undistinguished grave, but there, with few intervals of absence, by day and night, the little terrier dog was seen to remain. How it was supported none could tell, but after a time one who resided near the churchyard used to give the poor faithful animal its food. When the dog-tax was imposed, the collector came upon Bobby's new patron for the tax. He explained that he was not the owner of the dog, whose master lay buried in the churchyard. The matter came before the city magistrates on appeal. Inquiries were made, and it was found that Bobby had, with touching fidelity, clung to the memory and to the grave of his master. The Lord Provost and magistrates of Edinburgh obtained for Bobby exemption from the tax, and presented the faithful creature with a collar with a suitable inscription. He continued to live in the churchyard till he died. The story had long before become famous, and the generous, kind-hearted Baroness Burdett Coutts has since erected a monument to Bobby's memory, in the form of a drinking fountain surmounted by a sculptured effigy of the dog.

Very many touching stories have been recorded of these creatures; of their grief at the loss of those they have loved, and

the great difficulty of separating them from the cold remains; and how, when these are hid from their sight, they will, for days, months, even years, constitute themselves the unwearying guardians of the mound of earth which marks the spot. The circumstance which ocasioned the composition of Scott's beautiful poem, "Helvellyn," is well known. An amiable and highly-talented young gentleman, who was in the habit of taking long rambles through the counties of Cumberland and Westmoreland, attended only by a favourite terrier, perished by losing his way, in the spring of 1805, on the above-mentioned mountain. His body was found three months afterwards, still watched over by the faithful companion of his solitary excursions. The poetry of Sir Walter is not so much in fashion as it used to be, and as it is possible that the lines may be new to some of our younger readers, we venture to quote two out of the five musical stanzas which compose the poem:

"Dark green was that spot, 'mid the brown mountain heather,
Where the Pilgrim of Nature lay stretched in decay,
Like the corpse of an outcast abandoned to weather,
Till the mountain-winds wasted the tenantless clay.
Nor yet quite deserted, though lonely extended,
For faithful in death, his mute favourite attended,
The much-loved remains of his master defended,
And chased the hill-fox and the raven away.

How long didst thou think that his silence was slumber?
When the wind waved his garment, how oft didst thou start!
How many long days and long weeks didst thou number,
Ere he faded before thee, the friend of thy heart?
And, oh, was it meet that—no requiem read o'er him—
No mother to weep, and no friend to deplore him,
And thou, little guardian, alone stretched before him,—
Unhonoured the Pilgrim from life should depart?"

Every one who has travelled much in Scotland, more especially in the Highland districts, must have remarked the large attend-

ance of shepherds' dogs at church on Sundays. This peculiarity is very interesting to English tourists, one of whom states that he was told that many of the dogs were more regular attendants than their masters. This gentleman mentions that, in one parish, the animals, perhaps demoralised by a "black sheep" among their number, became so quarrelsome and unmannerly in their behaviour, that the minister requested all who had been in the habit of bringing their dogs to confine them to the house before leaving for church. This plan answered exceedingly well for the first Sunday, but, for the future, not a single shepherd or farmer could find his dog on a Sunday morning. They had no notion of being deprived of their accustomed liberty, and, well knowing the hour of service, set off to church without their masters. An attempt was then made to compromise matters, by erecting a large kennel close to the church, where the dogs were imprisoned during public worship, but they kept up such a fearful howling, that the congregation was seriously disturbed, and there was no help for it but to restore them to their former rights and privileges.

What more interesting example of a process very like reasoning, as well as an evident desire to please his master, could be met with, than that which Cowper records in his beautiful little poem, entitled "The Dog and the Water Lily." To attempt to render it into commonplace prose would spoil it. Some of my readers may not be sorry to have the incident recalled in the poet's own words :

> "It was the time when Ouse displayed
> His lilies newly blown ;
> Their beauties I intent surveyed,
> And one I wished my own.
>
> With cane extended far, I sought
> To steer it close to land,
> And still the prize, though nearly caught,
> Escaped my eager hand.

Beau marked my unsuccessful pains
With fixed considerate face,
And puzzling set his puppy brains
To comprehend the case;

But with a chirrup clear and strong,
Dispersing all his dream,
I thence withdrew, and followed long
The windings of the stream.

My ramble ended, I returned;
Beau, trotting far before,
The floating wreath again discerned,
And plunging, left the shore.

I saw him, with that lily cropped,
Impatient swim to meet
My quick approach, and soon he dropped
The treasure at my feet."

Sir Edwin Landseer's pictures tell how much he admired and loved those wisest and most useful of all dogs, the collies. Nor does he confine his loving portraiture to intellectual traits only. What a depth of feeling and tenderness of affection we see in that picture of "The Shepherd's Chief Mourner!" In none of his paintings did the great artist exaggerate the character of the animals he loved to draw, certainly not in the case of the shepherd dogs.

All books of natural history abound in anecdotes of the docility and sagacity of these dogs, but they have had no more genial and discriminating historian than James Hogg, "the Ettrick Shepherd."

He declares that dogs know what is said on subjects in which they feel interested. A farmer had a dog that for years met him always at the foot of his farm, about a mile and a half from his house, on his way home. If he was half a day away, a week, or a fortnight, it was all the same; she met him at that spot; and there never was an instance seen of her going

to wait his arrival there on a wrong day. She could only know of his coming home by hearing it mentioned in the family.

The same writer speaks of a clever sheep-dog, named Hector, which had a similar tact in picking up what was said. One day he observed to his mother, "I am going to-morrow to Bowerhope for a fortnight; but I will not take Hector with me, for he is constantly quarrelling with the rest of the dogs." Hector, who was present, and overheard the conversation, was missing next morning, and when Hogg reached Bowerhope, there was Hector sitting on a knoll, waiting his arrival. He had swum across a flooded river to reach the spot.

"My dog Sirrah," says he, "was, beyond all comparison, the best dog I ever saw: he was of a surly and unsocial temper,—disdaining all flattery, he refused to be caressed; but his attention to my commands and interests will never again, perhaps, be equalled by any of the canine race. When I first saw him, a drover was leading him in a rope; he was both lean and hungry, and far from being a beautiful animal, for he was almost all black, and had a grim face, striped with dark brown. The man had bought him of a boy, somewhere on the Border, for three shillings, and had fed him very ill on his journey. I thought I discovered a sort of sullen intelligence in his countenance, notwithstanding his dejected and forlorn appearance; I gave the drover a guinea for him, and I believe there never was a guinea so well laid out; at least, I am satisfied I never laid out one to so good a purpose. He was scarcely a year old, and knew so little of herding, that he had never turned a sheep in his life; but as soon as he discovered that it was his duty to do so, and that it obliged me, I can never forget with what anxiety and eagerness he learned his different evolutions. He would try every way deliberately, till he found out what I wanted him to do, and, when I once

made him understand a direction, he never forgot or mistook it again. Well as I knew him, he often astonished me; for, when hard-pressed in accomplishing the task that he was put to, he had expedients of the moment that bespoke a great share of the reasoning faculty."

Among other remarkable exploits of Sirrah, as illustrative of sagacity, Mr. Hogg relates that, upon one occasion, about seven hundred lambs, which were under his care at weaning time, broke up at midnight, and scampered off, in three divisions, across the neighbouring hills, in spite of all that he and an assistant could do to keep them together. The night was so dark that he could not see Sirrah; but the faithful animal heard his master lament their absence in words which, of all others, were sure to set him most on the alert; and without more ado, he silently set off in quest of the recreant flock. Meanwhile the shepherd and his companion did not fail to do all in their power to recover their lost charge; they spent the whole night in scouring the hills for miles round, but of neither the lambs nor Sirrah could they obtain the slightest trace. It was the most extraordinary circumstance that had ever occurred in the annals of pastoral life. They had nothing for it, day having dawned, but to return to their master, and inform him that they had lost his whole flock of lambs, and knew not what was become of one of them. "On our way home, however," says Mr. Hogg, "we discovered a lot of lambs at the bottom of a deep ravine called the Flesh Cleuch, and the indefatigable Sirrah standing in front of them looking round for some relief, but still true to his charge. The sun was then up, and when we first came in view, we concluded that it was one of the divisions which Sirrah had been unable to manage until he came to that commanding situation. But what was our astonishment when we discovered that not one lamb of the

whole flock was wanting! How he had got all the divisions collected in the dark is beyond my comprehension. The charge was left entirely to himself from midnight until the rising sun; and if all the shepherds in the forest had been there to have assisted him, they could not have effected it with greater propriety. All that I can further say is, that I never felt so grateful to any creature under the sun as I did to my honest Sirrah that morning."

"It is a curious fact in the history of these animals that the most useless of the breed have often the greatest degree of sagacity in trifling and useless matters. An exceedingly good sheep-dog attends to nothing else but that particular branch of business to which he is bred. His whole capacity is exerted and exhausted on it, and he is of little avail in miscellaneous matters; whereas a very indifferent cur, bred about the house, and accustomed to assist in everything, will often put the more noble breed to disgrace in those paltry services. If one calls out, for instance, that the cows are in the corn, or the hens in the garden, the house collie needs no other hint, but runs and turns them out. The shepherd's dog knows not what is astir; and, if he is called out in a hurry for such work, all that he will do is to break to the hill, and rear himself up on end to see if no sheep are running away. A bred sheep-dog, if coming hungry from the hills, and getting into a milk-house, would most likely think of nothing else than filling his belly with the cream. Not so his uninitiated brother; he is bred at home to far higher principles of honour. I have known such lie night and day among from ten to twenty pails full of milk, and never once break the cream of one of them with the tip of his tongue, nor would he suffer cat, rat, or any other creature to touch it. This latter sort, too, are far more acute at taking up what is said in a family."

A number of elephants on a march in India came on the scent of a tiger. One of them was seized with a panic and ran off into the woods, the driver saving himself by clinging to the branch of a tree and letting himself down. All attempts to recover the animal were fruitless, and the party proceeded on their way, giving up all idea of seeing him again. Amongst a herd of wild elephants entrapped eighteen months afterwards was found the runaway, who at first was as uproarious and unmanageable as the rest; but on an old hunter who knew him well riding up to him on a tame elephant, pulling him by the ear, and ordering him to lie down, he immediately obeyed the familiar word of command and became perfectly tractable. The writer who records this instance of memory also mentions a female elephant which escaped from her owner and was at large for *fourteen years*. On being recaptured she remembered her former driver, and instantly lay down at his order.

Locke adduces the learning of tunes as a proof that birds are gifted with memory. "It cannot," he says, "with any appearance of reason be supposed—much less proved—that birds, without sense and memory, can approach their notes nearer and nearer by degrees to a tune played yesterday, which, if they have no idea of it in their memory, is nowhere, nor can be a pattern for them to imitate, or which any repeated essays can bring them nearer to. Since there is no reason why the sound of a pipe should leave traces in their brains, which not at first, but by their after endeavours, should produce the like sounds; and why the sounds they make themselves should not make traces which they should follow as well as those of the pipe, is impossible to conceive."

There is no question that many animals understand the measurement of time. It is a well-known fact that, on lands where the crows are habitually shot at, the birds, instead of

keeping at a respectful distance, as on the rest of the week, come close up to the farmhouses on Sundays, having somehow found out that the guns are then shelved.

Mr. Bell gives the following instance as having fallen under his own knowledge. "A fine Newfoundland dog, which was kept at an inn in Dorsetshire, was accustomed every morning, as the clock struck eight, to take in his mouth a basket placed for the purpose, and containing a few pence, and to carry it across the street to a baker, who took out the money, and replaced it by a certain number of rolls. With these Neptune hastened back to the kitchen, and safely deposited his trust; but what was well worthy of remark, he never attempted to take the basket on Sunday mornings."

We cannot just now call to mind where we met, long ago, with a very amusing example of memory in a horse—the charger of the commanding officer of an Indian regiment. He was an exceedingly large and heavy man, and the horse having a dislike to carrying such a burden, acquired the habit of lying down on the ground whenever the colonel prepared to mount. This, as may be supposed, annoyed him, and, to avoid the ridicule of the soldiers, he parted with the animal, and procured another not so fastidious as to a few stone more or less. We believe it was a year or two—certainly some considerable time—after that the colonel, visiting another station, was invited to review the troops there, and a horse was placed at his service, which, on his attempting to mount, immediately lay down in full view of the assembled regiment. It turned out to be the identical dismissed charger, who had at once recognised his former objectionable owner.

In our school-days, says a writer in the "Leisure Hour," we made acquaintance with a Newfoundland dog, whose knowledge of the value of money and careful provision for his future wants,

were familiar to a large circle of admirers and patrons. He belonged to a clothier, and the entrance to his master's place of business was furnished with a couple of doors, some six or eight feet distant from each other, the outer one always being open in the daytime. A large mat between the two was his constant post; he rarely, if ever, was absent from it except for a few minutes at a time, when he went to supply himself with provisions at a baker's shop a few doors off, at the corner of the street. Many were the halfpence saved from marbles, barley-sugar, toffy, and even from our daily allowance for lunch, which we bestowed upon the great, sagacious-looking creature, for the pleasure of seeing him walk to the baker's and lay out his money in a biscuit. Sometimes we were disappointed of our amusement, for if not at the moment hungry he would take the coin and hide it under his mat, where, according to school-boy report, he had a fabulous amount (for a dog) of coppers, and from which he abstracted a penny or a halfpenny at a time, according to the state of his appetite. He knew perfectly well the difference between the coins, and their relative value, and that he was entitled to receive two biscuits for the larger sum, and only one for the halfpenny. We have given him a penny, and seen him enter the shop and permit the attendant damsel to take it out of his mouth, but instead of accepting the two biscuits offered him he stood still, looking gravely at her, as if something were wrong. This behaviour was intended to signify that he only wanted a single biscuit on that occasion, and wished for the change out of his penny. Now and then he took a fancy for a French roll by way of variety; at such times he would "make no sign," and preserve a fixed impenetrability of countenance on the presentation, first, of the couple of biscuits, and then of a biscuit and a halfpenny; then his desire was understood. The people of the shop were, as may be sup-

posed, accustomed to his ways, and able to interpret his mute expression, and as anxious to please him as if he had been a "regular customer" of the human species. After leaving school, I was told by more than one informant worthy of credit, that if you gave him a sixpence and accompanied him to the shop, he would receive the change, and then allow you to take it out of his mouth, satisfied with his two biscuits, and apparently quite conscious that so large a sum was never intended to be given him at one time. We never knew what became of the balance of his day's receipts at bed-time—whether his owner took care of it for him, and laid it out in new collars and mats as the old ones became worse for wear, or whether he slept upon it and guarded it. It was almost impossible that, unless gifted with an uncommonly elastic appetite, and a strict vegetarian to boot, his expenditure could have equalled his income. Poor old fellow! he was not a handsome specimen of his race, but "handsome is that handsome does," says the old proverb; and his intelligence and amiability made him a general favourite with the *habitués* of the well-frequented thoroughfare. He died long ago, and was properly honoured by being stuffed and preserved. How he would have been perplexed, if he had survived to the days of the bronze coinage; clever as he was, it would have been some little time, we suspect, before he learned to distinguish between the old halfpenny and the new penny, so nearly of a size.

Many anecdotes have been recorded about little dogs, after being worried by bigger dogs, returning with a more powerful friend or companion, and taking delight in seeing the bully well thrashed.

The following deliberate plan of retaliation, formed and carried out by a dog belonging to himself, is related by one who was a witness of the whole proceeding. The dog had been

assaulted and bitten by another much more powerful than himself, and thinking that, in such unequal odds, "discretion" was "the better part of valour," he took to his heels and ran home. For several days afterwards he was noticed to put himself on half rations, and lay by the remainder of his food. At the expiry of this period he sallied out, and in a short time returned with a few of his friends, before whom he set his store of provisions, and begged them to make a good dinner. This being despatched, the guests took their leave, along with their entertainer, and followed by the dog's master, whose curiosity was excited. He watched their progress for a considerable distance, when a large dog marked out by the leader to his companions as the offender was furiously attacked by them all, and well worried before he could make his escape. The self-denial persevered in by this dog with a view to his revenge, and his knowledge of the efficacy of a bribe, are very remarkable; and he must have explained to his friends the service expected from them in return for their dinner.

Examples of the intercommunication of ideas between animals of different races have, it is believed, been very rarely recorded. The subjoined one is from an eye-witness. An old mare, relieved from hard work in consequence of the infirmities of declining years, was turned into a field in company with a cow and several heifers. The pasturage in this field being of very indifferent quality compared with the rich crop of grass and clover in the one adjoining, longing eyes were cast by the animals on the tempting food from which they were debarred, and many attempts made to break through the intervening fence, which at some points was not in the best repair. One day the mare was observed to make a regular tour of inspection round the enclosure, evidently, as the sequel shows, to discover the most favourable place for escape. Having ascertained this

to her satisfaction, she returned to her companions, and requested the cow's attention by tapping her gently on the shoulder, first with her hoof, and then with the head. The cow then followed her conductor to the invalided part of the fence, and the pair having attentively surveyed it together, went back for the heifers, after which, the old mare setting the example, the rest followed her over the gap, and found themselves (literally) "in clover." It would not be difficult to translate the quadruped ideas and language here into our own tongue. First, we may suppose the reflection of the old lady to be something like this: "The vegetation in that field looks particularly rich and good; it makes one's mouth water. I'll just go round and see if there's no way of getting in." Then, having discovered the suitable spot—no selfish desire to leap the fence unobserved, and feast, like Jack Horner, all in a corner by herself, but—"I'll go and tell the cow, and bring her to look at the place." This done, the two consult together, and agree that "it will do very nicely; but we mustn't leave these poor young things in the lurch; they must share in the feast; let us go back for them." If these were not exactly the reasoning processes that took place, the initiatory movements and final result lead us to conclude that they must have been very similar.

A very interesting anecdote is related by Frederic Cuvier, showing not only great power of memory, but also strong attachment in an animal generally supposed to be destitute of all good qualities—the wolf. A gentleman had trained up one from infancy till he was as tractable as a dog, would follow him about whenever allowed, and become quite low-spirited when he was absent. Being compelled to leave home, his master made him over to the Ménagerie du Roi, where he at first drooped and refused to eat, but gradually became more reconciled to the situation. After the lapse of a year and a half his

master returned home and paid him a visit. The wolf knew his voice the moment he spoke, and flew to him with every demonstration of delight and affection, planting his fore-feet on his shoulders and licking his face. The same scene occurred after a second separation of three years' duration, the wolf, as before, at once recognising his master's voice, and bounding towards him as soon as set at liberty by the keeper. A final parting followed, and from that time the faithful creature never appeared to regain his former spirits and equable temper, occasionally indeed betraying ominous signs of the ferocity inherent in his race.

Many stories have been told of Sir Edwin Landseer's fondness for dogs, and the attachment shown by his various pets. Tiney, a little white terrier, was the latest companion of the painter. A brief biography, accompanying a portrait of Tiney, in the "Animal World," says that he readily learned his master's will, and equally understood his fun. The painter and his brother and sisters found no difficulty in teaching him many tricks. He regularly fetched the morning newspaper from the kitchen to his master's bed, and found a daily reward in the caresses of his benefactor. He as punctually carried up his patron's boots, making two journeys in doing such duty. Dogs reason, we have often said; and certainly Tiney did one morning, when he thought that it would save himself a second journey if he could take up the two boots at one time. Consequently he placed the boots together in a favourable position to enable him to grasp both with his mouth, and having gripped them he started off with apparent success and glee. His enthusiasm was, however, checked on the way by many impediments, and principally by the steps of the staircase. Though it occupied much more of his strength and time to accomplish the task he had set himself to do than he

had expected, Tiney's energy never flagged until he placed both boots together before his master, when he rested, apparently much exhausted, but really perhaps reflecting on his own folly; for never afterwards did any one see him attempt to carry more than one boot at a time. Tiney was taught to ask for biscuits; and it is noteworthy that when he begged of Mr. Charles Landseer (who suffers from deafness), he invariably barked in a much louder note than when addressing any other member of the family—a habit which experience and a love of biscuits, we need hardly explain, had taught him to be mindful of.

During Landseer's four-years' illness Tiney never left his side. In the garden, on very fine days, the faithful dog would sit coiled up for hours at his master's feet; and shortly before his end, Landseer, embracing his pet, exclaimed, "My dear little white dog; nobody can love me half as much as thou dost."

Anecdotes of elephantine intelligence are numerous, but most of them too well known to repeat here. In fact, all animals that come under the observation of man supply illustrations of what we may call moral as well as mental qualities that are truly surprising. The difficulty is not to find but to select such illustrations. But we have quoted as many as our space will permit.

A reviewer in the "Times," having noticed several books on animal sagacity, said: "If animals were only as sagacious in real life as they are in books, what a wonderful world it would be! No doubt the facts contained in many of even the most wonderful of these tales really happened exactly as they are described; it is the inferences from these facts which so often make us shake the head!"

