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Contributors

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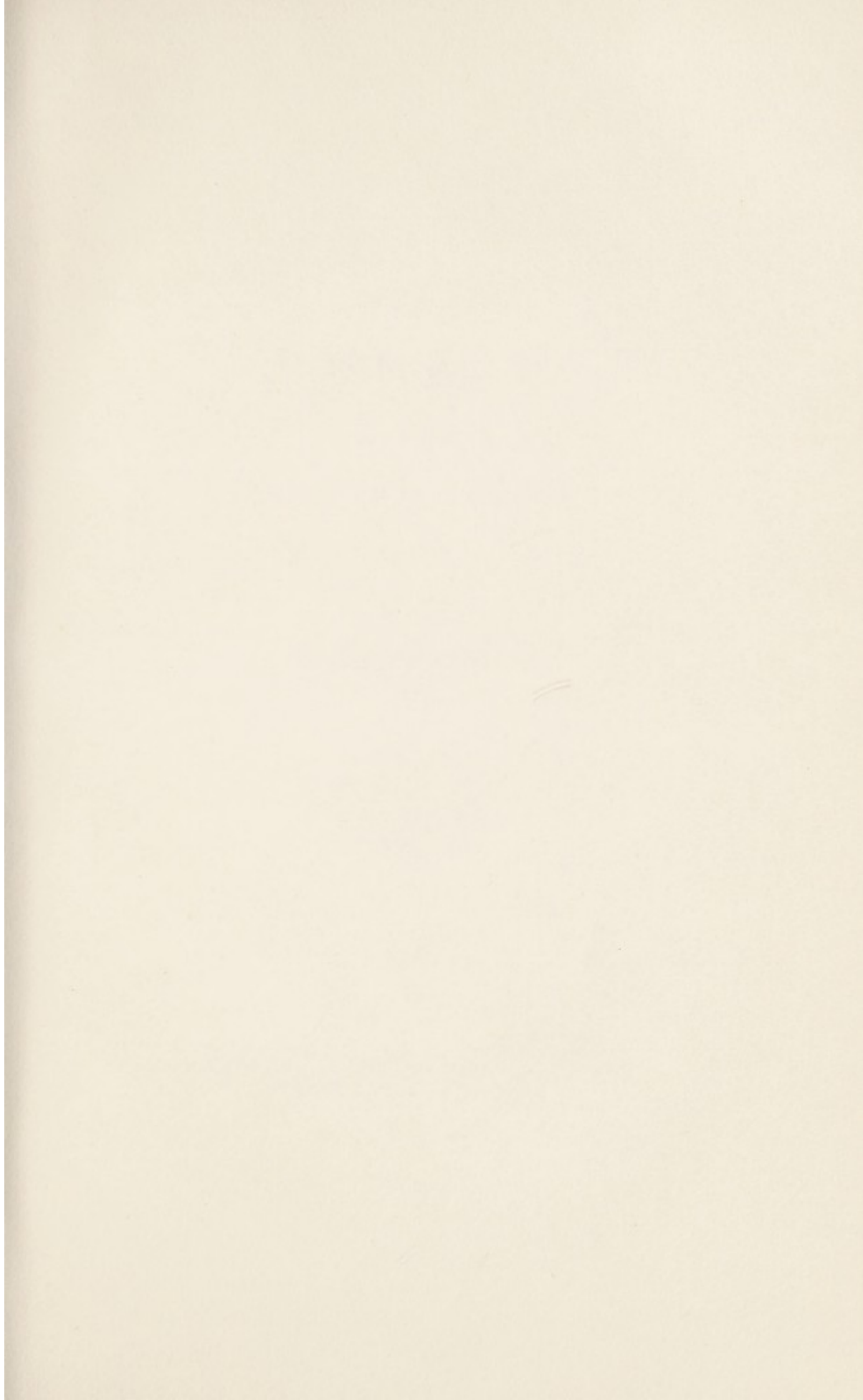
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T. DANFORTH A DISCOURSE 1808



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A
DISCOURSE,

BEFORE THE

Humane Society,

OF THE

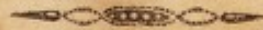
COMMONWEALTH OF MASSACHUSETTS.

BOSTON, JUNE 14, 1808.

.....
By Thomas Danforth.
.....



Published by request of the Society.



FROM THE PRESS OF

RUSSELL & CUTLER PRINTERS

1808.

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A DISCOURSE, &c.

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PUBLICA SALUS, NOSTRA MERCES.

WERE we to discuss the cause of life, and the various theories by which physiologists have attempted its solution, we should necessarily enter a field of enquiry, which would exhaust your patience, without affording satisfaction to your curiosity.

Life is a mode of existence so simple, that it cannot be explained by any known principles. Every attempt to describe life, has terminated in a mere description of its various phenomena. The organick action of plants decomposes the particles of water, as the same action in animals decomposes the particles of air. Both are conceived to be endowed with the living principle, both are equally dependent on each other, and by their mutual support, maintain their common existence.

