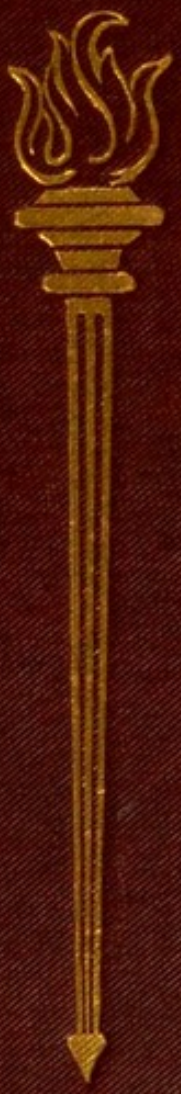
WHAT IS VIVISECTION?



A. R. GOODRIDGE

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By

A. R. GOODRIDGE

"THERE WILL COME A TIME WHEN THE WORLD WILL LOOK BACK TO MODERN VIVISECTION IN THE NAME OF SCIENCE AS IT DOES NOW TO BURNING AT THE STAKE IN THE NAME OF RELIGION."

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UNRESTRICTED VIVISECTION IS A DISGRACE TO EVERY MAN AND WOMAN LIVING IN FREEDOM AND COMFORT IN A COMMUNITY THAT TOLERATES IT

TO the men and women who, in their brave stand for mercy and truth have contributed so emphatically to the value of these pages, the writer desires to express heartfelt acknowledgment.

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INTRODUCTION.

Since becoming cognizant of the verities of this subject, I have found the question to be almost universally asked by members of the general community: "What is Vivisection?" notwithstanding some already considerable circulation of its facts.

This little volume has been compiled, from unimpeachable authorities, to answer that question.

To cover all the salient points as thoroughly, and yet in as condensed a form as possible, has been the effort throughout.

A. R. Goodridge.

New York,
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I.

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Could the answer to this question be given in the voices of those thousands that have suffered vivisection—even though these voices be inarticulate—no eloquence of rhetoric could equal that answer. But those voices never reach the ear of the merciful multitude.

In America the community at large yet remains, to use the language of a New England writer upon the subject, in "massive ignorance." The majority of the public to-day has been led to believe, in a vague and general way, that if such extreme as the carving and dissecting of living beings is ever practiced it is done rarely, and under anæsthetics; and that, being pursued within the body of the medical profession, or in the name of

science, it must therefore in all cases be justifiable and humane.

But when clarion tones of protest are sounded from within that very profession itself, and men who are advocates of vivisection, like Dr. Geo. M. Gould, cry aloud for the restriction, by law, of its barbarities, the genuine truth shines forth in unmistakable colors.

If ever reform were needed it is in this cause, for it is through the vice of needless and merciless vivisection, exempt as it is from all law, that **the most atrocious suffering known to-day** has its constant and widespread existence. Various ills, and even deaths, have reacted upon humanity through its practice, but the devotees of this pseudo-science have kept the people in ignorance, and have falsified to them, especially upon two points: its benefit to the human race, and its most barbarous and useless cruelties, to say nothing of the brutalizing lessons it is teaching our youth, in colleges, universities and other class-rooms.

It is not only 'time,' but indeed late time,

that the great and fatal blunders that are being made in the treatment of disease through animal experimentation should be known. Not only time, but overlate time that its gross and hardening lessons to the young should be understood. Not only time, but pitifully late time that the truth of its excuseless, continual, and monstrous tortures **be proven** to the people, **beyond cavil or contradiction.**

England has laws upon this subject, but in the United States vivisection has full license, without restraint or regulation by law, and "any jackanapes," as Dr. Gould himself expresses it, may dig and probe into the flesh and nerves of living beings, *ad libitum.*

While the medical profession has been slow to speak the truth—slow to admit—slow to accuse the practice that has been fostered in its midst, to the great saving of that profession from everlasting obliquy and shame, it remains, that **it is from within its ranks that the facts and the protests against them have been issued,** in spite of the influence of *esprit de corps* to withhold them.

Some of the greatest in their profession have been also brave and true enough to raise their voices against its incompetent methods and cruel abuses; and it devolves upon every physician claiming any humanity to have the courage, if such be requisite, to join his name with some of the greatest names in science and philanthropy; and to **work with heart and soul and strength** against the continuance of this disgrace to our community as it is now carried on in our midst.

Vivisection stands to-day a method of medical research which has been branded by members of the profession as "empirical," and its monstrosities of cruelty condemned in the strongest terms by many of its most eminent men.

The late Professor Lawson Tait, F.R.C.S., one of England's most brilliant surgeons, and its leading authority on abdominal surgery, has said:

"Some day I shall have a tombstone put over my grave and an inscription upon it. I want only one thing recorded on it, and that

to the effect that '**he labored to divert his profession from the blundering which has resulted from the performance of experiments on the sub-human groups of animal life.' Such experiments never have succeeded and never can; and they have, as in the cases of Koch, Pasteur and Lister, not only hindered true progress, but have covered our profession with ridicule.''**

The following we quote from the eminent Sir Frederick Treves, F.R.C.S. (present Surgeon to H. M. the King, formerly Surgeon-Extraordinary to H. M. the Queen, and Surgeon-in-Ordinary to H. R. H. the Duke of York), and who it will be remembered successfully performed the difficult operation upon King Edward at the time the coronation ceremonies were postponed:

'' Many years ago I carried out on the Continent sundry operations upon the intestines of dogs, but such are the differences between the human and the canine bowel that when I came to operate upon man I found I was much hampered by my new experience, that

I had everything to unlearn, and **that my experiments had done little but unfit me to deal with the human intestine.**"

Even were these operations done under anæsthetics, the agonies that follow abdominal surgery, for days afterward, men call "hell;" yet these experiments on helpless dogs continue year after year, for worse than no purpose—to hamper human practice.

Professor Theophilus Parvin, M.D., LL.D., a well-known American authority, quoting Dr. Tait upon the "undue importance" given to bacteriology, adds: "His authority and ability none can justly question."

When physicians and surgeons like these raise their voices against "the fashion" in their profession, it need not be difficult for the public at large to grasp the significance.

Bishop Potter (with a long list of others in the clerical profession) takes the matter up, expressing himself warmly in sympathy "with any effort to discourage **the savagery** of vivisection." He further adds: "It seems to me a curious illustration of what is called in science reversion to type, and might

be used as a strong argument for the brutal descent of those who are its defenders and disciples. One such opinion as that of a great surgeon like Lawson Tait seems to me sufficient to determine the question for all intelligent and right-minded people."

The Rev. J. D. Morrison, D.D., LL.D., Bishop of Duluth, says: "Vivisection is a pitilessly cruel practice, and it is a terrible indictment against it that a man like Lawson Tait should pronounce it worse than useless so far as the art of surgery is concerned. May the day soon come when the strong arm of the law will be uplifted to prevent men from torturing the brute creation under the mistaken delusion that they are thereby advancing the interests of humanity."

So eminent an educator as the late president of the Brooklyn Polytechnic Institute, Professor D. H. Cochran, LL.D., writes: "Unrestricted vivisection is a blot upon Christianity, a foul disgrace to our civilization. It should be closely and carefully restricted by law."

In regard to the experiments of the brutal

French Magendie, Dr. Anthony has said: "I never gained one single fact by seeing these cruel experiments in Paris. **I know nothing more from them than I could have read.**" And a Paris newspaper adds: "To prove something that has been demonstrated time after time, wretched dumb creatures are cut and sawn in pieces, their bones are crushed and their bodies racked. Most truths revealed by vivisection could have been discovered by deductive reasoning; but as it is "easier" (to the hardened) "to cut a dog open than it is to think, vivisectors are more plentiful than thinkers."

This is borne out by the casual remark a physician (a graduate of the Harvard Medical School) was recently heard to make in illustration of the same subject: "It is easier to find out what is in a box by breaking it open than by slower methods." We may add, in passing, that the physician who made this remark was one who smiled over an allusion to the awful sufferings of animals who are cut and carved under the influence of curare —the "hellish curare," of the continual

use of which we are seeing constant admissions by vivisectors—curare, which gives ease alone to the inhuman operator, while to the victim the pain is intensified although it is rendered voiceless and motionless.

And this is the modern work of science! Yet medical congresses held purposely to discuss the subject of vivisection (proper) have condemned and refuted the barbarous and absurd experiments," which are as useless as they are cruel.

Prevarication, however, **too often** exists among medical men in regard to this subject. Sir Wm. Gull, M.D., was questioned before the British commission as to whether he could enumerate any therapeutic remedies which have been discovered by vivisection, and **he replied with fervor: "The cases bristle around us everywhere"**. . . . The question was pushed closer, and so brought to the necessity of a definite reply, he answered: "**I do not say at present our therapeutics are much,** but there are lines of experiment which **seem to promise** great help in therapeutics." Observe the difference between this last state-

ment and the emphatic assertion that "cases bristle around us everywhere."

We are informed by Matthew Woods, M.D., of Philadelphia, that "the minds of **some of the best observers are lost to medicine because of following the false trail of vivisection,**" and when we see by the evidence of the following pages how empty-handed it comes to us after all these years of torture too terrible for any sentient creature to endure —empty-handed, as one of the most notorious vivisectors (Claude Bernard) himself confesses, in spite of all the false claims continually made for it—we can readily comprehend Dr. Chas. Bell Taylor, F.R.C.S., when he said: "The real study of humanity is made on the man himself, and if a doctor wished to know his business, it is at the bedside of his patient that he should learn it."

I believe that we have among our family physicians some of the most noble and humane men, and that many are honestly not cognizant of the atrocities perpetrated so abundantly in American laboratories to-day —but even beyond these, **who is the medical**

practitioner among us who would stigmatize himself as opposed to humane restriction of abuse? Whence, then, comes the strenuous effort, and why, to keep this practice utterly beyond the reach and realm of law?

That there has grown **a craze which has spread,** notwithstanding the statements to the contrary, over this country for so-called "scientific" research among the blood and nerves and tissues of living beings—**a search conducted amidst agony for the most trivial pretexts**—is all too well proven.

The greatest disgrace to our civilization today—it is not an exaggeration to say it—**is the professor of biology and physiology** in his present-day methods of working. To those who are unacquainted with the subject this doubtless seems an astonishing statement, but what crime can equal that of the torturer? **It is not alone under the alleged pretext of finding relief for human ills that this awful extremity is resorted to.** The most excruciating agonies are inflicted merely as an "**easier**" method of **teaching students well-known facts** simply by way of demonstration!

Does anything so inhumanly barbarous seem possible in this country, at this present day? Shall we have our children thus taught the **real lesson** of that heartless proceeding, the lesson of inhuman cruelty? And they—a "clique" in the colleges and various institutes—have managed thus far to keep the law itself at bay. These teachers will **show** their pupils by "object teaching," even though it be by the agony of another, every well-known fact.

Is the average student so stupid then as to call for this? And if so, will cruelty improve his mind?

Must they pack rabbits in ice, and let them scream in torture until frozen, in order to convince the minds of medical students the obscure and intricate fact that they will freeze, the one with hair shorn quicker than the one with its fur?

Shall they, day after day, and year after year, suffocate cats under a glass air-exhauster, that the class may have the **advantage of seeing** the poor creatures in that intolerable torture, gasping for breath, and

so learn thereby that life needs air? Shall these and other unmentioned atrocities be constantly performed for the demonstration of such and similar valuable and unprecedented knowledge?

For incomparably trifling purposes these defenceless ones are forced to endure excruciating agony. What fiendish, cowardly business! Hiding away from the law, to lay cruel and bloody hands upon—what? **The unoffending, the gentle, the tame, the little, the helpless, those that come confidingly at our call!**

The author of *The Vivisection Question* gives an illustration of the indifference to animal suffering which in some places exists. "The professor desired a bit of animal intestine to use in one of his experiments. It would have **been easy to have had an assistant kill a rabbit by knocking it first on the head, but that would have occupied half a minute's time. 'Give me a rabbit,' he called to the assistant, and, taking in his grasp the struggling creature, he plunged the blade of a pair of scissors in the abdomen,**

cut it open as one would cut a piece of cloth, thrust in his hand, tore out the entrails, cut off what he wanted, and flung the writhing and mutilated creature under the table to die in agony. . . . That is what comes from unrestricted vivisection, and that cruelty is possible in any laboratory to-day."

That the crime is actually committed of putting to torture living, sentient beings, with supreme carelessness and extravagance, for the most insignificant reasons, and using them without mercy for miserably inconsequent purposes, seems incredible. Shall we believe that the average human to-day is still so far down the scale of evolution that he will use **life** and **love** and **terror** and **agony** (when in his laboratory, out of sight) the same as though it were nerveless matter?

In the arousing at the present time against great abuses in the nation, the most pitiful of all abuses, because that which causes the most frightful suffering, and of the utterly innocent and helpless, remains yet undisturbed. And why? Because it has been so

secretly carried on, and its **facts so loudly denied and so greatly misrepresented.**

There is nothing vivisection dreads so much as **the light** on its diabolical methods; **for reform must come through the people, and the people must know before they can reform.**

It was the knowledge of the **facts** that broke up child labor in the dungeons of the mines. It was the knowledge of the **facts** that relieved England of the terrors of its prison system, although there was nothing those systems so fought against as open inspection; and it is the **knowledge of the facts, it is liability to inspection, that vivisection so stubbornly fights to-day.**

It is fact and decent sentiment that the vivisector dreads.

The existing practice has filled our peaceful-looking land with hidden hells. It is difficult for the people to realize the truth of this, for those hopeless dens are away from sight and hearing, while **we** breathe the happy air of freedom and comfort: but

here, in our midst, it is **true** that human beings are taking living, loving, sensitive creatures, **with flesh and blood and nerves like unto our own,** and with **dread and fear like unto our own,** and treating them as though they were but wooden toys, to be torn open and carved and broken and frozen and burned at pleasure! Even nailed to boards and slowly crucified for days,—this, too, is the truth. Think of it, these helpless creatures, to whom The Creator gave "our love and our fear."

What is so base as cruelty? Not another of the crimes that man is capable of committing can rank quite so low. It would but require that one be put to excruciating torture for one moment to experience the full truth of this. But the time has arrived, let us believe, when the devotees of this practice can no longer hoodwink the people; and it will be legally controlled. Disregard of suffering, because it is in a different **form** of life from our own, is not for this period in the evolution of humanity.

After a hearing in Massachusetts of the vivisectionists who oppose reform, they reported that the Committee, when listening to **them** heard **facts**—and not "stale and long-refuted suspicions;" science, and not mere "hysterical sentiment." They went on to say that the prominent surgeons, the hospital superintendents, many of the Boards of Health, and practically all the colleges and practitioners—all these—"told so much of accomplished fact and future promise from animal experimentation, that it made an impression."

It is through such representations, together with the usual one of no cruelty, or, at the most, quite inconsequent, that the tolerance of this practice has been maintained exempt, as it is, from the investigation and supervision of the law.

If the vivisectionists claim so much of "accomplished fact," then the notorious French vivisector, Claude Bernard, must have been unfamiliar with his subject, and not to be relied upon, when he said: "Our hands

are empty, though our mouths are full of promises."

And, if there is no cruelty, the almost equally notorious Klein was misrepresenting, when, in his testimony before the Royal Commission of Great Britain, he frankly admitted that, as an investigator, **he held as entirely indifferent the sufferings of animals subjected to his experiments**; and that, except for teaching purposes, he never used anæsthetics unless necessary for his own convenience."

There have not, then, been barbarous and agonizing cruelties? They are only "stale and long-refuted suspicions?" Klein, with numerous others in the bloody work, had gone insane, and testified falsely against himself? Why, he is in the employ of the English government at the present time.

The eminent Lawson Tait, M.D., knew his subject when he said: "Like every member of my profession, I was brought up in the belief that by vivisection had been obtained almost every important fact in physiology, and that many of our most valued means of saving life and dimin-

ishing suffering had resulted from experiments on the lower animals. **I know now that nothing of the sort is true concerning the art of surgery**; and not only do I believe that vivisection has not helped the surgeon one bit, **but I know that it has often led him astray.**" And again, the same distinguished surgeon was "merely an hysterical sentimentalist?" when he said in one of his addresses, "I was the witness of an experiment which thrilled me with horror, which I have never related in detail, and concerning the sight of which I shall preserve silence. I am, however, bound to say that I left the room with the feeling that **if such things were to be done in the pursuit of science, I should like to part company with her.**"

Dr. Leffingwell writes: "It is an interesting and significant fact that some of the most vigorous criticisms of the abuses of vivisection have been by men in the medical profession who are not advocates of its total abolition. Prominent among these is Dr. George M. Gould, a medical writer, a leading physician in Philadelphia,

and widely known as the founder and editor of *American Medicine.* Although a strong advocate of animal research, his kindness of heart will not permit him to condone its cruelties and abuses, and in an address before an association of physicians—the 'Academy of Medicine'—Dr. Gould did not hesitate to denounce them in the strongest possible terms. The address may be found in his book entitled *Borderland Studies.*

"He admits the cruelty of certain vivisectors both in America and Europe: 'Dr. Klein, a physiologist, before the Royal Commission testified that he had no regard at all for the sufferings of the animals he used, and never used anæsthetics except for didactic purposes, unless necessary for his own convenience, and that he had no time for thinking what the animal would feel or suffer. It may be denied, but **I am certain a few American experimenters feel the same way, and act in accordance with their feelings.'**

"Of European vivisectors, he says: 'I purposely refrain from even mentioning the hor-

rors of European laboratories. . . . The Teutonic race is to be congratulated that it is guilty of at least but few examples of the atrocities that have stained the history of Latin vivisection and before which, . . . **one shudders at the possibilities of mental action in beings that bore the human form and feature.'**

"Concerning a cruel American vivisector, Dr. Gould declares that 'it takes a deal of true science and patience to neutralize the good and wash out of the memory the sickening, goading sense of shame that follows the knowledge that in the name of science, a man could, from a height of 25 feet, drop 125 dogs upon the nates (the spine forming a perpendicular line at this point), and for days observe the results, until slow death ended the animal's misery.'

"Of what value is such experimentation? Dr. Gould tells us: 'When you see a vivisector pretending to be scientific, but whose every act and word indicates brutality to his fellow-men, the politician, the selfish schemer, vulgarity of mind and banality of manner,

rest assured **his laboratory experiment is vitiated with falsehood and error, and scientifically is utterly valueless.'**

"Dr. Gould does not hesitate to declare that one of the greatest of mistakes is the profound secrecy that surrounds the vivisector's laboratory. 'This brings me to what I can but conceive as a grave and profound mistake on the part of the experimentalists—their secrecy. . . . Every laboratory should publish an annual statement setting forth plainly the number and kind of experiments, the objects aimed at, and most definitely—the methods of conducting them.'

"No one has said anything worse of American vivisectors than this editor and physician. He has called some of them 'conceited jackanapes'—a designation which fits them exactly, and does credit to the insight of Dr. George M. Gould.

'The practice carried on by **conceited jackanapes** to prove over and over again already ascertained results, to minister to egotism, for didactic purposes—**these are not necessary and must be forbidden.'** "

Dr. Gould adds that **there are vivisectors in America who "are a disgrace to science and humanity,"** and that **"their useless and unscientific work should be stopped."** As the American Humane Association well says: "We may be sure that statements thus made are based on facts."

The following question, asked of Dr. Gould, is one which should receive the attention of every medical man in the community. "If, as **you** have testified, there are some American vivisectors who have no regard for the suffering they cause, and who are a 'disgrace both to science and humanity;' if, in American physiological laboratories, **'conceited jackanapes'** are dissecting living animals to minister to their egotism; if certain men are conducting vivisections 'only in the interest of vanity,' pretending to be scientific, while every word indicates brutality to their fellow-men, and whose laboratory experiment, 'vitiated with falsehood and error, is utterly valueless'; and if, worst of all, this vivisection is being conducted in secrecy—a secrecy which you condemn as 'a grave and pro-

found mistake '—**what influence is the Medical Profession exerting to-day toward the remedy of the terrible evils which you have thus so clearly admitted, and so forcibly denounced?**''

Professor Rolleston, of Oxford, strikes the keynote of explanation as to how the perpetration of these unspeakable atrocities becomes possible to a human being brought up in civilization, when he says :

'' Vivisection is very liable to abuse. . . . It is especially liable to tempt a man into certain carelessness. **The passive impressions produced by the sight of suffering growing weaker, while the habit and pleasure of experimenting grows stronger by repetition.**''

The delight and **over-readiness** of surgeons to operate has been a matter of frequent comment. It is a demonstration of the fact that the mind of man becomes more and more engrossed in whatever interest it embraces—even though it be a bloody and painful one; becomes more and more addicted to it, one

might say, as to an over-ruling habit. Thus to the vivisector there is nothing that holds him in such powerful thrall as the pursuance of his heartless occupation, terrible as it would be to the normal mind. He **becomes callous to the torture while absorbed in the most inconsequent investigation,** and strenuously seeks the toleration of the practice, utterly unrestrained, which even "conceited jackanapes" may perform at every diabolical whim.