Well, we are not telling these stories here to illustrate the disputed question of instinct and reason, nor to encourage any morbid affection towards the lower animals. Because

some animals are intelligent, docile, and affectionate, it does not follow that all animals are to be praised, or any of them to be petted. There are very bad and disagreeable animals, as there are very bad and disagreeable people, but we have no right to treat them with cruelty. Where animals do not interfere with man's rights and convenience, they have a claim to humane treatment. If the Creator has given to them such wonderful qualities and capacities, man should not injure wantonly God's creatures. This is an inference at which no one need shake the head. And another inference from such stories is the very practical one, that we may get good example sometimes from the lower animals. We may learn from them

> "Many a good
> And useful quality, and virtue too,
> Rarely exemplified among ourselves;
> Attachment never to be weaned or changed
> By any change of fortune, proof alike
> Against unkindness, absence, or neglect:
> Fidelity, that neither bribe nor threat
> Can move or warp; and gratitude for small
> And trivial favours, lasting as the life,
> And glistening even in the dying eye."—*Cowper.*

Bishop Butler, in the opening chapter of his "Analogy," "On a Future Life," gives various reasons against concluding that the dissolution of the body must be followed by the destruction of the living agent. "But," he adds, "it is said these observations are equally applicable to brutes; and it is thought an insuperable difficulty that they should be immortal, and by consequence capable of everlasting happiness." This objection Bishop Butler calls both invidious and weak, for immortality would not imply that they must arrive at great attainments, and become rational and moral agents; "even this would be no difficulty, since we know not what latent powers and

capacities they may be endued with." But the economy of the universe might require the existence of living creatures without any capacities of this kind. And all difficulties as to the manner how they are to be disposed of are so apparently and wholly founded in our ignorance, that it is wonderful they should be insisted upon by any but such as are weak enough to think they are acquainted with the whole system of things.

So great a thinker as Bishop Butler did not consider it irrational to conceive the continuance of the life of the lower animals with their present capacities. However this may be, the motives to humanity are equally strong. If, as some wise and good men have supposed, there may be a place for lower creatures than man in a future world, we should feel the responsibility of our relation to them now all the greater. Or, if we regard them only as a passing part of the present system of things, then, in knowing that death is the end of their little existence, we have the strongest motive to let them enjoy their brief life, and cruelty appears the greater injustice.

II.

VARIOUS FORMS OF NEEDLESS SUFFERING INFLICTED BY MAN.

I MUST now pass on to a less pleasant part of my subject, in pointing out the chief ways in which cruelty to animals is shown. Some of these are obvious enough. No one can pass along our streets without witnessing painful scenes. In places less open to public view, atrocities are perpetrated revolting to humanity and disgraceful to a Christian country. In these dark places, sometimes the lust of gain is the motive, sometimes the love of amusement, or "sport." Besides these classes of wanton and wicked cruelty, many are the ways in which helpless animals are exposed to thoughtless and unnecessary pain and injury. It would be impossible, within a short space, to enumerate all the forms of this evil; it is sufficient to mention some of the more common occasions of suffering and cruelty.

To speak of such things in detail would only distress readers with sensitive minds. At the same time, in order to expose and prevent such wrong-doing, people's minds *must* be distressed. Those who feel the most unselfishly and keenly for suffering are *always* distressed, and will continue to be, so long as those who do nothing to lessen the suffering have their feelings too much considered. Plain speaking and decisive action are needed in such a matter.

We begin with the various kinds of needless suffering inflicted upon animals used for the food of man; and we may include clothing and other necessary purposes.

Strange scruples have been raised not merely against the use of animal food, but against taking away the life of animals for any need of man. Not in superstitious India only, but in this country, there are Vegetarians, and other persons, who object to the use of animal food, not on the ground of health only, but as involving a power to which man has no right. To such statements we have only to oppose the clear permission of the Divine Author of life: "Into your hand they are delivered; every moving thing that liveth shall be meat for you: even as the green herb have I given you all things." Subsequent prohibitions, and the division into clean and unclean animals, had reference simply to ceremonial or sanitary points, and did not touch the divinely permitted right to take life for man's use. But this unqualified permission can never give sanction to the infliction of unnecessary pain, and far less of any form of lingering or cruel death. The killing of animals, whether for food, or clothing, or any other purpose, should be done as quickly and compassionately as the disagreeable office will permit. But is it so? Let the reader judge from a few facts. From the field and the farm, until they are killed for the table, and in the act of killing, most of the animals used for our food are subject to much needless and therefore cruel suffering.

In the transit of cattle by trains there has of late years been considerable improvement, the trucks being larger and more convenient than formerly, and on some lines special provision being made for giving them water in a long journey. But still there is too much cruelty, as any one may witness who has happened to be at a station on the arrival or departure of a cattle train. A traveller described in the "Times" what he saw

at Ely, and it is only a sample of the sufferings to which cattle in transit are subjected. "My attention was attracted to the up passenger platform, alongside of which was a cattle train, by a succession of oaths, exclamations, and sounds as of blows of sticks rapidly delivered. On crossing the line to see what all this meant, I found an unfortunate ox stretched on its belly across the lowered door or gangway of one of the trucks. The poor brute lay panting, utterly exhausted, with his forelegs resting on the floor of the truck, his hind legs stretched out touching the platform. Half a dozen drovers surrounded the animal, intent on overcoming his exhaustion, and compelling him to get on his legs. The method which they adopted was this: two of the fellows dragged him by the horns, another twisted his tail, whilst one at each side belaboured his back and sides with rapidly falling blows of cudgels, only intermitted for the moment while the cudgels were used as goads. There lay the helpless brute, every now and then making a vain effort to rise, until, after quite fifteen minutes' torture, he was got upon his legs and pushed in among the other animals in the truck, where it was presumed that close packing would prevent his falling on the floor of the van and being trampled to death. On inquiry I learned that these cattle came from Ireland. They generally arrive in Dublin from various parts of the country, and are immediately shipped for Liverpool, where they are trucked for various English markets, in this instance for Norwich. Fatigued by the journey in Ireland, knocked about and sickened in crossing the Channel, tired by travelling for many hours on English lines, often without food or water, one or more of the creatures frequently sink in the truck exhausted, and are trampled to death by the other animals. To meet this difficulty was the object of the proceedings I witnessed. The exhausted prostrate beast was dragged half out of the truck and tortured until he

was made to stand up again and resume his place among his fellow-travellers. This process, I was told, goes on in truck load after truck load, and week after week."

In the shipment and sea transport of cattle, sheep, and other live animals, there is often much unnecessary cruelty. Even in the shorter passages by the Channel steamers this is true, but in the traffic from the Continent, which is every year assuming greater dimensions, the horrors are like those we used to read of in the holds of the slave-trade ships. A well-known writer, a man as kind as he is brave, John MacGregor ("Rob Roy," in his "Canoe Cruise on the Baltic"), gives a painfully graphic account of "the horrors of the middle passage," in the transport of cattle from Northern Europe across the German Ocean to our ports. "Our captain, and indeed the crew and the drovers," says Mr. MacGregor, "did not appear to be heartless in the matter. It is the whole system and plan of shipping cattle which must be amended. To put suffering dying bullocks in the same steamer with passengers is utterly a mistake. The vessel cannot be used for both purposes without being unfit for either, since the two are quite incompatible.

"If a poor bullock becomes sea-sick at all, he speedily dies. If he is even weaker than his unhappy companions, and lies down, after two days and nights of balancing on sloppy, slippery boards, he is trampled under the others' hoofs, and squeezed by their huge bodies, and suffocated by the pressure and foulness.

"Through the livelong night, while we Christians on board are sleeping in our berths, these horrid scenes are enacted, and no one to see them.

"Morning comes, and the dead must be taken from the living. A great boom is rigged up, and as we lean over the rail to look on, there is a chain let down, and the steam-winch winds and winds it tight, and straining with some strong weight below, far, far

down in the lowest of the three tiers of 'filet de bœuf,' where no light enters, and whence a Stygian reeking comes.

"Slowly there comes up first the black, frowning head and horns and dull blue eyes and ghastly grinning face of a poor dead bullock, then his pendent legs and his huge carcase.

"To see the owner's mark on his back they scrape away the slush and grime, then he is swung over the sea, and a stroke of the axe cuts the rope round his horns. Down with a splash falls the vast heavy carcase; and £20 worth of meat floats on a wave or two, then it is engulfed. Another and another, and twenty-two are thus hauled up and cast into the sea, and this, too, on the first day of a very calm passage. What must it be in a storm? Oh, the roast beef of old England!"

Captain Stanley, R.N., has called public attention to a scene of gross, but we should hope exceptional, cruelty, witnessed by him in the landing of a cargo of cattle, from a foreign port, at Deptford. The poor brutes, sick, bruised, and faint, were savagely urged on with goads and sticks, in a way which the writer could only characterise by an allusion to the fiends in Doré's illustrations of Dante's "Inferno."

It ought to be widely known that there are two Acts of Parliament providing against cruelty during transit of animals either by railway or in steamboats: 32 and 33 Vict. c. 70, enforcing supply of food and water; and 12 and 13 Vict. c. 92, forbidding their improper conveyance. The following are examples of prosecutions taken under these statutes:

"A cattle dealer, of Edinburgh, was summoned at the Oxford Petty Sessions, for having unlawfully neglected to make any request in writing to the London and North-Western Railway Company to supply ten cows with food and water on their transit from Kilmarnock, in Scotland, to Oxford. A second summons charged the defendant with cruelty for conveying

the animals as aforesaid, when they were far advanced in calf.

"Mr. Percival Walsh appeared to prosecute on behalf of the Royal Society for the Prevention of Cruelty to Animals, and said the following were the facts: The ten cows were sent by the defendant from Kilmarnock to Oxford, a distance of about 344 miles. They were started, according to the direction of the defendant, at 4 P.M. on the afternoon of Monday, the 30th of September, and did not arrive until about a quarter after seven on the following Wednesday morning. Even if these were steer animals, it would have been a most cruel thing for them to have been kept for thirty-eight hours without food and water. Between four and five o'clock on the morning of Wednesday, the 2nd of October, it was discovered by the brakesman of the train, at Bicester, that some of the animals were lying down in the truck. He drew the attention of the inspector to the fact, and endeavours were made to take them out. Eight of them suffered intensely, but recovered. The other two died. It was a case of most monstrous cruelty, and he should ask the reporters to give the details of the case as fully as they could, with the view of the attention of the Privy Council being directed to the case. He then called witnesses, who proved the facts as stated above, when the magistrates retired, and after being absent about a quarter of an hour, returned into Court. The mayor said that the decision of the Court was, that a fine of £5 be inflicted for the first offence, and £5 for the second, with costs. The costs altogether amounted to £14 8s. 6d. Total, £24 8s. 6d."

The cattle drovers used to be a very rough and cruel set, as a class, but of late years there has been great improvement, many of them being remarkably kind as well as steady and respectable men. In the metropolitan district they require to have a

licence, which is a check upon those who might otherwise show misconduct. The officers of the R.S.P.C.A. also keep a vigilant look-out. The existing law is strictly enforced in cases brought before magistrates. The following clause is in the Act 12 and 13 Vict. cap. 92: "If any person shall cruelly beat, ill-treat, over-drive, abuse, or torture, or cause or procure to be cruelly beaten, ill-treated, over-driven, abused, or tortured, any animal, every such offender shall for every offence forfeit and pay a penalty not exceeding five pounds." The magistrates have the power of committing to prison for a period of three months, without option of a fine, for the same offences on conviction. It might be well to appeal more to the better feeling of the drovers, as well as to their fear of punishment—by giving good-conduct badges, for instance, in approved cases of habitual humanity.

The most humane—or we should say, rather, the least painful—mode of slaughtering oxen has been much discussed. It is strange that no general agreement has been arrived at on a matter where such an amount of practical experience is available. The disputes are chiefly among benevolent theorists. The practice of "pithing," either by piercing the brain through a wound in the forehead by a pole-axe, or by piercing the spinal marrow in the neck, has been recommended by many, and is adopted in some slaughter-houses. It is a very effective method in skilled hands, but if awkwardly done would be sure to cause intense suffering. Any one who has witnessed the swift death of the bull by a veteran matador can understand the efficiency of this mode of killing, but few ordinary butchers could skilfully accomplish the feat. A well-known medical man, at a recent meeting of the Society for Prevention of Cruelty to Animals, recommended the "asphyxiating process," or killing animals by exposing them to carbonic acid gas, in

which they would be suffocated. It is not likely that this process will ever come into general use, even if it were practicable, and if it could be shown to do no detriment to the flesh of the animals. As far as experience goes, no method has been proposed more efficacious and prompt than the ordinary one of stunning the animal by the blow of a mallet or axe on the forehead, followed immediately by bleeding, either by cutting the large vessels of the throat or piercing the heart with a long sharp knife. The certainty of this mode of slaughtering depends entirely on the strength and the skill of the operator. The only direction in which the efforts of the benevolent can be usefully turned in this matter is, to secure that competent persons be employed in slaughter-houses. No one ought to be allowed to kill without a licence, and the licence ought to be given only after sufficient proof of ability and skill. It is sad to think of the sufferings inflicted by blundering men and lads in this daily process. It is within the province of local magistrates to license and oversee slaughter-houses, and more care should be taken that none exercise this craft without licence after sufficient proof of competency.

Veal is not wholesome or digestible food. White veal is certainly unwholesome, and only very heartless people would touch it if they knew how it is prepared for market. In the killing of oxen there may be sometimes needless suffering, but the cruelty to which poor helpless calves are subjected is atrocious. Their torment begins when being taken to market. The too common plan is to tie their legs and lay them in a cart with their heads hanging below the level of their bodies. If the salesmen or butchers were conveyed in a jolting cart for some hours in this way, they would understand the cruelty of it, if they had any reason or feeling left at the end of the journey. A veterinary surgeon, who examined some calves

after a journey of only a few miles, found the skin on the head and throat tight, the eyes bloodshot, the mouth frothing, and one of them had blood oozing from the nostrils. In fact, the brain was gorged with blood, and the whole frame fevered. The suffering must have been intense, and the meat could not but be diseased.

The journey completed, a new form of torture is undergone in the slaughter-house. Instead of being quickly put out of pain, the calf is bled at intervals, that the blood may be slowly drawn from the body. Then, when still alive, the poor creature is slung up by the hind legs, with the nose fixed to a rail, and the blood allowed to trickle out, in the hope that every drop may be extracted, and the flesh assume the white hue prized by gourmands. This is how white veal is made, and no wonder it is often found an unwholesome and indigestible diet. Except to please stupid, ignorant cooks, there is no call for any of this barbarous cruelty. The meat is far better when not drained of its blood, and left mere fibre, insipid and white. With regard to the conveyance, Mr. Hunt, a large dealer in Sussex, who had dealt in sucking-calves for forty years, and sent about two thousand every year to market, has recorded his experience: "I attend Salisbury market, and buy a great many calves. They are put into a van with their legs untied, at perfect liberty, and in that manner brought home. In my opinion the practice of tying their legs, and packing them closely in a cart, with their heads hanging down, is a most unnecessary and cruel mode of conveyance. I never had a calf injured while conveying them in an upright position, nor would any other dealer who takes proper care of his animals. All the calves brought to Chichester market are brought standing up or slung in nets underneath the vans. My carts are six feet by five, with open rails on each side, affording a thorough ventila-

tion. Each van holds about fifteen calves, and I travel at the rate of five miles an hour." A dealer at Guildford was lately prosecuted and fined for carrying calves in a cart, tied with their heads hanging down, and there are few magistrates at petty sessions or quarter sessions who would not convict on information of such cruelty. As to the cruelty in the slaughter-house, its removal must be the result of public opinion, and to help this the mystery of "white veal" has been explained. A word from purchasers to the cook and the butcher would put this to rights. If a certain amount of whiteness is required, ascertain that it is not produced by the slow torture of bleeding when the calf is alive. The pole-axe being used, and the head then taken off, the draining of blood from the dead carcase should be the only whitening allowed. This plan is not only more merciful, but the veal is more nourishing and more wholesome.

What is true of cattle and sheep is too sadly true of almost every creature used for man's food—there is a great amount of thoughtless and heartless cruelty. Take for example the following report of what was lately witnessed by a correspondent of the "Times:"

"On returning last evening to town by the Great Western Railway, when arriving at Swindon my attention was arrested by the loud and continuous cackling of geese conveyed by the train. Having a presentiment that something was wrong, on reaching Paddington I sought out the trucks in which the poultry were, when I found that they were pent up in flat wooden cases, two deep, which, without having measured them, I should say were about two yards square and say fifteen inches deep. Air was admitted at the top of the cases by apertures, the dimensions of which may be gathered from the circumstance that it was only by means of the most careful and

tender manipulations on the part of a railway porter, while I was standing by, that the head of one of the geese, which, no doubt, had been forced through in a sort of death-struggle when gasping for breath, was restored to the case, and the bird thus saved from slow strangulation.

"Desiring to ascertain as far as I could the condition in which the poultry was, I put my open hands through the bars, when I was shocked to find the birds so closely packed that they seemed actually wedged together.

"But your readers may imagine how still more shocked I was on learning that these poor geese and fowls had been kept in that painful state since leaving Waterford on the morning of the previous day (how much before is impossible for me to say), and were to remain in that cramped and stifled state yet another long night, as in any case they would not be delivered until this morning. But, worse still, during the whole of this protracted time the poor birds were kept entirely without both food and water. I gathered that, in the summer months, it is not an unusual thing for some of the railway servants, as an act of sheer humanity, to throw water over the cases, hoping, no doubt, that the suffering birds may in some degree slake their burning thirst by the drippings from the bars.

"And this seems to be the mode in which the heartless dealers supply the English market with Irish poultry!

"I cannot believe that the British public—so renowned for their benevolence and for those noble efforts which distinguish us as a Christian country—will tolerate the continuance of systematic torture such as I have described, and which, I submit, would be a disgrace to a nation of savages."

This form of cruelty, not only to poultry in transit, but when exposed for sale at market, is everywhere common, both at home and abroad. Many men and women, otherwise tender-

hearted enough, may never have given the matter a moment's thought. A word from those who witness the suffering might set the owners or sellers a-thinking; and also the wide publication in market towns of reports of convictions would be useful. Not long since, a farmer at Melton Mowbray was fined £2 5s. 6d., for carrying to market some fowls by the legs with their heads hanging down. A few cases of conviction in different parts of the country, made widely known by county newspapers and by local placards, would put a perceptible check on these thoughtless cruelties.

To give only one or two further instances of needless suffering connected with food:

Eels are usually kept alive at the fishmonger's shop, but he ought to be obliged to put them out of pain before selling them, and not leave them to be tortured in preparing for the table. The writhing when being skinned shows the pain they suffer. No wonder they are "very tiresome" during the process, as one operator said. Shakespeare, in "King Lear," refers to the most cruel custom of cockney cooks "crying to the eels to be quiet, when she puts them i' the paste alive." Fishmongers should, before the eels go out of the shop, sever the spine close to the head, or otherwise cause speedy death, so as to prevent needless pain in cooking. Lobsters and crabs ought to be pierced, to prevent the slow torture of being boiled or steamed to death. There are men who regularly go to the respectable fishmongers in London to do this, and the dexterity with which they use the sharp piercing rod is remarkable. One object may be to prevent the poor creatures from dropping their claws in the torture of scalding, but it is humane to shorten their time of suffering. The claws are usually tied together to prevent them fighting, which is an improvement on the old barbarity of pegging the claws with wooden pins, a practice now

by law forbidden. The fishmongers or salesmcn might be compelled to kill all fish sold by them, to prevent thc greater torment they too often reccive in incxpericnced hands.

For the clothing as well as the food of man there must be much destruction of animal life. The same principle holds good as to the killing of animals for clothing as for food—that it should be donc with as little waste of life and with as little suffering as possible. That this is not always considered it would be easy to show; but it would take too much space to describe the various ways in which needless waste of life and needless suffering occur in providing for the necessities and still more the luxuries of dress. One example of the whole must suffice. In an article in the "Daily Telegraph" on the possible extermination of the seal, from the increased demand for sealskin jackets, some comments on the circumstances attending the capture and destruction of seals deserve the consideration of those who wear or who covet this luxurious article of dress.

"The time chosen for the seal fishery is unfortunately thc very period that of all others ought to be kept close. Except for a very short part of the year the seal lives to all intents and purposes on the open sea. But the female when about to bring forth seeks the shelter of the shore, where she suckles and watches her cubs until thcy are old enough to shift for themselves. At this time, wherever there are seals along the coast, large herds of them will be found from a quarter to half a mile inland. The proportions are very much those of a drove of decr. The main body will consist of oftcn several hundred females, each with onc or two helpless little oncs, while the malcs hang about the outskirts of the flock, and rclievc the monotony of their existcnce on shore by obstinatc and san-

guinary pitched battles with one another. As soon as a herd of this kind is spied, the boats are manned, and the whole vessel's crew, armed with bludgeons and axes, starts upon a 'cutting-out expedition,' at the horrors of which humanity may well shudder. The only way to effectually kill a seal with completeness and despatch is by a heavy blow with a bludgeon, or a deep cut with an axe, so as either to crush or sever the nasal bones; and when the boats' crews have got ashore an indiscriminate slaughter is commenced, the whole herd being often butchered before a single one can reach the water's edge. The tumult and skurry of the attack over, the real work commences. The adult quarry is skinned with all possible haste, and as often as not with the life still in it. The cubs, who lie moaning and whinnying by the side of their dams, are knocked on the head if big enough to give their fur any value, and if too small to be worth the skinning are left without even the mercy of a *coup de grâce.* Old seal hunters tell us—and we can well believe it—that it takes a man some time to get used to such cruel butchery, and that the half-human wailing of the little calves, as they flop and roll about the mangled carcase of their mother, is something that, until he is hardened to the work, will make his sleep uneasy at night. To put the thing in another shape, we may roughly say that the trim sealskin jacket, of which its fair owner is so proud, which becomes her so well, and which keeps out the cold, represents some half-dozen dams, who have more or less been skinned alive, while their little ones have been left to die in all the slow agony of starvation.