(A) Striking and apparent as the connections between these two great kingdoms of nature may seem, there are differences notwithstanding, which the nicest enquirer has not hitherto been able to discriminate, or inform us where animal life ends and vegetable life begins. Human existence is too short, our observations too limited to settle a common principle which shall be applicable to living beings in every state of their existence. In our researches on life, we must confine ourselves to the particular object of inquiry, trace its analogies, unfold its peculiar properties, and thus by experimental investigation, we shall enlarge and improve the stock of our knowledge. Life is the object of

no sense, and living bodies are ever varying, according to their susceptibility to the powers of excitement.

In contemplating the objects which surround us, and with which we form a connected whole in the chain of nature, we find that nothing on this globe is stationary, nothing is at rest, all is action and reaction, from man the chief work of organization, to the lowest mineral. The formation of bodies proceeds by insensible degrees, particle by particle is added, or assimilated, to the substance of their individual species, when nature from her thick, impervious veil, presents to the view of admiration, the beauteous crystal, the fruitful plant, or the wonder man.

Arrived at the point of completion, her steps are all retraced ; solution follows on solution, till by the resistless strength of her chymick power, the work and its form are lost in that vast fluid, which fills all space, and actuates all substance.

Thus is matter continually changing from simple to compound, till it is reconverted into its original principles.

A benevolent God, through the medium of light and heat, has produced, in the human species, the powers of sensation and thought. He has given us faculties, which have placed us high on the scale of beings. He has taught us to study in ourselves, how to promote the happiness of others, for he who is not charitable to himself, has nothing for his fellow. He has stopped the impatient hand, which vainly grasps at all knowledge. He has caused the principles with which we must operate, the crucible in which we would test the bold experiment, to crumble like ourselves beneath his resistless power.

Let us then quit speculations which are of little or no practical utility, for the consideration of man as he is; the nature of whose being, will ever furnish objects of enquiry important to philosophy, and rules of obligation essential to morality.

The physical existence of human beings, is doubtless dependent on laws, which influence the rest of nature. The moral agent does not exist independent of the physical. The acquisition, comparison, and combination of ideas, will be consonant to truth, in proportion as we preserve the command of the intellect. The mind is uniformly affected by the sound or unsound state of the brain and nerves, those great organs of the sympathetick affections; for whatever constitutes the mental principle, the brain is the medium of its operation; the moral conduct therefore, will be influenced by the physical sanity of those organs. Hence, the immediate connection between medicine and morality. If we trace vice, or folly, to its source, we shall find it to have originated, in the violation of those physical laws of nature, which by habit, is gradually increased into erroneous associations, producing frequent departure from the straight line of virtue.

The intimate and alternate action of the moral ~~on~~ the physical principle, may be exemplified in a variety of cases. The character of an individual may be changed, by exciting a violent action in either of the essential functions of life, by moral causes; as by stimulating and nourishing a constant spirit of emulation and pride. It may be influenced also by food, which generates a universally diseased action. It may be changed also, by im-

prudent exposure to the action of the sun, in intemperate climates. Thus, the phlegmatick disposition may be transformed to the irritable, and the natural character being altered, the moral propensities will be changed also. "The formation of the body, and more of the inclination of the mind, than is generally imagined, depend on the nature and quality of our food. The savageness of the wildest animals is softened by diēt, and it sometimes appears, as if ferocity would sleep quietly in the frame, unless awakened by sensations excited by the colour, scent, and taste of blood." (B.) The soldier, who is yet unused to the alarms of war, advances with trembling step, to meet its horrors, and is supported only by an artificial pride. In the rage of the battle, he loses the feelings of the man, and from the blood of his dying companions, he scents the vengeance of the hero.

Pleasure and pain alternately succeed each other, and follow in the inverse ratio of proportion. To the high excitement of mental or physical sensibility, will succeed complete indifference, keen regret, or the most perfect disgust. The principle of life which influences all our actions is limited, and the fibres on which it operates are confined in their powers of strength and resistance. Thus, on the sanity of the physical state of the constitution, depends in a great measure the relative condition of the mental capacity. By so slight a tenure do we enjoy the powers of intellect, that he who now may justly soar in all the supremacy of wisdom, may from circumstances beyond his controul, be palsied in faculty, and deprived of self agency.

This mutual influence of body on mind, is most wise

in the design and beneficial in its results. Human nature is enriched as well as bound by a most exalted principle, which this influence calls into exercise; conscience, which makes us brave, or cowards, notwithstanding the impudence of vice, or the ridicule of an empty philosophy. It is not a prejudice rooted by education, but a perception of honor arising from the conviction of truth, and constitutes among men a natural nobility without heraldry, making virtue pre-eminent. Such is the power of conscience over sensation and sentiment, that in some instances it has so predominated, as to have abstracted the mind from its bodily connections. God has made our necessities the stimulus to duty, and constituted our happiness in a mediate indulgence of the passions. By their alternations we are compelled to analyse the rules of existence, and acquire the lessons of hardihood. In the life of the philosopher of Athens, we have a momentous example, and though the history of mankind is fertile in the persecution of talents and virtue, that same ingrate multitude who crucify the living character, have after a lapse of continued impostures, adored in humble penitence the shade of those, whom they ignominiously had voted to death.