So vivisection has gone on unrestricted, but done in the dark, before its own little coterie of practitioners and classes. To the public there have been **barren promises and false claims;** in the laboratory **untold horrors heaped up, year upon year.** Even the great bulwark of the vivisector's claims—the claim of the discovery by Harvey, through vivisection, of the circulation of the blood, has been disproven by the stronger light of later history.

Professors of physiology have sneered at even the excuse of relief to humanity as the object of the awful work. Some vivisectors,

we are told, probably the majority, work in the hope of extracting some weak fame from the infamous tortures they commit; and others again, as has already been said, follow this abominable work for their own personal "ease" in teaching a class. Some, like Pasteur, have experimented for cures for human ills, with worse than failure. For this we have but to look at the frightful results from Pasteur virus (which as yet are not any too well known), the failure of the Koch "cure" for tuberculosis (consumption), and statistics concerning diphtheritic antitoxin and the number of physicians now considering it worse than useless. (For further facts on these points see pages 38 to 57.)

The public, **kept in ignorance,** could readily listen to the ever-present argument of "great necessity, great benefit to humanity—inconsequent cruelty, anæsthetics, a mere prick of a pin, or a merciful death, to save myriads of human beings, and the **unquestionable trustworthiness of all men who practice vivisection, (!)** their unimpeachable judgment, their purity of motive," and, added to this, the

last trump, that always takes the trick; the well-worn, veteran appeal to the mother—"We must practice vivisection continually in order to save your children from death!"

Thus the people have been hushed to rest, like a babe on its mother's breast, for are not these men great and good, and could not lie nor be mistaken, neither could any cruelty come nigh unto them? This is the equivalent to that which some of these tell us about themselves—or more modestly, about one another.

And vivisection goes on, ungoverned; and the helpless ones groan their pitiful cries, year after year, and look up day after day, into the relentless faces above them, with the agonies in their eyes still pleading in vain.

And the deaths from false antitoxins go on. And the immense sales from their most lucrative manufacture go on.

The great Phillips Brooks wrote: "Medicine has tortured sensitive animals by vivisection **with a recklessness which has no relation, direct or indirect, to human good.**"

And mercy and truth were never better

spoken than when Cardinal Manning declared: "Nothing can justify—no claim of science, no conjectural result, no hope for discovery, such horrors as these. Whereas, these torments, refined and indescribable, are certain, . . . everything about the result is uncertain, but the certain infraction of the first laws of mercy and humanity."

For further proof from the most eminent physicians and surgeons themselves, of the **dangers to humanity**, of the **false claims**, of the **inconsequent services**, of the **damnable cruelties** of vivisection, **as allowed to-day in America** and other so-called civilized countries, you have but to read the evidence found in the succeeding chapters of this book.

Shall we—as A People—tolerate this perpetual horror in our midst? If we can scarcely endure to **hear of** such ghastly agonies, shall we turn from these sufferers in their helplessness and leave them to their terrible **realization?**

The question is repeatedly asked: "What can **I** do toward the relief of this horror?"

The answer is: "You can help arouse every

human being within reach of your voice, in behalf of these sufferers. You can keep your children from such classes; your sons from the contamination of such colleges and universities; your votes for men **who will not tolerate unrestricted vivisection.'**

II.

FAILURE, ERRORS, AND DANGERS OF VIVISECTION.

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FAILURE, ERRORS, AND DANGERS OF VIVISECTION.

In this chapter are presented a few of the **numerous statements of eminent physicians and surgeons,** both in our own and other countries, concerning the futility of vivisection and the errors and dangers arising from its pursuit. After years upon years of the practice, and the torture of thousands upon thousands of lives, the continual failure to obtain valuable discovery through its barbarous means is in striking evidence.

The false and mistaken claims put out by its advocates have obtained credence in a hazy way among the community at large, but are disproven by high authorities in the profession, including even that notorious and merciless devotee to vivisection, Claude Bernard himself.

These **assertions coming direct from the**

profession are endorsed by numerous other physicians not here quoted, who have put themselves on record in similar views; but the desire to maintain brevity forbids additional testimony and comment.

William R. D. Blackwood, M.D., of Philadelphia, in an address delivered before the Scientific Association of West Chester, Pa., March, 1894, told his hearers: "It is **physically impossible** that other than **misleading** and **false doctrines** should be the result of the cruel and **degrading work of Vivisection!**"

And Dr. Henry J. Bigelow, for nearly thirty years Professor of Surgery in the Harvard Medical School, and leading surgeon of New England, has asserted, in regard to vivisection, "that in a large majority of instances it is to little or no purpose." Again, this great professor of surgery has said: "**How few facts of immediate considerable value to our race have of late years been extorted from the dreadful sufferings of dumb animals, the cold-blooded cruelties now more and more practiced under the authority of Science!** The reaction which follows every

excess will in time bear indignantly upon this. **Until then, it is dreadful to think how many poor animals will be subjected to excruciating agony, as one medical college after another becomes penetrated with the idea that vivisection is a part of modern teaching,** and that, to hold way with other institutions, they, too, must have their vivisector, their mutilated dogs, their guinea pigs, their rabbits, their chamber of torture and of horrors to advertise as a laboratory."

Also, from the same eminent source, we have: "The horrors of vivisection have supplanted the solemnity, the thrilling fascination of the old unetherized operation upon the human sufferer. Their recorded phenomena, stored away by the physiological inquisitor on dusty shelves, **are mostly of as little present value to man as the knowledge of a new comet . . . . contemptible compared with the price paid for it in agony and torture.**"

Professor Theophilus Parvin, M.D., LL.D., in his address as President of the American Academy of Medicine, quoting Professor Tait,

the late great English surgeon, says: "The subject of bacteriology has, I believe, undue importance in professional study and teaching. . . . May not a similar statement be made in regard to vivisection? My belief is that the value of this method of study in relation to surgery and therapeutics has been exaggerated. So far as the first department is concerned, reference will be made to abdominal and to brain surgery. If Mr. Tait's statement is accepted—**and his authority and ability none can justly question—vivisection has been an injury, not a help** to the former. His declarations upon this point have been positive and frequent. One of the most recent is as follows: '**Instead of vivisection having in any way advanced abdominal surgery, it has, on the contrary, retarded it.**' "

Fifteen years ago Professor Parvin wrote also the following: "Pasteur's investigations as to the cause of hydrophobia and the employment of preventive inoculations require longer observation and experience for appreciation. Koch's method of cure of tuberculosis rates much lower than it did a few

months ago. It is not beyond the bounds of possibility that before many years the average results from anti-hydrophobic and anti-tuberculous inoculations will be of such an unfavorable character that they will give one of the strongest arguments against vivisection."

Since the above writing, **Koch's anti-tuberculous inoculations have been given up,** and the Pasteur "discovery" has also shown itself **not only a failure,** but in a number of instances to have **brought on hydrophobia by the inoculation.**

J. H. Thornton, C.B., M.B., B.A., says, on "The Dangers of Pasteurism:" "It is, perhaps, not generally known that the Pasteurian anti-rabic treatment has been condemned by some very eminent men after prolonged and careful consideration. **The late Professor Peter, of Paris,** pronounced it to be **altogether empirical and devoid of scientific basis,** and he delivered a crushing indictment of it before the Academy of Medicine, at Paris, in which he **pointed out that several of Pasteur's patients had died of a form of**

hydrophobia, almost unknown hitherto in the human subject, but closely resembling the disease produced by Pasteur in his laboratory rabbits. **In short, they had died, not from a dog's bite, but from the virus injected into their bodies by M. Pasteur's hypodermic syringe.** In support of this terrible charge Professor Peter **produced a mass of incontrovertible evidence** which Pasteur's supporters have never attempted seriously to question. **Dr. Lutaud, of Paris, condemned the Pasteurian anti-rabic treatment as not only ineffectual, but also dangerous,** and cited the case of the postman, Rascol, in proof of this assertion. On February 28, 1889, Rascol and another man were attacked by a dog suspected to be rabid. In Rascol's case the dog's teeth did not penetrate the skin, but the other man was severely bitten. Neither of them wished to go to the Pasteur Institute, but Rascol was compelled by the French postal authorities to do so. He remained there under treatment from the 9th to the 14th of March, and on the 26th he resumed his duties. On April 12th severe symptoms set in, with pain at the

points of inoculation, not at the bite, for he had not really been bitten. On April 14th he died of paralytic hydrophobia, which evidently must have been caused by the Pasteurian inoculations. The other man, who refused to submit to this anti-rabic treatment, remained well, though he had been severely bitten by the suspected dog.

"Dr. Charles Bell Taylor, of Nottingham, England, in his article in the *National Review* of July, 1890, gives several cases which furnish decisive proof that hydrophobia is sometimes brought on by the Pasteurian inoculations. In each case the patient was bitten by a suspected dog, **underwent the Pasteurian treatment, and died of hydrophobia, but the biting dog remained quite well!** It is thus evident that persons who submit to the Pasteurian anti-rabic treatment run a very serious risk of getting hydrophobia."

Elizabeth Blackwell, M.D., in a letter written from England, says: "I am so fully convinced from a long life of medical experience that the medical profession is degrading its noble aim, and injuring the human con-

stitution by the short-sighted materialism of its present fashionable methods of 'research,' that I sincerely rejoice when I find an able physician brave enough to oppose the false methods of the present day. . . . The present rapidly accumulating evidence of failure in the treatment of consumption, hydrophobia, tetanus, myxœdema, and diphtheria, etc., by the dangerous method of inoculation, is a noteworthy fact."

From *What Better than Serum?* we quote Dr. R. E. Dudgeon as follows: "That medical practice has improved greatly during the last half century is not owing to the experiments of vivisectors, but chiefly to the discontinuance of many evil practices which were in full swing at the beginning of that period. I refer to bleeding by lancet, by leeches, and by cupping, blisters, setons and drastic purgations. **It was not vivisection that led to the cessation of those disastrous methods, but the persistent teaching of a small—and at first discredited—body of men within the medical profession.**"

Dr. Leffingwell says: "There has been in

medicine, or surgery, hardly any advance in modern times, but some zealot has attributed it solely to experimentation upon animals; there is not an experiment so hideous or brutal, but that some defender has arisen to excuse it, because perpetrated 'in the interests of sick and suffering humanity!' "

On the subject of puerperal fever, Dr. Leffingwell asks: "Is it due to animal experimentation that results have been obtained which have rendered infrequent the occurrence of puerperal fever? The Association of American Physicians so affirms. On the contrary, it can be proven

"(1) The basis of our knowledge concerning this disease was due to observations in hospitals, **and not to animal experimentation.**

"(2) The disease is not yet 'infrequent,' judging by the statistics of a nation's mortality.

"When the history of medical practice shall one day be written, there is no page we would more willingly have blotted out than that which relates to the causes and treatment of this terrible scourge. It is not only that for

twenty centuries medical science was absolutely ignorant of the principal cause of this malady, and that the treatment only added to the horror and increased mortality; the tragedy is that the physician himself was, in so many instances, the source of infection. One shudders at the contemplation of the slaughter that went on year after year in the great hospitals of great cities, in Europe and in America as well, while medical practitioners, instead of bringing assistance, were often spreading the cause of death throughout a community.

"**To whom came the first glimmer of truth regarding the causes and prevention of this scourge of maternity?** Was it some Mantegazza, bending with delight over his crucified victims? Was it a Goltz, watching agony mingled with maternal love? **To none of these came the truth.** It was to a young man who, in 1847, was an assistant in the Lying-in Hospital at Vienna, that medical science owes not only the first teaching of the real facts, but, as Lusk puts it, 'A large part of what is now the current doctrine concerning

the nature and prevention of puerperal fever.'

"Because **Semmelweis** pointed out that the awful scourge was due, not to an 'inscrutable and mysterious Providence,' but to the carelessness of physicians and their ignorance of the necessity of surgical cleanliness, his discovery was received with ridicule; he was hated and despised in his lifetime, and he died, Lusk tells us, 'with no other reward than the scorn of his contemporaries.'"

From the work *What Better than Serum?* we quote: "Pasteur's inoculations of rabic virus, inserted into the brain of the animal (virus produced from the frenzied brain of another) doomed to endure for days the torments of induced hydrophobia, are familiar to all. In blessed contrast to which we may mention the humane Buisson Bath, whose cleansing process has, after a long-tried experience in India and elsewhere, proved its immediate preventive and curative virtue. Not in hydrophobia alone, but in other affections, such as lockjaw, hot water and hot water alone, scientifically prescribed,

is doing its sanative duty. . . . In *The New York Herald* we read that the Harlem Hospital surgeons were elated over the discharge from that institution of a lockjaw patient after twenty-six days' treatment of serum inoculations into the spinal cord. The boy's front teeth (we are told) were knocked out in order to insert a tube through which to give needed nourishment. On the fifteenth day the jaw relaxed, and the boy was able to take a little nourishment. In strong contrast to the above, the following, taken from the *North American*, has special interest. 'Lockjaw is a contraction of the muscles. The remedy is the relaxing of the same. In view of the many dying in this country of lockjaw, it seems my duty to relate how I cured my daughter four years ago. . . . Her jaws were set and the muscles of her throat were contracted. I hastily prepared a hot water bath. . . . I kept her in this bath about one hour. In a half hour she could move her jaws. In one hour she could eat, talk, laugh, and was apparently well. I kept her jaws well protected with a cloth, and

kept her in a warm room for several days, as the secret of the cure is warmth and moisture, and she is a living example of the hot water cure.' The writer adds: 'Stay in bath a long time. Keep water hot and jaws submerged, putting cotton in ears, and lie on side. Afterwards apply a mild drawing plaster to the wound to draw out inflammation.

"A writer in the *Boston Transcript*, responding to claims put forth by Dr. Cyrus Edson regarding serum cures, emphasizes the fact that Pasteurism is now a 'byword among investigators,' and its principle is 'denounced by the leading scientific men of the world who have carefully looked into its merits;' that the 'antiseptic treatment of Lister is steadily yielding to Tait's method of simple cleanliness;' that 'many bacteria once thought to be injurious are now known to be healthful in their influence;' (bacteria which, notwithstanding the inquisitorial torments inflicted, still remain debatable ground) that **'in spite of the much vaunted serum cure for the plague, the death rate in India, where it is constantly used, is constantly increasing.**

Indian medical officers speak of it as useless.' Dr. Edson speaks of the 'honor of having found the antitoxin for diphtheria,' but the writer **refers to a meeting of the New York Medical Association (April 9th, 1900), where Doctors Winters, Rupp and Herman, who for years have been investigating the results of the serum, came forward with overwhelming proofs of its uselessness and injurious effects.** The President, Dr. Weir, said 'none of the serums had proved satisfactory.' In an article read before the New York Academy of Medicine, May 21, 1896, Dr. Joseph E. Winters gives the names of thirteen additional doctors (mentioning the hospitals with which they are connected) who, once earnest advocates of the serum treatment in diphtheria, now with **more extensive** experience have from conviction become opposed to it."

A medical authority writes on this subject: "It is said that experimentation has led up to the antitoxin treatment, which has 'greatly lessened the fatality of diphtheria.' If it took centuries of experience to determine the uselessness of the lancet and of other methods of

treatment so generally in vogue but a little time ago, it is not easy to perceive how the value of this new method of treatment can be absolutely determined until, after many years' trial, it shall be seen that the actual mortality from this disease has steadily decreased during a number of years in each country where it is tried. All statistics based upon the number of 'cases' concerning an alleged remedy **in which there is a commercial interest** should be viewed, at least, with suspended judgment. Says Dr. Herman, of Brooklyn: 'Until antitoxin brings down the diphtheria death-rate to a point lower than it ever was before and keeps it at that point in every place, it must be considered a failure.'

"Now, no point is more certain than that antitoxin has failed to meet this test. In Boston, in Baltimore, in St. Louis, in Philadelphia—as Dr. Herman points out—there were years before the introduction of antitoxin during which the mortality rate, based upon population, was lower than during other years since its use.

"In St. Petersburg, the deaths were 378 in 1893, and in 1897, after antitoxin was introduced, the deaths from diphtheria rose to 1,905. The antitoxin treatment in England, so far from lessening the mortality of the disease, has been wholly unable to prevent its vast increase. During five years (1877-1881, inclusive), when antitoxin was wholly unknown, the deaths from diphtheria to each million population of England and Wales were 111, 140, 120, 109 and 121, or an average, roughly, of about 120 per year.

"How was it after the introduction of antitoxin? The corresponding mortality for 1895 became 260, for 1896 it rose to 292, and in 1897 it was 246—more than double the mortality of certain years when antitoxin was unknown."

Regarding the use of antitoxin for diphtheria, Dr. A. L. Barcus, a practicing physician of Philadelphia and a member of the American Medical Association, has expressed very decided disapproval. He says:

"My personal experience with diphtheritic antitoxin has been very unsatisfactory.

For example: in one family under my professional care, four children contracted diphtheria almost at the same time. Two of them were treated with antitoxin at the outset of the disease—before I could reach them—and both died. The two others, taken immediately afterward, who had no antitoxin, fully recovered.

"In March, 1906, I had a very malignant case of diphtheria in a little girl of seven years. She made a perfect recovery without use of this so-called remedy. In the house immediately adjoining, there was a similar case; and although large quantities of antitoxin were used, the child died. A few cases of this kind may not prove a rule; but they certainly tend to prove that antitoxin is not a remedy upon which absolute dependence may be placed. At the present time, I never make use of antitoxin, and it is very rare that any case results fatally. Probably, in a great many cases, a simple sore throat is pronounced 'diphtheria,' and antitoxin being administered, the recovery, which would have

happened anyway, is ascribed to the treatment."

Mr. Stephen Coleridge gives a report upon his research concerning antitoxin as follows: "The recorded death-rate from diphtheria from the report of the registrar-general, during the nine years subsequent to its discovery in 1894, very largely exceeded the death-rate from the same disease for the nine years prior thereto."

What Better than Serum?—referring to England—says: "If we take the period of twenty years, from 1877 to 1897, during which vivisection has had fullest swing and biological science claims to have made its greatest strides—the number of vivisectors in England during this period having increased from 23 to 224—we shall be startled to find that just within these years (in which vivisectors claim their greatest honors) no less than twenty-four of the worst scourges that afflict mankind have actually become more fatal; in some cases doubly and trebly fatal—experimentation keeping pace with the fatal increase of disease; the number of

experiments in 1888 being 1,069,—and in the year 1901 they were 11,645,—experimenters, as we see, having increased within the twenty years mentioned from 23 to 224, and experiments having increased during the past thirteen years from about 1,000 to over 11,000. The Restrictive Act took effect in the year 1876."

Lawson Tait describes vivisection as "crude in conception, unscientific in its nature, and incapable of being sustained by any accurate or beneficent results applicable to man." And has also said: "I feel confident that before long the alterations of opinion which I have had to confess in my own case will spread among the members of my profession."

Similar in substance are the words of Dr. Geo. Wilson, LL.D., when he said, in his address before the British Medical Association: "After all these long years of flickering hope, I am prepared to contend that the indiscriminate maiming and slaughter of animal life, with which these bacteriological methods of research and experimentation have been in-

separably associated, can not be proved to have saved one single human life or lessened in any appreciable degree the load of human suffering. I have ventured to make that pronouncement before, but in halting, academic fashion. I reiterate it here and now with the strongest and fullest conviction."

And now we have this word from England on the danger to humanity of the following practice: "As comment upon the use of dogs in cancer experiments, is the following extract from a leading article in the *Times* of July 22, 1905, written by an expert: 'It has already been ascertained that morbid growths not uncommon in the dog, and upon the characteristics of which certain conclusions have been founded, differ essentially from true cancer, and are misleading with reference to it.' . . . . **The race will pay in false methods of treatment, and increase of suffering, for the atrocious tortures inflicted upon dogs in laboratory farms.**"

The following extracts from an address in this present year of 1906, by Dr. Henry Boucher, of Paris, France, are of deep signifi-

cance. After discussing numerous points of interest, he goes on to say: "The living and suffering material on which these vivisectors operate so varies from its normal state as to impressionability, sensibility, modes of function, etc., occasioned by terror or pain, that it cannot serve as a base of observations permitting proper conclusions to be drawn from the phenomena which pass in the martyred animal.