"There are some facts in the great world's course which, much as we may regret them, we are yet unable in any way to alter. Nothing will ever make fox-hunting a pleasant process for the fox, or shed a tranquil joy over the prize pig's

last moments. Seal-hunting is dangerous and uncomfortable work, and, not unnaturally, the one object of the seal-hunter is to get the greatest possible number of skins with the smallest possible expenditure of time and trouble. The work is butchery pure and simple, and, much as we may regret its horrible features, we cannot possibly hope to see them refined away, or expect the day when an officer of the Royal Society for the Prevention of Cruelty to Animals shall be appointed to each Dundee sealing brig. The simple facts stand thus—that a sealskin jacket is made of sealskin; that, to get the skin, we must knock the seal on the nose; and that, if the fur is to have a proper gloss and lustre on it, the seal must be skinned as nearly as may be alive. Apart, however, from considerations of humanity, it is fast becoming a serious question whether the present demand for sealskin jackets is not likely to end in the total extermination of the seal itself. The Norwegian and Swedish Governments have had the matter under their consideration, and have communicated with our own Board of Trade; and there is, it seems, a unanimous consensus of opinion to the effect that, unless a close time is adopted, the seal, if not entirely exterminated, will soon become so reduced in numbers as to render the fishing unremunerative."

Mr. Frank Buckland has taken a great deal of trouble, and has written much, in support of an international compact as to the time of beginning seal hunting. As yet his exertions have not had effect, for although the British fishers have generally expressed their willingness to abstain from early killing, other nations have not assented to the proposal. The fishery this year is said to be a failure; and no wonder, when we find the leading daily paper of Christiania thus speaking of the fishery of last year: "The captains give heartrending descriptions of the manner in which the fishing was conducted, owing to its having

commenced too soon—namely, at the close of March. There was this year a good prospcet of all the vessels being able to return full. Thousands of pregnant female seals were to be seen swimming about preparatory to giving birth to their young on the ice, over the shoals frequented by the shrimps, on which the seals prineipally subsist. But the vessels were lying in wait, and such a destruetion eommeneed that after the lapse of three days the fishing was utterly destroyed, and thousands of young seals were heard crying piteously after their slaughtered mothers. The young seal is worthless until it is three or four weeks old. If the fishing is eondueted in this manner for a very few years more, the seals will be utterly exterminated." It is, in a word, the old story of the golden egg. Already the fisheries are less productive than they were, and in a few years there will hardly be a seal left, except within those extreme Aretic limits, the dangers and terrors of whieh not even greed can tempt the fisherman to faee.

Whatever the scareity of seals may be, till they are wholly extinct there will be people to pay high prices for sealskin jackets. It is the same with other ereatures destroyed for ornamental dress. The war of extermination will be found to have been waged in the milliner's behalf. When we read of a lady appearing at a grand ball, her dress trimmed with the plumage of song birds ; when we see little humming-birds worn as an ornament upon hats, and all manner of feathers and plumes, we then recognise the lamentable and unalterable truth that humanity towards the lower animals is a sentiment whieh, however commendable in itself, must yet be strictly subordinated to the necessities of a lady's toilette. Here and there a lady may be found unselfish and tender-hearted enough to abstain from such ornaments, and men of sense will think all the more of her for it ; but the efforts of the humane, in the matter of

dress, must be limited chiefly to getting legislation as to close seasons, so that the poor animals and birds may be protected while engaged in rearing their tender young.

We now come to the cruelties inflicted on animals that assist the labour of man. It seems a base thing to refuse good treatment to creatures habitually engaged in our service, and by whose toils we are directly profited. Yet the want of sympathy and care is here only too common. Very often there is excessive and unremitting labour; loads disproportioned to the animal's strength; insufficient food and rest; and inattention to the many painful diseases and other consequences of ill-treatment. There are many humane servants who take pleasure in treating well the animals under their charge, and such treatment should always be encouraged by the owners, if only for their own interest. But the eye of the master cannot always be upon hirelings, and much cruelty passes unseen and unreproved. No one can pass along our streets and highways without witnessing painful scenes of cruelty to horses; overtaxed strength, furious pace, savage blows, and jerking of the hard reins. On the towing-paths of canals, in quarries, and many places these scenes occur. Coal carts are often drawn by feeble old horses unfit for the load, and the toil increased by the heads being reined up on the steepest inclines. The owners and salesmen ought to be made responsible for all such cruelties, as well as the hardened reckless drivers.

A large number of horses, ponies, and donkeys are employed underground. The inspectors of mines ought to inquire of overseers and responsible persons if they are properly treated.

With regard to harness, it is a matter of common sense as well as common humanity to have it as light as possible, and as little of it as is consistent with strength and wear. It is not so

much for the difference of weight to carry or burden to draw, but for the greater ease and comfort of the animal. The huge, heavy, ugly collars that used to be seen on farmers' and carriers' horses are going out, and are only fit to be shown at country fairs with clowns grinning through them, as relics of ruder times. All parts of harness should be as easy as possible. We must not judge of the ill effects merely from sores that are seen, though these are often bad enough. Over-pressure on any part, either from weight or tightness, interferes with the circulation, and causes much pain and discomfort, and if long continued will produce internal diseases. Tight straps, heavy collars, badly made saddles, and ill-fitting harness generally, are all injurious to comfort and health, and inflict needless cruelty.

The use of "blinkers" or "winkers" is also a needless mode of producing discomfort. Most coachmen will tell you that the horses would get frightened if allowed to see all about them, especially in towns. This is no doubt partly true when they have always been accustomed to being half-blindfolded, and led to depend wholly on the reins and the whip. It would hardly be safe to leave off blinkers suddenly when they have always been used; but if young horses were "broken in for harness" without them, and allowed the free use of their sight, and of their own sagacity, they would be more easily driven, and do their work more comfortably. In many departments of work, such as on railways, blinkers are not used; nor are they in field artillery, in the Army Transport Corps, and other public services. The intelligent brutes know what they are about, and are less likely to be frightened and unmanageable than if they were half-blinded, with noise and confusion all round.

The truth is that custom and fashion prove the hindrance, rather than any good reason, to the removal of blinkers. Being

accustomed to them, their absenee in earriages would at first seem as strange as their presenee would in the hunting field. If some people of position set the example, it would soon be followed, and the eye, even of eoaehmen, would get aeeustomed to the absence of what is really a nuisance and deformity to the horse's head.

A still worse point of modern harness is the general use of the bearing-rein. Here, as with blinkers, a sudden removal of the rein might not be safe, as most horses have learned to depend on the bit, and are used to being pulled up by the bearing-rein. If trained without them, there would be no doubt as to the superiority of the usage. It is absurd to suppose that the bearing-rein is neeessary to keep a horse up. With free reins, so as to allow of the play of the head, and of natural ehange of muscle in going up or going down hill, the sagaeity and sureness of foot of the horse would eome into play, whieh are hindered and destroyed by the bearing-rein.

It is used "to give an arehed neek and smart appearanee," but a good horse will hold its head well without sueh artificial means, and no art ean give to a sorry animal the proud erest and arched neek of a well-bred horse. Ignorant people may think, on seeing carriage horses tossing their heads up and down, and ehamping their bits, that these are marks of high spirit, whereas the poor animals are really trying to relieve themselves of the diseomfort and pain inseparable from having the head pinioned by a tight short rein.

The late Field-Marshal Sir John Burgoyne has thus stated his opinion as to the use of the bearing-rein for horses in draught: "It is not only inflicting a torment, but is absolutely injurious to the working power of the animal, as is elearly pereeptible in witnessing the difference in the natural position of the horse, if with or without it, in drawing a load

up hill. Though highly objectionable in the case of carriage horses, the cruelty is far greater in the case of the cart horse, where there is less spare power of action, and, what is of far more consequence, the greater number of hours of the day in which the animal is subject to it."

Mr. Fleming, one of the highest authorities in veterinary surgery, and indeed in all matters pertaining to horses, has published a very strong statement as to the evils and disadvantages of the bearing-rein, and his opinion is worth every consideration. Mr. Fleming says that it wearies the head and neck of the horse by the unnatural position which it causes; it gives the animal a hard mouth, and predisposes it to stumble; it tends to produce giddiness or even apoplexy and other serious complaints. The only wonder is why it has been tolerated so long; but when we remember how apt we are to overlook glaring evils, simply because their prevalence is so general and so familiar to us—and particularly when we become aware of the nature and character of the men to whom so many of us resign the entire control and management of our horses—we cease to be astonished that the long-suffering quadrupeds have been permitted to endure such indignity, inconvenience, and torture.

"The Builder," one of the most practical and utilitarian journals, and one not likely to be moved by sentimental notions, has, among other items in the shape of wants, said: "I want the cruel, silly bearing-rein to be universally abolished. None but fools use bearing-reins. Government should at once put a tax on these instruments of torture."

On the subject of horse-shoeing, in connection with which there is much cruelty, I recommend to the owners of horses the practical treatise, by Mr. Fleming, published by Chapman and Hall. A little treatise, entitled "The Horse Book," published by the R.S.P.C.A., contains numerous useful directions and

sensible hints for the right treatment in many points of this valuable helper of man's labours.

The most deliberate cruelty to which horses are subject is the practice of buying up old roadsters, hunters, carriage horses, and even racers, when past service for the rich, from old age or disease, and turning them to cabs or other oppressive work, upon the calculation of how many months they may be driven so as to return a profit, with the addition of the sale of the carcase at the knacker's yard. That poor men should buy such horses is not to be wondered at, but it is a mean and cruel thing in the rich to sell them, for the sake of the small sum they can fetch, for such purposes. Before a Parliamentary Committee many almost incredible facts were brought out in evidence as to the sale of old horses, and the proceedings at the knackers' yards. Much cruelty in this direction is unavoidable, yet appeal may surely be made to the rich not to let their horses that have served them well be doomed to end their days in painful misery.

In places of holiday resort, where ponies, donkeys, and other animals are made to minister to amusement, it is useful to have a warning notice conspicuously posted. This has been done with good result in various places; and we subjoin the form of such a notice, as a pattern to be used in other places where they may be useful.

"If any person shall cruelly beat, ill-treat, over-drive, abuse, or torture, or cause or procure to be cruelly beaten, ill-treated, over-driven, abused, or tortured, any animal, every such offender shall for every such offence forfeit and pay a penalty not exceeding five pounds;" or, instead of a fine, the magistrates may commit the offender to prison with hard labour for three months.

"Whereas information has been received that ponies, donkeys,

and goats within this district are cruelly beaten, and over-ridden by their riders and drivers, both as regards weight and speed, notiee is hereby given that the above recited sections of 12 and 13 Vict. cap. 92 will be rigidly enforced against all offenders.

"The rider of an animal cruelly ill-treated is liable to the above punishment as well as the driver, and frequently such person deserves the heaviest punishment."

The last remark, as to riders being often most to blame, is perfectly just, and a few fines rigorously enforced and publiely advertised would check mueh thoughtless cruelty. Through the watchfulness and kindly appeals of benevolent persons there has been a marked improvement of late years in the eonduet of boys in charge of animals kept for amusement of holiday people, an improvement which residents in the neighbourhood can, both by offering rewards and by threatening the hardened, sustain and increase.

One special elaim all animals employed in labour have—the rest of the seventh day. It is a notable fact, and in keeping with all the preeepts of Divine merey, that the Sabbath was appointed as a day of rest for beast, as well as of rest and holiness for man. "Remember the Sabbath day to keep it holy." "Six days thou shalt do thy work, and on the seventh day thou shalt rest: that thine ox and thine ass may rest, and the son of thy handmaid, and the stranger, may be refreshed" (Exod. xx. 8, 10; Exod. xxiii. 12; Deut. v. 14). In London there were six-day cabs, the owners taking licenee for six days a week, and giving their men and horses rest on the seventh. The plate and number of these eabs were of a different eolour from the seven-day eabs. It is to be regretted, both for the sake of the men and their horses, that the privilege has been abolished.

At one of the meetings of the British Association for the Advancement of Science, at Cork, in 1843, Mr. Bianconi, the well-known car proprietor in Ireland, read a paper giving his experience in regard to public conveyances. One of his statements is worthy of being noted. Mr. Bianconi said he had found by long experience that he could better work a horse eight hours a day for six days in the week, than six hours a day for seven days in the week. By not working on Sunday he effected a saving of 12 per cent.

We have next to consider the sufferings of animals in connection with the amusements of man. I have already admitted that cases are comparatively rare where animals are tortured for the sheer sport of the thing. When suffering is caused in field sports, or in other so-called amusements, various motives and feelings are in play, and the pain inflicted is overlooked or forgotten. This can hardly, however, be said of such brutal amusements as bull-baiting, dog-fighting, cock-fighting, and other sports which are in this country now under the ban of the law. It is only in secret that such deeds of darkness can now be practised, as they still sometimes are. Cock-fighting matches, for instance, are not yet things of the past. It used to be said that by the abolition of these sports the manly spirit of the English people would be weakened ; an argument which was much used in Parliament in opposing legislation on the subject. The reply was, that brutal feeling was no part of real courage; and experience has proved that the gradual decline of cruel sports has not weakened the manlier virtues, but has removed hindrances to improvement in the moral character of the working classes. We have no doubt that other cruel amusements, which are still openly defended and encouraged, will be abandoned under the influence of public opinion,

improved and enlightened by Christian principle. The Queen of England does not now, as in the days of Queen Elizabeth, patronise by her presence the dog-pit or the bear-garden. It is satisfactory to observe how the line of demarcation between honourable or decorous sports, and low or cruel amusements, is gradually shifting, and how one by one those practices which formed the recreation of refined society in former times are left to the dregs of the populace. We have no doubt that some cruel and demoralising amusements which are still prevalent will be disowned as barbarous, and their co-existence with the advanced state of society in other respects will excite the surprise of a future generation.

Of this kind is the sport of pigeon-shooting, as practised at Hurlingham and other lower places of public resort. Of these matches the "Times" has thus spoken in terms of manly protest. The only wonder is that the "Times" and other respectable journals continue to report proceedings which are so strongly condemned as brutal and demoralising :

"This so-called 'sport' goes on day by day and week after week at Hurlingham, and there are 'champion matches' and 'private matches,' and 'Lords and Commons' matches,' and 'conquering matches,' all meaning endless death and butchery to the 'blue rocks,' a race of birds which must be both hardy and prolific, as we are informed on very good authority that the birds supplied on recent occasions 'never were better.' We wish we could think any of the excellence attributed to the feathered victims was reflected on the human bipeds who frequent Hurlingham. Worse, rather than better, so far as tender feeling and humanity are concerned, must be the condition of all those 'ladies of pain' who return from Hurlingham sated with pigeon slaughter, dusty and excited, to swallow down their dinners, and then to rush off to bewitch the world of fashion at

some gay reception. But pigeon-shooting at Hurlingham has uglier features still than that of cruelty to animals. The old Red House matches, if any one alive remembers them, were confined to a few crack shots, whose skill in bringing down their birds was the wonder of a small knot of ardent admirers. There might occasionally be a bet or two, but as the stakes were small and the company limited, the gambling which attended these matches was unimportant. But these sweepstakes at Hurlingham have become the rage. Fashion follows them in its senseless way. The highest prize is £450. Vast numbers of idlers go regularly to 'the Park,' and the result has been that betting has shown its ugly face in that enclosure, and has become a prominent feature of the proceedings. In this way what was bad in its origin has become worse as it went on. Pigeon-shooting, always irrational and brutalising in itself, has begot a species of gambling of its own, and the matches at Hurlingham have grown to be a mere vehicle for idle betting. When we hear that the odds against Sir Frederick This were 100 to 10, that Baron That was freely supported at 100 to 8, that there was much 'general betting'—when we know all this, and hear it every day dinned into our ears, by the frequenters of 'the Park,' that it is the most charming and exciting place on earth, we can only say that we think it high time such senseless, such cruel, and such costly amusements should be put down, not indeed by law, but by what is above all law—the instinctive feeling which all true Englishmen and all lovers of legitimate sport have against practices which are alike brutalising, ruinous, and debasing, and which are revolting at once to the humanity and the common sense of the community."

We are sorry to learn that the bad example of the old country has begun to be followed in America. In Boston, of all places, there is a club, the Tremont Gun Club, for pigeon

matches. The Massachusetts Society for Preventing Cruelty tried a prosecution, but the judge who tried the case decided that it was not within the scope of the existing Act for preventing cruelty. "Nine-tenths of game birds," he said, "are shot by sportsmen, and *for sport;* 'there was no intent to mutilate;' the quality of the act must be determined by the act itself, and not by the result. Upon the facts as presented in this case I do not think a case of cruelty is made out, and I very much doubt whether the shooting of game comes within the spirit or scope of the statute enacted to prevent cruelty to animals. The Society, instead of relying upon the present statute to prevent shooting-matches, should apply to the legislature for a special law to prohibit such games."

The Society has rightly determined to try the matter again. In England the "intent" to mutilate or inflict injury is not requisite for conviction, and many penalties are incurred by those who repudiate wilful and wanton cruelty. Up till this time the American press and American law have strongly supported the efforts of the humane, and in regard to pigeon-shooting especially, condemnation even stronger than what we have quoted from the "Times" has been passed, with expressions of wonder that such brutality could be tolerated in England.

We get upon more difficult and debateable ground when we speak of field sports, as these are commonly understood. Even in the Royal Society for the Prevention of Cruelty the subject is for the present tabooed, some of the keenest sportsmen being warm friends and liberal supporters of the Society. In these pursuits, more than in any other department of animal suffering, there is no desire to inflict cruelty. The sportsman is intent on amusement merely, or it may be health, or is actuated by motives which do not take into account the sufferings caused to animals. These are either never considered, or overborne by

the excitement of the sport, or regarded as of little account compared with the advantages and pleasure of the pursuit. Many a sportsman has never once had a thought of cruelty in connection with his sport. Public opinion, in fact, is not strong enough to pass condemnation on field sports, as it does on other forms of cruelty. There is the more reason for those who think such amusements cruel to ventilate the subject, and give clear utterance to their opinions. On this matter no one has written with more force than Mr. E. A. Freeman, in an essay published some years ago in the "Fortnightly Review," and reprinted as a pamphlet by the Tunbridge Wells Local Society for Preventing Cruelty, one of the zealous and useful branches of the parent institution. A few extracts from Mr. Freeman's essay, entitled "The Morality of Field Sports," will bring the question clearly before our readers.

Not very long ago a street boy in a country town was charged before the local magistrates with cruelty to animals in setting two dogs to worry a cat. The offence was proved; a fine was inflicted and paid; but the boy's father added the comment that he thought it hard that his son should be fined for setting dogs on a cat, while gentlemen set dogs on hares and were not fined. The bench, on such an occasion, has the great advantage of being able to keep silence itself and, if need be, to command silence in others; and, as I heard the story, it did not appear that any attempt was made to answer the question. Neither the boy nor his father was likely to have read the Memoirs of Windham, but, if they had, they would have found their question forestalled. Windham, a patron of everything that called itself "sport"—"sport" of course commonly meaning the death or torture of some creature—said, manfully and consistently, "No one who condemns bull-baiting can consistently defend fox-hunting." I do not know whether in his

day the question of fox-hunting had been seriously raised; the battle which Windham had to fight was on behalf of bull-baiting. In that noble and manly and English sport, as its votaries then called it, Windham, a scholar, a statesman, a man of refined taste, and, on many points, of almost morbid conscientiousness, professed that he "rejoiced." And he at least had the firm standing-ground of thorough consistency. His proposition is essentially true. It will bear turning about and testing in every way. He drew from it one practical inference; I draw from it another. From the admitted right to torture the fox, Windham inferred the right to torture the bull. From the admitted sin of torturing the bull, I infer the sin of torturing the fox. But Windham's saying supplies a common point from which we may start in opposite directions. He at least went to the root of the matter; he saw how the case really stood, and neither deceived himself nor tried to deceive others by irrelevant and sophistical distinctions.

To chase a calf or a donkey either till it is torn in pieces or till it sinks from weariness, would be scouted as a cruel act. Do the same to a deer and it is a noble and royal sport. It is, as we have seen, a legal crime to worry a cat. To worry a hare is a gallant diversion. And men who share Windham's tastes without Windham's consistency, men who would lift up their hands in horror at the wanton torture of a bull or bear, deem no praises too high for the heroic sport which consists in the wanton torture of a fox.

I shall be asked, Do I condemn all persons who practise amusements of this kind? I answer that I have nothing to do with condemning persons, but only with condemning things. I believe cruelty in all cases to be a sin; but of the degree of the sin which is incurred by this or that man, whether in a Roman amphitheatre or in an English hunting-field, I wholly refuse to

judge. The amount of sin, in this as in all other matters, must mainly depend on the amount of light sinned against, and of the amount of light sinned against by this or that man no other man can judge. It will always depend largely upon the circumstances of a man's age, country, and position. It is undoubtedly true that many high-minded and cultivated, and in other respects even humane, men indulge now in hunting and shooting. They call hunting and shooting noble and manly sports. But Windham was also a high-minded and cultivated man, and Windham rejoiced in sports which he deemed noble and manly, but from which the modern fox-hunter now turns away in disgust. A gentleman of our own day who frequents cock-fights and badger-baits is undoubtedly a brute. So would a prince of Elizabeth's day have been, if he had, like Constantine, thrown his prisoners to the lions. And I believe that a day will come when fox-hunting will be looked on as no less unworthy of a man of sense and refinement than badger-baiting is now. But though conventionality may do a great deal, it cannot do everything. It cannot change wrong into right. I cannot but think that the indulgence in cruelty in any form and in any degree must more or less harden the heart. I am far from saying that every fox-hunter is a bad man, but I certainly think that, *cæteris paribus*, the fox-hunter would be a better man if he were not a fox-hunter. And few would approve of devotion to pursuits of this kind when it becomes the distinguishing feature in the character. A mere fox-hunter, a mere bull-baiter, a mere amateur of gladiators can never have been an estimable character in any age.