Man is not only endowed with peculiar sensibility, but from his constitution, is enabled to convert his powers of mechanism to the most beneficial uses. The skin which constitutes the envelope of the system, is that susceptible organ in which feeling eminently resides, and instinct discovers its powers. In the construction of the human hand, we behold the masterpiece of nature's art. If instead of flexible fingers, the human arm had been terminated with the hoof of the quadruped, the faculty of reason could never

have been improved, science and the arts would never have been known.

Man is indeed formed to survey with delight the magnificent spectacle of nature, and regale in the serenity of virtue, but is dependent on his brethren and the opinions he acquires concerning them and things, for happiness or misery. In the school of misfortune he is stimulated to reflection, and must acquire experience. In early life, free, open and unsuspecting, he becomes an unwary prey to base associates, habit insensibly gains controul, resolution sickens, he falls degenerate and wretched. The scions of vice are now ingrafted, and we no longer recognize the fruit of the original stock.

Our sufferings are in proportion to our natural sensibility, the state and influence of our habits. Hence that which shall cause pain in one mind, will produce impatience in a second, anger in a third, hatred in a fourth, and crime in the last. There are natures which cannot carry the weight of affliction. Shakespeare makes Lear invoke the Gods, to grant him true need to support filial ingratitude. The unfortunate king, "as full of grief as age, wretched in both, would flatter himself that no water drops should stain his man's cheeks," yet he sinks at last beneath the mighty pressure, and such is the power of sympathy, that the degraded but noble partner in his "moody madness," yields also his life to friendship.

Mere want of riches may be regarded as among the smallest misfortunes. If the life of man be as cheap as beasts, the gorgeous palace and the luxurious table would be superfluous. Habit however converts into second na-

ture, things which without its influence, would not be regarded as wants. Adverse circumstances are to be supported not on abstract reasoning, but according to our nature, genius, and acquired character. The man who is accustomed from early life to the hardy occupations of labour, will not feel depression like him, who from an elevated station, to which he has justly been raised, is violently precipitated. It requires something more than mere philosophy, to associate, in such circumstances, content with a bare subsistence. The truth is, we are too apt in polished society to regard the habit, more than the man. We hang out our virtues, and deceive. Honor is oftentimes unrewarded, till by death, the real character is developed. Prosperity wears a charmed life, whose magick conceals iniquity with the mantle of forgetfulness. "Plate sin with gold, and the strong lance of justice hurtless breaks; arm it in rags, a pigmy's straw doth pierce it." Riches do not constitute worth, for poverty not unfrequently exalts the merit that it covers. Unfortunate! wheresoever you are, if to hide your sufferings, you must fly society, go, and learn, in the story of the benevolent Samaritan, how to divide a sorrow, and half obliterate your own. What matters it, if we be told, that liberty, property, and life, are under the protecting arm of the law, if to resist misfortunes which none escape, requires a heart of iron. Man had been better in his savage state, where patience and courage alone were requisite, to combat hunger, and resist corporeal violence.

Philosophers have written on the subject of misfortune. They have not hitherto discovered a universal panacea. It would require as many, as there are individuals that suffer.

In the school of misery, and from pathetic scenes of distress, we are taught, and may acquire, the sublimest sentiments of honor and generosity. Convinced of this truth, the truly excellent Fenelon wrote *Telemachus*, to teach his pupils sentiments of benevolence, by fictitious scenes of wretchedness, the influence of which on human sensibility, he apprehended, was most powerful, in giving indissoluble strength to the moral associations.

If infirmity result from the condition of our nature, by what principle should the social compact be cemented? By a spirit of knowledge, with which, a spirit of charity keeps an equal pace. Faith, custom, nor country can debar her offices. Free and unstinted, she is equally foreign from the views of the stoick, the devotion of the ascetick, or the hypocrisy of the seeming philanthropick.

Animated by a desire to unite the spirit of sentiment with the spirit of knowledge, we have beheld, Mr. President and Gentlemen, with the warmest regard, the early establishment of "your standing Committee of Humanity." The resuscitation of life, and the alleviation of its miseries, are among the noblest duties of elevated minds. In the prosecution and accomplishment of such intentions, we recognize the real benefactors of society, who aim to convert the powers of science, to the purposes of common life. We view with astonishment the lofty genius of that man,* whose penetrating eye explored the regions of curiosity and grandeur. We pause in gratitude, when contemplating the godlike zeal of him,† who exhausted his energies, not in the

* Sir Isaac Newton.