"In consequence, we do not fear to affirm that conclusions based upon experiments made under such defective conditions can but be deeply erroneous. Our affirmation is found to be legitimate **by the contradictions they show** in their various experiments concerning different physiological theories, contradictions which will exist eternally. . . . It was through vivisection that Claude Bernard succeeded **in demonstrating that the liver is the organ which in our economy produces the sugar.** Now here is the truth. Scarcely had that eminent savant published his famous experiments when many others, whose names are also well known, Pavy,

Schiff, Lussana, Tiffenbach, Sagen, Kratchmer, etc., taking hold of his experiments, **tortured other animals, and demonstrated that, contrary to the conclusions of their colleague, the liver never made sugar during life,** and that the famous glycogenous substance contributed nothing to its production. **Such is the degree of exactitude that is given to physiological and medical science by the experimental method.''**

* * * * * * * *

Dr. Boucher further continues: '' The horrible suffering which man forces the animals to bear is falling back upon him in suffering and death. For example, you all know of the famous anti-hydrophobic serums invented by the immortal Pasteur, after he had caused untold numbers of dogs to die in the excruciating tortures of hydrophobia. Well, since that grandiose discovery, the number of deaths from that dread malady has increased and doubled in all the countries where it is in use. There were, before the adoption of the method in France, perhaps twenty-two per year, and now the number is over forty.

From fifty, in Italy, it is now eighty. And why this increase? Because these famous serums are, as the inventors very well said, but the attenuated virus of rabies. Now, in throwing into the human economy as a preventive these attenuated plantings, it sometimes happens that they encounter a soil sufficiently fertile to nourish these germs and fill their attenuated systems with all their virulence, and this is the result. . . . I am happy to say to you that in the whole civilized world a powerful reaction is manifesting itself against those cruel and useless practices. In Germany, in England, in Italy, and in America, petitions bearing thousands of signatures are laid on the desks in different legislative chambers to demand the suppression of these odious experiments, as useless as odious. . . . Every living creature has his part of justice to demand on the earth. Men are the abler brothers of the animal. They work for us—let our reason think for them! Let our humanity give them, at least, a merciful death! ''

Here is also a word of striking interest that

comes to us from France. T. B. Grimm, in an article published in the *Petit Journal* of Paris, February 14, 1906, says, in speaking of vivisection: "**Science itself is roused against it** and declares it useless and inhuman. A great number of doctors and scientific men of all countries have declared war against it. . . . **In France the campaign is led by men of the highest worth,** at the head of whom is Dr. Phillippe Marechal, one of the most eminent practitioners, and one of the most esteemed municipal magistrates of Paris. But the strongest argument which arises against vivisection comes from the vivisectors themselves. The greater part of them concede, at the end of their lives, that their researches have done nothing but add to the number of errors in physiology."

Sir Wm. Fergusson, F.R.C.S., another of the greatest surgeons in the world, said: "**I make no more experiments in vivisection.** I have made them heretofore, but I **regret it.** I did it because **I did not see the thing clearly.**"

Dr. Horatio C. Wood, Professor in the Uni-

versity of Pennsylvania, and an animal experimenter, has declared that "no experiments on animals are absolutely satisfactory unless confirmed upon man himself."

This statement is further enforced by François Achille Longet, Vivisector (late Professor of Physiology at the Medical Faculty of Paris), who says: "Experiments on animals of a different species, so far from leading to useful results as regarded human beings, had a tendency to mislead us. In seeking to benefit mankind by vivisection, it would be necessary to have recourse to pathological facts founded on experiments on human beings."

In the United States, two bills, one presented in Ohio in 1894, and one prepared in Indiana in 1901, asking that criminals be allowed for vivisection, "because animals fail to render satisfactory results," show the growth of the passion for this kind of work.

III.

CRUELTIES OF VIVISECTION.

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After having fostered the belief that we are living in a civilized age and in a civilized land, it has been a terrible awakening to come to the discovery of barbarities that are practiced in so-called Christian countries—barbarities which are too infamous, too revolting to be believed, were not their exposure indisputable. Such atrocities must need but to be known to be obliterated. If it is not so, then we are indeed not only capable of producing specimens of inhuman barbarians, but we are a nation of them, if we can, knowing it, permit it.

We may be inclined to look at barbaric days as passed, and turn with horror our backward glance to the period of the thumb-screw, the Iron Lady, and the Inquisition; but do not let us sit down and congratulate ourselves to-day on our present civilization,

with the text "God Bless our Home" hanging complacently on our walls, while groans of needless agony are extorted from our fellow-creatures just over the way, in the dens of merciless demonstration. Shall blessing and comfort and ease be upon our heads while we are permitting pitiless tortures to these helpless ones? He of the great heart of sympathy once said, in regard to deeds of charity, "Inasmuch as ye have done it unto one of the least of these, ye have done it unto me." The converse is as true, and every merciful soul feels it. Inasmuch as ye have **done these cruelties unto one of these, ye have done them unto me.** For those who have hearts, the very sunlight is darkened. All life is embittered, with such agonizing tortures daily going on about us. There can be no rest until these "little brothers" of mankind shall have been released from such unspeakable agonies. Till then—we suffer with them.

For proof of some of the cruelties of vivisection, "one need not go beyond the frank admissions of our text-books on Physiology. . . . 'We have long been in the habit, in class dem-

onstrations, of removing the optic lobe on one side from a pigeon,' says Professor Flint, of Bellevue Hospital Medical College. 'The experiment of dividing the sympathetic in the neck, especially in rabbits, is so easily performed that the phenomena observed by Bernard and Brown-Sequard have been repeatedly verified. We have often done this in class demonstrations.' 'The cerebral lobes were removed from a young pigeon in the usual way, an operation . . . . which we practice yearly as a class demonstration.'* Referring to the removal of the cerebellum, the same authority states: 'Our own experiments, which have been very numerous during the last fifteen years, are simply repetitions of those of Flourens, and the results have been the same without exception.' 'We have frequently removed both kidneys from dogs, and when the operation is carefully performed, the animals live for from three to five days. . . . Death always takes place, with symptoms of blood-poisoning.'

"In the same work we are given precise

* "A Text-book of Human Physiology," by Austin Flint, M.D.

details for making a pancreatic fistula, after the method of Claude Bernard—' one we have repeatedly employed with success.' ' In performing the above experiment it is **generally** better **not to employ an anæsthetic,'** but ether is **sometimes** used. In the same work is given a picture of a dog, muzzled, and with a biliary fistula, as it appeared the fourteenth day after the operation, which, with details of the experiment, is quite suggestive. Bernard was the first to succeed in following the spinal accessory nerve back to the jugular foramen, seizing it here with a strong pair of forceps and drawing it out by the roots. **This experiment is practiced in our own country.** ' We have found this result (loss of voice) to follow in the cat after the spinal accessory nerves have been torn out by the roots,' says Professor John C. Dalton, in his *Treatise on Human Physiology.* ' This operation is difficult,' writes Professor Flint, **' but we have several times performed it with entire success;'** and his assistant at Bellevue Medical College has succeeded ' in extirpating these nerves **for class demonstrations.'**

"In withdrawal of blood from the hepatic veins of a dog, 'avoiding the administration of an anæsthetic' is one of the steps recommended. The curious experiment of Bernard, in which artificial diabetes is produced by irritating the floor of the fourth ventricle of the brain, is carefully described, and illustrations afforded both of the instrument and the animal undergoing the operation. The inexperienced experimenter is here taught to hold the head of the rabbit 'firmly in the left hand,' and to bore through its skull 'by a few lateral movements of the instrument.' It is not a difficult operation; **it is one which the author has 'often repeated.'** He tells us 'it **is not desirable to administer an anæsthetic,'** as it would prevent success. . . .

"'I can truly say,' writes a physician who had seen all these experiments during his course of study in Bellevue Hospital Medical College, 'that **not only have I never seen any results at all commensurate with the suffering inflicted,** but I **cannot recall a single experiment which, in the slightest degree, has increased my ability to relieve pain, or in any**

way fitted me to cope better with disease.' "

" The writer of the following letter is one of Boston's leading physicians, a graduate from Harvard Medical School, and a member of the Massachusetts Medical Society. It refers to his experience abroad.

' When I was engaged in studying medicine in Paris, it was the custom of a distinguished physiologist to illustrate his lectures by operations upon dogs. Some of these dissections were not very painful; but others were attended with excruciating, long-continued agony; and when the piteous cries of these poor brutes would interrupt his remarks, with a look of suppressed indignation he would artistically slit their windpipes and thus prevent their howling. Curiosity prompted me to inquire of the janitor whether, after this period of torment these creatures were mercifully put out of misery, and I ascertained that such animals as did not succumb to the immediate effects of their mutilations were consigned to the cellar to be kept, unattended and unfed. until wanted

for the following lectures, which occurred on alternate days.

'From the cellar windows above their kennels the dismal moanings of these unfortunate sufferers could be heard as we passed; and yet I never noticed the slightest demonstration of sympathy in their behalf except on the part of a few American students. It is **to be noted that these dogs were subjected to needless torture for the mere purpose of illustrating well-known, accepted facts,** capable of being taught satisfactorily by drawings, charts, engravings, or models; and hence this cruelty, being unattended by any possible benefit to either students or mankind, was illegitimate and unjustifiable. But when it is considered that these same experiments **might have been conducted under the influence of an anæsthetic,** so as to minimize if not remove this needless suffering, this cold-blooded, heartless torture can only be characterized as contemptible, outrageous, **monstrous.**

'From detailed accounts communicated to

me by eye-witnesses of the incidents related, I entertain no doubt that barbarous cruelty was practiced at that time in all the Parisian physiological laboratories, though it is probable that for novel and horrible experiments none could rival the infernal ingenuity in this business of that master-demon, Claude Bernard. And it remains a lamentable reproach to the scientists of France that similar abuses of vivisection, **degrading and brutalizing to students, as well as to the perpetrators,** are still tolerated in that country and unblushingly reported at medical meetings or in professional journals. If it should appear that any such wrongs were being perpetrated in the United States, the medical profession would, I believe, take prompt and effective measures to brand the delinquents and unceremoniously suppress the evil.'

"It will be seen that the writer, in characterizing Bernard's experiments upon dogs 'for the mere purpose of illustrating well-known and accepted facts' as 'needless, cold-blooded, heartless torture,' **had not the slightest idea that such methods were cus-**

tomary to-day in American institutions. When he began the study of medicine they were not in vogue, and he naturally believed that such abuses existed only on the other side of the ocean.''

Sydney R. Taber, Esq., **a well-known attorney of Chicago, gives us the following: '' Some of the most awful vivisections recorded in history have been made in an American laboratory, within a few years, and published by the experimenter himself.** We refer to the experiments of Dr. Crile on surgical shock. A paper by a Chicago physician gives an account of some twelve experiments made upon dogs, each one involving the mutilation of the animal, cutting down to the heart, puncturing it, sewing up the wound, and, when the creature survived the operation, permitting the animal to live until it perished from the results of the experiment. One of these experiments was as follows: ' Case 2.—Mongrel Newfoundland; hypodermic of morphine, O. I. ether. Tube in trachea and connection with a bellows apparatus which permitted the use of air alone, or of

air and ether. . . . **Thorax widely opened, . . . heart wall caught with toothed forceps,** . . . punctured wound into left ventricle. . . . Chest wall sutured. . . . **Twenty-four hours later the dog was in a bad state—he would not stand, nor eat, nor drink.** Respiration was deep and labored. Dog found dead on the morning of the second day.'

'Cut to the heart, blood-poisoned, gasping out its life, enduring, it may be, a degree of agony beyond the expression of words—that was the fate of one animal. (There were twelve in all.)' "

"There is an experiment, one of the most excruciating which can be performed, which consists in exposing the spinal cord of the dog for the purpose of demonstrating the function of the spinal nerves. . . . . **This experiment, which we are told passes even the callousness of Germany to repeat; which every leading champion of vivisection in Great Britain reprobates for medical teaching; which some of them shrink even from seeing themselves, from horror**

at the torture necessarily inflicted; which the most ruthless among them dare not exhibit to the young men of England, this experiment has been performed again and again in American Medical Colleges, without exciting, so far as we know, even a whisper of protest or the faintest murmur of remonstrance! The proof is to be found in the published statements of the experimenter himself. In his *Text-Book of Physiology*, Professor Flint says: 'We have ourselves frequently exposed and irritated the roots of the nerves in dogs, in public demonstration in experiments on the recurrent sensibility . . . and in other series of observations.' "

"Dr. Theophilus Parvin, of Jefferson Medical College, has stated that there are some vivisectors 'who seem, seeking useless knowledge, to be blind to the writhing agony and deaf to the cry of pain of their victims, and who have been guilty of the most damnable cruelties, without the denunciation by the public and the profession that their wickedness deserves and demands. These crimi-

nals are not confined to Germany or France, to England or to Italy, but may be found in our own country.' "

Mr. Taber tells us: "**In America unrestrained liberty to vivisect has led to the repetition of the extreme cruelties of European physiologists.**" Shall we have no law?

" An Italian scientific vivisector, Professor Mantegazza, in his work on *The Physiology of Pain* (pp. 101-115), describes investigations which were entirely useless and yet impossible to read without horror and detestation. His problem was to create intense pain and at the same time to compel the creature to keep motionless in an attitude that would not interfere with his breathing. The ingenious scientist devised two methods of accomplishing his end, ' either by exasperating the pain, so that its influence overcame the action of the muscles of motion, or by planting sharp and numerous nails through the soles of the feet in such a way as to render the animal nearly motionless, because in every movement it would have felt its torment the more acutely.'

"To exasperate the pain, he invented a machine which he aptly called 'a tormentor'. With it, he explains, 'I can take an ear or a paw and, by turning the handle, squeeze it beneath the teeth of pincers. I can lift the animal by the suffering part. I can tear it or crush it in all sorts of ways.' One experiment was on a guinea pig nursing its young. A rabbit, after two hours' torment and a few moments' rest, had nails stuck into its feet in such a way that 'a pain much more intense' than in some previous experiment is produced. Two little creatures are subjected for two hours to the tormentor, then 'larded with long, thin nails in their limbs.' They 'suffer horribly, and, shut up in the machine for two hours more, they rush against each other, and, not having the strength to bite, remain interlaced, with mouths open, screaming and groaning.'

"All these 'experiments', extending over a year, were conducted, he tells us, not with repugnance, not with dislike, but 'con multo amore'—with extreme delight."

"To stop the cries of the animals without

hindering respiration, the windpipe is first dissected out and then a hole made into it. It is then raised up and a large nail is passed in across it behind, so as to prevent the blood from running into the respiratory tract. Many other physiologists have tried, like De Graaf, to **stifle the cries of the animals in order to avoid complaints of persons living in the neighborhood of laboratories.** Dupuytren used to cut the recurrent laryngeal nerves so as to render the animal dumb, and I have often done the same operation for the same purpose, only that I operated by the subcutaneous method by a process I shall describe elsewhere."—*La Physiologie Operatoire.*

Mrs. Elizabeth Stuart Phelps Ward, in her powerful *Plea for the Helpless,* tells us of "the admission of the remorseful and repentant vivisector, once assistant to the terrible Claude Bernard, who confessed: 'I have witnessed many harsh sights, but the saddest sight I ever witnessed was the expression on the faces of the dogs when they were brought up from the cellar to the laboratory for sacrifice.'"

The great and noble Frances Power Cobbe wrote in her book, entitled *Bernard's Martyrs,* that "Vivisection is very seldom the occasional resource of the practical surgeon, or even of the puzzled physiologist (like Sir Charles Bell), who desires to solve once in a way some knotty and important problem by a most carefully prepared experiment never to be needlessly repeated. **It is, on the contrary, a profession—a regular and independent business—to which men devote themselves with ardor and ambition, and pursue in as orderly a manner, week after week and year after year, as any other trade,** till many of them might boast that they have slaughtered more animals than the most experienced butcher in the shambles." And far more brutally! "**Modern vivisection may be defined, in short, to be the limitless invention, performance and repetition, by scores of inquirers, of every kind and sort of operation on every portion of the living frames of animals, and pre-eminently of the most sensitive animals.** Brains, nerves, eyes, hearts, veins, intestines, bones, limbs, and skin—nothing

escapes, and no part fails to afford a practically boundless field for the ingenuity of the physiologist; or if the imagination of one ever flags, it is soon stimulated into double activity to disprove the boasted discoveries of another.

"We stand, in truth, face to face with a new vice—new, at least, in its vast modern development, and the passion wherewith it is pursued—the Vice of Scientific Cruelty."

Dr. Ellis, in describing his experiments in Harvard Medical School, states as follows: "All the frogs were curarized. . . . The sciatic nerve laid bare and cut in the upper part of the thigh." Dr. Ellis tells us that "many frogs were used;" that "different frogs vary greatly in their susceptibility to different forms of electrical irritation;" that "each animal is a law unto itself;" that "the individual peculiarities of different frogs and the varying conditions to which they are subjected add perplexing elements to the problem;" that "very delicate apparatus was employed;" that in some instances a "curious result was obtained by striking the abdomen

rapidly for a short time, causing the force of the heart beats to much diminish;" that sometimes the little creature's heart becomes "enormously swollen with blood, as shown by the great rise in the lever;" that shocks were "given once every second" in certain cases, and that "very beautiful records can be taken." Beautiful, indeed, and what result was obtained?

"We cannot believe," says the Harvard manifesto, "that such enquiries are ever undertaken without . . . . the conviction that the benefit to humanity will far outweigh whatever suffering they may cause to the animals." The worth of these fine sounding words Dr. Ellis will further point out to us: "The results of our experiments point to the existence of a vaso-dilator as well as a vaso-constrictor mechanism **in the frog**!" What paltry, what shamefaced result to offer to the world as the fruit of scientific torture!

A high authority writes:

"The experience of a young woman, who, with the ambition to devote her life to the relief of suffering, had been studying to be

a physician in one of our great medical schools. She to whom the fluttering of a caged bird excited a thrill of pity had compelled herself to look upon the waste of life in the physiological laboratory, had forced herself to witness the exquisite agony, **the prolonged torture of living animals, which constitutes a part of the medical teaching in this country to-day.** For example, it was affirmed on one occasion by the professor of physiology before his class of young men and women, that the fur of animals prevents the radiation of animal heat, and is thus a protection from cold; that, moreover, an animal deprived of its fur, or with the fur rendered useless by a coating of varnish, would actually suffer if exposed to extreme cold. Nobody out of a lunatic asylum ever doubted this wonderful assertion. Every young man and woman in the medical school knew it as perfectly as the professor himself. But, in the present civilization of Massachusetts, Pennsylvania, and New York, there is nothing so satisfactory in the science teaching of

certain institutions as an experiment with torture; **nothing is so cheap as pain.**

"Three rabbits were produced, one naked, sheared of its fur, one similarly treated and with its body varnished, the third retaining its natural protective covering; and the three animals were then packed in ice. No anæsthetic was given; the moaning cries of the freezing animals, 'the exhibition of pain,' were an important element in the success of this brilliant experiment. Little by little the moans and cries of the freezing animals grew fainter, and after a time ceased altogether. Then they were unpacked. What was the result? Precisely what might have been anticipated. The demonstration was a 'success.' One rabbit, varnished, had been frozen to death. Two others, congealed into partial insensibility, were soon resuscitated, and 'reserved for other experiments.'"

This experiment, **remarkable alone for its imbecility and cruelty, was not an isolated instance, but is quoted as one of the standard effusions of scientific teaching to-day.**

Another example of the cruelties perpetrated recently in 1906, is described in a Chicago press report to various newspapers: "Chicago, March 1.—Charges that unnecessary cruelty is shown in vivisection experiments conducted by an assistant professor of the Physiology Department of the University of Chicago, are made by students who attend his classes. Three young women are among his pupils. The instructor is accused of failing to use anæsthetics where the lack of them causes the subjects of experiment **torture** which **could be avoided at the cost of the few minutes of recitation time needed to apply the drugs.** He is not credited with intentional cruelty, but accused of thoughtlessness. . . . An unusually painful operation was described by a medical student as having been performed on a cat. The professor, in order to explain the reflex action of the nerves, severed the spinal cord at the neck, using a bone chisel for the operation. According to a member of the class, no anæsthetic was used!"