I can remember the indignant remonstrances of several newspapers at the attempt to introduce among us a form of "sport" which consisted of the mere slaughter of deer, without any of the elements of pursuit or adventure, the animals being simply

driven up to be butchered by royal personages sitting at their ease. The sheer brutal love of slaughter was here stripped of all disguises, and public opinion condemned it. So it is with the lowest brutality of all, the "sport," of pigeon-shooting, where to mere wanton slaughter the low element of gambling is added. Fine gentlemen still practise the "sport," and fine ladies look calmly on, but protests in more than one newspaper show that they do not carry the universal feeling of the country with them.

There are two forms of modern hunting which differ from fox-hunting, and approach to shooting, in so far as the animal hunted is good for food. These are the chase of the deer and that of the hare. But no one will say that modern deer-hunting is, like the hunting of the savage, a pursuit undertaken as the only means of procuring the only available food.

The modern deer-hunt is simply a run after a creature which there is confessedly no design to kill, but on which a great deal of fright and weariness is wantonly inflicted. The "sport" or pleasure to be found in such a piece of contemptible cruelty is certainly hard to understand. And after all, in deer-hunting, too, there are ugly doings done behind the scenes. In a late article on the subject in the "Quarterly Review" we were calmly told, in language which savoured a little of the slaughter-house, how the hounds at certain times were allowed to "go into" a hind—that is, I suppose, to tear her in pieces—in order to "blood" them. A man who set his dogs to tear a sheep in pieces would at once find his way before the magistrates, and few people would pity him if his sentence was as severe as the law allows. The subtle distinction between one ruminant and another is really beyond me. The stag-hunting of the few districts of England where the wild red deer still lingers, differs greatly from the royal sport of Windsor Park. It is at least

shrouded in those disguises which veil from some minds the inherent cruelty of all these pursuits. But from my view of the case it is, like the rest, wanton cruelty.

As for the hares, I find that hare-hunting is looked on with different feelings in different parts. In some districts it is as noble and gallant and manly as any other form of "sport;" in others, while fox-hunting is gentlemanlike and even ladylike, hare-hunting is said to be looked down on as vulgar. These are distinctions into which I cannot enter; the principle of cruelty is essentially the same in all these sports, and it is perfectly indifferent whether it is a prince or a tinker by whom the cruelty is committed. Still, in the case of hare-hunting, the victim is so specially timid and defenceless, that to condemn it to wanton flight and torment, may perhaps need a harder heart than to do the like by a stag or fox. The sufferings of the hare could call forth a passing emotion of pity even from a heathen sportsman. But I presume that, in the amusement of coursing, to see what Arrian shrank from looking on, and to hear "the last *human* cry of the hare in the fangs of the dogs," forms part of the refined enjoyment.

Fox-hunting is said to have some social advantages, I mean real social advantages, in linking together class and class. In this I believe there is some truth as regards some particular classes; but supposing it to be more true than it is, it does not touch the question. It should not be forgotten that the sports of the amphitheatre had, as Mr. Lecky acutely remarks, a direct political advantage. They afforded the only time when the Roman despot and his subjects were brought face to face, and when he was made to feel some degree of responsibility. We are told too that, if there were no field sports, country gentlemen would find nothing to do. This again does not touch the question, and the saying is a libel on very many country

gentlemen, both among those who hunt and those who do not. I could point to a good many country gentlemen, to men who are the salt of their class, who—whether for my reasons or for any other I cannot always say—never join in field-sports, and what is more, whose public and private duties would not allow them time to join in them. We are told that many men, if they were not hunting, would be doing something worse. This I can well believe; but it only proves that hunting is not the worst of all occupations, and I never said that it was.

It does seem to me that the effects of these pursuits on the general character of their votaries is not a good one. The difference of degrees of course is infinite; many men hunt who can hardly be called "hunting men;" but when the pursuit is followed to such a degree as to be a marked feature in a man's character, the effect is not good.

I am not going to discuss the wide subject of the game-laws, one which would carry me far away from my main subject. I will only say that, next to a Jamaica court-martial, no mockery of justice can be conceived greater than that of a game-preserving squire sitting to convict a poacher on the evidence of a game-keeper. The sentence may be, and often is, perfectly just; the law, good or bad, must be enforced, and the poacher is in most cases a thorough scoundrel. But it will be hard indeed to make people believe that the magistrate is not deciding in the interest of his own order and of his own pleasures, rather than in the interests of justice. As myself a county magistrate, and one of a class which, I must say, is more abused that it deserves, I may honestly say that, even in this matter, we are "not so bad as we seem." Still the thing has a very ugly look in all cases, and ever and anon it becomes an ugly reality.

The advocates of humanity have a hard battle to fight, but

I am not without hope. The good cause has made great advances. As in everything else, there are fluctuations and reactions, and perhaps of late years there may have been a certain reaction in favour of cruelty. So it has been with the growth of political freedom; still, political freedom has advanced, and so I feel that it must in the end be with the cause of humanity. With regard to man and beast alike, great has been the progress since the days of Titus, great has been the progress since the days of Elizabeth. And in every step in the right direction, whether in the cause of freedom or in the cause of humanity, I can rejoice. I detest the cruelty of fox-hunting; yet when I look back to what has been, I feel glad that, at least among persons of decent character, fox-hunting is the worst form of cruelty that I have to condemn. And a chain of witnesses has never been wanted since the days of Saint Anselm and Saint Ceadda, and the old time before them. Jane Grey with her Plato before her, while "the poor souls who knew not what true pleasure was" were seeking for it in the pangs of the hart panting for the water-brooks, stands to all time as a beacon, specially to those of her own sex who can seek for pleasure in the infliction of pain. In every age there have been some who could say that—

> "No bright bird, insect or gentle beast
> I consciously have injured, but still loved
> And cherished these my kindred."

Who does not remember in his childhood the young hero, in the tale of Sandford and Merton, who, in the spirit of the old saints, withstands the torturers of the hunted hare, and refuses, even under the blows of the savage hunter, to betray the unfortunate? The protests of the gentle Cowper, the warning voice of the "Ancient Mariner," must still sound in some ears.

I find in the life of the great and good Dr. Petrie that, through his whole life he raised his protest against sports of this kind, and warned many a sportsman that his pursuits were those of the savage. The writings of Sir Francis Palgrave are full of passages of exquisite beauty and tenderness, wrung from him by the events of a history which set before him the pursuits of the hunter in their naked ugliness. I do not envy the feelings of the sportsman who can read what Sir Francis says as to the desolation of Hampshire, and the fate of William Rufus, without a qualm as to the lawfulness of his sport. But perhaps these witnesses may be despised, as the testimony of recluse students, incapable of entering into a noble and manly sport. But I believe that it would be possible to name more than one gallant soldier who could both take and jeopard life when his duty bade him, but who deemed it no sign of courage to rejoice in the needless anguish of man or beast. And I will wind up with the touching words—words which I have lighted on since I began this essay—of one who, if a poet and a student, is also a practised man of the world :

"The strife, the gushing blood, the mortal throe,
With scenic horrors filled that belt below,
And where the polished seats were round it raised,
Worse spectacle! the pleased spectators gazed.
Such were the pastimes of the past! Oh, shame,
Oh, infamy! that men who drew the breath
Of freedom, and who shared the Roman name,
Should so corrupt their sports with pain and death.

"The pastimes of times past? And what are thine,
Thou with thy gun or greyhound, rod and line?
Pain, terror, mortal agonies, that scare
The heart in man, to brutes thou wilt not spare.
Are theirs less sad and real? Pain in man
Bears the high mission of the flail and fan.

In brutes 'tis purely piteous. God's command,
Submitting His mute creatures to our hand
For life and death, thou shalt not dare to plead;
He bade thee kill them, not for sport, but need.
Then backward if thou cast reproachful looks
On sports bedarkening Custom erst allowed,
Expect from coming ages like rebukes
When day shall dawn on peacefuller woods and brooks,
And clear from vales thou troublest Custom's cloud."

But appeals like this are lost upon mere "sporting men:"

"The reeking, roaring hero of the chase,
I give him over as a desperate case.
And though the fox he follows may be tamed,
A mere fox-follower never is reclaimed."

We can only hope that the number may increase of country gentlemen with hearts susceptible of pity, and with minds cultured and capable of higher pursuits than sport:

"Detested sport,
That owes its pleasures to another's pain,
That feeds upon the sobs and dying shrieks
Of harmless nature, dumb, but yet endued
With eloquence, that agonies inspire
Of silent tears and heart-distending sighs;
Vain tears, alas! and sighs that never find
A corresponding tone in jovial souls."

I must not enlarge further on the various forms of needless suffering, many of which will occur to different readers. Why should dogs, which perspire through their mouths, be tortured with close muzzles, enough to drive them to madness? Why should traps, even for vermin, be constructed so as to cause the most crushing and prolonged agony? Why should stupid Boards and greedy contractors be allowed to repair our roads with metal that seems ingeniously suited to distress and injure our horses? The pages of the "Animal World" are constantly

bringing to notice many such kinds of heedless and needless cruelty.

But, after all, the sum of suffering is less than it was, and moral and social improvement is increasing in relation to this question. Fifty year's ago, bull-baiting, with all its fiendish accompaniments, was still common, and the feasts and fairs of "merrie England" were scenes of cruelty and crime as revolting as in any heathen land. These brutal sports had still defenders in Parliament "in the days when George the Fourth was king," and few protests were heard from the pulpit or the press. What has been done during the past half-century, and especially under the beneficent reign of Queen Victoria, our next chapter will narrate.

III.

MEANS OF PREVENTION, LEGAL AND EDUCATIONAL.

We have now referred to various kinds of sufferings to which animals are exposed, although it is impossible to enumerate all of them. Legislation has done much for the removal of some causes of scandal, and the fear of punishment operates to a certain extent in restraining from open cruelty. The law does not, however, reach beyond flagrant cases, and must always leave much wrong and suffering unnoticed and unredressed. The law cannot reach the vast bulk of cases where animals are used in the service of man, nor those where they are domesticated, as pets or otherwise ; the treatment of animals in such conditions must depend mainly on the care and good feeling of their owners. It is by the education of the young, and by the influence of public opinion, that in this, as in many other social questions, the greatest good can be done. In all these directions the lead is taken by the Royal Society for the Prevention of Cruelty to Animals, which has branches in many parts of the country, and the success of whose beneficent work has led to similar societies being founded in other countries. Every humane person will, in his own sphere, do what he can to lessen suffering, but individual effort can do little, especially in cases within the scope of legislation, compared with the watchful care of an influential association which specially charges itself with the protection of dumb animals, and employs trained and experienced officers for this purpose.

Of the objects and operations of the Society we shall have to

speak presently, but meanwhile a brief statement of the origin and history of British legislation on the subject of cruelty to animals will be useful.

The horrible scenes and cruelty and vice connected with bull-baiting and other savage spectacles, as well as the sufferings witnessed in the more ordinary transactions of life, having compelled the notice of public men, Lord Erskine, in 1809, introduced a Bill into the House of Lords, where it was carried without a division, but was rejected in the House of Commons. Committees of inquiry were, however, from time to time appointed ; and at length, in 1824, Mr. Martin, of Galway, whose exertions in this matter deserve to be remembered with honour, succeeded in carrying a general measure. Mr. Wilberforce was one of his chief associates and supporters. In 1835, in consequence of the urgent suggestions in the Report of an influential committee of inquiry, a more effective measure was passed, which, with some amendments and additional enactments, is now the law of the land. According to this law penalties are enforced against persons convicted of offences enumerated in the Act.

The benefits of legislation have been incalculable, and none of the evils or inconveniences predicted by its opponents have been verified. It was said, as is usual on all such occasions, that you cannot make men merciful or religious by Act of Parliament. True, but the law can prevent much actual suffering and wrong. It was said that it would be impossible to decide what was cruelty and what was not; to distinguish, for instance, between blows necessary and justifiable when beasts are lazy and refractory, or even blows of hasty temper, and deliberate cold-blooded cruelty. Lord Erskine had already replied to this objection in showing that no difficulty of the kind occurred in regard to the treatment of apprentices: "To distinguish the severest discipline, for enforcing activity and commanding

obedience in such dependents, from brutal ferocity and cruelty, never yet puzzled a judge or jury—never, at least, in my long experience." It was also said that the provision by which one-half of the penalties should go to informers must multiply frivolous and vexatious prosecutions. So far from this being the case, it is of the rarest occurrence that any difficulty arises about the decisions. It was mentioned in one of the reports of the Society for the Prevention of Cruelty to Animals, the officers employed by which have greatly assisted in carrying out the beneficent designs of the law, that in the year preceding that report, in nearly three hundred prosecutions, the offenders had in every instance been convicted. It was also objected that it would be unjust to deprive the poor of their amusements, while no attempt was made to interfere with the equally cruel amusements of the rich. "This bill," said Mr. Windham, upon one occasion, "instead of being called a bill for preventing cruelty to animals, should be entitled a bill for harassing and oppressing certain classes among the lower orders of the people." Mr. Martin exposed the true motive of this argument: "Gentlemen apprehended that they rose above vulgar prejudices, and were great philosophers, when they maintained that the lower classes were entitled to their own amusements. But this opinion, so far from being philosophic and philanthropic, was founded on an unworthy motive. It arose from a contempt for the lower class of people, and was so much as to say, 'Poor creatures, let them alone, they have few amusements, let them enjoy them.'" The following entry to the same effect, appears in Mr. Wilberforce's Diary: "Went to the House for Martin's Bill on Cruelty to Animals. It is opposed on the ground of the rich having their own amusements, and that it would be hard to rob the poor of theirs . . . . a most fallacious argument, and one which has its root in contempt for the poor."

Another objection was, that such legislation must necessarily be limited and partial in its application. "The argument," replied Mr. Martin, "that by this law we have not done all that ought to be done, was no answer to the claim to do as much as was possible at the moment, any more than telling a man who attempted to save one hundred out of eight hundred persons on board a sinking ship, that his being unable to preserve all was a sufficient reason to abstain from attempting to rescue any."

Such were the principal arguments by which, along with much vituperation and ridicule, it was attempted to bear down a humane design, the simple object of which was to aid in suppressing vice, and to lessen the sum of misery in the world. There are several cruel amusements and practices at present openly encouraged and defended, that ought as soon as possible to be added to those already denounced as illegal; and when, in regard to these, further enactments may be demanded, the same or similar objections will probably be urged. Looking back to the recorded debates upon the question, it will be found that the men most conspicuous in their opposition to these measures, uniformly set themselves against every measure of an enlightened, or liberal, or benevolent nature. They were the defenders of the slave trade, for example, and on the same ground, that legislation should not interfere with "the rights of property" and with "the liberty of the subject"—liberty meaning licence to do wrong.

In educating public opinion, and in preparing thus for effective legislation, the most valuable help has been given by the (now Royal) Society for the Prevention of Cruelty to Animals. Beginning half a century ago, on a small scale, it has gradually risen in influence and in public favour.

At the Jubilee Meeting in 1874, Mr. Colam, the Secretary of

the Society, in introducing the usual annual report, contrasted the state of public opinion now with what it had been fifty years ago. "In reviewing the history of this Association from the date of its foundation, June 16th, 1824, your Committee earnestly call your attention not only to the improvement in the treatment of animals, but to the present universal approval of your principles. Fifty years ago, the worst forms of cruelty to animals were openly perpetrated in our streets and on our highways without provoking general indignation, and even without awaking general commiseration in the minds of eye-witnesses. Fifty years ago the pioneers of your righteous cause, instead of receiving praise, were subjected to ridicule and odium. Assembled now in this magnificent hall, surrounded by representatives of kindred societies, who have travelled from all parts of the world in order to take part in the proceedings of to-day; encouraged by a favourable public opinion; and enjoying the most gracious and distinguished patronage which can be bestowed on a charitable community, your Committee are devoutly sensible of the blessings which have been vouchsafed to their labours of love; and they cannot, therefore, be restrained in making this public acknowledgment and record of their heart-felt gratitude to the Father of all mercies."

The history of a Society carried on in this spirit, and with so excellent an object, could hardly fail to be a record of progress and success. The courage and energy, the self-denial and patience of the pioneers and early workers have been amply rewarded. There were, from the first, honoured names in the reports,—Erskine, Martin, Burdett, Buxton, Lushington, Fry, Gurney, Wilberforce—but the general interest in the cause was of slow and gradual growth. The early support given to the Society by Her Majesty the Queen has been of immense benefit

in securing public attention. Forty years ago, while Princess Victoria, she allowed her name to appear at the head of its patrons, and in 1840 conferred the right of bearing the style and title of a Royal Society. This influence was a substantial help to a cause which had been exposed to ridicule and retarded by prejudice. The Society now has a long list of royal and noble patrons and office-bearers, and a vast number of zealous and wealthy supporters, and is cheered on its work by the approval of public opinion.

It was consistent with her earliest sympathies and life-long countenance that the Queen should feel interested in the Society's Jubilee Meeting; and consequently, as soon as she had learned the date of such festival, she projected a mode of testifying her regard towards its objects which was felt to be eminently graceful, encouraging, and useful; for it is no less than a royal message ordered to be read to thousands of her subjects at the meeting, and addressed to all her people. It need not be wondered at that the letter elicited three cheers for Her Majesty as soon as it was read at the meeting; for its spirit and force are not only admirable, but calculated to awake the best feelings in the hearts of Englishmen, and to make them proud of their noble Queen.

"Buckingham Palace, June 19, 1874.

"My dear Lord,—The Queen has commanded me to address you as President of the Society for the Prevention of Cruelty to Animals, on the occasion of the assemblage in this country of the foreign delegates connected with similar associations, and of the jubilee of the Society, to request you to give expression publicly of Her Majesty's warm interest in the success of the efforts which are being made here and abroad for the purpose of diminishing the cruelties practised on dumb animals. The Queen hears and reads with horror of the sufferings which the

brute creation often undergo from the thoughtlessness of the ignorant, and she fears also sometimes from experiments in the pursuit of science. For the removal of the former the Queen trusts much to the progress of education; and in regard to the pursuit of science, she hopes that the entire advantage of those anæsthetic discoveries from which man has derived so much benefit himself, in the alleviation of suffering, may be fully extended to the lower animals. Her Majesty rejoices that the Society awakens the interest of the young by the presentation of prizes for essays connected with the subject, and hears with gratification that her son and daughter-in-law show their interest and sympathy by presenting those prizes at your meeting. Her Majesty desires me to announce a donation of one hundred guineas towards the funds of the Society.

"I am, my dear Lord, very faithfully yours,

"T. M. BIDDULPH.

"The Earl of Harrowby, K.G., &c."

The operations of the Society and the application of the funds placed at its disposal may be referred to three great points:

1. The prosecution of offenders.
2. The education and training of the young.
3. The influence of public opinion, through the pulpit and the platform, the newspaper press and general literature.

Since the institution of the Society the number of prosecutions at the instance and at the cost of the Society have increased every year. It was feared that there might be many frivolous and vexatious charges, an objection made from the first against legislating on the question. So far from this being the case, it is the rarest occurrence that any difficulty arises about the decision. In the various reports of the Society, we find that of hundreds of prosecutions during each year,

the vast majority of offenders had been convicted. Very judicious advice is given on this matter in the papers circulated by the Society throughout the country, recommending personal appeal and remonstrance, and only in case of obstinate and gross cruelty the adoption of severer measures. Even when prosecution is resolved upon, the case is reported to the committee in London, by whom the authorisation is given to proceed before a magistrate. The careful and watchful supervision of the Society, which extends to all its operations, may be seen in the printed notices to their officers. Any town or district sending £100 annually to the parent society has the privilege of a special officer, well fitted for the service, in the locality.

It is very gratifying to find that branches of the parent society are being formed in all parts of the country, and in large towns special officers, trained to their duties, are attached to these local societies. In the "Animal World," the monthly organ of the Society, lists of these associations and of the office-bearers are frequently published. The good work is also carried on by societies in many foreign countries, reports of which appeared in the proceedings of the International Congress, the sixth of a series, held in London, this one being in 1874, at the time of the Jubilee Meeting of the parent society.

We are glad to observe the ground taken up in the formation of these branch societies, the subject being regarded as a moral obligation, and not simply as a matter of law and police. For example, at one of the most recently reported meetings, at Exeter, the proceedings were quite in this tone. The meeting was held in the spring of 1875 for reorganising a local branch. The mayor, Mr. H. C. Lloyd, presided, and said that the Guildhall could not be granted for any worthier purpose. The mayor was supported by the high sheriff, and by many of the leading notables of the city and county, both ecclesiastics and laymen. Among the

speakers at the meeting was the Baroness Burdett Coutts, who, in referring to the Bishop of Exeter as president of the local branch, said that although the bishop had laborious and incessant calls of duty in his office, he had not refused this additional demand on his time and attention, "considering the dumb animals," the Baroness said, "as part of his diocese, and feeling that they had a claim on his kindly care and pastoral attention." This was said with genial humour, and the meeting warmly responded when the speaker added, that "in England, Christianity has no doubt exercised its beneficent influence upon the treatment of animals, and that it is by carrying out the precepts of Christianity we shall ultimately eradicate this and every other form of evil. Cruelty is the same evil principle whether exhibited towards animals or towards our fellow-creatures, as in the slave trade. Both spring from the same germ of cruelty and greed of gain, and Christianity alone can counteract these evils."