† Mr. Howard.

magnificence of sublime inventions, but like the humane Beccaria, to soften the brow of care, meliorate the sufferings of crime, and systematise the school of misery. Compare the views of a Napoleon, with those of a Jenner. The former, has shed the blood of thousands of his species, to satiate a pride incommensurate with any known ambition. The latter, having tamed the serpent pestilence, which had so long ravaged the beauty of the human form, has charmed him to sleep, and deprived him of a fatal sting. The one, has disarmed death of terror. The other, has not added a unit to the sum of political happiness. Splendour and slavery, have resulted from the emulation of the former ; protection and life, from that of the latter. With principles and views not less indicative of the best intentions of the human mind, and the most sublime sentiments of the heart, the Humane Society may justly produce the fairest claims to civick approbation and regard. Accept our congratulations. For the generous purposes in which you have engaged, may the smiles of Heaven and the benedictions of your Countrymen recompense your labours.

If we were made acquainted with the cause of life, we might more easily settle on some certain characteristick, whereby animals and vegetables in every state of existence, might be distinguished from their structure after death, while the substance of their composition had not exhibited any sensible putrefaction. (c.) It would doubtless be a prodigious step in the knowledge and cure of diseases, could we ascertain to what stimuli, the body in a state of asphyxia remains susceptible. Although, hitherto those means are undiscovered, such is the bold spirit of modern research, that medicine, aided by the light of Prometheus, may yet

be enabled to penetrate the dark caverns of death, and kindle anew the almost extinguished spark of life.

Since the discoveries of the celebrated Dr. Black, chymical analysis has advanced with rapid progression, in the developement of the laws and phenomena of animal life. The science of chymistry, from the obscurity of its origin, and its barbarous dialect, awaited the dawn of a genius, whose creative mind gave it a new birth, and a new character, which has justly entitled him to a conspicuous niche in the temple of fame. Possessed of this preeminent art, man may walk hand in hand by the side of nature, obeying her laws, imitating her productions, and participating in her prerogatives. Although, much has been effected by the subsequent labours of his followers, with regard to the agency of calorique and respiration, in preserving the full powers of life, much remains unknown. As you have opportunity, may you imbibe the same zeal. Continue annually to hold forth rewards to emulation, genius and industry. Resolve but firmly, and the success of the enterprise is half your own. But remember, harmony in the execution, is essential to the accomplishment. Let not the niggardly principle of selfishness influence your motives. A spirit of contention among men of letters, has often disgraced themselves, and brought down the contempt of the people. It is a sort of combat, in which the fortunate antagonist is more desirous to chant the song of victory, than retire in the complacency of conviction. What therefore might be viewed as an effort to enlighten, is justly regarded as mere vanity. Dispute not then for the beggarly conquest of opinion, but dispute for the honour, reputation, and happiness

of your country. Bring together the earnings of your mental toil. Let there be a common deposit. Science thus accumulating from age to age, will be formed at last into one vast pyramid, whose basis will rest on the eternal foundations of experience, whose apex shall point to truth.

Persevere Gentlemen, and prosper. "Lateat scintillula forsan." Be not precipitate to decide. Weigh maturely every circumstance of the death, the character and habits of your patient, that you may more fully be assisted, in graduating the scale of those stimulant applications, on the physical intensity of which, you expect to rely. The skilful physician, like the scientific General, requires, to his aid, implicit confidence, and obedient will. The victory or defeat, may rest on a dial's point. Though what he hath to do, should be begun quickly, hastiness in the operation, is no criterion of judgment. To this cause, may be attributed, the failure of many attempts to resuscitate.

Do we ask for proofs of the power of art? testimony that your exertions have not been in vain? The records of your institution, are monuments more precious to you, than is the most brilliant sceptre, sustained by the pride of ambition.

If the return to our native soil, after a long and perilous voyage, excites the tender sigh of nature, *O! Dulcis Patria, te teneo!* how keen the sensation, to behold the vital flame glow anew, on the pallid cheek of death. The fond parent restored to the embraces of affectionate children, the darling son to the bosom of a disconsolate mother, are scenes in the drama of life, which the pencil cannot touch, language cannot utter.

By your wise care, the hardy mariner has found a safe retreat from threatening destruction. Often, when sitting in the circle of domestick friendship, recounting to his listening offspring, the story of his escape, his big heart cannot withhold extremity, but bursts in spontaneous tears of gratitude.

Perhaps, the subject of your resuscitation had sought in death, to terminate a wretched being. Fulfil then your task. Alleviate his misery ; if possible dry up its source. Has disease deprived him of the power to labour ? Has the baseness of individuals defrauded him of his rights, or precluded him from the means of restitution ? Place yourselves the corner stone of a foundation, on which may be erected the superstructure, of a well regulated Infirmary. Has his mind, unfortified by education, habit, or reflection, grown distracted in the view of his fallen condition ? Assist to raise some friendly dome, where lunacy may be secluded, from the wanton regards of impertinent and unfeeling curiosity. To rescue an individual from an untimely grave, is oftentimes an act of instinctive bravery, or professional effort. But in accomplishing these objects, you may produce the most important benefits to community ; the prevention of self murder.

