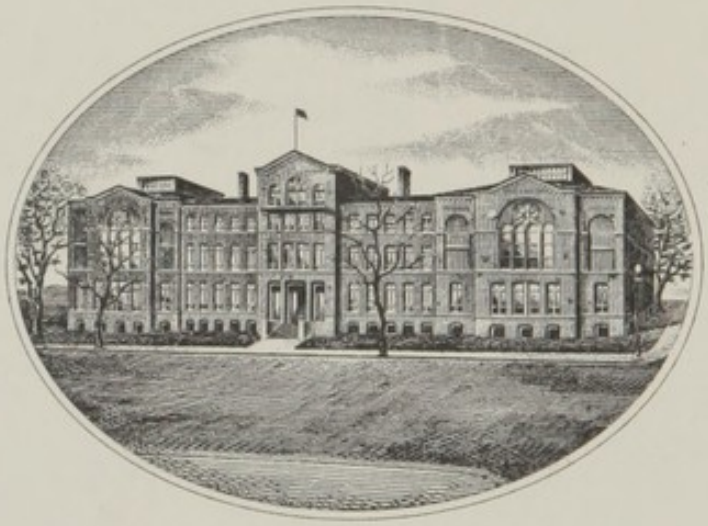
Four lectures on the Thomsonian practice of medicine / by David Tower.

NATIONAL LIBRARY OF MEDICINE

Washington



Founded 1836

U. S. Department of Health, Education, and Welfare

Public Health Service

FOUR

LECTURES

ON THE

THOMSONIAN PRACTICE OF MEDICINE.

BY DAVID TOWER,

PHYSICIAN AT AVON MINERAL SPRINGS.

"Truths would you teach to save a sinking land,
"All fear, none aid you, and few understand."

CANANDAIGUA:

PRINTED BY BEMIS, MORSE AND WARD,

(FOR THE AUTHOR.)

1828.

Dr. Jackson
with Mr. Wadsworths best regards

FOUR

of the soundness of the principles Mr. W.
does not judge. It is written by a

LECTURES

young man of superior natural
talent ——

ON THE

THOMSONIAN PRACTICE OF MEDICINE.

BY DAVID TOWER,

PHYSICIAN AT AVON MINERAL SPRINGS.

"Truths would you teach to save a sinking land;
"All fear, none aid you, and few understand."

CANANDAIGUA:

PRINTED BY BEMIS, MORSE AND WARD,

(FOR THE AUTHOR.)

.....

1828.

TO DR. SAMUEL THOMSON,

WHOSE DISINTERESTED LABORS AND IMPORTANT DISCOVERIES IN MEDICINE, WHILE THEY HAVE BROUGHT DOWN UPON HIM THE IMPLACABLE DISPLEASURE OF THE FACULTY, HAVE SECURED TO HIM THE GRATEFUL ESTEEM OF ALL WHO ARE ACQUAINTED WITH HIS PRACTICE:

THE FOLLOWING LECTURES ARE RESPECTFULLY INSCRIBED,

BY THE AUTHOR.

PREFACE.

IT is customary for authors to make some apology when they bring any thing before the public. My apology, I hope, will be found in the importance of the ideas hinted at in the following lectures. That they are free from all inaccuracies of style, the author has not the vanity to flatter himself. But the matter they contain, he hopes, will be such as to meet the approbation of all unprejudiced men. Whatever inaccuracies either may contain, the author has one apology to plead, which on all occasions should be heard, viz. that he is a young man. He can truly say to the public, that he has much to say to them on this important subject—and should his life and health be spared him, he will at some future time resume the subject.

LECTURES.

LECTURE I.

I HAVE purposed, fellow-citizens, to address you upon an important and interesting subject. The investigation of any proposition, which has for its object the multiplication and enlargement of the sources of happiness, must be of importance to us all:—and that which relates to the nature and cure of disease, must rank itself in importance among the first. It is the duty of every individual, whatever his profession may be, so to employ his physical and intellectual powers that this world may be wiser and better for his having lived in it. Let the truth of the preceding sentiment be acknowledged, and the only inquiry is, how is that power to be exerted for the accomplishment of the desired end? According to our views of this subject, the proper answer to the above question is, it is to be exerted in learning the extent of its own ability, its relations and tendencies; or, in the language of the poet,

"The proper study of mankind *is man*."

If human happiness be the object of our reflections and desires, would we in any small degree effect the desired end, we must obtain an accurate knowledge of human nature. For, if it be true that this earth is a vale of tears, and if it be true also, that an imputation of malevolence cannot be made to bear upon the character of the great First Cause in man's primeval creation, the conclusion is clear and irresistible, that there must be some obstructions to man's happiness—that things are driven from that channel in which the kind hand of nature designed them to flow. Would we qualify ourselves to be able to assist nature in her kind operations in restoring things to their primeval regularity, we must acquaint ourselves intimately with the original structure of things. This we must do, in order to ascertain how far, and in what particulars na-

ture has been diverted in its courses. That things are thus diverted, is evident: for if the case be otherwise, why are our ears saluted with that dolorous voice of discontent, which at times is heard from almost every individual of the whole species to which we belong? And if we actually possess certain knowledge of the causes of this disquietude, and of the remedy also, why then is not the healing balm applied? why then is not nature's assistant administered and the voice of discontent hushed to peaceful repose?—The reason is obvious: we are, in too great a degree, ignorant of both cause and remedy. One thing, however, is very clear, that this unhappiness arises from some supernatural cause—that nature is prevented, by some barrier or other, from discharging those kind offices for which she was intended by her God.