Where the cause of humanity is thus associated with the principles of morality and religion, the work is sure to prosper. In accordance with these sentiments, we note with pleasure that, in a pastoral letter issued by an Episcopal Convention, held in 1874, at New York, the following passage occurs: "The Christian soul is sensitive to the love of God, and loves all things in Him, and for His sake. It loves even the dumb creatures He has made, because He condescends to be the God of the sparrow, and considered the very cattle that were at Nineveh. Gentleness to the animals which serve us, protection to the dependent flock which typifies the chosen people of God, pity for the callow brood in the fragile nest, are lessons which men of love are not ashamed to impress upon themselves and upon their children."

It is under the Act 12 and 13 Victoria, cap. 92, that the

legal penalties for cruelty to animals are chiefly enforced. There are also some minor enactments against particular forms of ill-treatment of animals.

I have before me a large number of reports of convictions, obtained chiefly through the prosecutions of the Society, and they cover a wide and varied range of such offences. A selected list of these convictions, conspicuously posted in markets, near railway stations, police offices, and other public places, would be useful both as a warning against manifest forms of cruelty, and for information as to offences which are now often regarded with indifference. A farmer at Leyburn was fined £7 12s. for sawing off close to the head the horns of some Irish heifers, a member of the Council of the Royal Veterinary College having given evidence as to the cruelty of the practice. The fine would have been larger, but it was the first conviction in England, though the practice was stated to be not uncommon in Scotland. A bird fancier was sentenced to fourteen days' imprisonment with hard labour for putting out the eyes of a chaffinch to improve its singing.

Some of the convictions are for offences not involving cruelty in the ordinary sense of the word, as implying intentional causing of pain or torturing, but the Act is directed equally against practices where suffering is caused through carelessness or neglect. Thus, at the Middlesex Sessions, a previous conviction by a magistrate, Mr. D'Eyncourt, for "overstocking" a cow, was on appeal confirmed ; the Assistant Judge, Sir William Bodkin, saying that every magistrate on the Bench concurred in confirming the conviction. The case is worth citing as an example of inhumanity through neglect, by which offenders render themselves liable to prosecution. The Sanitary Inspector of Newgate Market said he was in the Metropolitan Cattle Market with two other officers, and his attention was directed to

a cow that was standing in one of the market alleys, apparently in great pain, moaning and trampling about. He could see it had very recently calved, probably not more than three or four hours. He saw milk on the ground, and dropping from the teats. The udder was much distended, and she could not stand still. Professor Spooner, Principal of the Royal Veterinary College, said he thought, from the evidence, the cow had been treated very improperly and cruelly. The animal was in great pain from the accumulation of milk. The counsel for the appellant contended that nothing had been done inconsistent with humanity, and that what had been complained of was the common practice. The judge, in his decision, said that the practice was very reprehensible, though he acquitted the appellant of intentional cruelty. He concluded with the remark that the Bench considered they were bound to assist the Royal Society for the Prevention of Cruelty to Animals in putting a stop to it.

These examples I have cited to show that many forms of inhumanity, arising from ignorance or thoughtlessness, expose the offenders to legal penalties. For instance, many sportsmen and dealers in small birds may not be aware that any person killing, wounding, or taking any wild bird named in the Act 35 and 36 Victoria, cap. 28, "for the protection of wild birds during the breeding season," from the 15th day of March to the 1st of August, or exposing or offering for sale such birds, is liable to be proceeded against and punished. But the greatest number of convictions are for brutal or wanton cruelty, where no defence is offered. The number would be soon diminished if those who observe them would take the trouble to make the charge and to appear as witnesses. When Mr. Richard Martin was in London during the sittings of Parliament, he never allowed a case of cruelty observed by him to pass unchallenged. The officers of

the Society are very active and watchful, but they have a vast field to oversee in the metropolis, and the public must be appealed to for co-operation in preventing or punishing cruelty. By communicating with the secretary, every help will be given in points of doubt or difficulty, and every exertion made to bring offenders to justice, with as little trouble as possible to prosecutors or witnesses.

By existing statutes the protection of law is afforded only to domesticated animals mentioned in the Acts; but there is no reason why wild animals should not be included in the statutes. Cases have often occurred of the most brutal cruelty towards animals not enumerated in the existing Acts, and the offenders have escaped punishment. A lad, who had covered some rats with turpentine and set fire to it, was lately discharged at a police court because rats are vermin, and "wild animals" not enumerated in the Acts against cruelty. It might very safely be left to magistrates to decide whether wanton cruelty has been inflicted, with the right to inflict punishment whatever the animal may be that has been the victim of the cruelty. The fact of their being "vermin," or any kind of "wild animal," should not leave them without protection from heartless cruelty, while admitting the right to destroy them. An amendment of existing Acts is called for, to the extent of rendering any one liable to punishment for wanton cruelty upon any animal, whether "wild" or "domesticated." The evil result is the same, whatever living creature is wantonly tortured.

There is, indeed, an Act for the Protection of Wild Birds (a large number of which are enumerated), but only during the breeding season. The passing of this law has been due as much to the love of natural history as to the love of humanity. By this Act, any person who shall kill, wound, or take any wild bird named in a list appended, or shall expose or offer for

sale any such wild bird recently killed, wounded, or taken between the 15th day of March and the 1st day of August in any year, will be liable to be proceeded against and punished under 35 and 36 Victoria, cap. 78, entitled "An Act for the Protection of certain Wild Birds during the Breeding Season." It would be a good thing if some check could be put upon the destructive proceedings, both of sportsmen and birdcatchers, at all seasons of the year, as well as breeding time. Some latitude must be given, but the wholesale raids, upon singing birds especially, grieve every lover of nature. For the sake of sale as cage birds it is bad enough, but we have no patience with those who encourage the capture of such birds for gluttony. A friend says he never sees the strings of larks and other loved birds hung in front of the dealers' shops, without wishing the catchers a good flogging and the consumers a chronic indigestion.

What shall we say also of the stupid as well as barbarous practices of what are called "sparrow clubs," which wage war not on sparrows only, but all small birds that come in the way? The children in our country schools must be taught better, and told how useful the birds are to the gardeners, and to the farmers also. But the grown-up members of sparrow clubs are seldom capable of being argued with, though discussions in "Farmers' Clubs," reported in local papers, might be of some use. The most effective appeals as yet have appeared in the pages of the kindly as well as witty journal, "Punch."

"The ignorance of natural history disgracing the rustics who till the soil of certain parts of England is just equal to the greatness of their opportunities for acquiring a knowledge of it. Many of them believe that a cuckoo changes into a sparrow-hawk, that the slowworm and even the stone-loach are venomous, and that a horsehair put into a pond gets animated and becomes a worm. Subjoined, from the 'East Sussex Gazette,' is an

illustration of this boorish ignorance which the clowns of a Bœotia in the South of England rejoice in: 'SPARROW CLUB. —On the 2nd inst. the members of the Sparrow Club held their annual meeting at the S—— Arms Inn, when twenty-three sat down to an excellent dinner. After the removal of the cloth the accounts were examined, and the chairman announced that 10,807 sparrows and other heads had been sent in during the year, that being about 900 more than last year, and about 3,000 more than the year previous, showing clearly that there is no scarcity of birds yet, and it was agreed to carry the club on another year, in spite of "Punch," "or any other man."'

"Are there no local gentry about S—— who take enough interest in their tenants to be desirous of restraining them from doing themselves damage, for want of knowing better than to attempt the extermination of the little birds? If there are, they should organise some method of imparting the requisite instruction to such louts as those who dined the other day at the S—— Arms, to celebrate the destruction of 10,807 sparrows and other small birds which they had caused during the past year. It would be a charity to beat, if possible, into the heads of these boobies a calculation of the number of caterpillars and grubs whose increase they must have occasioned by that stupid impolicy. A Clodhoppers' Institution, whereat lectures on ornithology could be delivered, might be established at S—— [I suppress the name for the sake of the clergymen and local gentry who may be supposed to know better], with some advantage, if the S—— bumpkins were capable of understanding any lectures. What, however, would probably answer the purpose in view better, would be an opposition to the Sparrow Club, under the name of a Caterpillar Club, established to promote the extirpation of mischievous insects by preserving the sparrows, and finches, and feathered songsters, of which the

massacre is encouraged by a society of blockheads. The chawbacons understand eating and drinking, if not much else, and under the influence of a good dinner they might be persuaded to let the little birds live and eat up the vermin."

It may be here remarked that the public press has of late years given the warmest encouragement and support, not only to the proceedings of the Society, but to the cause of humanity to animals in general. It was not always so, and some of us remember the ridicule and abuse poured on Mr. Martin, and other humane men, in the newspapers. As the guide as well as the exponent of public opinion, this is a welcome change in the press. The "Spectator" has done special good service. The "Times," "Telegraph," "Daily News," "Standard," and indeed all the press, with the exception of the lowest "sporting papers," have aided the cause. Even the "Saturday Review," where a genial and kindly view of any subject is rarely taken, thus wrote on the occasion of the Society's Jubilee:

"The history of the Society for the Prevention of Cruelty to Animals, which has been celebrating its fiftieth anniversary, marks a satisfactory advance in an important branch of public morality. It was in 1822 that, in consequence of Mr. Martin, the idea that it was an offence to treat a domestic animal with wanton cruelty first received legislative sanction, and two years later this Society was established. Since then, not only have bull-baiting, cock-fighting, badger-baiting, and other barbarous sports been prohibited by law, but a great change has also taken place in the way of thinking about animals generally. When an Italian peasant is remonstrated with for ill-using his cattle, he replies that they are not Christians, and therefore it does not matter; and very similar ideas prevailed in our own country on the subject when the Society began its operations. As the Queen remarks in her letter to Lord Harrowby, cruelty is

frequently due to ignorance and thoughtlessness, and the spread of education has had a natural tendency to make people more humane and sensitive. A dull, stupid fellow knows from his own sensations when he receives a kick or a blow that it hurts him, but it requires an effort of imagination to understand that animals also suffer from brutal usage. When people once begin to think whether animals are in pain, they are in a fair way to become more humane in their treatment of them; and the Society for the Prevention of Cruelty has done good work both in stimulating this course of reflection, and in getting its gradual developments embodied in the law of the country. Martin's Act has been repeatedly amended, the slaughter of horses has been brought within legislative regulation, dogs are no longer allowed to be used as beasts of burden or draught, and food and drink are required to be supplied to cattle on a long railway journey. In the course of its career the Society has procured the conviction of some twenty-four thousand persons; and the knowledge that its officers are prepared to take proceedings in regard to all cases of cruelty which come under their own observation or which are reported to them, has a salutary effect on those who are only to be influenced by fear of punishment. The making of cruelty to animals a criminal offence has also made it disgraceful, and people are ashamed to be detected in the commission of acts of a degrading character. In this way a penal law may be useful, not merely in securing the punishment of offenders, but in attaching a stigma to particular offences. The fines which are usually inflicted for cruelty to animals are penalties of a very moderate kind, which would probably have little effect in themselves apart from the opprobrium with which they are associated. Some idea of the range of the operations of the Society may be gathered from the list of prosecutions for a month. In April last, for example, there

were forty-one convictions for neglecting to supply food and water to animals on the railway. There were two cases of overcrowding pigs, ten of overloading horses, and one of conveying fowls in a cruel manner. Any one who has observed how fowls are usually conveyed, squeezed together into the smallest possible compass, as if they were rags or vegetables, or some other inanimate object, will probably be surprised that there should be only a single conviction under this head; but the officers of the Society were perhaps fully occupied in the protection of more imposing animals. There were also a hundred and thirty-five convictions for ill-treating horses; twenty-three cases of ill-treating donkeys and mules, and four cases in which the victims were oxen and cows.

"One can imagine the surprised bewilderment with which any one who had lived in the last or the beginning of the present century, would be filled on revisiting the earth, to find all this tender and scrupulous care bestowed on the brute creation, and to learn that a man might actually be sent to prison for ill-using animals, which used to be regarded as being as much his possession to do what he liked with as his turnips or potatoes. Lord Harrowby, the president of the Society of which we are speaking, remembered the ridicule and contumely to which the brave Irish gentleman who first took up the question in earnest was subjected, and had heard a respected and accomplished member of the House of Commons, who was supposed to be an admirable representative of an English gentleman—Windham, we presume, is here referred to—defending the practice of baiting bulls in his place in Parliament. It should be remembered that, if humanity to animals is a comparatively recent fashion, it was not till 1840 that the use of climbing boys to sweep chimneys was prohibited by law. It will be found, indeed, that consideration for animals and consideration for one's

own kind go pretty much together. Thoughtfulness about others, whether animals or men, is the origin of a humane disposition. The great thing is to get people to think what is likely to be the effect of their acts on creatures which share their own capacity for physical agony; and when once this habit of thought is established, a desire to spare the poor animals as much as possible is pretty sure to follow. It is in cultivating and encouraging this habit of mind that the Society for the Prevention of Cruelty to Animals finds its most useful function. The enforcement of the law and the punishment of the offenders are no doubt necessary and important operations in their way; but, after all, the number of cases of cruelty which can be dealt with in this way is comparatively few. Outrageous public cruelty may thus be laid hold of; but then cruelty of this sort is by no means common. It is the regular every-day treatment of animals on which their happiness or misery chiefly depends, and the only effectual way to secure that this treatment shall be generally kind and considerate, is to cultivate a particular bent and habit of mind on the subject."

For the prevention of some kinds of cruelty to animals it is now universally admitted that the Legislature should interfere, and there is a call for more stringent enactments than are yet on the Statute Book. To give effect to these laws, private individuals ought to lend their aid, and not leave all to be done by official prosecutors. Those who witness acts of cruelty should not "pass by on the other side," but interfere when interference might be useful, or at least they should be willing to give information and bear testimony against offenders. It is the duty of every humane person, as he has opportunity, whether by personal effort or by aiding that Society, to prevent wrong being done to helpless creatures. Masters and employers should see that their servants use animals well.

Those who can speak to the public, either from the pulpit or through the press, should lift up their voices in behalf of the dumb. But all these external influences,—legal penalties, solemn warnings, earnest pleadings—while useful to some extent, have very small effect compared with what the wider diffusion of a spirit of humanity would secure. This can be attained only by the education and training of the young. Hence the importance of making kindness to animals a special department of instruction in schools, and the earlier in life this is begun the better.

> "The spring-time of our years
> Is soon dishonoured and defiled in most
> By budding ills, that ask a prudent hand
> To check them ; and, alas ! none sooner shoots,
> If unrestrained, into luxurious growth,
> Than cruelty, most devilish of them all."—*Cowper.*

There is true philosophy and true knowledge of human nature in these lines of the poet. The seeds of selfishness and anger and cruelty are not put into the young heart by any external agency, nor are they carried thither by chance, but they are indigenous there, weeds of native growth, and in that congenial soil readily expand to the crimes by which human nature is disgraced.

A shrewd observer of human nature, the painter Hogarth, has illustrated the fact of "the boy being father of the man," with great fidelity and force, in his pictures of "The Four Stages of Cruelty." A boy begins his career by tormenting animals, and after he has become hardened by repeated acts of barbarity, he at length commits murder, and suffers an ignominious death. The transitions are natural, and unless some superior power interfere to check the early tendency to cruelty, to awaken the conscience, and arrest the degeneracy of the mind, the gradation

of crime is inevitable. The Roman emperor who in his childhood took delight in tormenting and killing flies, afterwards found pleasure in persecuting and committing barbarities on his subjects. There may not in all be the same extent of degradation of character, but the tendency is always the same, if the seeds of cruelty are not early checked, and the seeds of kindness and mercy are not early sown and cultivated.

Not only in infant schools, but in classes for all ages, special attention should be given to inculcating humanity to animals. I do not mean that there should be separate teaching at a separate hour for this, but a due share of the teacher's time and care should be bestowed on this department. The principals of training schools have the greatest influence in their hands to effect this desirable object. To provide books or give advice is not enough, if the teachers do not feel the value of such training. There is a common saying that "the schoolmaster makes the school," and it is true in this special field of instruction. If the teacher has no kindly feeling towards animals, and takes no interest in their life and habits, he will impart no interest to the pupils under his care. I would, therefore, strongly urge that in our training schools very special attention should be given to this subject. Every teacher, male or female, ought to have some training in natural history, and no certificate should be granted without an examination in this department. There is no need of much technical or scientific knowledge, but a certain amount of intelligent and practical acquaintance with natural history ought to be required, and clear instruction given as to the necessity for attending to the subject of humanity to animals as an important part of every teacher's duties. I earnestly commend this to the notice of the heads of training colleges, and to those by whom masters and teachers are appointed.

Many pleasing instances might be given of the effects of such

training on the feelings and conduct of the pupils in the schools where it has been tried. Two of the children attending an infant school at Edinburgh, brothers, about five and four years of age, coming in late one morning, were to go to their seats without censure if they could give an account of what they had been doing, which should be declared satisfactory by the whole school, who were to decide. They stated, separately, that they had been watching the proceedings of a large caterpillar, and noticing the different positions of its body as it crossed their path—that it was now straight or horizontal, then bent, then upright or perpendicular, and finally sloping up when it escaped into a tree. The master asked them, abruptly, "Why did you not kill it?" The children stared. "*Could* you have killed it?" asked the teacher. "Yes, but that would have been cruel and naughty, and a sin against God." The little moralists were acquitted by acclamation. Here was a simple lesson never to be forgotten in that school.

Mrs. Manby, the mistress of the National School at Horseley Heath, Staffordshire, having directed her attention to this subject, her labours were crowned with abundant success. The birds built their nests, and reared their young unmolested, on the walls of the school; nay, while the classes were employed the happy creatures used to come among them, to pick up the crumbs which the admiring children had thrown for them. If, by chance, a butterfly entered this asylum of mercy, the boys eagerly but gently strove (contrary to the usual propensity of children) which should with the greatest care set it at liberty. As a contrast to this, some children from a neighbouring school, who once were there before they were observed, plundered one of the nests, and threw the naked helpless young ones about the room, in sport!

It was stated many years ago, that of seven thousand children

who had at that time been educated in the school in the Borough Road by Mr. Lancaster, where humanity to animals was specially inculcated, at the date of the report in which the fact is stated, not one had been accused of a criminal offence in any court. So many instances of a similar nature could be added, that we cannot but consider the encouragement of this special instruction as an object of national importance; and we therefore hope that in all public schools special attention should be directed to this matter.

The celebrated poet and essayist, Pope, wrote an admirable paper on cruelty to animals in the "Guardian," in which, among other schemes, he proposes the following: "I fancy," he says, "some advantage might be taken of the common notion that it is ominous or unlucky to destroy some kinds of birds, as swallows or martens. This opinion might probably arise from the confidence these birds place in us by breeding under our roofs; so that it is a kind of violation of the laws of hospitality to murder them. As for robin-redbreasts, in particular, it is not improbable that they owe their security to the old ballad of 'The Babes in the Wood.' However it may be, I do not know why this prejudice, well improved, and carried as far as it would go, might not be made to conduce to the preservation of many innocent creatures, which are now exposed to all the wantonness of an ignorant barbarity." This was a very benevolent proposal of Mr. Pope, but there is no need of giving sanction to errors or superstition even for so good an object. We do not require such aid. Lessons founded on the wonderful habits and instincts of animals, and on the benefits, direct and indirect, which man derives from them, are always sure of exciting kindly feelings. The children thus instructed are free from silly prejudices so common against many animals, and are evidently impressed with a feeling of benevolent regard to all animated

nature. The mode in which a schoolmaster can by his personal influence promote among his scholars the growth of a feeling of kindness towards animals is described by a Frenchman, M. de Sailly, in a paper which has been published by the English Society's Committee, and which ought to be read by all schoolmasters. "I have always," says M. de Sailly, "in my forty-six years' experience as a schoolmaster, tried to teach children habits of kindness to animals. I well know that early impressions are never forgotten, and a child that is taught humanity to animals will, in later years, learn to love his fellow-men. I have, therefore, taken pains to develop the affections of the children under my care, and to sow the fruitful seeds of kindness, gentleness, and justice towards domestic animals, which are and always will be the farmer's chief wealth; and also towards others, which, although in a wild state, are no less useful to agriculture, though ignorantly treated as enemies."

The methods by which such instruction may be communicated and such sentiments encouraged are very various, and must be left to the good sense and good feeling of the parent or teacher. One remark only seems necessary. It is far more important in the very young to attend to the formation of character than the impartation of knowledge, and instead of cramming the children with lessons only meant for the memory and the head, a due share of time should be given to subjects which interest the feelings and improve the heart. It is not merely for the sake of the lower animals that we say this, but for the highest advantages of the pupils. As the effects of cruelty are twofold—hurtful to the poor victims and hurtful to those who inflict the injury, so the effects of benevolence are twofold—preventing suffering, and improving the hearts of those who show kindness. As our greatest poet says,

> "Mercy is twice blessed;
> It blesseth him that gives, and him that takes."

Apart, then, from the immediate and direct good in lessening the sufferings of the animal creation, the healthful exercise of the benevolent affections, in a field so boundless, and where some objects are always within reach, cannot fail to be productive of much good, and to prevent much evil in life. For the law of the human mind upon which we work in this department of tuition and training, is the same benevolence, or love, which is the fruitful source of most of the moral virtues and social graces.