Those virtues, which we flatter ourselves we all possess, we are too apt to neglect to cultivate. In this age of political gloom, mystery, and intolerance, let the study of humanity be your chief care. If you permit the urbanity and duties of social intercourse, to be frequently undermined by the violence of party passion, or the malevolence of disappointed ambition, it may not be difficult to sustain the character

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of freemen with crimes, as detestable as those, which have left an indelible blot in the history of a great and magnanimous people. Let us then all cherish the supreme love of the humane character, and individually bestow our mite, to raise the depressed, and soften the pillow of death.

Descend Charity, daughter of Heaven, sister of truth :
In this temple, hallowed to thy praise, inspire our hearts
with thy benignant spirit. Approach ye children of mortality :
Here at the altar exchange forgiveness. Then will
science and virtue combine their energies to prosper our institutions,
and render our nation illustrious and happy.

ERRATA.

For *endowed*, read *ENDUED*, page 3d, 11th line, and page 7th, 23d line.



NOTES

The first part of the notes is devoted to a general survey of the subject, and is intended to give the reader a general idea of the scope and extent of the work. The second part is devoted to a detailed description of the various methods employed in the investigation, and is intended to give the reader a more complete knowledge of the details of the work. The third part is devoted to a discussion of the results obtained, and is intended to give the reader a more complete knowledge of the facts of the case. The fourth part is devoted to a discussion of the conclusions drawn from the results, and is intended to give the reader a more complete knowledge of the author's views on the subject.

NOTES.

NOTE (A.)

Some late curious experiments would seem to prove, that the great characteristic between these two kingdoms, is the power of evolving calorique, or in other words, resisting the general powers of putrefaction, or conversion of their substance into aerial fluids, and vice versa, the conversion of their fluid or soft parts into consolidation; for the action of vitality is perpetually carrying off from the body it actuates, by combination with calorique, various substances, which, if retained, would be injurious to its healthy economy, and by the powers of digestion, secretion, and assimilation, converting its fluids, into the substance of the body itself, by which, the temperature of the animal or plant is preserved, and calorique equally distributed, for the various purposes of the animal and vegetable economy.

Dr. MARTIN, in his remarks on the various degrees of heat in bodies, observes, that by the most careful experiments on vegetables, he could not ascertain, that they, any more than the most inert matter, were endued with a power of generating a degree of heat superior to the medium they live in. This was also the opinion of Lord BACON, and the philosophers of his time, which seems not a little strange, as for the purposes of secretion, in the various plants, and fructification, calorique must be both evolved and combined to constitute their properties. The ingenious Senebier, of Geneva, has proved that the internal temperature of some plants, while the parts of fructification are developed, exceeds the temperature of the ambient air $15\frac{3}{4}$ of Fahrenheit's thermometer. Dr. HUNTER also, in his experiments on the heat of vegetables, has observed, that the sap of a tree would freeze at 32° when taken out of the vessels of the tree, but that the trees were often as low as 15° , and the sap not frozen.

Difficult as it may be therefore, to determine on any precise characteristic of living beings, in every state of their existence, it is obvious, "that of all the powers attending animation, that which seems fundamental, is the power of the living body, to preserve the same heat in various degrees of temperature of the same medium, and in media of different density and pressure."

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If the accuracy and penetration of the most learned naturalists, have not enabled them to distinguish plants from animals, and either of these from fossils, vain would be our attempt to decide, which is the most probable theory of animal life.

NOTE (B.)

(B) I knew, says Dr. MOSELY, a person at Kingston, in Jamaica, a Mr. *Benjamin Parker*, who had nearly lost his life, by an event which illustrates this supposition. . . . He had a Spanish-main tyger, which he brought up on milk and sugar, and bread, from the time it was newly born, until it was nearly full grown. It slept in his room, frequently on his bed, and went about the house like a spaniel. The man was taken ill of a fever. I directed him to be bled. Soon after the operation he fell asleep, with the tyger by his side, on the bed. During his sleeping, the arm bled considerably. The tyger, which as yet had never seen blood, or tasted animal food, while Mr. Parker was sleeping, had knawed his shirt sleeve, and the bloody part of the sheet into a thousand pieces. He had also detached the compress, and got at the bleeding orifice of the vein, and licked up the blood running from it. The impatient animal, forgetting in a moment his domestic education, and the kindness of his master, began to use the arm with some roughness with his teeth, which awaked Mr. Parker. On his rising up in his bed, the tyger and master were in mutual consternation. The tyger gave a spring, and jumped on an high chest of drawers in the room; from that, to the chairs, and tables, and ran about the house in wild and horrible phrenzy. I arrived at the house at the time of this confusion. The tyger escaped into the garden, where he was shot.

NOTE (c.)