I trust you will not refuse to read these

facts. Frances Power Cobbe, whose life was devoted to the defense of the helpless, has said: "If you cannot bear to look at them, what must the suffering be to the animals who undergo the cruelties they represent?"

"Within the past hundred years," says a recent writer, "the ethical ideals of civilization have so far advanced that cruelty to animals, so long a matter of indifference, is to-day regarded as the manifestation of depravity and vice. To the charge of cruelty, therefore, the American vivisector is justly sensitive; his sensitiveness finds frequent expression in the various memorials made to Congress." . . . Yet the hardening process of this work is such as to produce results like the following: "A very striking example of this tendency was brought out in the testimony of a witness before the Royal Commission,—Doctor Klein, a practical physiologist. He admitted frankly that as an investigator he held as entirely indifferent the sufferings of animals subjected to his experiments, and that, except for teaching purposes, he never used anæsthetics unless necessary

for his own convenience. Some members of the Commission could hardly realize the possibility of such a confession. 'Do you mean that you have no regard at all to the sufferings of the lower animals?' 'No regard at all,' was the strange reply. . . .

"Of Magendie's cruel disposition there seems only too abundant evidence. Says Dr. Elliotson: 'Dr. Magendie, in one of his barbarous experiments, which I am ashamed to say I witnessed, **began by coolly cutting out a large round piece from the back of a beautiful little puppy, as he would from an apple dumpling.'**

"'**It is not to be doubted that inhumanity may be found in persons of very high position as physiologists.** We have seen that it was so in Magendie.' This is the language of the report on vivisection, to which is attached the name of Professor Huxley."

The Hon. R. T. Reid, in the House of Commons, said, in April, 1883: "It is said that the use of anæsthetics is the means of preventing these kinds of operations (experiments on the brains of monkeys, by David

Ferrier) from causing pain. Although in the first instance an animal may be under the influence of anæsthetics, you can not keep up a protracted comatose condition for days, or weeks, or months, and therefore it is perfectly idle to suggest that the horror of the operations is at all diminished."

"Under the head of 'Cats' we are told that 'Cats are more difficult to handle than dogs, inasmuch as they are armed with teeth and claws, while their suppleness and agility make it more difficult to secure them.'

Muzzling a cat is done with less ease to him who will torture it, "and for that reason Walter **used to sew the lips together instead.**"

The eminent surgeon, Dr. Henry J. Bigelow, LL.D., has said: "**There is little in the literature of what is called the horrors of vivisection which is not well grounded on truth.** Vivisection is not an innocent study. . . . It can be indiscriminately pursued only by torturing animals, and the word **torture** is here used to convey the idea of very severe pain—sometimes the severest conceivable pain, of indefinite duration, often termina-

ting (fortunately for the animal) with its life, but as often only after hours or days of refined infliction, continuously or at intervals.

"A man about to be burned under a railroad car begs somebody to kill him. . . . Yet it is a statement to be taken literally, that **a brief death by burning would be considered a happy release by a human being undergoing the experience of some of the animals who slowly die in a laboratory.**"

In alluding to "those weak and ill-regulated beings whose first impulses to crime may be due to habitual indulgence in unlimited vivisection," a recent writer relates this incident. "Not long ago I stood in Mt. Auburn, by a nameless and almost forgotten grave. It was the last resting-place of Dr. John W. Webster, a professor in Harvard Medical School; a man of science, and one who had been revered and honored in his profession. And yet that man had lured to his laboratory a brother physician, had stabbed him to the heart, and had suffered the penalty of murder. As I stood by that dishonored grave, I said to the old man who had pointed

it out to me, 'Did you know him?' 'Yes,' said he, 'I knew him.' 'Well, do you not think that, after all, his confession might have been true—that the deed was done in sudden anger, **and that he had not lured his old friend to his laboratory for the purpose of committing a murder?**' 'No,' said the old man, 'I think that he did it.' 'But why?' I asked. **'Any man,' said he, 'that would take a living dog and nail him to a board, and cut him up alive, would be capable of committing murder—and that is what he did.'** That is the sentiment of the people. It is more than a sentiment; it is a truth."

It cannot be necessary to further add to this list of cruel facts.

Will not every reader here addressed see to it, and **work—work even as the terrible conditions demand,** to release these helpless ones who await this agony?

Some vivisectors, after years of tortures with but inconsequent results, have awakened to find left to them as their portion only bitter regret. What a portion this must be, to those who have any soul left, the mem-

ory of such agonies inflicted by their hands.

Mr. Grimm tells us some "have expressed not only regret but remorse. Dr. Reid, whose experiments in vivisection were of the most cruel kind, made upon the nerves of the tongue of thousands of dogs tortured to death, has just died of cancer of the tongue. In recalling the horrible suffering inflicted upon his victims, he, in his despair, said to those about him that he considered his suffering as a punishment from Heaven.

"The famous physiologist, Haller, the friend of Casanova, passed through the same agony. He cried, 'Will God ever pardon me for having tortured his creatures so much? I have maltreated God's creatures. How will He treat me?'"

Mr. Grimm adds, of experimental physiology, that "the number of its adversaries grows daily"—and this, in this year of 1906, from across the water; not even from kinder England, but from the Continent. Surely, civilization is coming, though it has been, alas, pitifully slow.

To term such vivisection as is practised

"brutish" is quite too gentle an epithet. It is an insult to the animal creation, so-called. No four-footed brute ever inflicted such excruciating and long-drawn-out tortures upon its victims as do these humans, that the usage of cruelty has turned into—what?

Young students, beware how you tamper with it, even in its smaller beginnings. Remember that this is also a law of nature, that no being can inflict agony upon another without hardening his nature and losing the best of that which constitutes a man higher than his dog or his cat or his horse. **They** have all been known, yes, even cats have been known to lose their own lives in their efforts to save, or through their devoted affection for their human friends. Between the conduct of man to animal and animal to man, in the matter of inflicting long-drawn-out cruelty, which has the lower record?

Shall this nation prove that, if hyenas and vultures are exceptions in the animal kingdom, Claude Bernard, Mantegazza, Magendie, Brown-Sequard, Klein, Flint, Crile, and others, are exceptions to humanity?

IV.

DECEPTION.

IV.

DECEPTION.

The question has been asked: "To what extent can scientific authority be implicitly received as the foundation of belief regarding the subject of vivisection?". . . . "One might suppose that here was the welcome opportunity to demonstrate that science can have nothing to conceal; that her symbol is a torch and not a veil; and that above all professional preference and partisan zeal stands fidelity to accuracy, and the love of absolute truth."

But vivisection has sought **darkness, secrecy, exemption from law.** The question is frequently asked, "To what extent has vivisection beneficially influenced the present practice of medicine?"

To what degree have its unspeakable agonies been the means of sparing human beings?

The constant claim of those who are the

advocates of this **unlimited vivisection** is always its great utility—far beyond what the facts warrant—and the mercy and humanity with which it is performed. It is their usual claim that there is little or no suffering inflicted, never atrocious and long drawn out agony, for incomparably trivial ends.

There is scarcely a vivisector who is so hardened or daring as to acknowledge to the world the horrors that all too frequently infest the laboratory.

The public, upon the whole, seems to have believed that every one of these hundreds of experimenters is a humane and truthful man and that they form the one class in the world, no matter from where they've been gathered, who are quite beyond anything unrighteous and therefore beyond deceit.

As has been already remarked on an earlier page the writer believes that there are many humane physicians who, not practicing these atrocities themselves, are unaware of much that is being done in the laboratories by others calling themselves scientists; but as Dr. Parvin himself tells us: "who seem,

seeking useless knowledge, to be blind to the writhing agony, and deaf to the cry of pain of their victims, and **who have been guilty of the most damnable cruelties, without the denunciation, by the public and the profession, that their wickedness deserves and demands.** These criminals are not confined to Germany or France, to England or Italy, but may be found in our own country."

These advocates of unlimited vivisection allude to the statements of those who are attacking their cruel methods as "stale and long refuted suspicions."

We will quote some of the most eminent of their profession, in reply.

Henry J. Bigelow, LL.D., for nearly thirty years a professor in the Harvard Medical School, a member of the Massachusetts Medical Society, surgeon of the Massachusetts General Hospital, and leading surgeon of New England, has said: "There is little in the literature of what is called the horrors of vivisection which is not well grounded on truth. . . . Vivisection is not an innocent study. . . . **Vivisection will always be the**

better for vigilant supervision, and for whatever outside pressure can be brought to bear against it. **Such pressure will never be too great, nor will it retard progress a hair's breadth** in the hands of that very limited class who are likely materially to advance knowledge by its practice. . . .

"**A torture of helpless animals—more terrible by reason of its refinement and the effort to prolong it, than burning at the stake, which is brief—is now being carried on** in all civilized nations, not in the name of religion, but of science. . . . . **By far the larger part of vivisection is as useless as was an** *auto-da-fé*. **The law should interfere.** There can be no doubt that in this relation **there exists a case of cruelty to animals far transcending in its refinement and in its horrors anything that has been known in the history of nations.** There will come a time when the world will look back to modern vivisection in the name of science as they now do to burning at the stake in the name of religion."

"A few years ago there was given out by the assistant professor of physiology in Har-

vard Medical School at Boston, one of the most astonishing statements concerning vivisection that ever appeared in public print. The accuracy of his statement was vouched for by five other leading professors in the same institution—Drs. Henry P. Bowditch, W. T. Councilman, W. F. Whitney, C. S. Minot, and H. C. Ernst—men whose scientific reputation has imparted to their affirmations an immense authority throughout the country. They put forth what they asserted was a 'plain statement of **the whole truth**' concerning experiments on living animals. He, perhaps, is a rash man who ventures to question any assertion supported by names like these. But it is the duty of every lover of scientific truth to point out errors wherever he may find them, no matter how shielded by authority or intrenched by public opinion;" and, in the following criticism, Dr. Leffingwell has used "this professional manifesto as an illustration of the fallibility of even the highest scientific expert testimony." . . . .

"In the first place Professor Porter does

not well when he denies (as he seems to do) that the practice of experimentation upon living animals has ever led to abuse. He says: 'The cruelties practiced by vivisectors are paraded in long lists, with the assurance that they are taken directly from the published writings of the vivisectors themselves.' Well, is this assurance untrue? 'These long-drawn lists of atrocities that never existed'—can these be the words of a devotee of scientific truth? What does Professor Porter mean by them? What other meaning is possible for the average reader to obtain than that he intended to deny that atrocious experiments were anything but a myth? 'Never existed?' Why, both in Europe and America, but especially abroad, **I have personally seen most awful cruelty inflicted upon living animals, simply for the purpose of illustrating well-known facts or theories that had not the faintest conceivable relation to the treatment and cure of disease. No facts of history are capable of more certain verification than the tortures which have marked the vivisections**

of Magendie and Bernard, of Bert and Mantagazza, and of a host of their imitators.

"'It is not to be doubted that inhumanity may be found in persons of very high position as physiologists—we have seen that it was so in Magendie.'

"This is the language of the report on vivisection by a royal commission, to which is attached the name of Professor Thomas H. Huxley. . . . But quite as strange as any assertion in this 'plain statement of the whole truth' is the implied suggestion that abuse is impossible because everything is so openly done!

"'These loud outcries to put an end to the frightful scenes daily enacted within the open doors of the most enlightened institutions of learning'—surely there is a false impression conveyed by these words which their writer should hasten to correct.

"'**Within the open doors!**' . . . .

"**Why, no feudal castle of the middle ages was ever more rigidly guarded against the entrance of an enemy than physiological laboratories are secured against the admission**

of unwelcome visitors. To some of the largest laboratories in the United States **no physician, even, can gain entrance** unless personally known.

"If the Bishop of Massachusetts and the editor of any leading newspaper in the city were to apply for admittance at Professor Porter's laboratory during a vivisection, would the doors swing open as to welcome guests? Would they be invited to come again and as often as desired, **without previous notification? I commend the experiment.**

"Of course a certain degree of this seclusion is necessary and wise. That which I criticise is the implied denial that any secrecy exists and this **reference to 'open doors.'** And if doubt still lingers in the minds of any who read, a conclusive experiment will not be difficult to make. **Let him but knock at these 'open doors' when vivisection is going on.**

"We are informed, too, by these scientific authorities that by so simple a method as 'a scratch on the tail of an etherized

mouse' and subsequent treatment, 'the priceless discovery was made which has at length banished tetanus from the list of incurable disorders.' That is an unscientific statement simply because it is untrue. Tetanus, or lockjaw, was never in 'the list of incurable disorders'—if uniform fatality is meant; and it certainly has not been taken out of the list by any 'priceless discovery' whatever.

"Consult Aikin, Wood, Fagge, Gross—consult any medical authority whatever of ten years ago—and you will find the recoveries from tetanus averaged at that time from ten to fifty-eight per cent. of those who were attacked.

"Now, what mighty change has been wrought by the 'priceless discovery?' Well, I take up the *London Lancet* of August 10, 1895, and I find an English physician tracing 'all procurable published and unpublished cases of tetanus treated by antitoxine,' and they number just thirty-eight, of which twenty-five were recoveries and thirteen were deaths. I take up the New York

Medical Record for August 24, 1895, and I find a correspondent stating that he 'can discover in the recent medical literature but six or seven cases in all where anti-toxine or tetanine has been used successfully, and they were all by foreigners.

"To call that a 'priceless discovery,' which is not in general use to-day, which in four years has made no better record than this, and with which the report of hardly a single cure can be found in American medical annals within the last five years,—is that a scientific statement? Was it worthy of the reputation of men who allowed it to go forth to the world backed by the eminence of their names?

"'It is asserted,' says Professor Porter, 'that living animals, without narcotics, helpless under the control of poisons which, it is alleged, destroy the power to move while increasing the power to suffer, are subjected to long, agonizing operations, in the hope of securing some new fact, interesting to the scientific mind, but without practical value.' This is one of the

most curious and ingenious sentences I have ever read. Its inaccuracy depends on only two words, 'without narcotics.' No critic of vivisection ever made use of those words in any such statement; and I challenge Professor Porter for a single reference or quotation.

"It cannot be given. But if, instead of the words 'without narcotics,' Professor Porter had written 'without anæsthetics,' then he would have made a precise, accurate and true statement of what undoubtedly **has** been charged. Could any reader imagine that such a charge was true, and that it might exactly apply to some operations carried on in the laboratories of Harvard Medical School?

"'Helpless under the control of poisons which destroy the power to move, while increasing the power to suffer,' writes the physiologist, in seeming amazement at the mendacity that could coin such a wicked lie! **Yet that statement is entirely true.** The name of that poison is curari or woorara; the orthography is by no means fixed. 'Woorari,' says Dr. Ott (who has personally made use of it in the physiological laboratory at Harvard Med-

ical School), 'is able to render animals immovable . . . . by a paralysis of the motor nerves, **leaving sensory nerves intact.**'

"The properties of this singular poison have been carefully investigated by Claude Bernard, whose work on experimental science may be seen at the Boston Public Library. 'Le Curare,' he says, 'detruit le mouvement, en laissant persister la sensibilité' (p. 298). 'Curare destroys the power of movement, although sensibility persists.' Under the influence of this agent the animals upon which the physiologist may be working are 'exactly as if solidly fixed to the table, are in truth chained for hours' (p. 310). Does it know what is going on? 'When a mammal is poisoned by curari, its intelligence, sensibility or will power are not affected, but they lose the power of moving' (p. 296).

"Do they suffer? Is it true, this statement which Professor Porter tells us is 'asserted,' but which he does not—except by innuendo—deny, that animals are 'helpless under control of poisons which de-

stroy the power to move, while increasing the power to suffer? '

"Well, Claude Bernard was one of the greatest physiologists of this century, and he shall tell us. Death by curare, he says, although it seems 'si calme, et si exempte de douleur, est au contraire, accompagnée des souffrances, les plus atroces que l'imagination de l'homme puisse concevoir,' —'sufferings the most atrocious that the imagination of man can conceive!'. . . . **Throughout the entire manifesto the word 'narcotics' is constantly used apparently as a synonym for 'anæsthetics;'** we read, for instance, of 'a rabbit narcotized with chloral,' a 'narcotized dog,' etc., but not once of an 'anæsthetized' animal. . . . .

"And this brings me to a point upon which I am loth to touch, since it would seem to involve the most positive contradiction of statements made by scientific men of the highest authority. Speaking in the plural number for his five associates, Professor Porter has said of vivisections causing pain, that 'such in-

vestigations are rare. **None such have been made in the Harvard Medical School within our knowledge.'** This assertion has been widely copied, and **is almost universally believed.** The *Boston Transcript* doubtless echoed the sentiment of the public when it declared in its editorial columns that 'the character and standing of the medical men whose names are given as responsible for this explanation to the Boston public **forbid any questioning** of its statements of facts.' What is the value of authority if one may assume to disbelieve in a case like this? Here is the assertion of six scientific teachers. For the general public **nothing would seem to remain but unquestioning acceptance,** and implicit belief.''. . . .

Their very own reports, however, in their own medical statistics, have **proved** to the contrary.

"In the *Journal of Physiology* for April 6, 1895, appears a long and elaborate article on the 'Path of the Respiratory Impulses,' by Professor William Townsend Porter, of the Laboratory of Physiology in the Harvard

Medical School, the author of the preceding manifesto. **Taken in conjunction with his assertion regarding painful vivisections that 'none such have been made in Harvard Medical School within our knowledge,'** this paper would seem to offer a very curious and significant illustration of **scientific forgetfulness.**

"The object of Professor Porter's experiments was the confirmation of a purely physiological hypothesis; one which **had no reference whatever to the cure or treatment of human ills.** His researches embraced at least sixty-eight experiments, and full details of fifteen are given in this essay. In seven of these fifteen experiments—all involving **most painful mutilations**—light doses of morphia or chloral were administered instead of anæsthetics; in one experiment the dose is not given, and in another there is no mention of any 'narcotic' of any kind. Even when ether was given, it was **not, as a rule, used throughout the experiment.** . . . . 'At 10.30 a middle-sized dog received 0.2 g. morphia. Half an hour later, the left half of the spinal cord was severed. . . . Animal being loosed,

showed a paralysis on the left side. . . . At 4.30 the dog was bound again and the abdomen opened.' Why was the dog '**bound again?**' No mention of 'narcotic' or anæsthetic during further steps of the experiment.''. . . .

Answering some of the charges vivisectionists bring against those who raise their voices to prevent limitless cruelty, the *Animal Defender* of June, 1905, says: "A sufficiently forceful refutation of this oft-repeated charge against us of 'lack of facts' and 'stale, long-refuted suspicions' is found in Mrs. Ward's paper, published in our last number. . . . . Also in the laboratory reports of work done at Harvard, Clark, Johns Hopkins, and other universities, in which, after reading the pitiless description of most piteous details, we read the heartless words: '**No anæsthetics.**' On one occasion, in our hearing, at one of the State House inquisitions, a Harvard professor, when confronted by a similar **written statement of his own, boldly** asserted the contrary—that anæsthetics **were** used in that particular experiment;

showing **how elastic a vivisector's code of morals must be 'in order to conceal the unpalatable truth.'** We laymen have always considered, too, that the series of experiments **conducted and recorded by Dr. H. P. Bowditch (Harvard)**, in which the sciatic nerve of a cat was laid bare and stimulated for three consecutive hours by electricity, were sufficiently painful to be called specifically cruel experiments. About thirty cats were used."

"The book recently compiled by Professor Harold Ernst, of Harvard, is, as one may find on examination, **singularly free from painful details** likely to be construed as cruelty, but the official records and articles in medical journals **tell another tale.** . . . . .

"The experimental work of Dr. Geo. W. Crile, Cleveland, so clearly set forth in his *Surgical Shock,* leaves no chance for mere **suspicion** with regard to cruelty.

"The cruel fact that a physician of New Jersey 'bound 141 dogs, raised them to a height of twenty-five feet and dropped them on iron ridges; some of the dogs living a few hours, others for days, their agonies being

carefully observed and noted,' is not based on **suspicion**—and New Jersey is in America."

Again, " One of the leading scientific societies of Washington defines cruel experiments as those in which ' there is an unjustifiable infliction of pain.' **What, to a vivisector, is an unjustifiable infliction of pain?** It is the infliction of more pain than is necessary for the **success of the experiment.** ' Cruelty,' as defined by six vivisectors of Harvard University, ' is the intentional infliction of **unnecessary pain.**' But who is to judge how much or how little pain is ' necessary? ' Who is to decide whether the subjection of the animal to prolonged torture is of the slightest value? Who, according to the scientific societies of Washington, should be the supreme and only judge of the vivisector? **The vivisector himself!** . . . . .