The help of pictorial art should be largely enlisted in this good work. To some extent this is already done, especially in the excellent periodical, "The Animal World," published by the Royal Society for the Prevention of Cruelty to Animals. The series of illustrated volumes, issued by Partridge and Co., specially commended by us, have been widely circulated among the homes of the middle and higher classes. But there is room for further effort in preparing and displaying pictures of a plainer and more striking kind, to arrest the attention and touch the feelings of the lower classes and of the young. For the latter it would not be desirable to have the grosser forms of cruelty vividly represented, but rather such illustrations as might create sympathy and foster kindly feeling towards dumb animals. For rougher natures, more direct appeals in the way of pictorial effect would be needed. When Hogarth published his four illustrations of eruelty to animals, he wrote thus:

"The leading points in these prints were made as obvious as possible, in the hope that their tendency might be seen by men of the lowest rank. Neither minute accuracy of design nor fine engraving were deemed necessary, as the latter would render them too expensive for the persons to whom they were intended to be useful. And the fact is that the passions may be more forcibly expressed by a strong bold stroke than by the

most delicate engraving. So expressing them as I felt them, I have paid the utmost attention, and, as they were addressed to hard hearts, have rather preferred leaving them hard, and giving the effect by a quick touch, to rendering them languid and feeble by fine strokes and soft engraving. The prints were engraved with the hope of in some degree correcting that barbarous treatment of animals, the very sight of which renders the streets of our metropolis so distressing to every feeling mind. If they have had the effect and checked the progress of cruelty, I am more proud of having been their author than I should be of having painted Raphael's Cartoons."

These are right noble words, and more honourable to Hogarth's memory than his highest triumphs of art. Pictures in which the horrors and evil effects of cruelty to animals are delineated in a plain and forcible manner, would make more impression on certain minds than the most careful and earnest appeals in tracts or sermons. If we had an artist who would take up this subject as George Cruikshank has taken up the evils of drunkenness and of "The Bottle," he would be a powerful ally in the cause of humanity. Some of our highest artists would feel it an honour and privilege to be useful in this way, for the lower animals have no truer and more generous friends than among our artists. I commend this hint to the Secretary of the Society, who could easily obtain the contributions of eminent artists for so laudable an object. Mr. S. C. Hall enlisted the combined contributions of many distinguished artists for his book against intemperance, and this may serve as a good example for procuring a similar book against cruelty to animals.

In the very earliest years, whether at home or in infant schools, kindness to animals should be taught. A mother or teacher can never be at a loss, by teaching or anecdote or example, in impressing the young mind with tender feeling and

gentle ways. The kind and considerate treatment of pet birds or animals will come to be observed by the very youngest children. When attention is thus awakened, and the claims of these helpless creatures recognised, it will be easy to produce the most lively and eager interest in all that belongs to animal life. The press teems with publications suitable to be helps in this training. Let me name as an example the books prepared by the Rev. F. O. Morris for use in juvenile classes and in families. "The Natural History Scrap Book" and "Animal Life in Europe," and others, published by the Religious Tract Society, are most attractive for young people. But all books of natural history abound in materials which a kind-hearted and judicious parent or teacher can turn to good account.

The "Ladies' Committee" of the R.S.P.C.A., of which the Baroness Burdett Coutts is president, has given valuable aid in the educational department. Through their application the General Committee placed at the disposal of the London School Board £100, to be laid out in prizes for the best essays on humanity to animals. The presentation of these prizes by H. R. H. the Duchess of Edinburgh, formed a notable feature at the Jubilee Meeting in Albert Hall. Nearly five hundred boys and girls received prize books or certificates of merit inscribed with their names. Two prizes were given for the best essays in boys' higher schools, and two in the girls' schools. In the elementary schools for boys and girls, there were also two prizes. Many very young competitors and charity children obtained certificates, and were heartily cheered on coming up to get their rewards. Three prizes were given for essays written by pupil teachers. Mr. Prebendary Jackson, on behalf of the adjudicators, said that great care and attention had been used in trying to find out the best essays; the excellence of many of them rendering the adjudication no easy task. As an old friend

of national and all elementary teachers, he congratulated the masters and mistresses of the elementary schools of London upon the vast progress that had taken place since he first undertook to adjudicate upon these essays. Among the successful competitors the eleven prize-bearers each represented a separate school; and the others who obtained certificates of merit represented three hundred and seventy schools, eighty other schools being represented by pupil teachers. These facts and figures indicate the large attention that has been secured to the subject by the offering of prizes, and this will receive in future the special care of the Ladies' Committee.

But this is only one form of the useful labours of the committee. They have circulated an immense number of leaflets, tracts, pamphlets, and other literature designed to inculcate humane principles. These silent teachers they send into schools, village libraries, reading-rooms, public-houses, prisons, and hospitals: all places, in short, where they are likely to reach the classes for which they are intended. They supply tract distributors and district visitors with such publications for circulation. They have caused numerous addresses and lectures to be delivered, to the working classes and in schools, on the wonders of the animal kingdom, and the claims which animals have upon man for humane treatment. They urge the necessity of introducing such topics in reading-books and copy-slips. They have sent hundreds of thousands of copies of that excellent periodical the "Animal World" to school-masters and mistresses in the United Kingdom and in the Colonies; and they are unwearied in planning new ways of influencing public opinion in favour of educational efforts in this direction.

It only remains to add that for all this useful work the Ladies' Humane Committee have no special funds, grants being made from the general funds of the Society for any special object

recommended by them. It is therefore all the more necessary to remind the reader that the way to help any branch of the good work, whether protective, legal, or educational, is to send the needful supplies to the head-quarters at 105, Jermyn Street.

A very simple and practical plan of kindness, both to man and beast, is undertaken by the Metropolitan Drinking and Cattle-Trough Association. This society provides free supplies of water for animals in the streets of London. Upwards of three hundred troughs and fountains have been erected, and are kept in repair, and supplied with water, at no inconsiderable expense. For some of the troughs the charges by the water companies are as high as £30 a year, but then twelve hundred horses, besides oxen, sheep, and dogs, may drink at a trough on a single day. The friends of the temperance cause, and those who pity the poor animals employed in the service of man, are alike appealed to to maintain and extend this useful association, which is supported entirely by voluntary contributions.

IV.

VIVISECTION, AND EXPERIMENTS ON LIVING ANIMALS.

In 1864 a prize of £50 was offered by the Royal Society for the Prevention of Cruelty to Animals, for the best essay on the following propositions :

1. Is vivisection necessary or justifiable (when performed as at certain veterinary schools) for the purpose of giving dexterity to the operators?
2. Is it necessary or justifiable for the general purposes of science; and if so, under what limitations?

A number of distinguished and competent gentlemen were invited and consented to weigh the merits of thirty-two essays, which were written in competition for this prize, including the Earl of Harrowby, president of the Society, Prince Louis Lucien Bonaparte, Lord Stanhope, Lord Auckland, Bishop of Bath and Wells, Colonel Buckeridge, Mr. Frank Buckland, Dr. Carpenter, Mr. Clarke, of the "Lancet," Dr. Fraser, Professor Owen, Dr. Quain, Professor Spooner, and Professor Varnell. At the adjudication, the first prize was awarded to Mr. Fleming, Veterinary Surgeon of the 3rd Hussars, and as another essay was in the minority of only one vote, a second prize was given by the Committee to its author, Dr. Markham, Physician to St. Mary's Hospital, London.

These two essays were published by the Society in 1866. They cover the entire ground of the controversy in regard to vivisection, and on the whole fulfilled the conditions in the prize essay advertisements: that the treatises should be sound,

conclusive, and convincing in evidence and argument. As upwards of half of the essays forwarded in competition were written, more or less, in defence of vivisection, it was sufficiently understood that the Society intended fairly to consider both sides of the discussion. In publishing the two successful essays, the Society, while professing not to be bound by the opinions of the essayists, so far endorsed and approved their general scope. A brief statement of the conclusions arrived at will therefore prove a suitable introduction to the present discussion of the whole subject.

With regard to the first question, "Is vivisection necessary or justifiable for the purpose of giving dexterity to the operator?" the response was clear and decisive. The affirmative of this proposition had been strenuously maintained in a Veterinary College in France. It has long been the practice in these colleges to require the students to perform a certain number of operations on living animals. Eminent men had defended the practice, as the best and most fruitful mode of teaching veterinary surgery. Mr. Fleming's essay contains an account of the operations performed by the students at the principal school in France, the College at Alfort, and the description would be hardly credited except on the testimony of an eye-witness. "In a building or shed, open to the air on one side, lay six or seven living horses, fixed by every possible mechanical contrivance by the head and feet to pillars, to prevent their struggling, and upon each horse were six or seven pupils employed in performing different surgical operations. The sight was truly horrible. The operators had begun early in the forenoon; it was nearly three o'clock when we entered the place, so that the poor wretches, as may be supposed, had ceased being able to make any violent struggles; but the deep heaving of the still panting chest, and the horrible

look of the eyes—when such were remaining in the head—while the head was lashed to a pillar, were harrowing beyond endurance. The students had begun their day's work in the least vital parts of the animals, the trunks were there, but they had lost their tails, ears, and hoofs, and the operators were now engaged performing the more important operations."

We must not proceed with this ghastly detail. Each student is required to rehearse eight distinct operations; so that altogether a single horse has to undergo sixty-four attacks of cutting instruments or burning, each attack painful, nearly all of them acutely so, and all in one day, if life remains. At the School of Lyons the same course of training is adopted, but with somewhat fewer operations required from each student. The scandal caused by these cruelties led to an appeal to the late Emperor of the French, who referred the matter to a commission, and the result was that French scientific men declared such atrocities to be necessary. These practices are therefore continued at the present time.

To the honour of the Veterinary Schools of England, vivisection has never been allowed in them. The English veterinary surgeons have no other means of acquiring dexterity before entering on practice than by operations on the dead body; and, as Mr. Fleming with just pride observes, "no one will deny that they are as well qualified to undertake the management of difficult operations as the vivisectionists." "Every operation," Mr. Fleming adds, "can be as successfully taught on the dead as on the living horse; indeed, from experience, I can sincerely aver that more instruction, and more skill and dexterity will be acquired in less time in the dissecting room than in the operating yard." Professor Owen, in his published notes on the essays, says, "I entirely concur in the unanimous conclusion of the essayists in denouncing the stupid and atrocious system,

which assumes, for instance, that it is necessary for the veterinarian tyro to draw the red-hot iron along the skin of a living horse, in order to enable him to apply it properly in a case requiring firing."

We may therefore dismiss this part of the inquiry, only expressing regret that there are so many defenders of these cruelties in foreign countries, although happily not in England.

With regard to the second question, "Is vivisection necessary or justifiable for the general purposes of science; and if so, under what limitations?" both the prize essayists agreed that "the use of chloroform or some other anæsthetic is demanded in every case where practicable;" and that "Experiments performed before students, in classes or otherwise, for the purpose of demonstrating known facts in physiology or therapeutics, are unjustifiable." Dr. Markham says of such operations, "They are needless and cruel; needless, because they demonstrate that which is already acquired to science, and especially cruel, because if admitted as a recognised part of students' instruction, their constant repetition through all time would be required." Then, in parenthesis, Dr. Markham adds, "I need hardly say that courses of experimental physiology are nowhere given in this country; and that these remarks consequently apply only to those schools in France and elsewhere where demonstrations of this kind are delivered."

"The only justifiable experiments," Dr. Markham says, "are those made in order to determine facts in physiology, pathology, and therapeutics, whereby medical knowledge may be directly or indirectly advanced." The conditions under which such scientific researches may be undertaken are thus stated: "that chloroform or other anæsthetic be used, and that the experimenter be a skilled anatomist and physiologist, capable of reading and appreciating all the facts which experiments

may offer to his observation; that he has made himself master of all the known facts affecting the matter which he is about to investigate; that he has, in a word, duly, I might say solemnly, prepared himself to perform the business he has taken in hand."

The fulfilment of these conditions, it is stated in the preface to the published essays, "would suppress probably not less than ninety per cent. of these atrocities which it has been the earnest desire of the Society to prevent."

Mr. Fleming, in his essay, while declining to deny absolutely the right of experimenting on live animals for purposes of science, maintains that the practice is justifiable only under the most rare and exceptional circumstances. "The right to experiment (he thinks) should be limited to a very few, and they should be men who are not only qualified by general scientific attainments for such a responsible and profound task, but by their humane and merciful characters."

Such was the position of the question in 1866, when the prize essays were published. At the meeting of the British Association at Liverpool, in 1870, a committee of Section D, Biology, was requested to draw up a report on the following resolution—"To consider whether any steps can be taken by them or by the association, which will tend to reduce to its minimum the suffering entailed by legitimate physiological inquiries, or any which will have the effect of employing the influence of the association in the discouragement of experiments which are not clearly legitimate on live animals."

The report of the committee was published in the Volume of the British Association for 1871, p. 144, as follows:

"1. No experiment which can be performed under the influence of an anæsthetic ought to be done without it.

"2. No painful experiment is justifiable for the mere purpose of illustrating a fact already demonstrated; in other words, experimentation without the employment of anæsthetics is not a fitting exhibition for teaching purposes.

"3. Whenever for the investigation of new truth it is necessary to make a painful experiment, every effort should be made to ensure success, in order that the suffering inflicted may not be wasted. For this reason, no painful experiment ought to be performed by an unskilled person, with inefficient instruments and assistance, or in places not suitable to the purpose, that is to say, anywhere except in physiological or pathological laboratories, with proper regulations."

This report went as far perhaps as might have been expected from a committee of men of science, one of whom had been largely engaged in such researches. But in the few years that have since passed, the practice of vivisection has increased to a scandalous extent, and the evils are not now confined to foreign countries, as they were when Dr. Markham spoke in the name of the respectable part of the medical profession in England.

At some of the hospitals and schools of medicine in London, experiments on living animals now form part of the regular curriculum of study. In the prospectus of Guy's Hospital Medical School for 1874–75, we are told, "Demonstrations of the functions of organs on living animals are performed before the class by the lecturers on physiology." At the Westminster Hospital School there are "Experiments on animals on the action of the heart, the rate and force of the blood currents, etc. Gentlemen will themselves perform the experiments so far as opportunities permit." The latter clause has been since suppressed, but the

demonstrations are continued. At the University College is given "a course of demonstrations in animal physiology under the direction of the Jodrill Professor of Human Physiology." Similar arrangements are announced in other principal schools of medicine. Besides these, there is the Brown Institute, where pupils, not regular students of medicine, are admitted. At all these places demonstrations are given throughout the Winter and Summer Sessions, the number of experiments amounting in all to some hundreds, independently of those made in pursuing original investigations.

The nature of these demonstrations may be judged from the headings of some of the sections in the "Handbook of the Physiological Laboratory," prepared for the use of the pupils at University College. Whether the experiments are few or many, or whether performed by teacher or pupils, is not the point, so much as the repetition of them, merely for demonstrating ascertained facts. Among them we find "Asphyxia by slow suffocation," "Mode of producing permanent fistula," and others equally barbarous, and useless for practical purposes in "the healing art." One operation illustrating a point of importance in science, known as "Recurrent Sensibility," is thus referred to: "This can only be shown in the higher animals, the cat or dog being best adapted for the purpose. The method adopted is this:—The arches of one or two vertebræ are carefully sawn through, or cut through with the bone forceps, and the exposed roots very carefully freed from the connective tissue surrounding them. *If the animals be strong, and have thoroughly recovered from the chloroform and from the operation,* irritation of the peripheral stump of the anterior root causes not only contraction in the muscles, but also movements in other parts of the body, indicative of pain. On dividing the mixed trunk the contractions cease,

but the general signs of pain or sensation remain."—"*Hand-book*," p. 403.

I have underlined a few words, for the sake of calling attention to a point of importance in the discussion. It is generally supposed that these experiments are painless, being only performed when the animals are under the influence of chloroform. One eminent surgeon (I refrain from giving his name), who has appeared as defender of vivisection in letters in the "Times," refers to "painless demonstrations." Anæsthetics may be administered in most cases, but in many they are not; and even when the operation commenced under their influence, the injury and the mutilation of the animals remain, after the effects of the chloroform have passed off, for they are not always "mercifully put out of pain," *i.e.*, killed (as at Guy's Hospital), but are sometimes reserved for other operations. Occasionally there is used a preparation, a vegetable poison, which paralyses muscular motion, while it heightens sensation, the animal being kept alive by artificial respiration till the effects of the drug have passed off. A spectator, unaware of the treatment, might suppose that the animal was insensible to pain, while it really suffered double torture.

It is a mockery, therefore, to plead that the demonstrations are always painless. In some experiments the action of chloroform would interfere with the results, as when the object is to demonstrate the increased sensibility, or the occurrence of pain, under certain conditions. The plea is put forward to lessen public odium; but the readers of medical journals know that in many cases the animals are kept for days and even for weeks in a mutilated state, for the renewal or variation of experiments. The details of these agonising scenes are too horrible to give, and no English surgeon of repute ought to sanction such atrocities by a general plea in defence of the right of vivi-

section. The same writer protests against "the interference of those who have neither the knowledge nor the means of knowledge of the nature and the value of these studies." The admission of such a protest in the "Times" newspaper might mislead some who do not know the facts of the case, and it will be therefore necessary here to present some statements, though they may be distressing to sensitive and humane minds. Without clear knowledge of the truth as to vivisection as now practised, public opinion cannot be brought to bear.

Readers of medical journals have long been aware of the extensive practice of vivisection in the laboratory of Professor Schiff at Florence. In the "Life of Mrs. Somerville," who spent part of her last years at Florence, there are several references to the scandal caused by Professor Schiff's experiments, and the veteran scientific writer contrasts the "inutility as well as the barbarity of such proceedings with the researches of Sir Charles Bell, who was as distinguished for his humanity as for his discoveries." Rumours of these cruel proceedings having thus come to the public ear, an English physiologist wrote to the "Times" a partial defence, and the Professor himself made some explanations, with the assertion that the operations were painless. How far these defences are justified by facts the following summary of the report of an eye-witness will prove. A visit to M. Schiff's laboratory and adjoining rooms was paid by the Chief Inspector of the Society for the Prevention of Cruelty to Animals at Florence, with two or three of the members. In their report they say:

"We entered the premises at 11 a.m. (June 18, 1874) and asked for the Professor, who accompanied us throughout our visit. In the first room we found an attendant cleaning away the stains of blood of a poor dog on which an experiment had just been performed, and which the Professor told us he had

killed. On our requesting him, however, to let us see the dead animal, he sought to divert us from our wish by means of many words and phrases; but, on our insisting, he, after some little time, said, 'Come by all means,' and, opening a door leading into another room with two exits, he said, 'He is no longer here; they have removed him.'

"On our return to the yard below, Mr. Sharp and I saw a large poodle with a wide, open wound under the throat. At my suggestion, we made an attempt to obtain a closer view; but, owing to the terror the dog was in, we failed. Our attention was then directed to other dogs, whereof the greater number had wide and deep wounds under their throats. On our asking why these barbarities were committed, the Professor confessed that those deep incisions were made by him to prevent the animals from howling, and so disturbing the neighbourhood. Tied up in a small room we noticed a little dog, quite blind, and in reply to our inquiry why it was not killed, the Professor told us that it was kept for vivisection.

"Near the garden door was found a number of dogs tied up in couples, some with wounds and others sound. One of them was hardly able to stand, caused, we were told, by illness. On asking the Professor why it was kept alive, he did not reply, and changed the subject.

"We saw quantities of fowls, pigeons, and rabbits. We made no inquiries about them, and by this time our feelings were such that we at once left the premises."

On inquiry, it was found that all the dogs not claimed at the Home for Lost Dogs, were handed over to M. Schiff. About 300 had thus been disposed of in little more than six months. The President of the Society appealed to the syndic, or mayor of Florence, as to the legality of this, as the municipal regulations require that the dogs taken to the home are either to be re-

turned to their owners, on payment of fine or tax, or are to be killed. The syndic took no notice of the appeal, and M. Schiff continues his demonstrations. In April, 1875, the walls of Florence were extensively posted with this announcement: "Dogs are purchased at No. 8, Via S. Sebastiano, at the rate of one franc each. For every ten dogs a sum to be agreed on between buyer and seller will be paid."

During the meeting of the British Medical Association at Norwich, in August, 1874, a French physiologist, M. Eugène Magnan, operated upon two dogs in the smoking-room of the Masonic Hall, in that city. The professed object was to show the effects of alcohol upon the system. The legs and heads of the poor animals were tied down to the table, and then through tubes inserted into their thighs absinthe and other alcoholic fluids were injected. The operator was assisted by four medical practitioners of Norwich, whose names I refrain from giving, as they may yet be ashamed of themselves for the part they took in the wretched exhibition. There were many spectators, including eminent physicians and surgeons, whose names we also refrain from giving, as the amount of approval or disapproval on the part of each is not apparent. A well-known London surgeon was nominated arbitrator, and allowed the experiments to continue, acting, we are willing to believe, against his better judgment and feeling, with a desire not to seem to oppose the principle of experimenting on living animals, rather than with direct approval of this particular operation.

The case was one of flagrant and stupid barbarity. The general effects of alcohol on the system are known, and special points yet undetermined can be ascertained by observation in medical practice far more surely than by experiments under unnatural conditions. The Royal Society for the Prevention of Cruelty to Animals very properly instituted proceedings

against the Norwich practitioners who assisted at the experiments. Sir William Fergusson, the eminent surgeon, on being examined as a witness, described "the ghastly scene," "the groaning of the dogs," their "writhing agony," and in one of them, "epileptic convulsions," adding an emphatic condemnation of the whole exhibition as a wanton piece of cruelty. It is a pity that Sir William did not at the time raise his voice in protest, for it is probable that the arbitrator might then have had the manliness to put an end to the revolting exhibition. The Norwich magistrates agreed in the opinion that the experiments constituted an act of cruelty, but eventually dismissed the case, as the offence did not seem to come within the meaning of the Act under which the prosecution was laid.