The ingenious Dr. GOODWIN considered life in the more perfect animals, the power of propelling the fluids through the circulating system. In cases of asphyxia, the circulation of the fluids through the system is stopped, and the solids are to all appearance destitute of irritability and sensibility. Instances however have occurred, in which by due application, irritability and sensibility have been restored, and the power of the vascular system, or vitality recovered. The means used have been purely physical and chymical. Life, according to Dr. GOODWIN, was extinct, for the power of which he speaks, is extinct, not

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an index of vitality is visible. He moreover remarks, that a difference in degree does not produce an alteration in kind. Is the animal then dead, or is the state of a living body modified? We know of no satisfactory solution on this subject. Here our art is conjectural. By the powers we apply, irritability, (which in the opinion of Dr. KITE, is the test of life,) is, after various periods, according to circumstances, excited. The body though insusceptible to the influence of ordinary stimuli, is not beyond the sphere of some stimulus. What then is the difference between asphyxia and death, in cases where there are no visible signs of putrefaction? That there is a difference, we shall not deny. In what it consists, we do not know. When life is extinct, or rather, when we no longer can produce by external agents applied to the body, signs of irritability and sensibility, solution of its component parts, or putrefaction must ensue. Thus life and death alternately succeed, the form alone is annihilated, and "all nature remains and maintains an eternal vigor."

By the experiments of Mr. Coleman, the effects of agents will be found much to vary. "He threw into the stomach of a drowned whelp a drachm of the tartrate of antimony. In seven minutes from the apparent recovery of the animal, it began to vomit, in twelve to purge, in one hour and seventeen minutes the animal died. To another whelp of the same litter, which he did not suffocate, he also gave a drachm of the same article. In less than four minutes it vomited, in eleven it purged, in fifty-three it died. The stomach of each animal was found empty, but the internal coat of the stomach of the animal engaged in the second experiment, was nearly gangrenous." It appears then, that the stomach of drowned animals is not influenced by the tartrate of antimony, as in cases, where the sensibility of the animal is not impaired. The measure then of the intensity of any agent, capable of exciting the living principle, must not be regulated by the intensity of that agent upon the healthy fibre. For though the qualities of substances are equally positive, their effects on the subject will be found to vary, in relation to the quantity of the agent, and the relative state of the animal, at the time of its application. In a case of submersion, the temperature of the body is greatly reduced. The consequence is a suspension of its functions. The restoration of its temperature therefore, by the aid of caloric, which is the principle of expansion and of animal action, is the first object of medical aid, for till the temperature of the body be restored, respiration cannot be excited. It is, in the language of Dr. Goodwin, put-

ting the body in a condition to favour the return of respiration, which is the pendulum of the machine, whose equal and regular action harmonizes the whole: Its motion stopped, *man* becomes a lifeless carcase, again renewed, again he wakes to intelligence. Respiration, however, is not a distinguishing characteristic of every living from a dead body, but a condition essential to the preservation of the *temperature* and various functions of the *respiring* animals. To excite the full powers of animation in cases of asphyxia, the temperature of the heart and vascular system must first be restored. If the principle of heat and irritability, according to Girtanner, resides in oxygenous gas, then in cases of submersion, the inflation of the lungs with vital air would *alone* be adequate to the above purpose, but the contrary is known to be the fact.

Dr. Menzies seems inclined to this opinion, but suggests whether the air thus introduced, effects this so much from the calorique it may afford, as from its stimulant power. That it acts as a stimulus, is obvious, for the temperature of the system must first be restored, before irritability can be excited, either in the entire animal, or its detached parts, as Dr. Gardner in his experiments on the heart of the turtle, has strikingly evinced.

“Some years ago, I cut out the heart and part of the large vessels of a turtle, with a view to examine the structure of the parts and the circulation of the blood in that animal. Having wiped off the blood and other moisture, the heart was wrapped up in a handkerchief; but engagements in the way of my profession obliged me to postpone my curiosity till about 6 or 7 hours after it was cut out. When I examined it, there appeared not the least signs of life. It was much shrivelled and dried. But, upon putting it in water nearly milk warm, it plumped up, and some parts of it acquired a tremulous motion. Laying it on the table, and pricking it with a large needle, it palpitated several times. The palpitation renewed as often as the needle was pushed into its substance, until it became cold, when it seemed insensible to every stimulus. But after warming it again in water, it recovered its irritability, and repeated its palpitations on the application of the needle. Though no motion could be excited in it by any stimulus when cold, yet it moved several times after being macerated in warm water.”

Oxygenous gas, as gas, does not communicate heat. It can only do this, when it is decomposed. According to Mr. Davy, it cannot be decomposed without a rapid combustion, and

evolution of calorige, and this combustion he thinks, would be inconsistent with the known temperature of the lungs. Thus much is certain, that in the process of resuscitation, our attention must be steadily directed to the gradual restoration of the temperature of the system, so justly insisted on by Dr. Goodwin; for whether life be extinct, from a want of susceptibility in the heart to excitement, or an obstruction in the minute pulmonary vessels, from a collapse of the lungs, their temperature must be restored, before the lungs can be made to act, or the heart be excited.