" Wherein lies the possibility of equivocation? In the definition of the word ' cruelty.' That word has one meaning for the general public, but an entirely different sig-

nificance for the vivisector," as does also the word "necessary."

"If, as we are told," says a recent writer, "'that the pains inflicted in the laboratory are not caused needlessly or intentionally,' surely this is no more than might have been said by Cicero of the dying gladiator, by Calvin of the execution of Servetus, or by Sir Matthew Hale of a burning witch."

"Evidence exists that experiments have been made in Harvard Medical School under the following circumstances: Animals have been '**curarized,**' and in that condition vivisected. Curare is not an anæsthetic, but simply **prevents the animal from moving, while remaining entirely sensible to pain.** Animals have been 'very lightly narcotized' and in that condition vivisected. There is no evidence that animals 'lightly chloralized' are insensible to pain. In the majority of published accounts of experiments there is no mention whatever of anæsthetics being used. In a few instances only there is reference to the administration of ether before the pre-

liminary cutting, often followed later by use of **curare**. . . .

"'An animal under its influence,' says Professor Holmgren, the professor of physiology at Upsala University, 'it changes instantly into a living corpse, which hears and sees and knows everything, but is unable to move a single muscle; and under its influence no creature can give the faintest indication of its hopeless condition.' This venom is, he says, 'the most cruel of poisons.'

"The French vivisector, Claude Bernard, tells us that 'it destroys the power of movement, but permits sensibility to exist;' that the 'cadaver one has before him hears and comprehends what goes on about him, and feels whatever painful impressions we may inflict.' In a memorial issued last year **against legislation,** a writer is quoted as stating that 'it has never been claimed by any scientific man that it (curare) is an anæsthetic.' **But it is used in every laboratory in America where vivisection goes on to any extent.**" . . .

"'I sometimes fear,' said Dr. Theophilus Parvin, in his address before the American

Academy of Medicine, ' that this anæsthesia is frequently nominal rather than real; else why so many ingenious contrivances for confining the animal during operations, contrivances that are not made use of in surgical operations upon human beings? ' " . . . .

" **The majority of these published investigations relate to curious questions in physiology, and have no perceptible relation to the treatment or cure of human ailments.** For proof of these statements the reader is referred to the published accounts of various experimenters themselves, concerning their own investigations. Most of them may be found in somewhat rare volumes, entitled, ' Collected Papers, Physiological Laboratory of Harvard Medical School.' . . . .

" These were Boston vivisections. They were not done thousands of miles away in some distant European laboratory, **but here at home.** . . . What judgment are we entitled to pass upon this manifesto? Was it, indeed, what it claimed to be—' a plain statement of the whole truth? ' No. A ' statement of the whole truth ' would not have

carefully mentioned 'a scratch of the tail of an etherized mouse,' and made no reference to other investigations of infinitely greater import carried on in their own laboratory. "A statement of the whole truth," concludes Dr. Leffingwell, "would not have spoken of 'long-drawn lists of atrocities that never existed,'—denying in one sweeping sentence some facts as certain as any in history. A statement of **the whole truth** would not have referred to 'narcotics' as though they were identical with 'anæsthetics;' it would not have left hidden the use and purpose of curare; it would not have referred to 'open doors,' when there are no open doors; it would not have proclaimed to the public as a 'priceless discovery' for the cure of tetanus an agent of which not five cases of successful employment in this country can be found in medical literature. And above all, a plain statement of the whole truth would never have declared that no painful vivisection had been made in Harvard Medical School '**within our knowledge,**' in the face of the existing evidence."

"A perusal of the above will tend to show **the undoubted fact that the majority of the American public is at present completely hoodwinked on the subject of vivisection.** It has been led to believe three gross falsehoods—1. That the practice is a rare and occasional one only. 2. That great benefits to the Healing Art have been derived from it. 3. That anæsthetics are invariably employed. Were it not for the belief in these three fallacies, the whole monstrous system of scientific torture of animals would be stopped in a week by a national outcry."

Bishop Lawrence has said, in **his unaccountable effort to prevent the least supervision of vivisection:** "What may be done in Europe I do not know, though I have the impression that doctors and scientists there, are, as a rule, humane men."

Yes, extracts from views of French physicians, on pages 145-150 of this book, show us that there **are** humane doctors and scientists in France—some who are **humane enough to protest with energy against the barbarities of their colleagues of which they are cog-**

nizant. It is the honesty and truth and mercy of such men that is saving the medical profession from hopeless disgrace.

"The professional vivisector may come to be **indifferent** to the **sight of suffering in an animal; but apathy ceases when he is charged with a vice,** and when those whom he has met in society decline to recognize him on the public street. What shall he reply to such charges? Shall he boldly deny the existence of anything approaching cruelty? How is it possible, against overwhelming proofs to the contrary?

"'I recall to mind,' says Dr. Latour, 'a poor dog, the roots of whose vertebral nerves Magendie desired to lay bare, in order to demonstrate Bell's theory, which he claimed as his own. The dog, mutilated and bleeding, twice escaped from the implacable knife, and threw its front paws around Magendie's neck, as if to soften his murderer and ask for mercy. I confess I was unable to endure that heartrending spectacle.' In the documents laid before Congress by various scientific bodies, the name of Magendie is always men-

tioned with respect, **but we venture to say that there is not a scientist in Washington whose name stands as high as that of the late Thomas Henry Huxley, who declared,** in the report of the Royal Commission: '**It is not to be doubted that inhumanity may be found in persons of very high position as physiologists. We have seen it was so in Magendie.**' Without changing the definition of the word 'cruelty,' it is impossible, in the face of evidence, to claim for vivisection exemption from its stain.'' . . . .

"In his Presidential Address in the Section of State Medicine at the Annual Meeting of the British Medical Association in August, 1899, **Dr. George Wilson, LL.D., probably the leading authority in Great Britain upon Preventive Medicine,** made the following indignant reference to these ignoble equivocations: 'I boldly say there should be some pause in these ruthless lines of experimentation. . . . I have not allied myself to the Anti-vivisectionists, but **I accuse my profession of misleading the public** as to the cruelties and **horrors which are perpetra-**

ted on animal life. When it is stated that the actual pain involved in these experiments is commonly of the most trifling description, **there is a suppression of the truth,** of the most palpable kind, which could only be accounted for at the time by ignorance of the actual facts. I admit that in the mere operation of injecting a virus, whether cultivated or not, there may be little or no pain, but the cruelty does not lie in the operation itself, which is permitted to be performed without anæsthetics, but in the after-effects. Whether so-called toxins are injected under the skin into the peritoneum, into the cranium, under the dura mater, into the pleural cavity, into the veins, eyes or other organs—and all these methods are ruthlessly practiced—**there is long-drawn-out agony.** The animal so innocently operated on may have to live days, weeks, or months, with no anæsthetic to assuage its sufferings, and nothing but death to relieve.' "

"I like to believe with Professor Mills," says Dr. Leffingwell, "that 'Science begets a truthful state of mind, a desire to state

truth, and that only,' and that it is insulting to say that 'biologists deliberately deceive the public.' Nevertheless, there is abundant **proof of such deception.**

"Suppose I take a dog and, putting it under the influence of chloroform, cut out its kidneys and close the wound. It recovers consciousness. Now I have 'performed the vivisection under anæsthetics,' have I not? The animal will live from three to five days,—suffering nothing, Professor Mills? Or suppose, upon another dog thus anæsthetized, I cut down to the spinal cord. Two or three hours after, when it has recovered from the shock of the operation, I bring the animal before my class of students, and, by irritation of this great nerve trunk, I subject the dog to excruciating pain. Somebody objects to it. 'Why, I gave this animal chloroform while I cut its flesh! It was **a vivisection under anæsthetics.** It suffered no pain while I made my incisions,' I reply. In the opinion of Professor Mills, would not such an answer be an utter perversion of the truth?

"In October, 1892, just after the debate in the Church Congress, there was cabled from London to various newspapers in this country a long interview with Professor Victor Horsley, a young physiologist, who had just achieved notoriety throughout England by insulting a venerable lady who was eminent as an English writer before he was born. Mr. Harold Frederic, in the *New York Times*, graphically describes a visit to the physiological laboratory of University College, London, where he found Mr. Horsley engaged in vivisecting a cat. 'I am delighted,' said the physiologist, 'to afford the public any opportunity to judge for themselves of the cruelty of our methods. We invite criticism.' Nothing could be more hearty than such a welcome; and the intelligent correspondent at once began to satisfy his curiosity. What about the sufferings of animals after the operations made upon them? The genial professor smiled at the inquiry, and invited him to take a look at his menagerie 'and judge for yourself.' In this menagerie, Mr. Harold Frederic tells us, were

to be seen ' many cats and monkeys, all fat, cheerful, and jolly, playing one with another after their kind, the cats apparently altogether unconcerned as to their brain loss so recently incurred, **and the monkeys quite unaffected by the removal of the spinal cord!** '

" Think of a statement like that put forth regarding animal experimentation! Just as truthfully Mr. Frederic might have described monkeys ' quite unaffected by the loss of their heads.'. . . . ' One last question, Mr. Horsley,' exclaimed the satisfied investigator. ' Do you ever perform any painful operation on a living animal without the aid of anæsthetics? '

" ' Never! Neither I nor any of my colleagues! '

" Now, what did Professor Horsley intend to imply by this most definite statement? That neither he, nor any of his colleagues ever made an experiment causing pain? Such a statement as this, so deliberately and explicitly made as to be without possibility of equivocation or evasion, would have been a falsehood. Yet that is the mean-

ing which even the editor of the *New York Times* drew from Professor Horsley's words; for in his paper he headed the interview, in small capitals, 'ABSOLUTE PAINLESSNESS OF EXPERIMENTS!' That is the meaning which ninety-nine out of every hundred readers of the interview would unhesitatingly accept; that is the meaning which some one apparently intended to convey. It may be 'excellent fooling,'—this cheap deluding of the credulous public; but we may be sure that the true interests of science will never be permanently advanced by masquerading a lie under the guise of a truth." . . . . Again, "Even so distinguished a scientist as Sir John Lubbock once rashly asserted in Parliament that 'without experiments on living animals we should never have had the use of ether.' Nearly every American school boy knows that the contrary is true, that the use of ether as an anæsthetic—the most **valuable discovery of modern times—had no origin in the torture of animals.**"

Were it not for the precedent which history furnishes, it would seem incredible that men

in high places should testify on such a bias from straightforward fact. I know of no better example of this than is given in Dr. Leffingwell's masterly *The Lesson of Reform*, from which the following extracts are quoted: "Against personal testimony of eye-witnesses to its cruelty, how did those who were pecuniarily interested in maintaining the slave-trade manage to prevent all legal interference for nearly twenty years? How may an infamy be defended? We wonder sometimes what words of apology could possibly be uttered in support of so atrocious a system of cruelty. Yet the task is not difficult. It was done precisely as it is done to-day, in the matter of vivisection. The American Humane Association has asked,—not that animal vivisection be abolished, but simply that it shall be placed under such Government supervision as may prevent wanton cruelties and abuse. **Our proposals are met by the same methods which were adopted a century ago in regard to the slave-trade,—by a denial of cruelty and by evasion of the truth; by claim of necessity, and by favorable testi-**

mony of eminent men in support of the system. Let us note the **character of the evidence which was brought forward in support of the slave-trade.** . . . Lord Rodney, Vice-Admiral of England, declared that the abolition of the slave-trade ' would greatly add to the naval power of France, and diminish that of Great Britain in proportion.' Admiral Sir Peter Parker gave it as his opinion that the abolition of the slave-trade ' must, in time, destroy nearly half our commerce, and take away from Great Britain all pretention of being the first Maritime Power in the world,'—just as Dr. Kober, of Washington, told the United States Senate that a bill bringing the practice of vivisection under the inspection of the United States Government ' would be simply one step, and that an important one,—in the direction of dealing a death-blow to the progress of American medicine! ' '' . . . .

" Other witnesses declared that ' the abolition of the slave-trade would be an act of cruelty to the negro himself.' ' The total abolition of the trade by all nations,' testified

Mr. Fountain, 'would produce a scene of carnage from one end of the African coast to the other.' 'The abolition of the slave-trade,' said another witness, 'would be the ruin of the colonies, destructive to the slaves already in them; and be the most impolitic act, **the greatest inhumanity and breach of faith which this country could ever** pass,' an absurd statement equalled only by that of Dr. William W. Keen, who **gravely declared that the Senate bill for the supervision of vivisection in the District of Columbia was 'a most cruel and inhuman effort to promote human and animal misery,' and a serious menace to 'the cause of humanity!'** " . . . .

"How singular all this seems to us today! The slave-trade was abolished eighty years ago. Did 'carnage from one end of the African coast to the other' ensue? Did England then fall from her position as a great maritime power, and did France step into her place? Did several 'millions' of mechanics find themselves without employment and worse than useless? Was half the commerce of England destroyed?

May it not be more than probable that when posterity shall look back upon those who to-day oppose any reform to the abuses of vivisection, they will regard their opposition with the same contempt with which we esteem all this evidence for the slave-trade, given a hundred years ago?

"But the strongest argument advanced in favor of slavery or the slave-trade was that which is so familiar to us regarding vivisection,—**the denial of any abuse.** . . . Never is it difficult to obtain evidence in support of cruelty when selfish interests are concerned; and slavery in the West Indies was defended **by some of the most distinguished men of the time, with the same emphasis and eagerness evinced in our day by illustrious personages in defence of the practice of unrestricted vivisection.** . . . In 1807 Parliament abolished the slave-trade, and made it illegal after the following year. In 1811 it was made a felony; in 1820 it was made piracy, and punishable with death. Where now in the world's esteem are they who testified that to the maintenance of the

power of England it was necessary to keep up that sum of all villainies,—that curse of mankind? Where in the world's esteem, a century hence, will be the opinions of those, who in our day are not ashamed to assert that for the maintenance of Medical Science and the benefit of mankind it is necessary to permit vivisection to be absolutely without limitation or control?" Where in the esteem of right-minded people does such opinion stand to-day?

"Men point to some ripe scholar, adorning the presidency of a great institution of learning; to some ecclesiastic, representing the highest dignity of his church; or to some official at the head of a Government laboratory; and because such men are against us, we are told to cease all agitation for reform. And then **History lifts a curtain, and we see Daniel Webster** standing in the Senate Chamber on March 7, 1850, **advocating the passage of the Fugitive Slave law;** we see **the venerable Lord Brougham in the British House of Lords using his vast influence to keep women and children in the coal-mines; we see Cobden**

and Bright and Gladstone palliating and defending the awful atrocities of the factory system; we see some of the wisest and best men in the American pulpit of fifty years ago defending the infamy of American slavery. For never was there a great cruelty or abuse that could not enlist the championship of **respectability**, or bring to its support the influence of **illustrious names.**''

Must we then believe that every man of the thousands who study medicine, or experiment amid the nerves and gore of sentient beings, is therefore a righteous man, and incapable of cruelty and prevarication?

V.

PROTESTS FROM THE MEDICAL PROFESSION.

V.

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"Within recent years leading physicians and surgeons throughout the world," quoting a contemporary writer, "have joined forces with humanitarians, and with voice and pen have expressed themselves as opposed to the barbarities and misleading practices of vivisection."

In the following pages some of these eminent physicians shall speak for themselves.

Henry J. Bigelow, M.D., (late) Professor of Surgery in Harvard University, and leading surgeon of New England, has said: "The horrors of vivisection have supplanted the solemnity, the thrilling fascination of the old unetherized operation upon the human sufferer. Their recorded phenomena, stored away by the physiological inquisitor on

dusty shelves, are mostly of as little present value to man as the knowledge of a new comet, . . . **contemptible compared with the price paid for it in agony and torture.** My heart sickens as I recall the spectacle at Alfort. . . . This was surgical vivisection on a little larger scale, and transcends but little the scenes in a physiological laboratory. I have heard it said that 'somebody must do this.' I say it is needless. Nobody should do it. **Watch the students at a vivisection. It is the blood and suffering, not the science, that rivets their breathless attention.** If hospital service makes young students less tender of suffering, vivisection deadens their humanity, and begets indifference to it. For every inch cut by one of these experimenters in the quivering tissues of the helpless dog or rabbit or Guinea-pig, let him insert a lancet one-eighth of an inch into his own skin, and for every inch more he cuts let him advance the lancet another eighth of an inch, and whenever he seizes, with ragged forceps, a nerve or spinal marrow, the seat of all that is concentrated and exquisite in agony, or

literally tears out nerves by their roots, let him cut only one-eighth of an inch further, and he may have some faint suggestion of the atrocity he is perpetrating when the Guinea-pig shrieks, the poor dog yells, the noble horse groans and strains—**the heartless vivisector perhaps resenting the struggle which annoys him!**"

Dr. George Hoggan, in a letter to the *London Morning Post*, makes the following powerful appeal against the secrecy followed by the vivisectionist. He says: "If the Society for the Prevention of Cruelty to Animals intends to do its utmost to put down the monstrous abuses which have sprung up of late years in the practice of vivisection, it will probably find that **the greatest obstacle to success lies in the secrecy with which such experiments are conducted; and it is to the destruction of that secrecy** that its best efforts should be directed.* **So long as the pres-**

* Dr. George M. Gould, editor of *Philadelphia Medical Journal*, in his address before the "American Medical Association," made the same criticism regarding American vivisection: "This brings me to what I can but conceive as a grave and profound mistake on the part of the experimentalists—*their secrecy.*"

ent privacy be maintained it will be found impossible to convict, for the want of evidence. No student can be expected to come forward as a witness when he knows that he would be hooted from among his fellows for doing so, and any rising medical man would only achieve professional ruin by following a similar course. The result is, that, although hundreds of such abuses are being constantly perpetrated among us, the public knows no more about them than what the distant echo reflected from some handbook for the laboratory affords.

"I venture to record a little of my own experience in the matter, part of which was gained as an assistant in the laboratory of one of the greatest living experimental physiologists. (It was that of Claude Bernard, in Paris.) 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 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 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 tails in the trough as the 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 and 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 practice 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.

"I am inclined to look upon anæsthetics as the greatest curse to vivisectible animals. They alter too much the normal conditions of life to give accurate results, and they are therefore little depended upon. They, indeed, prove far **more efficacious in lulling public feeling towards the vivisectors than pain in the vivisected.** Connected with this there is a horrible proceeding that the public probably knows little about. An animal is sometimes kept quiet by the administration of a poison called **curare,** which **paralyzes voluntary motion** while it **heightens sensation,** the animal being kept alive by means of artificial respiration.

"I hope that we shall soon have a government inquiry into the subject, in which experimental physiologists shall be only witnesses, **not judges. Let all private vivisection be made criminal** and all experiments be placed under **Government inspection,** and we may have the same clearing away of abuses that the Anatomy Act caused in similar circumstances."

Albert Leffingwell, M.D., says: "If pain-

ful experiments are necessary for the education of the young physician, **how happens it that Watson and Burroughs are ignorant of the fact?** If indispensable to the proper training of the surgeon, **why are they condemned by Fergusson and Paget?** If requisite even to physiology, why denounced by the physiologists of Oxford and London, and viewed 'with abhorrence' by the greatest of modern scientists?"

"I know from personal experience," writes Clayton L. Hill, M.D., of Buffalo, N. Y., "that medical and surgical research does not demand the fearful suffering and waste of life that is entailed upon the lower animals. I have seen many hundreds of vivisections, and not one of them developed a new truth or an idea not already well established. Vivisection as practised in medical schools is simply a sort of theatrical performance for the benefit of the students and the glory of the professors."

"Anæsthesia is good while it lasts," says H. R. Brissett, M.D., of Lowell, Mass., "but I have often seen it pass off, and the experi-

menter go on with the work in hand without renewing it; and all the class saw with revulsion that there was real torture in the case."

Professor Theophilus Parvin, M.D., LL.D., says: "Original investigations, very often a euphemism for vivisections, may seem quite fascinating to the young medical student, and possibly he thinks thereby to find a short road to fame: the result frequently remains in the embryonic condition of manuscript read chiefly, if not exclusively, by the author."