The Academy of Sciences at Paris, at its annual meeting, testified its appreciation of M. Magnan's share in the experiment by awarding him a prize of 2,500 francs. The opinion of the medical profession in England has been divided as to the merit or demerit of the experimenters, the general feeling being that the experiments in this instance were not demanded in the interests of science.

Although this first case of prosecution for cruelty under the pretext of science has been unsuccessful, let us hope that it may prove beneficial as a warning, and that it may help to educate public opinion on the subject of vivisection generally. If another such case could be brought before an English jury, the expression of opinion would be more decided. Few of our magistrates have had the subject specially brought to their notice, and most of them are likely to show unwillingness to act in opposition to what is represented as necessary for the advancement of science and for the benefit of mankind. It is important, therefore, that magistrates should know how far men of science are divided as to the alleged benefits of vivisection,

and also that most of those who maintain the occasional advantage of experiments, agree in denouncing those exhibited at Norwich as needless acts of cruelty.

It may be said that this scene at Norwich was an exceptional one, and that the presence of the French physiologist may have been chiefly to blame for its perpetration. Unhappily it is not so. The practice of vivisection, not only for purposes of investigation, but for demonstration and illustration of received facts in physiology, is greatly on the increase in England.

The difficulty in bringing cases of this kind before a legal tribunal is the secrecy with which the operations are conducted. Without the evidence of eye-witnesses conviction cannot be obtained. No student attending the demonstrations at our London schools dare appear as a witness till he has become independent of his fellow-students and his teachers. Prosecutions cannot be taken up after a certain time has elapsed. The only thing that can be done is to make known to the public, and especially to legislators and magistrates, this new form of cruelty which has sprung up in England within the last few years. For this purpose I introduce the statement (hitherto unchallenged) of a medical practitioner, Dr. George Hoggan, who has published in the newspapers and in "Fraser's Magazine," for April, 1875, a little of his own experience, gained as an assistant in the laboratory of one of the best known experimental physiologists. He refers, it is assumed, to the laboratory of a Parisian professor, M. Bernard, but his evidence may serve as a warning as to what is possible in England, if a check is not put upon the practice.

"In that laboratory we sacrificed daily from one to three dogs, besides rabbits and other animals, and, after four months' experience, I am of opinion that not one of those experiments on animals was justified or necessary. The idea of the good of

humanity was simply out of the question, and would have been laughed at, the great aim being to keep up with, or get ahead of, one's contemporaries in science, even at the price of an incalculable amount of torture needlessly and iniquitously inflicted on the poor animals.

"During three campaigns I have witnessed many harsh sights, but I think the saddest sight I ever witnessed was when the dogs were brought up from the cellar to the laboratory for sacrifice. Instead of appearing pleased with the change from darkness to light, they seemed seized with horror as soon as they smelt the air of the place, divining apparently their approaching fate. They would make friendly advances to each of the three or four persons present, and, as far as eyes, ears, and tail could make a mute appeal for mercy eloquent, they tried it in vain. Even when roughly grasped and thrown on the torture trough a low complaining whine at such treatment would be all the protest made, and they would continue to lick the hand which bound them till their mouths were fixed in the gag, and they could only flap their tail in the trough as their last means of exciting compassion. Often when convulsed by the pain of their torture this would be renewed, and they would be soothed instantly on receiving a few gentle pats. It was all the aid or comfort I could give them, and I gave it often. They seemed to take it as an earnest of fellow-feeling that would cause their torture to come to an end—an end only brought by death.

"Were the feelings of experimental physiologists not blunted, they could not long continue the practice of vivisection. They are always ready to repudiate any implied want of tender feeling, but I must say that they seldom show much pity; on the contrary, in practice they frequently show the reverse. Hundreds of times I have seen when an animal writhed with pain,

and thereby deranged the tissues, during a delicate dissection, instead of being soothed it would receive a slap and an angry order to be quiet and behave itself. At other times, when an animal had endured great pain for hours without struggling or giving more than an occasional low whine, instead of letting the poor mangled wretch loose to crawl painfully about the place in reserve for another day's torture, it would receive pity so far that it would be said to have behaved well enough to merit death; and, as a reward, would be killed at once by breaking up the medulla with a needle, or 'pithing,' as this operation is called. I have often heard the professor say, when one side of an animal had been so mangled and the tissues so obscured by clotted blood that it was difficult to find the part searched for, 'Why don't you begin on the other side?' or 'Why don't you take another dog? What is the use of being so economical?'

"One of the most revolting features in the laboratory was the custom of giving an animal on which the professor had completed his experiment, and which had still some life left, to the assistants, to practise the finding of arteries, nerves, etc., in the living animal, or for performing what are called fundamental experiments upon it—in other words, repeating those which are recommended in the laboratory handbooks."

"It could be wished," says Dr. George Wilson, in his "Life of Dr. John Reid," "that the invitations to all and sundry among the students of a college or university, to imbrue their hands in innocent blood, as candidates for honours or medals, were more guarded than at present they are. A premium has thus been put upon animal torture and animal murder, at the hands of the most inexperienced, and the most unskilful members of the profession, which has been productive of serious evil. It is time that something be done to check it, by suitable caution and advice to students; and few things would be more

effectual than the public condemnation of injudicious and needlessly cruel physiological experiments, even when these occur in essays deemed worthy of reward. Our central, regulating, and examining medical bodies have much in their power in reference to this; and owe it to the character of the profession for humanity, not to tempt young men to let desire for distinctions induce them to be thoughtlessly, much less deliberately, cruel."

Let it be observed, that all these operations are what have hitherto been admitted to be "needless and cruel." Experiments performed merely for demonstrating facts already established, have been till now almost universally condemned. It was for such practices that the late M. Magendie, in Paris, incurred just odium and contempt. Men who have had ample experience in teaching have testified that these experiments are useless, and therefore cruel. The late Dr. Fletcher, of Edinburgh, a favourite pupil of Mr. Abernethy, who himself often denounced the needless cruelties of physiologists, thus expressed his sentiments in his "Introductory Lecture to Physiology:" "Certainly no cruelty is requisite in conveying, whatever may have been practised in acquiring, the knowledge. None of the functions of animals need be seen in action in order to be perfectly well understood; they may be abundantly well fancied from preparation and representations of the organs engaged in performing them. During many years' experience in lecturing on this subject, I have never yet found it necessary, in a single instance, to expose a suffering animal, even to students of medicine (who are necessarily, in some degree, familiarised with sights of horror), for the purpose of elucidating any point in physiology." In the lectures on the Institutes of Medicine in the University of Edinburgh, Professor Alison never had recourse to such exhibitions in illustration of his lessons. In view of the new

system of teaching recently introduced in the London schools, every humane and truly scientific man will thank Professor Owen for his emphatic words, "I reprobate the performance of experiments on living animals to show to students what such experiments have taught the master; whilst the arguments for learning to experiment by repeating experiments on living animals, are as futile as those for so learning to operate chirurgically."

Seeing that these things are done on an extensive scale, and are openly defended, there is good reason for reproducing the indignant protest of the great English moralist of last century: "Among the inferior professors of medical knowledge," says Dr. Johnson, in one of the papers in the "Idler" (No. 17), "is a race of wretches whose lives are only varied by varieties of cruelty; whose favourite amusement is to nail dogs to tables, and open them alive; to try how long life may be continued in various degrees of mutilation, or with the excision or laceration of the vital parts; to examine whether burning irons are felt more acutely by bone or tendon; and whether the more lasting agonies are produced by poisons forced into the mouth or injected into the veins. It is not without reluctance that I offend the sensibility of the tender mind with images like these. If such cruelties were not practised, it were to be desired that they should not be conceived; but since they are published every day with ostentation, let me be allowed once to mention them, since I mention them with abhorrence. . . . What is alleged in defence of these hateful practices every one knows; but the truth is that by knives, fire, and poisons, knowledge is not always sought, and is very seldom attained. I know not that by living dissections any discovery has been made, by which a single malady is more easily cured. And if the knowledge of physiology has been somewhat increased, he surely buys knowledge dear who learns the use of the lacteals at the ex-

pense of his own humanity. It is time that universal resentment should arise against those horrid operations, which tend to harden the heart and make the physician more dreadful than the gout or the stone."

This statement of Dr. Johnson has been ascribed to prejudice and ignorance by those against whose cruelty it is directed, and who are abashed by his strong and honest censure. His indignation led him to injustice in speaking of such experiments as the "favourite amusement" of the operators, for we may suppose that higher motives actuate even the most callous vivisector. But not the less it is true that the most stupid and wanton cruelties are still perpetrated, deserving all the severity of Dr. Johnson's criticism. Nor are these confined to "the inferior professors of medical knowledge." Let me give one or two examples.

M. Brachet, an eminent French physician under Charles x. and Louis Philippe, who obtained the Physiological prize from the Institute, narrates the following experiment:

"I inspired a dog," he says, "with the greatest aversion for me, by plaguing and inflicting some pain or other upon it as often as I saw it. When this feeling was carried to its height, so that the animal became furious as soon as it saw or heard me, I put out its eyes; I could then appear before it without its manifesting any aversion. I spoke, and immediately its barkings and furious movements proved the passion which animated it. I destroyed the drum of its ears, and disorganised the internal ear as much as I could; when an intense inflammation which was excited had rendered it deaf, I filled up its ears with wax. It could no longer hear at all. Then I went to its side, spoke aloud, and even caressed it, without its falling into a rage; it seemed even sensible to my caresses." It was thought necessary to repeat this experiment, in order that there might

be no uncertainty in the result! "And what," observes Dr. Elliotson, who criticised the case, "what was all this to prove? Simply, that if one brute has an aversion to another, it does not feel or show that aversion when it has no means of knowing that the other brute is present. If he had stood near the dog on the other side of a wall, he might have equally proved what common sense required not to be proved. After all, I do not understand how the poor dog did not scent him. I blush for human nature in detailing this experiment."

Here is another example. Painful as the recital is, it is well that non-professional readers should know what kind of experiments are made by men high in science, and so understand that it is no groundless prejudice which holds up their researches to reprobation.

The narrator in this instance was M. Bouillaud, a man of high scientific name, and one of the most conspicuous physicians in the Medical School of Paris. His mode of procedure in investigating the functions of the brain, was to injure or remove various portions of the cerebral substance in different animals, and then to watch and note the effects as long as they survived. The account of the eleventh experiment begins thus: "I made an opening on each side of the forehead of a young dog, and forced a red-hot iron into each of the anterior lobes of the brain. Immediately afterwards the animal, after howling violently, lay down as if to sleep. On urging it, it walked or even ran, for a considerable space: it did not know how to avoid obstacles placed in its way, and on encountering them groaned, or even howled violently. Deprived of the knowledge of external objects, it no longer made any movements either to avoid or approach them. But it still could perform such motions as are called instinctive: it withdrew its feet when they were pinched, and shook itself when water was poured upon it. It turned

incessantly in the cage as if to get out, and became impatient of the restraint thus imposed." After noting many revolting details, he says, "It slept occasionally for a short time, and on awakening began its mournful cries. *We tried to keep it quiet by beating it, but it only cried more loudly: it did not understand the lesson; it was incorrigible.*" Some days elapsed, and the journal continues: "Its fore-legs are now half paralysed; in walking, or rather in dragging itself along, it rests upon the back of its foot bent upon the leg. No change has taken place in respect to his intellectual power: as its irrepressible cries disturbed the neighbourhood, I was obliged to kill it." Another young dog that had been exposed to similar suffering from having had "the cranium and cerebral hemispheres sawed transversely," escaped from its torturer by a comparatively easy death. "To prevent its plaintive cries disturbing my neighbours, I enveloped it in a thick sack. On examining it some time afterwards, I found that it had died from suffocation." Another dog was selected, "possessing the reputation of being lively, docile, and intelligent." The anterior part of its brain was transfixed on the 28th June, and day after day, for several weeks, it was tortured in every possible way, and the effects recorded. After detailing the results, he says, on the 7th July, "when menaced, it crouches, as if to implore mercy, but does not in consequence obey. It, on the contrary, utters cries which nothing can repress, similar to those of an uneducated dog, whose intellect is undeveloped. It eats with great voracity, and is in good health. *I watched it attentively for the remainder of this, and for the first fifteen days of the succeeding month.* Its want of docility was remarkable: when called it did not come, but lay down and wagged its tail with an air of stupidity. When we tried to lead it, it resisted, rolled upon the ground, and cried, but at last walked, again stopped, and drew back,

and cried anew. When confined it cried continually, in spite of all correction. It appeared astonished at everything; it was easily alarmed; and when menaces were succeeded by blows, in place of flying, or acting so as to avoid them, it merely lay down in a supplicating posture and cried. It did not caress us on our return, (!) although absent *for many days. Some days afterwards,* I led it to the river, and, regardless of its terror, threw it in; on this occasion it quickly swam on shore, and returned to the house. I sometimes put it out at the door, menacing to make it go away, but it remained, or if it did go, it was only for a few steps, when it returned, uttering slight cries, as if entreating us to open the door. All its docility consisted in coming, when, after caressing it, we called upon it in a tone of kindness; or, if we had menaced, beat, or called upon it in vain, in going away, holding down its head and tail, and in crouching down as if in the act of supplication. It was sacrificed on the 15th August, in the performance of a new experiment." "I have made many experiments," says M. Bouillaud, "similar to the one now detailed, but the subjects of them died too soon to allow me to draw any clear and definite conclusions."

M. Brachet and M. Bouillaud were at the very head of the medical profession in their day in France. If *they* could unblushingly record such experiments, what may not be done by men of inferior caste? The use of anæsthetics, while lessening the amount of suffering, does not lessen the heartlessness and stupidity of such operations.

Every man of sound sense as well as ordinary humanity must question the legitimacy of conclusions arrived at by such methods of inquiry. Attempts to mutilate the cerebral substance are not calculated to afford much information. Other parts than that under the scalpel are almost certain to be

injured, or if not thus injured, they may be affected by the extension of the irritation produced by the operation, and by sympathy with the injured parts. There are other sources of error inseparable from such methods of inquiry. For instance, the loss or enfeeblement of any particular faculty after the destruction of a certain part of the encephalon, is no adequate proof of the alleged connection between that organ and the manifestations referred to it; because the same loss might follow a violent injury of any part of the brain, or indeed of any part of the body. Thus M. Bouillaud argued from the last of the horrible operations referred to in the preceding paragraph. "This experiment," he says, "is well worth our attention. The animal scarcely understood us when we called on it; it no longer played with or caressed other dogs; it had a stupid or astonished air: all the corrections inflicted to compel it to remain in one place were unavailing, if the place did not please it; it no longer understood their meaning; its want of docility was extreme." "We found, on examining the body, that there remained of the wounds inflicted, solely a canal traversing the anterior part of the brain; it is to this, the only existing lesion, that the impairment of the intellectual powers is to be attributed." It was therefore demonstrated, according to this philosopher, that the particular part of the brain injured was the seat of the faculties deranged, and that to its lesion was to be attributed the "stupidity" which restrained a sentient being from caressing its torturers; the "want of docility" which prevented a poor brute, writhing in agony, from understanding the meaning of the blows inflicted to compel it to remain in one place!

Those who admit the abstract *right* to perform experiments on living animals, for the advancement of science, with the

view of improvement of the healing art, may yet hesitate to admit the *expediency* of any such method of research. The whole history of this branch of physiological inquiry, from the time of Herophilus, Erasistratus, and the Egyptian dogmatists, who are said to have experimented on living human malefactors, if it does not convince men of science of the almost total inutility of such methods of research, must at least force them to admit, that they are of infinitely less service than it is now the custom to represent them. Take any of the particular subjects that have occupied the attention of the greatest anatomists and physicians who have been vivisectors,—the functions of the various parts of the encephalon, for example; and what a mass of vague and absurdly discordant results appears as the fruit of all their inquiries! After the myriads of experiments by Legallois and Wilson Philip, Amussat and Fleurens, Magendie and Bouillaud, and multitudes of others, it is surely fair to ask what satisfactory results have been obtained? Physiologists know well how small a number of facts there are, universally or even generally admitted, as the fruits of vivisection; and out of the few conclusions that have been placed beyond the reach of controversy, I believe there is scarcely one that has not, or might not have been as surely arrived at by anatomical and pathological research.

Let the question be put calmly to medical men, or to physiologists, what additions of importance have been made to our theoretical knowledge, and what accessions to our resources, either in the prevention or the cure of disease, have been obtained strictly through vivisection, and it will be found that they are in general at a loss for a reply, or that their answers are confined to a very brief list of alleged results.

The three most notable discoveries ascribed to experiments on living animals, are the circulation of the blood, by Harvey;

the double functions of the spinal nerves, by Sir Charles Bell; and the use of chloroform as an anæsthetic, by Sir James Simpson. These are indeed splendid discoveries, but the statement that they are due to vivisection must be received with much reservation.

Let us take first the discovery of chloroform as an anæsthetic. "Surely any amount of suffering that the case might have required might have been legitimately inflicted upon the lower animals, to secure such an inestimable boon to humanity." These are the words of Dr. Carpenter, a humane man as well as a distinguished physiologist, and who when a lecturer on physiology never exhibited experiments on living animals to his students. Dr. Carpenter puts the matter hypothetically, *i.e.*, "*might have been* legitimately inflicted," for he knows well that chloroform, and the anæsthetic uses of it, were not discovered by experimenting on living animals. But other advocates of vivisection, less informed or less scrupulous, have made a great boast of this as a result of their art. The fact is that the use of chloroform was the result of an experiment, but it was an experiment, and rather a perilous one, tried by Sir James Simpson upon himself, and by his assistant Dr. Keith, as they have graphically narrated. The previous use of the vapour of sulphuric ether as an anæsthetic was also the result of a trial on himself by an American. These facts are so well known that the reference to chloroform in support of vivisection is an unworthy appeal to popular prejudice.

With regard to the circulation of the blood, I find the following remarkable passage in the works of the Hon. Robert Boyle: "I remember," says Mr. Boyle, "that when I asked our famous Harvey, in the only discourse I had with him (which was but a little while before he died), what were the things which induced him to think of a circulation of the blood,

he answered me, that when he took notice that the valves in the veins of so many parts of the body were so placed that they gave free passage to the blood towards the heart, but opposed the passage of the blood the contrary way, he was invited to think that so provident a cause as Nature had not placed so many valves without a design; and no design seemed more probable than that, since the blood could not, because of the interposing valves, be sent by the veins to the limbs, it should be sent through the arteries, and return through the veins whose valves did not oppose the course that way."

Here we have the testimony of Harvey himself that he was led to the discovery by anatomical observation, and inference therefrom. Experiments were afterwards made in proof of what he had discovered. At that era of medical science prejudice was great, and experiments seemed necessary for the demonstration of his doctrine, and for the removal of the violent opposition it met with. The example of Harvey is no plea for the repetition of his demonstrations.

In the same manner Sir Charles Bell has left on record an express declaration that his great discovery was due, not to experiment, but to observation, and a few experiments were afterwards made, not for his own conviction, but for the satisfaction of others. "It was necessary," he says, "to know whether the phenomena exhibited on injuring the separate roots of the spinal nerves correspond with what was suggested by their anatomy." Some experiments were performed "after delaying long, on account of the unpleasant nature of the operation." And he adds, "These experiments satisfied me that the different roots, and the different columns from whence these roots arose, were devoted to distinct offices, and that the notions *drawn from the anatomy* were correct." Professor Owen, commenting on this statement, remarks that, "he alone

discovers who proves, who converts a speculation into a positive conclusion." But Sir Charles Bell himself repudiated this as the ground of his claim as a discoverer. "In a foreign review of my former papers," he says, "the results have been considered as in favour of experimenting on living animals. They are, on the contrary, deductions from anatomy, and I have had recourse to experiments, not to form my opinions, but to impress them on others. It must be my apology that my utmost powers of persuasion were lost while I urged my statements on the ground of anatomy alone." And again, "Experiments have never been the means of discovery, and the survey of what has been attempted of late years will prove that the opening of living animals has done more to perpetuate error, than to enforce the just views taken from anatomy and the natural sciences."

I have lately conversed on the subject with Mr. Shaw, honorary surgeon of Middlesex Hospital, Sir Charles Bell's friend and relative, and the able editor and expositor of his published researches. Mr. Shaw tells me that Sir Charles always spoke of his discovery as due entirely to anatomical research ; that his experiments were performed with the utmost reluctance, only in confirmation of the discovery he had made ; and that he often referred to the cruelty of needless repetition of experiments. This is quite in keeping with the humane spirit that appears in all the writings of Sir Charles Bell.

Mr. Shaw, giving a summary of Sir Charles Bell's researches in the "Medico-Chirurgical Review"* for 1842, thus expressed

* In the same journal ("Medico-Chirurgical Review," vol. 36, new series), the editor, after describing M. Longet's experiments, says, "We cannot conceal our abhorrent dislike of what the French call vivisection, in which unoffending brutes are made the victims of the most shocking sufferings, all with the view of advancing science !" The reviewer proceeds in a tone of honest indignation, with which every true lover of science and every generous heart will sympathise. In

himself as to experiments: "The profession must be well persuaded by this time, what a difficult task it is to obtain any uniform results by having recourse to experiments. And it is scarcely too much to say that if physiologists had waited patiently till cases occurred in practice, such as have actually been met with in very numerous instances, when the pathological phenomena confirmed the views deduced from anatomy, our convictions would be as strong as after all the multiplied experiments which have been performed."