Mayhow, who wrote in the 16th century, has been considered as the first, who gave any striking hints on the effects of air, and respiration. . . We may however go further back, and in the philosophical writings of Cicero, we shall find some most important observations on this interesting topick, with which we shall close our remarks, having already reached the bounds, prescribed in our annual dissertations. *Omne quod vivit, sive animal, sive terra editum, id vivit propter inclusum in eo calorem; quod autem alitur et crescit, eodem modo utitur, certo et equabili, qui, quamdiu remanet in nobis, tamdiu et vita remanet, refrigerato autem, et extincto calore, occidimus ipsi, et extinguimur. In pulmonibus autem, inest raritas quædam, et assimilis spongiis mollitudo. Hauriendum spiritum aptissima, quæ tum se contrahunt adspirantes, tum maxime dilatant, ut frequenter ducatur* *Spiritu*
cibus animalis, quo maxime aluntur animantes.



APPENDIX

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Handwritten note or signature in the left margin.

SECRET

APPENDIX.

THE following Communications must appear interesting to the friends of Humanity, and have received the attention of the Society.

....

PLYMOUTH, JAN. 16, 1808.

To the TRUSTEES of the Massachusetts Humane Society.

GENTLEMEN,

THE following instances of preservation, the particulars of which I am requested to communicate, have recently occurred in this town.

About ten o'clock in the evening of the 10th inst. Mr. NATHAN CHURCHILL, in attempting to walk on a plank from the wharf to the deck of a vessel, unfortunately slipped and fell, in such manner, as to thrust himself under the bottom of the vessel. ICHABOD HALL, being present, and observing that he did not rise to the surface, resolutely sprang from the wharf, twelve feet high, for his relief. Diving to the bottom, the water being about five feet deep, he found Churchill in such a position, in the mud, under the vessel, as to require his utmost efforts to disengage him. This however he happily effected, by seizing hold of his cloathes; and, having raised his head above water, although greatly obstructed by pieces of floating ice, and incumbered with boots and thick garments, they soon reached an anchor suspended from the vessel; by the aid of which, they recovered the wharf, though much exhausted. Another man standing on the deck of the vessel, witnessed their efforts in the water, was greatly alarmed for their safety; but had not resolution to attempt any assistance. Mr. Churchill is deeply impressed with a sense of the perilous situation from which he was providentially rescued, and assures me that, but for the prompt and resolute exertions of Hall, he must inevitably have perished. I am therefore of opinion that the last mentioned person, for his important

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service on this occasion, is well deserving of consideration from the Trustees.

Some time previous to the above transaction, a daughter of the widow KYES, aged ten years, unfortunately fell from a wharf into the water, about ten feet deep, and before assistance could be given she had sunk to the bottom, and emerged ; at the moment of her going down the second time, she was rescued from inevitable destruction by the humane agency of Mr. SYLVANUS STURTEVANT, who hearing the alarm, immediately let himself down to his shoulders in the water, between the wharf and a vessel, seized the child by her hair, while under water, and with the help of another person, brought her on shore ; but in so exhausted a condition, that some time elapsed before she recovered her strength and faculties. Mr. Sturtevant having placed himself in a situation which endangered his own safety, as a little motion of the vessel might have pressed both him and the child against the wharf, is recommended to the Trustees for their favourable notice.

Other instances of a similar nature, not attended by circumstances sufficiently important to merit communication, serve to evince that commendable spirit of emulation and alacrity among our sea-faring people, which is truly gratifying to the friends of our excellent institution, and which it is desirable should be encouraged upon all suitable occasions. I am, Gentlemen, with sentiments of great respect, your obedient and humble servant.

JAMES THACHER.

COHASSET, 24TH MARCH, 1808.

REVEREND SIR,

YOUR son observed to me, it was your wish to see some statement of the melancholy event that occurred at Cohasset, on the 3d inst. to the family of the two captain SNOWS, (brothers) in said town. In obedience to his request, and your wishes, I will state the circumstances to the best of my recollection.

On the day of the above date, two sons, from seven to ten years of age, playing on the ice, (which was sufficient to support them near the shore, but becoming weaker toward the channel,) fell through at a good distance, but in sight of the house, and their mothers, who instantly flew to their assistance; passing on about fifty feet from the bank, one of the mothers broke in; her little daughter, of eleven years, followed and fell through, near the mother; the other Mrs. Snow, finding it impossible to render them any assistance, very judiciously ran for the nearest neighbours, for assistance, and the nearest help, which was myself, and others, standing on a wharf, nearly half a mile from them. We immediately ran to their assistance, and to my surprise, discovered three heads above water; in approaching them, a creek intervened, catching a pine rail in my hand, I crossed the mouth, whilst my companions ran round the head of it, the ice being tender; but observing one of the children sinking, was induced to take the risk, and was fortunate enough to get within ten feet of it, before the ice gave way, but swam and caught the sinking child, and kept it up, till the persons came off with a boat on the ice, and took in Mrs. Snow, and the others that were nearest to the bank. Extending a pole to me, I grasped it with one hand, and held the child by the other, till they dragged us to the boat, and took us in; presuming ourselves safe, judge my surprize, when in, to discover the boat leaking to such degree, that it went down from under us in less than thirty seconds. Entangled with the ice, about sixty feet from the bank of the meadow, which we could neither approach for the ice, not being strong enough for those to come to our assistance, without getting into the same distress, which some of them did. After long struggling, they all succeeded to get on the ice, except myself, Mrs. Snow, and one other man, and the children, who all drowned. Finding such entanglement at the edge of the ice, I swam for the sunken boat again, where we all remained, till they went some distance to the house, and uncorded beds and brought lines, which being thrown off the edge of the ice, I caught the end, and perceiving the woman's hair above water, seized it; they pulled us to the edge of the ice, at the same time pushing toward us a long ladder. I passed one arm through