Clinton Wagner, M.D., writes: "I sincerely hope that the efforts being made for the abolition of vivisection may succeed at an early day." (Dr. Wagner was late Professor at the New York Post-Graduate Medical School and at the University of Vermont, and was formerly Surgeon and Brevet Lieutenant-Colonel of the United States Army.)

"I am utterly opposed to the practice of vivisection," says S. Mills Fowler, M.D., Professor of the Practice of Medicine in the Dunham Medical College of Chicago. "The

brutality manifest in its employment is a disgrace to our civilization. It disgraces not only those who employ it, but also those who witness it. It should receive the unqualified condemnation of every civilized person."

J. W. Thomson, M.D., of New York City, has expressed himself as follows: "We do not believe that vivisection ever gave knowledge that led to the relief of a single human being from pain, or in any way helped to ameliorate human suffering. **This diabolical practice is totally needless as well as dastardly inhuman.** No man who has been guilty of vivisection ought to be allowed to practice as a physician. Imagine any one coming from a torture-chamber to see a sick child, or to have a mission to help suffering humanity! How can one who is callous to animal suffering yearn to help his fellow-man?"

"I am without words to express my horror of vivisection," writes Professor James E. Garretson, M.D., Senior Professor of Surgery in the Medico-Chirurgical College of Philadelphia, "though I have been a teacher of anatomy and surgery for thirty years. It

serves no purpose that is not better served after other manners."

A. Rose, M.D., of New York, makes this assertion: "There can be no nobler cause than the prevention of cruelty to animals in vivisection. During the Middle Ages tortures were inflicted under the very eyes and strict supervision of awfully learned physicians, **and thus we see that learning does not prevent us from cruelty.** We have to be reminded of this example."

J. D. Buck, M.D., F.T.S., of Cincinnati, Professor of Nervous Diseases and the Principles of Therapeutics, has made the following statement: "When the returns are all in from this age of experimental science it is my firm conviction that it will be abundantly proven that vivisection has **added not a single fact to knowledge regarding functions of man, or the nature or cure of disease, that was not already essentially in our possession, or could not be derived from other sources.** Scientifically, I believe vivisection to be useless as a means of obtaining knowledge of the nature of needs of man."

The eminent British surgeon, Dr. Lawson Tait, says: "Vivisection has proved useless and misleading, and, in the interests of true science, its employment should be stopped, so that the energy and skill of scientific investigators should be directed into better and safer channels. I hail with satisfaction the rousing which is evident in the public mind upon this question, and I feel confident that before long the alteration of opinion, which I have had to confess in my own case, will spread widely amongst the members of my useful profession."

Another well-known British physician, Dr. John M. Fox, in a letter to the *Manchester Guardian*, January 18, 1894, has this to say: "It is not by any such unnatural procedure that valuable medical discoveries in the interest of humanity have been made. What is wanted is the rare intelligence and foresight of the discoverer. This may not be produced in every generation or every school, but it cannot be manufactured by any industrious multiplication of experimental tortures."

In 1892 Canon Wilberforce said, in a speech in London: "One of the greatest physicians that ever lived, . . . Sir Thomas Watson, told me himself, not long before he died, **that young men had to unlearn at the bedside what they had learned in the laboratory.**"

And John Elliotson, M.D., F.R.S., says: "A course of experimental physiology, in which brutes are **agonized to exhibit facts already established is a disgrace to the country that permits it.**"

Dr. F. S. Arnold, M.A., writes: "I believe that vivisection is a **barren and misleading method** of research from whose practice no benefit has accrued to humanity which would for a moment be considered by any unbiassed person, cognizant of all the facts, to outweigh the animal suffering and human degradation it has caused and still causes."

In his address before the British Medical Association, in 1899, George Wilson, M.D., LL.D., author of *Handbook of Hygiene,* and Medical Officer of Health for the Mid-Warwick District, made the statement: "After all these long years of flickering hope, I am

prepared to contend that the indiscriminate maiming and slaughter of animal life with which these bacteriological methods of research and experimentation have been inseparably associated, cannot be proved to have saved one single human life or lessened in any appreciable degree the load of human suffering."

"I regard vivisection as **immoral** and **unjustifiable,**" says J. H. Thornton, C.B., M.B., B.A. (Deputy Surgeon-General, I.M.S., retired), "as well as **quite useless** and **very dangerous,** and I feel assured that unless a determined stand be made against it, human beings will be used for this purpose instead of animals before long."

From the European edition of the *New York Herald* we learn that in France the same opinion finds expression as in the United States and Great Britain. "Dr. Paquet, who was formerly Doctor Inspector of the Enfants Assistes de la Seine, says: 'Vivisection is useless in the study of medical science, in the study of anatomy for which the dissection of the human corpse suffices, and

in the study of surgery, the practical operations on a corpse on the one hand, and the daily accidents in which urgent surgical aid is required on the other, being all that are necessary for the student. It is also useless in the study of physiology, for if we are to-day cognizant of the functions of the organs, it is through having treated them when injured. **It is in the clinic, and not in the vivisecting room, that we have learned the physiological rôle which each organ in the human body plays.' ''**

'' Dr. Leon Marchand, a professor, holds much the same ideas: ' It is an error,' he says, ' to suppose that vivisection has given any true scientific notions to either surgery or medicine. It is quite the contrary. **I have always found what are called scientific experiments not only strange and inhuman, but illusory and dangerous,** and I am astonished that all my brother doctors do not recognize **the insanity of the investigation as practiced by the vivisectionists.' ''**

'' The opinion of Dr. Edward Hirtz, of the Necker Hospital, is: ' I am decidedly hostile

to vivisection, **of which the vivisectors make an intolerable abuse**; for they cause wretched dogs, rabbits and Guinea-pigs to suffer in order to obtain, not only problematic results, but those which are in no way interesting. Perhaps in historical times certain experiments may have been justified when made by great physiologists with moderation and humanity. **Now, it is the contrary**; vivisection is practiced even by students. **It is a useless torture and a sterile cruelty.' ''**

'' Dr. Nicod says: ' From a scientific point of view I consider that **vivisection can not do otherwise than divert right judgment into error**, the vivisectionists operating upon the healthy organs of animals, whereas the operations practiced upon man are only done upon organs afflicted with divers maladies. As to the moral point, no beneficial result for humanity can be obtained by practices so barbarous and cruel. The only good result which could be obtained would be to vivisect human beings, and my advice to vivisectors is that they should commence by operating on one another.' ''

"Dr. C. Mathieu writes: 'My ideas coincide exactly with those of Dr. Ph. Marechal. While studying medicine in the hospitals I was at one time charged with the functions of preparing the physiological experiments. It was for a short time only, as I could not support the sense of horror which these vivisections caused me. I consider them to be useless cruelties. I never learned anything from them, and I consider the campaign against vivisection noble and humane.'"

"Dr. Salivas is even more emphatic: 'I consider,' he states, 'that vivisection **is immoral in the highest degree.** It is as useless as it is immoral, and I condemn it absolutely. The immortal Hippocrates never vivisected, yet he raised his art to a height that we are far from attaining to-day, in spite of our pretended great modern discoveries, which have for the most part the result of introducing into medical science extravagant **theories which it will be most difficult to eradicate.**'"

"To the foregoing testimonies as to the worthlessness of vivisection may be added the following:

"Dr. Levoisin: 'It is most urgent that vivisection should disappear from the programmes for the teaching of students.'

"Dr. Lecointre: 'The work that the union against vivisection has undertaken is a noble one. . . . It would be well to inculcate into the minds of the young medical generation that vivisection ought to be exceptional, and that the animal should not suffer in the operation. The dog should be always exempt; unfortunately, he is actually the **principal martyr.**' "

"Dr. Goyard: 'Science changes its system often. Why build up ephemeral systems upon the **most revolting cruelty?** Respect the suffering of animals.' "

The list of eminent French surgeons who are so convinced of the uselessness and cruelty of the practice that they are in favor of its entire abolition includes Drs. Michelon, Jules Grand, J. Montaigne, Jules Delbet, Theophile Pascal, Deyber, Chateau, Charon, Corneille, Duriez and Lheureux. The following names of those who condemn the practice were sent by the physicians themselves

to Madame De Silva, Secrétaire Generale de L'Union Internationale contre la Vivisection: Dr. Paquet, Prof. Leon Marchand, Dr. Edgar Hirtz (Necker Hospital), Drs. Nicod, C. Mathieu, Salivas, Hirvouet, Levoisin, Lecointre, Goyard and M. Mord.

VI.

VIVISECTION IN SCHOOLS BEFORE CHILDREN.

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Of such hardened disposition have some of the teachers of physiology become that they have carried this method of instruction, in various instances, before children in both public and other schools.

The President of the Illinois Humane Society, in his Report for the year 1904, speaks the following emphatic words:

"The horrors of vivisection, emphasized by its comparative uselessness, continue to appeal to the sympathy and to demand the condemnation of the benevolent, and to urge forward the campaign for its restriction within proper limits.

"The merciless experimenter continues, in the name of science, the infliction of agony beyond description upon sentient creatures,

committing such offenses that the sympathy and pity of educated benevolent humanity revolt at its contemplation.

"Touching upon this general subject, and in confirmation of the necessity for restrictive legislation herein, I must say that we are in possession of a communication from the president of one of the branch societies in the State, relating the experience of mere children in one of the higher schools in the southwestern part of Illinois, in which children were compelled—some of them against their own wills, others against the wills of their parents; some made absolutely ill by the spectacle, and withdrawn by their parents from school—to be present at exhibitions by a so-called professor of physiology (and what crimes have been, and are being committed in that name!) and subjected to the spectacle of the vivisection of living and warm-blooded animals, one of the cases being of a cat which was large with young—fancy that!—and when this professor had taken the young from the body he held up the body to the class, and remarking, 'You

can see now why it was so heavy,' threw the little ones into the fire or stove—all this before the eyes of these children. What a horrible sight this was! **Yet of such calloused composition, to too great an extent, these professors of biology seem to be, or become,** wherever vivisection, unanæsthetized vivisection, is practiced.''

"The American Humane Association, deeply impressed by the growing prevalence of vivisection as a method of study in our larger educational institutions, and regarding its introduction into public and private schools as both dangerous and unnecessary, recently sent circulars on this subject to a number of persons, whose opinions it deemed of value, and whose judgment it desired. The report of this inquiry, embracing a considerable number of letters from all parts of Europe and America, has just been issued. The questions submitted were in substance whether experiments involving the infliction of pain or death upon helpless creatures would tend to cultivate or to blunt the natural sensibilities of children assisting thereat; whether it

was advisable to give children a belief in their irresponsible power over the lower forms of life, or cause them to be familiar with bloodshed and death; whether all that is necessary for children to know of physiology could not be taught by other means than experiments upon animals; and finally, whether in those cases where exposition of vital organs before advanced classes be deemed advisable, it would not be better to make such demonstration and exhibition upon organs obtained from the butcher, of creatures already killed for purposes of food, and not upon animals used as pets and associated with human affection. With but few exceptions, the writers agree with its expressed opinions about such experimentation in our schools, and believe it is not only injurious and uncalled for by necessity, but that it so blunts the natural sensibilities as to operate to the moral detriment and deterioration of the character of the young."

Writing from Washington, Wm. T. Harris, A.M., LL.D., the Commissioner of Education of the United States, says: "I am glad to

learn of some movement against a practice too widely extended, of dissecting animals before the children in the elementary schools."

"I am surprised and shocked," says Frederick Harrison, Esq., "to learn that there can exist schools of any kind where young boys and girls are allowed to witness dissection of living animals under any circumstances whatsoever. . . .

"But I should have thought that all persons of decent feeling and of practical experience of the young must be agreed on the depraving effect of accustoming boys and girls to see death inflicted, to witness organic operations, and to find the ghastly incidents of the surgical and the dissecting table are part of their manuals of education. I can imagine nothing more certain to blunt their sense of humanity, and to surround their intellectual life with degrading association.

"Those who are parents or moral teachers know how difficult it is to extirpate the love of cruelty to which so many children are prone. But for their teachers to familiarize them with cruelty as part of their training

is a strange perversion of the moral sense.

"I care not whether the anæsthetics are adequate, or whether the dissection is of dead animals—**both are revolting and deeply demoralizing for children.** And the enormity is increased where the animals dissected are the companions of our daily life.

"Auguste Comte, who was a philosopher as well as a professor of science, taught us that the domestic brutes we train to our service are in a sense admitted to our humanity. And he would not have the highest moral teachers of the young defile themselves with the dissection even of the dead."

His Eminence, Cardinal Gibbons, of Baltimore, writes: "The best interests of children, in my judgment, require that they be not familiarized with the sight of blood, or death inhumanly inflicted. I am inclined to think that sufficient instruction could be imparted by use of illustrations and manikins."

The Rev. Dr. Lyman Abbott, formerly Pastor of Plymouth Church of Brooklyn, and Editor of the *Outlook,* New York City, writes: "I should think it very clear that not only

vivisection, but even the dissection of animals carried on by or before children of public school age, must do a great deal more harm than it can possibly do good."

Rev. A. J. Chapin, D.D., of Omaha, Nebraska, says: "I believe the business of dissection, and especially of vivisection as practiced in the public schools of all grades, to be wholly unnecessary and wrong, and am glad to use any influence which I may possess against the demoralizing practice."

George A. Bacon, A.M., of the firm of Allyn & Bacon, Publishers, of Boston, Mass., writes: "To my thinking there is absolutely no excuse for killing animals in order to teach anatomy or physiology in our schools. In the first place the practice in dissection which pupils get amounts to nothing, and they are just as likely to come to wrong as to right conclusions from their observation."

"It is time to call a halt upon the infliction of pain on animals," says H. H. Freer, Professor of Science and Art Teaching and Political Economy, of Cornell College, Mt. Vernon, Iowa, "or wantonly killing them

for the purpose of teaching anatomy, physiology, or hygiene to young children. All that children need to know on these subjects can be taught without resorting to processes that will blunt the sensibilities, deprave the taste, and brutalize the whole nature of children."

"The boy murderer, Pomeroy, was, I believe, from early life accustomed to the scenes of the slaughter house, and his environment, no doubt, was responsible for his cruel and murderous tendencies."

"The practice referred to is unnecessary, painful in the extreme to sensitive natures, cruel and demoralizing," writes Prof. John E. Kimball, late Superintendent of Schools at Newton, Mass. "In my experience as Superintendent of Schools, I have heard of instances of fainting and real suffering to susceptible children in connection with this very reprehensible practice. If there is one phase of culture outside the usual curriculum in our public schools which should be of constant care, it is the habit of uniform kindness to the lower orders of animate creation, and this is not consistent with a practice which must

blunt the sensibilities of all, if it does not in some cases tend to develop types of brutality, which from time to time shock society."

James Jeffrey Roach, Editor of *The Pilot,* Boston, Mass., writes: "I consider the vivisection of animals for the ostensible instruction of children to be cruel, useless, and demoralizing in the extreme, and that everything necessary for the teaching of physiology could be as clearly and more humanely taught by the use of illustrations and manikins."

"I believe it to be a serious mistake to encourage children to any irresponsible use of their power over the lower forms of life," says Rev. Samuel J. Barrows, formerly Member of Congress from Massachusetts, and formerly Editor of *The Christian Register,* Boston, Mass. "Children should be taught that might is not right, and that the same laws of love, mercy, and justice which apply to human beings should be applied to the animal creation so far as possible. It seems to me that it is an abuse of the name of education to familiarize children with the infliction upon

animals of mortal wounds, etc., under the pretence of imparting scientific knowledge. An animal is not to be treated as a toy, which a child is encouraged to take apart just to see how it is put together. The development of the spirit of love, mercy, and justice is more important than to turn the school-room into a butcher's shop or a dissecting-room to gratify an intellectual curiosity. Physiology should have its place in school instruction, but quite as important is the subject of ethics, which includes not only our duties to our fellow-beings, but also our duties to animals."

"It is shocking and unpardonable that anything approaching or resembling vivisection should be permitted, except in professional schools," declares Professor J. H. Allen, of Cambridge, Mass., "and then only under the greatest precautions as to anæsthetics. . . . For all that can be profitably taught to the ordinary pupil, plates and models are preferable on every account."

Professor Bar, University of Göttingen, Germany, says: "I agree fully with the American Humane Association in the opin-

ion that not only vivisection but even dissection of animals, killed by and before children of public school age, will inevitably operate to the moral injury of the young."

"I do not believe the effect upon children of witnessing experiments upon living animals can possibly be good," writes Rt. Rev. W. C. Doane, LL.D., Bishop of Albany, N. Y. "It must either shock their sensibilities if they are what they ought to be, or tend to encourage them in cruelty if they have that unnatural strain in them."

Rt. Rev. Thomas M. Clark, Bishop of Rhode Island, says: "I was not aware that any such atrocity existed as the introduction of vivisection into our ordinary schools, and I think that it ought to be **forbidden by law.** If physiology cannot be taught our children by the use of manikins and illustrations, **it will be well not to teach it at all.**"

"The system of education of the young appears to need a fundamental reform," proclaims the Rev. Dr. Morgan Dix, D.C.L., Rector of Trinity Church, New York, "and it is perhaps fortunate that fads of this kind

should be introduced as rapidly as possible, in order that the need of such a general and rational overhauling **in the interests of much abused childhood** may become more thoroughly evident to the general view. It is not necessary that the average boy or girl should be made an expert in anatomy, physiology or biology. Such studies are only appropriate for those intended for the degrees in surgery and medicine. I feel certain that all that is necessary for the time can be accomplished by models and illustrations, and that there can be no need of a display of ether, knives, blood, wounds and death. Upon the whole, **I confess to amazement at the infatuation of those, whoever they may be, who have introduced, or deem it wise to introduce, such methods** into an already overloaded system of education, and I deprecate with all earnestness the mischief likely to ensue from so wide a departure from the principles and modes of sober common sense and useful teaching."

"Even physiologists—some of them practical experimenters in vivisection—join in

condemning these class demonstrations," writes Dr. Leffingwell. . . . "Dr. Rolleston, Professor of Physiology at Oxford, said that 'for class demonstrations limitations should undoubtedly be imposed.' . . . Charles Darwin, one of the greatest of naturalists, stated that he had never either directly or indirectly experimented on animals, and that he regarded a painful experiment without anæsthetics, which might be made with anæsthetics, as deserving 'detestation and abhorrence.' And finally, the report of this commission, to which is attached the name of Professor Huxley, says: 'With respect to medical schools, we accept the resolution of the British Association, in 1871, that experimentation without the use of anæsthetics is not a fitting exhibition for teaching purposes.'

"Views from such sources cannot possibly be dismissed as 'sentimental or unimportant.'"

VII.

HUMAN VIVISECTION.

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While but the smallest fraction of the agony, both as to intensity and numbers of victims, is practiced in so-called human vivisection, yet what has already been done upon the human subject shows the tendency of the practice of animal vivisection.

Professor Horatio C. Wood, M.D., of Philadelphia, has said: "No experiments on animals are absolutely satisfactory unless confirmed upon man himself."

In the work known as *Illustrations of Human Vivisection,* published by the Vivisection Reform Society, the Secretary, Sydney Richmond Taber, in his preface, says: "In the following pages are given a few illustrations of the great vice of modern science, known as Human Vivisection. Much that could be brought forward is not in-

cluded; for some of the worst cases of American experimentation .are too loathsome for publication except for special circulation. Enough is given in these pages to afford any reader the means for judging the morality of this practice.

"One distinction must be carefully noted.

"The phrase 'Human Vivisection' must not be taken as having any reference to the experimental use by physicians of new methods or new remedies, with a view to the benefit of the patient. To such tests there can be **no objection.** But Human Vivisection is something entirely different. It may be defined as the practice of subjecting human beings, men, women, and children, who are patients in public charitable institutions, hospitals or asylums, to experiments involving pain, distress, mutilation, disease, or danger to life, **for no object connected with their individual benefit, but for scientific purposes. . .**

"Some years since the scientific world was informed that certain experiments had been made upon American soldiers at the United

States Army Hospital by three American physicians. The object of their investigations was to study the action upon human beings of two poisonous substances—atropia and morphia. Just so far as the experiments were made upon suffering men, **in the hope of giving relief from pain,** and at the same time contributing to medical knowledge, there can be nothing to criticise in any way. There is reason, however, to believe that, moved by the zeal which science inspires, in some cases these experimenters went far beyond this. For example, in the report of their investigations appear the following statements:

"'We finally entered upon a deliberate course of experiments with the intention of ascertaining in what respect . . . the two drugs in question were antagonistic. . . . **The experiments** which we shall now relate **were most of them made upon soldiers** who were suffering from painful neuralgic diseases, or from some cause entailing pain. In some cases, however, convalescent men were the subjects of our observations, but in no

instance were they allowed to know what agents we used or what effects were expected. . . .