Professor Owen says: "It is to be regretted that Sir Charles Bell should have committed himself to the statement that experiments on the lower animals have never been the means of discovery. They have certainly been the means of rectifying such residuum of error as, among his most valuable additions to truth, he bequeathed to the world." This is a very cautious and qualified criticism of Sir Charles Bell's statement. But other physiologists, not on grounds of sentiment or humanity, but purely on review of scientific results, have expressed themselves with clear decision as to the inutility of vivisection.

The following passage occurs in the late Dr. Barclay's work on the muscular motions: "In making experiments on live animals, even where the species of respiration is the same as our own, anatomists must often witness phenomena that can be phenomena only of rare occurrence. After considering that the actions of the diaphragm, in ordinary cases, are different from its actions in sneezing and coughing, and these again different from its actions in laughing and hiccup; after considering that our breathing is varied by heat and cold, by pleasure and pain, by every strong mental emotion, by the

marked contrast is an article in the "British and Foreign Medico-Chirurgical Review" for April, 1875, the writer of which brings the subject down to the "Bob Sawyer" level of intellect and taste. To a journal of such reputation this article is little creditable.

different states of health and disease, by different attitudes, and different exertions,—we can hardly suppose that an animal under the influence of horror; placed in a forced and unnatural attitude; its viscera exposed to the stimulus of air; its blood flowing out; many of its muscles divided by the knife; and its nervous system driven to violent desultory action from excruciating pain, would exhibit the phenomena of ordinary respiration. In that situation, its muscles must produce many effects, not only of violent but irregular action; and not only the muscles usually employed in performing the function, but also the muscles that occasionally are required to act as auxiliaries. If different anatomists, after seeing different species of animals, or different individuals of the same species, respiring under different experiments of torture, were each to conclude that the phenomena produced in these cases were analogous to those of ordinary respiration, their differences of opinion as to motions or ordinary respiration would be immense."* What is here said with regard to respiration, will apply to almost every subject that has been investigated in a similar manner. It is not to be expected that the natural phenomena of the animal economy can be displayed when all the conditions of the parts through which they manifest themselves are completely altered. This opinion cannot be expressed more forcibly than in the words of Celsus: "It is alike unprofitable and cruel," he says, "to lay open with the knife living bodies, so that the art which is designed for the protection and relief of suffering is made to inflict injury, and that of the most atrocious nature. Of the things sought for by these cruel practices, some are altogether beyond the reach of human knowledge, and others could be ascertained without the aid of such wicked means. The appearances and conditions of the parts of a living body, thus ex-

* "Barclay on the Muscular Motions," p. 298.

amined, must be very different from what they are in their natural state. If, in the entire and uninjured body, we can often, by external observation, perceive remarkable changes, produced from fear, pain, hunger, weariness, and a thousand other affections, how much greater must be the changes induced by the dreadful wounds and cruel mangling of the dissector, in internal parts whose structure is far more delicate, and which are placed in circumstances altogether unusual." * These remarks were made probably in reference to the inspection of human criminals; and although, of course, the *cruelty* is less, they bear with double force against the *utility* of operations on the lower animals, where the original differences of structure and function must further diminish the chance of any light being thrown upon human physiology.

The general inutility, therefore, of the examination of living animals arises, I apprehend, not merely from the difficulty of performing such experiments, or from any other contingent cause, but from the method of investigation itself. Nature, when interrogated, reveals only what is her condition at the moment of examination, and hence, although the permanent and unchangeable properties of inanimate matter renders the use of experiment there of paramount value, in living and sentient beings its application is more limited, and its results more uncertain. We cannot depend on the accuracy of conclusions respecting the natural functions of parts, drawn from experiments which only show what takes place in those unnatural conditions induced by operations. For not only are the ordinary actions of the organs thereby often deranged or destroyed; but the dreadful extremity of terror or suffering, and many other causes, may conspire to render still wider the

* Celsus, lib. i., p. 8.

difference between the observed and the natural condition of the objects which are examined.

M. Legallois, a man of great skill and extensive knowledge, remarks in one place of his "Experiments on the Influence of the Nervous System on the Circulation," "J'eus presque autant de résultats différens que d'expériences ; et après bien des efforts inutiles pour porter la lumière dans cette ténébreuse question, je pris la partie de l'abandonner, non sans regret d'y avoir sacrifié un grand nombre d'animaux, et perdu beaucoup de temps."

The testimony of another French physiologist, M. Colin, a zealous advocate and extensive practiser of vivisection, is worthy of being noticed. "Certain experiments," he says, "are complex in their nature, when they are applied to important functions, the perturbations of which react on nearly the whole animal economy. Apply your instrument to the brain, or the heart, and immediately you have general and serious disturbances of the system, which it is necessary to disengage from those which belong to the direct and local result of the experiment." And again, with regard to the uncertainty of the results obtained, M. Colin says, "Often the same experiment repeated twenty times gives twenty different results, even when the animals are placed apparently in the same conditions. It may even happen that the same experiment gives contradictory results." M. Colin, after making this admission, speaks of the necessity for multiplying experiments: "It is necessary to recommence in order to learn." The fairer conclusion would be, with M. Legallois, to desist from a mode of research which experience had shown to be unsatisfactory and fallacious.

I submit, therefore, these testimonies of practical physiologists to the candid consideration of tho medical profession.

Experience has shown that experiments on living animals are attended by many sources of fallacy. The results obtained by different experimentors are so various, and often so contradictory, that there is scarcely a single position laid down by them that can with confidence be adopted. We find that the most opposite results occur at different times from injury of the same organs ; that injury of different organs often produces the same results ; and that the same experiments are not followed by the same results in different subjects. The latter remark is especially applicable to experiments with poison, the effects of which show remarkable variations in different animals. I think that the true value of these experimental researches was rightly estimated by Dr. Pritchard, who in his work on "Insanity" says : "It is well known to all those who have paid attention to the recent progress of physiology, that attempts have been made to ascertain the functions of the different parts of the brain and its appendages, by removing successively parts of these organs from living animals, and noticing the changes which ensued in their actions when thus mutilated. The most celebrated of these was the series of experiments instituted by M. Fleurens. MM. Magendie and Serres, and more lately Fodera and Bouillaud, have occupied themselves with similar researches. The results obtained by these experiments not only differ in essential respects from each other, but are completely opposed to conclusions deduced by others from inquiries instituted and pursued for several years on a different path. These inquirers are disposed to distrust all the results of vivisections, or experiments performed by cutting away the brains of living animals. The method of research which thoy have pursued is that of minute and accurato observation of pathological facts."

Dr. Carpentor says, "On such subjects as tho functions of tho different parts of the encephalon, I do not believe that experi-

ment can give trustworthy results; since violence to one part cannot be put in practice without functional disturbance of the rest. Here I consider that a careful anatomical examination of the progressively complicated forms of the encephalon, from fishes up to man—the experiments already prepared by nature—is far more likely than any number of experiments to elucidate the problem." And elsewhere: "Almost all our knowledge of the laws of life must be derived from observation only. Experimentation can conduct us very little farther in this inquiry. . . The ever-varying forms of organised beings by which we are surrounded, and the constantly-changing conditions in which they exist, present us with such numerous and different combinations of causes and effects, that it must be the fault of our mode of study, if we do not arrive at some tolerably definite conclusion as to their mutual relations. In the language of Cuvier, the different forms of animals may be regarded as so many kinds of experiments ready prepared by nature."

Cuvier's own words in the passage referred to by Dr. Carpenter, as to the value of Comparative Anatomy, or the observation of the structure and functions of the organs of the lower animals, are worthy of quotation. "Nature has supplied the opportunities of learning that which experiments on the living body never could furnish. It presents us, in the different classes of animals, with nearly all possible combinations of organs, and in all proportions. There are none but have some decription of organs by which they are made familiar to us; and it only suffices to examine closely the effects produced by these combinations, and the results of their partial or total absence, to deduce very probable conclusions as to the nature and use of each organ, and of each form of organ, in man."

To this I may add, that the observation of abnormal specimens of the human body is also capable of affording conclusions

which experimentors seek to arrive at by their painful processes. A careful collection and arrangement of such observations would establish facts in physiology with far greater certainty than any experiments could do. In fact, the observation of the human species in its early periods, and in cases of anomalous growth, affords many analogies to "those experiments ready prepared by nature" which Cuvier refers to in comparative anatomy.

Equally instructive, and elucidatory of physiology, are the teachings of Pathology, or the observation of structure and functions under disease, and the appearances after death. Here again, nature supplies materials for study and for induction, far more varied and more trustworthy than any experiments could give. I am not disputing the conclusiveness of some of these experiments. For example, M. Magendie found that cutting off the eyelids of a rabbit and leaving bare the globe of the eye brought on ophthalmia. MM. Boulay and Colin starved a horse, made an open wound in the throat, and injected some grains of strychnine, and the poor animal died "in characteristic convulsions." M. Flourens removed with a knife some layers of the brain of a bird; "it immediately manifested a loss of harmony in its movements, it staggered and fell." M. Béclard's "Treatise on Physiology," a standard book of instruction and reference, both in England and abroad, contains hundreds of similar "experiments," with directions for performing them. The operations certainly demonstrate the facts stated. But they are not the less stupid and cruel because they are conclusive. What is here affirmed is, that by clinical and pathological observation the same results could be and are obtained. In the words of Celsus, "Hæc cognoscere prudentem medicum, non cœdem sed sanitatem molientem; idque per misericordiam discere, quod alii dirâ crudelitate cognoverint."

The physician who pursues this system of research, even in the most limited sphere, cannot fail to contribute a larger number of important facts, and to aid more in the solution of the arcana of physiological science, than he could effect by thousands of dissections of the lower animals. He will, moreover, have the satisfaction of knowing that, "while endeavouring to save life, and performing offices of mercy, he is acquiring that knowledge which others often vainly seek to obtain while inflicting death and performing deeds of dire cruelty."

In regard to the functions of the various parts of the encephalon, to discover which a vast proportion of cruel experiments have been made, and are still being made (we regret to say under the sanction of the British Association for the Advancement of Science), almost the only accepted facts are due to the observations of medical men, not to the researches of vivisectors. In fact, after all the ghastly records of such experiments, the bare recital of which would fill many volumes, we have to fall back upon the results obtained by the humane practitioners of the healing art in their reports of clinical and pathological cases.

I have given instances of needless cruelty perpetrated by men eminent in science, but there is reason to fear that "the race of wretches," of whom Dr. Johnson speaks, "among the inferior professors of medical knowledge" are not extinct. A few years ago a Yorkshire surgeon published, in a Scarborough newspaper, the report of an experiment of the most revolting cruelty. It is quoted at page 69 of Mr. Fleming's "Prize Essay on Vivisectics." When such a narrative could be unblushingly told by a medical practitioner, and admitted into the columns of an ordinary newspaper, it is to be feared that experiments of this class are not unfrequent, and that public opinion is not sufficiently awake to their atrocity. We do not wonder at the

honest indignation of great-hearted Samuel Johnson. Sad it is that his words should be applicable at all in our days, though we have certainly advanced both in science and humanity.

Enough has been said to show the existence and the extent of this evil. The question remains, what ought to be done?

Any appeal to vivisectors themselves would be in vain. The better sort of them, who are influenced by scientific zeal, no doubt hope that they may succeed in researches which have baffled their predecessors. The lower class of operators are too hardened to listen to any remonstrance. What can we expect from men, of one of whom we read this: "An English student having quitted a German physiological laboratory, unable to bear its horrors, the professor remarked that 'he never found Englishmen who would stop with him, and he supposed (with a sneer) that they thought God would make them suffer the same as the animals.'" An English surgeon, visiting a French laboratory, describes the conduct of the students, in mimicking the cries and moans of the tortured animals in derision, as so revolting, that he quitted the place in disgust. I myself witnessed this "tiger-monkey" spirit in Magendie's class. We have not reached that depth in England yet, and we must not risk our schools of medicine being degraded to the continental level.

An appeal can more hopefully be made to the medical profession at large, the majority of whom acquired their knowledge before these cruel practices were introduced into our schools of physiology. The number of distinguished men who have recently signed a protest and memorial on the subject, proves that a strong feeling pervades the profession as to the scandal of the present state of things. Some united and official action ought to be taken, so as at least to condemn the abuses of the system. In Ireland this has been partially done. The

Programme of the Practical Course of Institutes of Medicine for 1875, under the joint management of Trinity College, Dublin, and of the College of Physicians, concludes with the significant, "*N.B.—Vivisections are absolutely prohibited.*"

We must not, however, be too sanguine as to the influence of the medical profession, when we read in the Reports of St. Bartholomew's Hospital, vol. ix., the record of the following series of experiments, performed by a physician attached to that school of medicine, and published without eliciting the indignant protest of the other medical officers belonging to that hospital. The operator took sixteen cats, and having opened their sides while under the influence of chloroform, tied up their bile ducts, and then left them to expire slowly from the consequences of the operation. His professed object was to ascertain the changes in the liver, by examining microscopically the morbid conditions which his experiment had superinduced. He preferred, he tells us, cats to dogs, because dogs have been found to live only from five to ten days, whereas some of his cats lingered for more than three weeks. The first two creatures were fortunate enough to die after two days. The third, he remarked, three days after the operation, "seems to be dying, and lies on its side, mewing." It was "found dead" next day, and a fourth died in four days of prolapse of bowels. A fifth, "a very old white cat," lingered four days. Two were found dead on the seventh day. Of one which survived about a fortnight, it is noted that it was "very feeble; when tumbled over, has great difficulty in regaining its feet." Two of the poor creatures lingered till the 27th and 29th day, when they were killed. The results of the experiments for any practical purpose I regard as worthless, and the whole affair is an example of pitiless and stupid cruelty.

It is evident that public opinion outside must be brought to

bear for the suppression of atrocities which thus pass without protest from the profession. The late Sir Arthur Helps ("Animals and their Masters," p. 43) says, "It is very little that legislation can do in this matter. We can only rely upon the force of enlightened public opinion." He adds that "Women could do a great deal in this matter, as indeed they can in most social affairs. Any man," he says, "known to have practised needless cruelties on animals, should be placed under not only a professional but a social ban."

> "I would not enter on my list of friends
> (Though graced with polished manners and fine sense,
> Yet wanting sensibility) the man
> Who needlessly sets foot upon a worm."

How much more are those to be shunned who pass their time in pursuits so repulsive and cruel. "Public opinion," Sir Arthur thought, "would stop many of the cruel and wicked experiments carried on under the sanction of public bodies."

The late Dr. Bardsley, of Manchester, a man of high moral character as well as professional eminence, suggested that "no experiments should be allowed except under the sanction of the College of Surgeons or Physicians, in either of the three kingdoms; the individuals who wish to institute them specifying to these corporations the nature of the experiments, and their supposed advantages, ere they are permitted to put them in practice."

This might have been of avail at the time when Dr. Bardsley proposed it, but would scarcely be a sufficient safeguard now. Some legislative interference is called for, and the only question is as to the mode and extent of the interference. A "Society for the total abolition of vivisection" has been formed, the object of which is to obtain the legal prohibition of

all experiments on live animals. There is no likelihood of this being listened to in Parliament. But the law may be invoked to prevent needless cruelties on the pretext of science. The existing laws against cruelty to animals do not reach the case. We have a new class of offences, requiring fresh legislation. Even if the difficulty of obtaining evidence were got over, it is not clear that such practices come within the scope of the Acts now in force, as the failure of the prosecution at Norwich proved.

Professor Haughton, of Dublin, himself a practical physiologist of eminence, proposes that all such experiments should be conducted under the superintendence of a public officer, responsible to public opinion and to the law for his action. These Inspectors of Physiology would hold a post under a Vivisection Act, analogous to that of the Inspectors of Anatomy under the Anatomy Act, a law which has worked well, and is regarded by the medical profession as beneficial. Some check, Professor Haughton thinks, would thus be put to the growth of evils which have brought a cloud over the whole medical profession.

While the appointment of inspectors might to some extent prevent the introduction of grosser cruelties, I doubt if there would be much result in diminishing the evils already existing. The present laboratories and schools of physiology would probably be allowed to continue under the official supervision. The inspectors would seldom interfere with the teachers in the courses of instruction now adopted. New legislation would be necessary, in order to determine what operations are needless and cruel. Laws cannot precede public opinion, but must be the outgrowth of that opinion. The present duty of all who wish these evils abated, is to diffuse information on the subject, among non-professional as well as professional readers.

This must be done extensively and without delay, for the evil

is increasing, and is likely to increase, from the prominence given to such researches in our schools of medicine. Let it be remembered that this is a new feature in English medical education. There were no "demonstrations" on living animals at Guy's, or St. Bartholomew's, or Westminster, or University College, a few years ago; nor in Dublin or Edinburgh was the practice recognised. The generations trained under such influences must deteriorate in moral and social tone, and the character of the whole profession will be affected by the misdeeds of the vivisectors. No profession has a larger number of humane and right-hearted men; and they ought to prevent the discredit of special legislation,* by uniting in some public disapproval of crimes that are committed in the name of medical science.

Since the foregoing pages were written, and while still open to revision, a brief but important paper has appeared in the "Contemporary Review" for May, 1875, by Sir Thomas Watson. This paper may be taken to represent the views of the highest class of the medical profession. It is written with the express purpose of "calming disquietude upon the subject of vivisection, which is not unnaturally looked upon in society with horror and disgust, and of showing that, however fearfully it may often have been abused, it may be both lawfully and mercifully

* A Bill for regulating vivisection has been presented in the House of Lords by Lord Henniker (Hartismere). It requires registration of places for experiment, open to the inspectors of anatomy; it requires anæsthetics to be used; and includes under the term vivisection other cruel experiments. This Bill can be objected to by no scientific man honestly desiring to check the abuses of vivisection. It hardly goes far enough, for it will not check barbarities in registered places. (See pp. 121, 122.) I would have preferred special inspectors instead of the inspectors of anatomy. Power is given to a justice of the peace to issue a search warrant to constables where cruelties are reported in unregistered places.

practised." Sir Thomas lays down the following restrictions and conditions, within which he thinks vivisection may be justified:

"1. I hold that no vivisections are excusable which are made at random, simply to see what will happen. To justify them at all there must be some definite object in view of a previously instructed mind, some plain question to settle, some important doubt or uncertainty to remove, some hypothesis containing the promise of service to humanity to be confirmed or confuted; at least some reasonable hope and prospect of resulting benefit.

"2. I hold that no man is justified in making any painful experiment upon a living creature who does not possess the skill, judgment, intelligence, and previous knowledge requisite to render the experiment successful and instructive. * * *

"3. I hold that no teacher or man of science, who by his own previous experiments, or by his absolute knowledge of trustworthy and conclusive experiments made by others, has thoroughly satisfied himself of the solution of any physiological problem, is justified in repeating the experiments, however mercifully they may be conducted, or even in taking away the animal's life, merely to appease the natural curiosity of a class of students, or of scientific friends and acquaintances; still less for the sake of display or self-glorification.

"4. If the alleged inferences from former experiments are not generally accepted by competent judges as just, or thoroughly established, then a single repetition of the experiments, to settle once for all a disputed point of importance, may reasonably be allowed."

It is further explained that (except in rare instances, when the manifestation of pain is necessary to the solution of the problem investigated) the operations should be performed under the influence of anæsthetic agents, or immediately after the

sudden decapitation of the animal. The latter class of operations, however, are not strictly cases of vivisection, which means the cutting into *live* animals for scientific experiment. The use of anæsthetics does not prevent the mutilation or permanent discomfort of the victims, and the destruction of the life after experiment in such cases is therefore recommended.

If the conditions and restrictions advocated by Sir Thomas Watson were attended to, there would be an end to ninety, or even ninety-nine, out of a hundred experiments, and there would have been no public disquietude or agitation on the subject. But after careful consideration of Sir Thomas Watson's temperate statement, I see no reason to withdraw or modify a single sentence of what I have written.

The practice of vivisection is not restricted to a very few eminent and capable men of science, and the operations are not confined to the determination of points that invite a crucial or decisive experiment. On the contrary, a wide field of research is thrown open, and incompetent and unqualified operators are tempted to enter upon it. Ascertained facts in physiology are demonstrated before classes of youthful students, and these repetitions, because needless, are cruel and demoralising. English schools of medicine must not be degraded to the level of those continental schools which, till within the last few years, were always spoken of in this country with deserved reprobation. Sir Thomas Watson concludes his paper with these words: "The consolatory thought remains, that in proportion as our knowledge of the functions of the nervous system approaches to completeness will the need of these painful methods of 'interrogating nature' continually lessen, and finally cease." This is a consummation devoutly to be wished, but the prospect of it at present is not promising. The practice of vivisection in this country "has increased, is increasing, and ought to be dimin-

ished." This can be effected best by the influence of public opinion, with full knowledge of the facts of the case. The question is not now whether vivisection is ever justifiable, but whether the present abuses of it are to be tolerated. I believe that the scientific value of this method of research has been exaggerated, and I hold, with the late Dr. Abercrombie and other eminent physicians, that most of the results, for all practical purposes, could be obtained from clinical and pathological study, without experimenting on living animals. I hold also, with Cuvier, Sir Charles Bell, Dr. Carpenter, and other eminent physiologists, that more certain and satisfactory conclusions can be arrived at from anatomy, comparative anatomy, and observation of the human body, in health or in disease, than from vivisection. Let the restrictions, however, proposed by Sir Thomas Watson be endorsed and enforced by the governing bodies of the medical profession, and much will be gained in the cause both of humanity and science.

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