the lower slat, and clinching the woman in my arms, they dragged us through the ice, till it became strong enough for a person to come out, and haul us on to the ladder. Mrs. *Snow* perfectly senseless. Being carried to the house, and stripped, thrown into warm blankets, the process of friction was commenced, and at the same time constant application of hot cloths, with vessels filled with hot water, which succeeded in restoring the circulations, in a short time. The children were recovered in half an hour after they sunk, and some effort made on one of them to resuscitate, but without effect—the water being near the freezing point, and the atmosphere about the same, the e bodies were too much chilled to promise success, by perseverance.

The scene was distressing and melancholy ; for some time I expected eight or ten persons would perish in the presence of twenty smart active men, well acquainted with the element we were struggling with, and not more than sixty feet distant, for the want of means ; for as fast as they approached us, they were involved in the same difficulty.

Considering the cold, it is astonishing that the woman and children remained alive till our arrival, which must have been about half an hour, and after the boat sunk nearly a quarter more, and myself was so chilled, that I could not reach the house without assistance. The water was part salt and part fresh, about ten feet deep.

Mrs. *Snow's* life is not at present in danger ; but being dragged about the boat and ice, with her own struggles, she will require time to recover perfect health, if she ever does.

S. STEPHENSON.

Rev. Mr. LATHROP.

BOSTON, MAY 13, 1808.

GENTLEMEN,

RETURNING from the country, on Tuesday evening, about 10 o'clock, in company with my son, between the Toll-House and South-Boston Bridge, we were alarmed with the frequent cry of murder. On approach-

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ing the spot, whence the cry proceeded, we discovered a man in the water, who informed us that he had been in above an hour and an half. As he was within a few yards of the shore, I encouraged him to attempt fording to it; but he informed me that he could not swim, that he had four times been over his head, and was afraid of moving from the bank, in which he then stood; that he was so stiff with cold that he was apprehensive, if he attempted to move he should fall down, and not be able to rise again, and that if he was not soon relieved he must inevitably perish. Seeing no boat, I hastened to the nearest house, distant rather more than a quarter of a mile, and JESSE B. WILCOX and JAMES SPEARE drest themselves, and came out. We tore off part of a fence, and Mr. WILCOX stripping off his cloaths, went into the water, and extending the boards before him, enabled the poor man to reach them, who was thus saved from death. He informed us that his name was *Richard Day*, and that he had gotten into this dangerous situation, by attempting to wade after a mud-schow. As it is morally certain that he must have perished in a short time, if he had not received assistance, and as Mr. Wilcox ran some risque in venturing naked in the water, on so cold a night, I recommend him to your notice and generosity.

I am, gentlemen, with great respect,
your humble servant,

JOHN S. J. GARDINER.



PREMIUMS,

ADJUDGED FROM *JUNE* 1807, TO *JUNE* 1808.

<i>David Everett</i> , for taking a Lad out of the water, in danger of drowning,	3
<i>Eason Johnson</i> , for saving the life of a child of ten years old,	5
<i>Benjamin Brentnell</i> , for saving a child,	3
<i>Benjamin Chandler</i> , a similar exertion,	3
<i>James Decoster</i> , helping a boy out of the water,	1
<i>L. Jenkins, William Prat, John Carr, James Damon</i> —four seamen, who saved the life of <i>Thomas Gould</i> ,	8
<i>James Briant</i> , saving the life of a child,	3
Messrs. <i>Hall and Sturtevant</i> , of Plymouth, for their exertions— <i>vide appendix</i>	16
<i>Bill Richardson</i> , for taking several children out of the water near the N. Mills, and preventing a young man from drowning himself,	7
<i>Mr. McIntyre</i> , for his exertions in saving the life of <i>Mr. B. Barnes'</i> child,	5
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EXPENCES OF THE SOCIETY.

Semi-annual Meeting,	18	50
Expenses for printing and advertizing,	94	75
Postage of Letters,	4	33
<i>Capt. Scott</i> , for materials and labour, } refitting the hut on Nantasket Beach, }	25	46
Messenger of the Society,	85	
Expenses of the Life Boat,	1433	11
Do. Shed at Cohasset,	160	
A piece of Plate presented <i>Capt. Gardner</i> , of Nantucket, }	43	
	-----	1864 15
		\$ 1918 15