" ' The subjects of **our experiments** were men free from fever. Some were suffering from neuralgia, and some were **men in very fair health,** suspected of malingering. . . . The patient was kept recumbent for some time before and during the observation.'

" In other words, United States soldiers, some of whom were ' in very fair health,' some slowly recovering from wounds or disease, were used as research material for experiments with powerful drugs, and were not permitted to know what was being done!

" The object of these experiments was the study of two drugs, morphia and atropia, given separately or in combination. One is impressed with the abundance of the human material at the disposal of these investigators; they make not merely one or two experiments, but whole ' series of experiments.'

" ' In the next **series of experiments** we endeavored to learn whether, when full doses of morphia and atropia were injected

together, **the pulse would be modified.** . . . These observations were checked by two other **sets of experiments.** In one we gave a full dose of morphia subcutaneously, and when the pupils were well contracted, or the cerebral influence clearly marked, the atropia was employed. In the other we gave the atropia first, and when it began to show an effect on the pulse we injected a full dose of morphia.'

"Very singular experiments, these, to be made by American surgeons upon American soldiers!" . . . .

Dr. Sydney Ringer, in his *Handbook of Therapeutics*, shows that his "scientific enthusiasm was so great that he could not forbear making experiments upon hospital patients with a poison for which there appears to be **no recognized medical use,** and so rare that he was obliged to have it specially manufactured for the occasion. He says: 'Our experiments led us to conclude that ethyl-atropium paralyzes the motor nerves and the spinal cord, but leaves the sensory nerves unaffected. . . . **In our experiments on man**

this drug, given in doses sufficient to produce marked symptoms, neither strengthened nor quickened the heart. . . . In man a dose of one grain . . . produces decided but transient paralysis, **the patient being unable to stand or walk, and the head dropping rather towards the shoulder or chest, and the upper eyelids drooping.'**

"Dr. Ringer suggests no medical employment for this poison, and his experiments upon human beings were **apparently for the gratification of his curiosity.** Does the reader regard such experiments upon hospital patients as justifiable? . . . .

"A distressing feature of many of these experiments is the fact that the men and women upon whom they are performed were not only ignorant, but under constraint. In this horrible case certain patients in the hospital were not merely poisoned once, but were obliged, 'on compulsion,' to undergo the convulsive paroxysms and all the other agonizing symptoms a second time." . . . .

"At a meeting of the New York Academy of Medicine, held in 1887, Dr. J. W. Stickler,

of Orange, New Jersey, presented a paper upon *Foot-and-Mouth Disease as It Affects Man and Animals,* etc. He had conceived the theory that this epidemic disorder, so fatal to certain animals, had a particular relation to scarlet fever; and that if human beings were inoculated with the virus of this animal disease it might render them immune to the infection of scarlatina. To test the theory—one, by the way, utterly discredited and forgotten at the present time—Dr. Stickler made a number of ' experiments ' of the most dangerous kind upon children entrusted to his professional care. The New York *Medical Record* of December 10, 1887, prints, as its leading article, this paper in full. The first victim of this human vivisector was a little boy, about eight years of age, who had never had scarlet fever. First, the lad was inoculated with the virus of foot-and-mouth disease, an ailment very fatal to certain domestic animals. After his recovery from this, he was deliberately exposed to the infection of scarlet fever, one of the most terrible of all diseases to which children are liable. The

experimenter shall tell the story in his own words: 'He was then taken to a house in which there was a boy sick with scarlet fever. . . . His parents being poor, the pillow upon which the patient lay had not been exchanged . . . since the beginning of the sickness. This pillow was placed over the face of the boy who had been inoculated, and held there some time. **He was then made to inhale the breath of the patient.'**

"What do American fathers and mothers think of such experiments, if secretly made upon their **own** children? Because these parents were ignorant and 'poor,' is the experiment to be condoned? Is it any excuse to tell us that, after all, the lad did not suffer from scarlet fever, although he was forced by strong arms to run the risk of infection? If this child had taken the disease and had died from it, **does anyone think that the details of that scientific murder would ever have come to light?"**

Then what of those who hold that because a man who has a medical degree does a thing it must, without question, be done righteously

—must go unquestioned, **whether it be in the laboratory or otherwhere?**

When Magendie (one of the arch-torturers of animals), operating for cataract some years ago, committed his terrible crime of plunging the needle to the bottom of his patient's eye, "**that he might note upon a human being the effect produced by mechanical irritation of the retina,** he demonstrated **how greatly the zeal of the experimenter may impair the responsibility of the physician,**" as well as deaden all feeling for suffering whether it be human or animal.

"Even yet we are not without hope for better things," declares the Vivisection Reform Society. "We heartily wish that the day may come when, in utterances that can not be misunderstood, the medical press of this country shall expend its vigor of denunciation, **not** upon those **who bring infamy to the light of day,** but upon the wretched **experimenters** upon human victims, whose deeds bring scandal upon science and disgrace upon the practice of medicine. No doubt it will require some degree of moral courage for the

conductors of an American periodical to take this stand; probably it will alienate the support of a few well-known vivisectors. But any such loss, we are sure, will be more than compensated by an enhanced self-respect and an increased public confidence and esteem."

And in that excellent work, *Some Reasons for Restricting Vivisection,* the author says: "An eminent surgeon in this country has stated that 'in order to appreciate properly any toxic (poisonous) agent, we must follow its effects through a wide range of created existence from vegetable to man.' The superiority of human beings as material for scientific experimentation has long been recognized. 'Very curious facts', we are assured by well-known American physicians, 'could certainly not have been learned from any course of experimentation upon animals lower than man.' **The zeal of the vivisector has reached its logical conclusion** in a large number of experiments on human beings."

VIII.

THE URGENT NECESSITY OF RESTRICTION BY LAW.

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Under the laws of the various States, there is, at present, practically no legal restraint upon the practice of vivisection when carried on in a physiological laboratory. Any one there may subject any animal within his control to any degree of suffering provided it is done in the name of science.

No State has, as yet, come forward and labeled itself as the pioneer in law of this bitterly needed reform.

It is true, civilization has progressed to the point where many who have become cognizant of these unspeakable barbarities have worked and labored with poignant sympathy, to save these helpless ones—so in our power—from tortures too terrible for any sentient creature to endure; have labored, have agon-

ized in sympathy—as yet in vain; and it is also true—may we not believe it?—that there are untold numbers more who possess the same degree of humanity; whose hearts ring as true with justice and mercy, who would be found in the same category if they also knew, **only knew**, of the facts. May the people of each commonwealth arise, and without delay, and see to it that the useless infliction of such agony and torment is stayed, and stayed **now**. Years of inexpressible torture have already been allowed to pass in these States—partly from a want of knowledge, which cannot very well longer exist.

We cannot do better in a condensed effort toward hastening general enlightenment than to quote a most able article from the Brooklyn *Citizen*, which gives the following: "The notices of the opening of the Rockefeller Institute inform us there are caged in the upper story of the building some 200 cats, dogs, monkeys, rabbits, etc., ready for the students to commence work upon at once. It seems a school of vivisection is established in this country, supported by the Rockefeller mil-

lions, to continue the horrible work of vivisection. Not one word of protest have I seen in any of our journals.

"Why is the public so indifferent? It must be because of ignorance in regard to the work done by vivisectors. Permit me to repeat a few of the experiments performed by men who are well known to us, who, under the stimulus of scientific curiosity, seem to have become oblivious to suffering and to have lost all pity. Dr. Martin, of Johns Hopkins University, removes the brain from animals, and observes results for one or two weeks without giving food. Professor Ott, of the same university, opens the spinal column of cats and applies electricity to spinal marrow without anæsthetics. Professor Senn, of Chicago, tears the pancreas of an animal in two. Animal is left for weeks to note result. Dr. Walton, of Harvard Medical School, excised epiglottis of dogs, observed one for twenty-one days, chokes in swallowing liquids and solids at every trial. Dr. Crile publishes an account of experiments in surgical shock. Healthy male fox terrier,

crushing the foot causes sharp rise of temperature. This was repeated several times. In the book experiments are described, such as 'tearing and twisting the sciatic nerve,' 'extirpation of an eye and manipulation and bruising of the socket,' 'injection of water into stomach to bursting.' The same vivisector performed over 200 series of experiments on dogs, only one of which is here cited: 'A decapitated dog was kept alive ten and one-half hours.' Dr. Helen Baldwin starves a dog for ten days in Dr. Hessers' laboratory, New York City. Drs. Baer, Dawson and Marshall, of Johns Hopkins, crush the great nerves of the neck in dogs, and after several days endeavor to stimulate them into activity by electricity.' I mention only a few experiments gathered from current medical journals and performed by men eminent in surgical science, but it is enough to give those who have paid no attention to these matters some idea of the work that is to be done in the Rockefeller Institute.

"If ever this horrible cruelty resulted in benefit to the human race there might per-

haps be some excuse, but these same vivisectors admit that no reliable conclusion can be drawn from them as applicable to the human being. Dr. William Rutherford, of Edinburgh, admitted before the royal commission that 'these experiments must afterward be tried upon man before a conclusion could be drawn.' Men who perpetrate these cruelties will not hesitate to go further when the opportunity is afforded and human beings will take the place of cats and dogs. Professor Slosson, of the University of Wyoming, declares in the New York *Independent* that: 'The aim of science is the advancement of human knowledge at any sacrifice of human life.'

"In the Ohio Legislature of 1894, Dr. J. S. Pyle, of Canton, made an attempt to secure criminals for vivisection, and, more recently, Dr. Fletcher, of Indianapolis, Ind., and others endeavored to establish an experimental hospital where condemned criminals shall be vivisected. As this, in their estimation, is necessary to the perfection of their work, we need not be surprised if, backed by the in-

fluence of their patron, the vivisectors of Rockefeller Institute should secure the end for which their Western brethren labored in vain, and that the Rockefeller Institute have delivered to it condemned criminals for verification of experiments described.

"To many, such a result may seem absurd and impossible, but the effort has repeatedly been made, and if two hundred animals can be made the subjects of such experiments as have been described, without awakening a single protest, we need not wonder if a law handing over condemned criminals for vivisection should be accepted with the same indifference. These horrible practices of vivisectors, some of which are referred to, and some of which are too indecent and terrible for print in a clean journal, force an earnest protest.

"It is asserted by some of the leading opponents of vivisection that the practice of performing experiments upon the lower animals with a view to benefiting humanity is fallacious. In a letter to the London *Times,* written by the late Dr. Charles Clay,

some months before his demise, he said in part:

" ' **As a surgeon I have performed a large number of operations, but I do not owe a particle of my skill or knowledge to vivisection. I challenge any member of my profession to prove that vivisection has in any way advanced the science of medicine, or tended to the improvement of disease.'**

" In the meantime, it may prove instructive to my readers to scan some of the opinions concerning vivisection, which have been expressed by prominent surgeons of the United States and England.

" ' **I do not believe that a single experimenter says to himself when he gives curare to a rabbit or cuts the spinal cord of a dog, ' Here is an experiment which will relieve or cure the disease of some men.'** No, he does not think of that. He says to himself, ' I will clear up an obscure point. I will seek out a new fact.' "—Charles Richet, M.D. (vivisector), Professor of Physiology, Paris, in *Revue des Mondes*, February 15, 1883.

" ' When the returns are all in from this

age of experimental science it is my firm conviction that it will be abundantly proven that vivisection has added not a single fact to knowledge regarding functions of man, or the nature or cure of disease, that was **not already essentially in our possession, or could not be derived from other sources.** Scientifically, I believe vivisection to be useless as a means of obtaining knowledge of the nature or needs of man,' writes J. D. Buck, M.D., F.T.S., Professor of Nervous Diseases and the Principles of Therapeutics, Dean of Pulte Medical College of Cincinnati.

"'Many years ago I carried out on the Continent sundry operations upon the intestines of dogs, but such are the differences between the human and the canine bowel that when I came to operate upon man I found I was much hampered by my new experience, that I had everything to unlearn, and that **my experiments had done little but unfit me to deal with the human intestine.'** The foregoing statement is an extract from an address reported in the *British Medical Journal* for November 5, 1898, and delivered by Sir Fred-

erick Treves, F.R.C.S., formerly surgeon-extraordinary to H. M. the Queen, and surgeon-in-ordinary to H. R. H. the Duke of York· consulting surgeon to the London Hospital

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"James H. Payne, M.D., of Boston, in a letter to *Anti-Vivisection*, March 1, 1895:

"'I am wholly opposed to vivisection. It is useless, wicked, cruel, barbarous, and infamous. It is worse than useless. It fills the mind with false and brutal ideas. No good ever came from it and never will. It demoralizes the sensibilities and unfits one for the demonstration of real scientific truth. I pray you may prosper in your good endeavor to obliterate the hideous practice from the whole earth.'

"Ira D. Brown, M.D., Weedsport, N. Y.:

"'Every word in the above statement I know to be true. The practice of vivisection is inhuman, cruel and brutalizing in its effects upon those who witness it, while no information useful to the human family is gained from it. **In our medical colleges it is indulged in as a sport, a pastime, to the**

moral degradation of the students, making them unfit for the practice of the healing art.' (American Humane Association's *Report on Vivisection*, page 18.)

"Dr. J. S. Harndall, royal veterinary surgeon:

"'There is no proof that the millions of animals that have been cruelly tortured and sacrificed to the whims of scientists have produced the slightest benefit to science.'

"'The advancement of our knowledge, and not utility to medicine, is the true and straightforward object of all vivisection. No true investigator in his researches thinks of their practical utilization. Science can afford to despise this justification with which vivisection has been defended in England.' (Dr. L. Hermann (vivisector), professor of physiology, Zurich.)

"**The work that is done by vivisectors cannot be known to the public generally, otherwise there would be a howl of indignation from an outraged public sentiment. The extent of the damnable work is unknown.**

But a Paris vivisector used 585 dogs in experiments on barometric pressure alone. In Florence, Professor Schiff, in ten years, used 70,000 animals, including 10,000 dogs. In Vienna, in two years, over 25,000 dogs, same number of cats, and 5,000 horses and asses. And all of this suffering involved is declared by some of the greatest names in medical science as wholly useless. Abernethy denounced it, as did Owen and scores of the **greatest names in medicine.''**

Thus not only a glimmer, but a beam of light on the subject has at last found its way through the press.

Who are those who protest against unrestricted vivisection? **Not** a few weak sentimentalists, as the vivisectors are in the habit of claiming, for it will be seen that some of the **greatest names in the medical and surgical profession,** as well as eminent ones outside of it, are those who are asking for this law. What could be more significant of the reality of its urgent need?

Shall we, then, the free people of the

United States, stand outside the prison walls of the helpless, who are there awaiting **appalling tortures,** and fail to interfere?

There is a leaven of humanity, even in France, that has awakened, and is working for mercy; as also in England and America.

Shall this black blot still longer stain our Stars and Stripes? Shall the wails of the undefended cry for help with every flutter of our flag toward Heaven, and plead, **still** plead in vain? Shall we ever again bow in honor to that banner so long as it is content to float above a hell where the innocent and helpless are utterly without defence?

It seems to be supposed by some, as Dr. Leffingwell says: "That the members of the medical profession and scientific men generally stand as a unit in opposing" a bill for restriction by law. "No statement could be further from the truth. Not long ago I had the honor to be appointed on a committee of medical men whose object was to test public sentiment in this respect. A circular was drawn up embodying various phases of opinion, and sent out to the leading scientists and

educators of this country, to certain representative names in Europe, and to every physician in New York and Massachusetts who had been in the practice of his profession over fifteen years. **Well, only 18 per cent. of the physicians confessed themselves in favor of absolute non-restraint** in this matter of vivisection, and **no less than 61 per cent. favored the principle of such a bill.** Let me quote a portion of what they signed:

"'We believe that the common interests of humanity and science demand that vivisection, like the study of human anatomy in the dissecting room, should be brought under the direct supervision and control of the State. The practice, whether in public or in private, should be restricted by law to certain definite objects **and surrounded by every possible safeguard against license and abuse.'**

"The first signature to that statement of opinion, heading a long list of eminent physicians and medical teachers, is the name of one who stands first among those whom science venerates to-day—the name of Herbert Spencer." . . . .

Dr. Leffingwell goes on to say that this bill eminently appeals for consideration "because it is in line with the legislation, which during the last hundred years has made for the advancement of civilization. It is a strange and sad commentary upon the innate selfishness of human nature that not one forward step in the progressive development of humanity has ever been made without opposition from some whose supposed 'interests' were in the way. It is not a century since the governmental inspection of insane asylums and private 'mad-houses' was first instituted, against the protests of their keepers; and no worse atrocities are recorded in history than those revealed when those secret cells and dungeons were thrown open to the light of day. The State assumed the supervision of prisons and jails, and swept out of existence the torture of criminals by their keepers under guise of 'necessary discipline and restraint.'

"In the great coal mines of Great Britain, fifty years ago," continues Dr. Leffingwell, "women and girls, naked to the waist, and

half-grown children, pushed and drew, in darkness and danger, far beneath the surface of the earth, their burdens of fuel. The law made it illegal, and women and children were taken out of the mines. The law penetrated the factories of Great Britain; found children working fourteen hours a day at their looms, and weeping at their tasks; and although any interference with the privileges of manufacture was most bitterly resented by such statesmen as Cobden and Bright, yet even against their protests the law threw about childhood and womanhood its protecting arm. . . .

"To **close the doors** of laboratories where vivisection is going on, and **then to demand proof of any abuse of vivisection there,** is a method of argument which I do not care to characterize. 'But this is an attack of the medical profession.'

"Nonsense. With equally good reason the great insurance companies or the savings institutions of New York or Massachusetts might complain that their integrity is impugned, because the State government de-

mands at regular intervals a report of their financial administration."

Dr. Leffingwell, in his address before the Senate Committee at Washington, D. C., April 17, 1896, in favor of a bill providing for Government supervision of vivisection, said: "We are told, Mr. Chairman, that there is no necessity for such a measure as this. That depends upon **whether vivisection is capable of abuse.** I confess that from those who oppose legislation of any kind, **I have never heard one word in condemnation of the awful atrocities that have stained the practice of vivisection.** But it seems to be a law of nature, that wherever you find unlimited power, you find in due time that power abused; and **no facts of History are more capable of verification than the unspeakable cruelties practiced in vivisection by eminent men in countries where the practice is not controlled by law.** Why, both in Europe and America, **I have personally seen torment, exquisite and prolonged, inflicted upon living animals, not for any purpose of beneficent discovery, but solely to**

demonstrate, over and over, facts as well known as the alphabet.

"Not long since, one of the leading professors in a New York medical college told me of most sickening experiments performed by one of his associates in the laboratory to which he belonged. Yet nothing could be done—the law does not penetrate there. **We are becoming a byword,** even among physiologists, **for our indifference.**

" Dr. Gerald Yeo, the professor of physiology in King's College, London, in an article of the *Fortnightly Review,* protested against English physiologists being held responsible for the cruelties of other lands. 'Why repeat,' he says, 'the oft-told tale of horrors contained in the works of Claude Bernard, Paul Bert, Brown-Sequard, and Richet in France, of Goltz in Germany, Mantegazza in Italy, and Flint in America? '—coupling thus the name of an American physiologist with the names of some of the most inhuman and brutal vivisectors that ever walked the earth." . . . . And these were **educated** men!

"Some years ago, in Washington, Prof. Theophilus Parvin, M.D., of Jefferson Medical College, Philadelphia, delivered the presidential address before the American Academy of Medicine; and, calling attention to the subject of vivisection, **he asserted** that there were investigators 'who seem, **seeking useless knowledge, to be blind to the writhing agony, and deaf to the cry of pain of their victims,** and who have been **guilty of the most damnable cruelties, without the denunciation of the public and of the profession that their wickedness deserves and demands.** These criminals are not confined to Germany or France, to England or Italy, but may be found in our own country.' **'Criminals'** and **'damnable cruelties' are strong words,** Mr. Chairman, **to be used by the president of the Academy of Medicine** in regard to American physicians or the practice of vivisection in American laboratories!"

"In his recent work on 'The Meaning and Method of Life', Dr. George M. Gould, late editor of the *Medical News*, and a strong advocate of vivisection, **declares, nevertheless,**

that it 'must be regulated by law.' He says: 'The practice carried on by conceited jackanapes to prove over and over again already ascertained results, to minister to egotism, for didactic purposes—these **are not necessary,** and **must be forbidden.'** " . . . .

Dr. Theophilus Parvin quotes the Rev. Morgan Dix as follows: "I have read accounts of the tortures inflicted in the name of science on the creatures committed to our care or placed in our power by a Divine Providence, and they have made me sick at heart for weeks together. I shall never peruse these frightful statistics again. **I have read what arguments are made in extenuation or recommendation of the practice, and their only effect has been to strengthen my conviction that man is capable of becoming the most barbarous and most merciless of all agents.**"

The question, "Should vivisection be regulated by law?" is answered, even by an advocate of vivisection, Dr. George M. Gould, in the following words: "If a very limited use of vivisection experiment is necessary for

scientific and medical progress, it should be regulated by law, carried out with jealous guarding against excess and against suffering, and the maimed animals painlessly killed when the experiment is complete.'' This one word from such a source should be enough alone to settle the question.

'' About this practice the atmosphere of controversy is thick with the dust of contradiction and dispute,'' writes Dr. Leffingwell.

'' ' It is one of the foundations of medical science,' asserts one authority. ' The conclusions of vivisection are absolutely worthless,' is the reply of Dr. Lawson Tait, one of the most eminent surgeons of our time. ' It is a mild, merciful, and, for the most part, painless interrogation of Nature and her secrets of life,' says a recent apologist and advocate of vivisection. ' The experiments of certain physiologists are those of inhuman devils,' says Canon Wilberforce, of England. Among contradictions like these one may well ask, where is truth to be found?

''The solution of this strange divergence of opinion is not difficult; it lies simply in the

absence of careful definitions of the words we use. 'Vivisection' is a term which includes some kinds of operations upon living animals involving excruciating and prolonged torture; and some other operations which simply destroy life, with the discomfort of induced disease; and yet other experiments which involve no pain whatever. It is a practice of almost infinite variety and complexity. To speak of it as inevitably involving the infliction of torture is to betray ignorance; to defend it on the ground that pain is never inflicted, and that alleged abuses rarely occur, is to state **what every student of physiology knows to be false.**

"Atrocities of vivisection are facts of history. It is well perhaps at the outset to take a glance at some of them. What has been done by men without pity, in the hope to wrest from Nature something she has hid? **The abuses of research include every form of excruciating and lingering torment that can be conceived.** In the august name of Science animals have been subjected to burning, baking, freezing; saturation with inflammable oil

and then setting on fire; starvation to death; skinning alive; larding the feet with nails; crushing and tormenting in every imaginable way. **Human ingenuity has taxed itself to the utmost to devise some new torture,** that one may **observe what curious results will ensue.** For instance, Dr. Brachet, of Paris, by various torments, inspired a dog with the utmost anger, and then, he goes on to describe, ' when the animal became furious whenever it saw me, I put out its eyes. I could then appear before it without the manifestation of any aversion. I spoke, and immediately its anger was renewed. I then disorganized the internal ear as much as I could, and when intense inflammation made it deaf, then I went to its side, spoke aloud, and even caressed it without its falling into a rage.' Of this one man, Dr. Elliotson, in his work on *Human Physiology,* goes out of his way to say: 'I cannot refrain from expressing my horror at the amount of torture which Dr. Brachet inflicted. I hardly think knowledge is worth having at such a purchase.' " And such knowledge!

"Von Lesser, of Germany, made a long series of experiments in scalding animals to death. He 'plunged a dog for thirty seconds into boiling water;' he 'scalds another four times, at various intervals;' even animals which have just passed through the pangs of parturition do not escape. Dr. Castex, of Paris, fastens a dog to the dissecting-table, and, discarding the use of anæsthetics, stands above it 'with a large empty stone bottle. I strike with all my strength a dozen violent blows on the thighs. By its violent cries the animal shows that the blows are keenly felt.' Of another victim: 'I dislocate both the shoulders, doing it with difficulty; it appears to suffer greatly;' and so on through the long series."

"Chauveau 'consecrated' more than eighty large animals, mostly horses and mules, worn out in the service of man, to almost the extremest torture possible to conceive, not, as he expressly tells us, 'to solve any problem in medical theory,' but simply to see what degree of pain can be inflicted through irritation of the spinal cord.". . .

"Yet all these experiments, repeated day after day, were conducted, as Mantegazza himself asserts, not with pity or repugnance; of that, no admission is made; but '**with much delight and extreme patience for the space of a year.**'

"One stands in mute amazement at revelations like these. Dante, in his *Inferno,* never dreamed of torture so awful as certain refinements of torment which Professor Mantegazza invented and executed, **of which the details cannot be told.**

"Is there any vivisection more awful to contemplate than a man like this who has succeeded in plucking from his heart every sentiment of pity or instinct of compassion? And how barren of benefit were the results of these experiments! Out of all these multiplied torments of Richet and Mantegazza, of Chauveau and Castex, of Magendie and Brown-Sequard, **science has found not one single remedy to disease, not one discovery of the slightest value to mankind!**

"What have the atrocities of experimentation to do with America? Much, every way.

There is hardly an apologist for unlimited vivisection in America who will not admit that such cruelties are to be deplored, and that scientific curiosity has driven these men into unpardonable excess. But how did it happen? Were they by nature more brutal than other men? Probably not. On one point the teaching of History is uniform. Wherever is conferred power without responsibility, there will follow—there must inevitably follow—license and abuse. It is the relation of cause and effect. Perhaps we execrate unduly the heartlessness of a Nero or a Robespierre, a Magendie or a Mantegazza. They were but the natural product of the time which made them monsters of cruelty, by the gift of absolute power.

"But are such glaring abuses possible in America? Why not? **The realm of pain has here no boundaries which investigation is required to observe.** In no American State or Commonwealth is there any law, any statute of any kind whatever, which would prevent these same experiments from being repeated here as often as desired in a physio-

logical laboratory. Now, is it probable that in a country like ours, with a population drawn from every foreign source, experimental research, thus unrestrained, remains free from the excesses which have stained it everywhere else—in Italy, in Germany, in France? The absence of clear, definite, and reasonable limitations beyond which vivisection becomes cruelty, and should not go—is of itself an invitation to abuse. Such restrictions elsewhere have been successfully initiated. In England, Scotland, and Ireland—countries whose medical skill is quite equal to our own—a painful experiment for the illustration of facts already known has been prohibited for over fifteen years. . . .

In America "experimentation has vastly increased; but it exists largely in comparative secrecy, behind locked doors, guarded by sentinels. . . . Against reasonable privacy of this kind no criticism can be justly urged. An anatomical dissecting-room, for instance, ought not to be open to every passer-by. . . . But the world does not like overmuch secrecy, and right doing never needs it. . . .

'Misjudgment of vivisection exists,' says one. Well, how is it to be dispelled by all this concealment and secrecy? . . . .

"Upon the excesses into which a perverted zeal or cruel indifference has led experimenters in America, it is hardly necessary to dwell. **Proofs are abundant enough**; one needs only to study certain American text-books of physiology, where the various experiments performed, 'for teaching purposes,' every year, are frankly related. **Once we admit the right to torture a living creature simply as an aid to memory, and where shall we put bounds to the cruelty one may inflict?** Is it an abuse of experimental science to cut out the stomach from a living dog—**the 'infamous experiment of Magendie'**, as Dr. Sharpey calls it? **I have seen it done, not in Europe, but America.** To cut down upon the spinal cord of a dog for the demonstration of its functions—an operation which Dr. Michael Foster, of Cambridge University, has never seen performed, from 'horror of the pain?' Where is there a medical college in America in which it has never been done? Is it an abuse of

vivisection to freeze rabbits to death before a class of young men and young women merely to illustrate what everyone knew in advance? It is done annually. To divide the most acutely sensitive nerve in the whole body in order to prove what nobody doubts? It is one of the 'regular experiments.' **To mutilate a living animal so severely that, left to itself, death might occur; to fasten it so that struggle is useless; to set in operation delicate machinery which shall cause it to breathe by artificial force, and so to keep it through a long night of terror and pain till 'wanted' for the final sacrifice of demonstration before students on the following day? It is not of infrequent occurrence in American laboratories.** . . . 'What doth it profit a man' to see it all?

"Let Dr. Bigelow, late Professor of Surgery at Harvard University, reply: 'Watch the students at a vivisection. It is the blood and suffering, not the science, that rivets their breathless attention.' . . . . 'But,' somebody protests, 'surely there should be no limitations or conditions regarding original re-

searches?' Well, why not? Investigation in America has been absolutely unrestrained for forty years; has it accomplished anything of value?" For even the value of the antitoxin experiment, at its very best, is to-day but an open question, and judging from statistics (as well as from personal reports of the danger in its use), it is going the way that the miserable failures of Koch and Pasteur have gone. "Have not even American scientists been subject to an enthusiasm that, during investigation, takes no account of the pain it inflicts? Look, for example, at that series of one hundred and forty-one experiments performed not long ago in Jersey City, opposite New York. The object of the experimenter was, as he tells us in his account of them, 'to produce the greatest amount of injury' to the spinal cord and its attachments without killing the animal outright; and with this end in view a great number of dogs, with hobbled limbs, were dropped from a height of twenty-five feet, so as to effect all the severest injuries thus designed. Strange, indeed, it is to read the record of experiment

after experiment, and to note that 'even a few hours after they had been dropped, when the experimenter presented himself to their view, the dogs not severely injured never failed to greet their master with extravagant expressions of joy.' Well, what judgment are we entitled to pass on these investigations? What valuable discovery for the benefit of suffering humanity accrued therefrom? The highest European authority upon medical questions shall tell us: 'It is a record of the most wanton and stupidest cruelty we have ever seen chronicled under the guise of scientific experiments. If this were a type of experimental inquiry indulged in by the profession, public feeling would be rightly against us; for, apart from the utterly useless nature of the observations, so far as regards human surgery, there is a callous indifference shown in the descriptions of the sufferings of the poor brutes which is positively revolting. . . . Badly planned and without a chance of teaching us anything, and carried out in a wholesale cruel way, we

cannot but feel ashamed of the work as undertaken by a member of our profession.'

"This is the judgment of the British *Medical Journal*, the leading authority of Great Britain. Here we have criticism based upon knowledge of what constitutes an abuse of scientific research. **It cannot be swept aside as the wailing of sentiment or the exaggeration of ignorance.**

"Take another instance of 'original investigations.' An American physiologist has recently demonstrated to what extent experimentation may be carried on here in America, where, as he, himself, tells us, 'there is no law governing vivisection.' Experimenting upon dogs, he subjected them to every form of conceivable injury; cutting, tearing, and burning the skin; cutting and crushing muscles; crushing the joints; puncturing the ear; crushing, tearing, cutting and burning the tongue; pouring boiling water within the abdomen; manipulating vital organs; burning and crushing the paws; tearing and crushing nerves,—together with **other operations too hideous for mention.**"

The notorious American vivisector, Dr. Crile, has been practising such tortures that in England a writer in the *London Star* has said of him: "The name of Crile deserves to be preserved as a symbol of fiendish cruelty."

In addition to the great army of unheralded "experimenters," including the "jack-anapes" to whom Dr. Gould alludes, there are other names perhaps as prominent as Dr. Crile's in the field of torture. One may read of Dr. Flint's "demonstrations," done over and over again, as narrated in his own book, and draw his knowledge for himself straight from the fountain head.

Dr. Leffingwell tells "of an experiment by a German physiologist, in which the spinal cord of a dog was destroyed by thrusting a steel probe into the spinal column, producing, we may say, the most atrocious torture it is possible to conceive. The animal evinced its agony by fearful convulsions; but it was permitted to utter no cry that might evoke sympathy, for previous to the demonstration its laryngeal nerves had been cut! No vivisection could be more utterly unjustifiable or

more fiendish in atrocity. And yet with entire and perfect good faith this demonstrator might have repeated **the well-worn formula, that he was** 'careful to inflict **no unnecessary** pain.' 'I know,' said Herr Stricker, on one occasion, 'that this experiment will seem cruel; but it is 'necessary' that my hearers should have its effects impressed on their minds!' Surely there was never more fit example of Milton's words:

'So spake the fiend, and with Necessity,
The tyrant's plea, excused his dev'lish deeds.'

"Now, for this same reason, merely as a method of teaching, what prevents that demonstration-experiment from being regularly repeated before young men and young women in the leading colleges and universities of the United States?". . . .

Again, Dr. Leffingwell tells us it is **the duty of every one** to inquire and know the truth. "'Is it true,' one should ask, 'that such awful agony has been repeatedly inflicted upon animals by European and American physiolo-

gists, and that proof of their cruelties is based **upon their own statements and reports?** Can it possibly be true that not a single one of these accursed experiments has yielded to medical science any discovery of the least practical value in the treatment of disease? Is it true that no law prevents the repetition of these abuses in my own State? Is it true that such painful experiments are unnecessary for the attainment of medical knowledge and skill; that every year a host of physicians and surgeons graduate from the medical schools of England, Ireland, and Scotland, who never once in the course of their studies are asked to see an animal tortured that lessons may be remembered?' Decision upon questions like these is not difficult; but let it be conviction based upon solid facts; for that alone has chance to be heard, or opportunity to be effective in results. . . . That which any careful observer of recent tendencies in thought might have foreseen, has actually occurred. Spurred by competitive rivalry, . . . nearly every great educational institution of America is **widening the opportu-**

nity for its young men and young women to investigate the phenomena of living things. . . . . No American college at present reckons itself completely equipped without its biological laboratory and its staff of instructors, conversant with the newest methods of foreign investigation."

And this not even as "an adjunct to professional study," but simply arrogating to itself the name of "scientific research," a name that through this method has been befouled and draggled in the lowest ditch. "Science!" How much "science," I would like to ask, would one of these—I will not say men—human beings, apply to so much as one finger of his own, to ascertain some well-known fact among his blood and nerves and tissues? But to the coward, "nothing is so cheap as pain," when it is inflicted on the nerves of another, if that other be utterly helpless. Ah! it is cheap, indeed, to torture the defenceless—but will no day of reckoning come? For the Creator and God of our life is also the Creator and God of theirs. For very shame, there are few experimenters

who can admit the true facts in regard to their heartless work.

Many physicians are declaring to-day that the practice is "dying out." But for a sad denial of this we have but to quote from a long list of the declarations of the colleges themselves.

Dr. Ballou, of Providence, R. I., a distinguished member of the medical profession, wrote to the presidents of a number of representative colleges of America for information as to whether any restriction of torture as a means of illustration was imposed by them.

It is evident, from the characteristic replies, that "in the majority of American universities and colleges there are no restrictions governing or limiting the infliction of pain. The judgment of the professor is the only guide; his wish, the only limitation. That which in England would be a crime, in America would not be even the infraction of a college rule! The freedom which prevails in the physiological laboratories at Vienna, Berlin and Paris has quietly taken root in our American universities. One hesitates to believe

that the atrocities of torture which have so often stained methods of research on the Continent have been duplicated in the physiological laboratories of America."

Rev. Dr. Francis L. Patton, President of the College of New Jersey, Princeton, replied: "The College of New Jersey has not defined or limited, so far as my knowledge goes, the extent to which living animals may be subjected to pain." . . .

James R. Day, D.D., President of Syracuse University, N. Y., wrote: "In reply to your first question would say that there are no written restrictions. We leave the decision to the judgment of the investigator."

"There are no restrictions," so wrote other clerical presidents of American colleges and universities.

And these replies come from Doctors of Divinity! Whom can we trust even for mercy? In such a matter we should not trust, we must **know.** If the account of the money department needs to be supervised, surely **so does the agony.** As Dr. Leffingwell has so forcibly stated: "What, for instance,

would be thought of the president of a great and wealthy university who should proclaim that, as regards the expenditure of the treasurer, no restraints or restrictions were ever imposed; that complete confidence in personal character took the place of all vouchers and receipts? What opinion should we hear of the college treasurer himself, who refused all demand for dètailed statement of his accounts, as ' a grave reflection upon his character?' There is not an institution in the land where such financial mismanagement would not be condemned. Yet why so many precautions against prodigality of money, and such acute sensitiveness toward the slightest impediment against prodigality of pain?

" What may be done? The first step is to convince those who govern the policy of our institutions of learning that here, too, is need of judicious surveillance and control." Great God—what agonizing need!

But to return to the college presidents: the most charitable conclusion to accept concerning them is that they genuinely do not know,

and are too humane to believe, the half that is being perpetrated under their very shadows. Is the task of thorough and constant investigation too difficult for him, who should be the guardian angel of the Institution? Then, let me beg of you,—gentlemen who hold this responsible position, to call on the arm of the law for help, rather than allow these little ones of creation to be so maltreated while under your care.

Dr. Leffingwell asks: "What are the ideals held up before American students in American colleges? What are the names whose mention is to fire youth with enthusiasm, with longing for like achievement and similar success? Is it Richet, 'bending over palpitating entrails, surrounded by groaning creatures,' not, as he tells us, with any thought of benefit to mankind, but simply 'to seek out a new fact, to verify a disputed point?' Is it Mantegazza, watching day by day, 'con molto amore e patienza moltissima'—with much pleasure and patience—the agonies of his crucified animals? Is it Brown-Sequard, ending a long

life devoted to the torment of living things, with the invention of a nostrum that earned him nothing but contempt? . . . Is it Magendie, operating for cataract, and plunging the needle to the bottom of his patient's eye, that by experiment upon a human being he might see the effect of irritating the retina? Is it Stricker, making a tortured ape to mimic the agony of a dying man?

"These men, it is true, Science counts among her disciples. They reached fame" (let us say notoriety) "through great tribulation, **through agony that never can be reckoned up,** but it was **not their own;** through 'sacrifice,' indeed, but not self-sacrifice; through abnegation of compassion, by suppression of pity. Surely in these names, and such as these, there can be no uplift or inspiration to young men toward that unselfish service and earnest work which alone shall help toward the amelioration of the world. 'The old order changeth,' but are there not some ideals of humanity that do not waver with the passing years?

"Perchance the curiosity of Science will

one day spend itself. The last evasive and evading mystery of Life may not be wrested from nature by fire or steel. Then there may be names that Humanity will forget, or **remember only to execrate.** But whenever in time to come men shall long to lessen in some way the awful sum of ache and anguish in the world, will they not rather turn for their inspiration to those ideal examples of self-sacrifice which still encourage us; to Howard, risking life in prison and lazar-house, that by revelation of their infamy he might stir the conscience of Europe to the need of reform; to Wilberforce and Clarkson, toiling amid obloquy and abuse for more than twenty years to put down the African slave-trade; to Garrison, waging war for thirty years that he might help to free America from the stain of human bondage; to Shaftesbury, confronting the organized greed of England in his effort to protect children in coal mines and factories; to Arnold Toynbee, making his home amid the squalor and wretchedness of Whitechapel, that he might know by hard experience the bitterness of life for the Lon-

don poor. Are not these better examples for the emulation of youth than those devotees of research whose pitilessness is their supreme title to the remembrance of posterity? Surely, from their eternal serenity, they would whisper to us, if they could, that the right path to the world's amelioration is not by way of torture."

When one of the greatest scientists the world has known pleads that vivisection may be restricted by law, who is there that should raise an opposing voice? It is from none other than **Herbert Spencer** that we find the following: "We regard as **cruel and wrong** the infliction of torment upon animals in the search for physiological facts which have no conceivable relation to the treatment of human diseases, or experiments that seem to be made only for the purpose of gratifying a heartless curiosity—such, for example, as those described in the work of Professor Mantegazza, entitled *The Effect of Pain upon Respiration.*

"We consider as wholly unjustifiable the

practice of subjecting animals to torture in the laboratory or class-room, merely for the purpose of demonstrating well-known and accepted facts. We hold that the infliction of torment upon living animals under such circumstances is not justified by necessity, nor is it a fitting exhibition for the contemplation of youth. And since in England, Scotland, and Ireland, such experiments as these are regarded as degrading in tendency, and are therefore forbidden by law, we think no harm will come to science if they shall also be forbidden in every American State.

"We believe, therefore, that the common interests of humanity and science demand that vivisection, like the study of human anatomy in the dissecting-room, should be brought under the direct supervision and control of the State. The practice, whether in public or in private, should be restricted by law to certain definite objects, and surrounded by every possible safeguard against license or abuse."

The responsibility of this awful work rests

upon every one of us. There should be no rest for ourselves or the government until vivisection is placed under the surveillance of the law.