As it respects the amount of happiness which man, in his present state of existence, is capable of enjoying, or how much his Creator intended he should enjoy, I have nothing to say. It is a truth, however, that anatomy has never taught us that the body of man is designedly shaped for disease: we can discover no disproportion in its organization indicating that it was thrown together by a malevolent hand. On the contrary, all its elemental parts are so organized, as to afford ample proof to us, that it is the intention of nature that an equal and healthful action should animate the whole system.

Nor have we any evidence to believe the faculties of the mind were given us for any other purpose than to advance our happiness. Since the wonder-working hand of nature has worked favorable to our happiness, why then, it may be asked, are men so unhappy? Because man has fallen from that state of rectitude, in which he was made. As is respects the degree of unhappiness brought upon mankind by the fall, I have no question to raise. If it can be proved, however, that the mind always produces the first effects upon the body, and not the body upon the mind, then undoubtedly some evil state of the mental faculties gives origin to all the misery of which our species are the subjects. But it is certain when the body is diseased, the mind will be effected as well as the body —and when the disease is removed, the disquietude of the mind and body will both subside together.

It is taken nearly for granted, I believe, that spirit always acts first upon matter, and not matter first upon spirit. This unquestionably is true, as it respects the great Creator, who is a spirit exclusively. And it is undoubtedly the mind or im-

mortal part of man, that acts upon the mortal or material part —for the body, without the mind, is dead. But while the mind is confined to the body, it may be, that the wants and pains of the body suggest to the mind the necessity of action; and although the body does not in realty act on the mind first, still the mind does not act without some object, and the object which the mind has in acting is to satisfy want or remove some obstruction in the body.

But the connection between body and mind, I am free to say, is to me perfectly inexplicable; nor have I made these remarks thinking to explain it; neither have I made them to disprove the sentiment, that our unhappiness is the consequence of our disobedience, or of the fall of man:—For there need not be a doubt in the minds of any, but that all the misery of which we are the subjects, has been brought upon us by disobedience to God's laws:—And these laws not only extend to a few particulars, but to every thing that can have any influence in the proper management of all the concerns of human life; and these laws are as clearly revealed to us in that happy adaptation we behold in a great variety of means to the accomplishment of an equal variety of ends, as they could be in a written code: hence a man may as directly, and perhaps as criminally, violate the laws of his Maker, by endeavoring to destroy the connection between cause and effect, as by violating any revealed command. Whenever we use any thing different from what it was intended, we disobey the command of God.

Hence, fellow-citizens, permit me to remark, that perversion of things has been the most fruitful source of misery to mankind. By perversion of things, I mean the using them for the accomplishment of different ends from those for which they were designed. The Creator has given to man a moral sense, intellectual strength, and physical power. The first of these enables him to judge of what is right and wrong, with respect to moral conduct; the second enables him to reason accurately and to form just conceptions on moral and natural subjects; the third enables him to obtain those things from the earth necessary to sustain animal life. We see that the Creator has assigned distinct offices to each of these different gifts:—The first, to save us from criminality; the second, from imposition, and the third, from starvation.

Now, if the moral and intellectual powers of men were employed only in the investigation of those subjects which lie

clearly within the atmosphere of our mental vision—those only which have a direct tendency to increase the sum of human happiness, and to decrease the sum of human misery; and if the natural power of the body were employed in obtaining those things for which the voice of nature calls—and if men were uniformly to pursue that judicious course of conduct in the concerns of human life, for which their reason and judgment were given, to enable them to pursue—human happiness, unquestionably, would be augmented beyond what, at present, has entered the mind of man to conceive. Then would human nature arise from the degradation of misery into which it has been cast by a perversion of its blessings, and begin to assume her dignity, and ascend towards her native skies.

But at present, fellow-citizens, the truth respecting man is otherwise. His moral sensibility, in too great a degree, is effaced by an accumulation of guilt, and his intellectual faculties, instead of being employed in accomplishing the end for which they were given, are employed much too frequently in advancing his own and others' misery. His physical powers, instead of being exerted in supplying those things for which nature calls, are too much employed in accumulating silver and gold, (for whom he knows not,) or in pleasing a wild and extravagant fancy, or in extinguishing human life by war. And it is by this criminal perversion that the order of nature is broken, and the disquietude of mankind increased.

We have good evidence, fellow-citizens, that the faculties of the mind of man are not the only blessings which Providence has bestowed upon us, that are used for purposes different from those for which they were designed. This may be the case as it respects our food. Is it at all probable that the best food and manner of its preparation, have been adopted? Have we not reason to fear, that an imputation of guilt might be made to bear upon our characters, arising from perversion with respect to choice in our daily sustenence? Have we not at least some reason to believe that there are articles which nature designed we should subsist upon in a great degree, which we subsist upon in a very small degree—while there are other articles which were not so much designed for food as for other purposes, that we use in abundance?—What has been said in regard to our food, applies equally to our drink. Who does not know that a most destructive sin of perversion is committed by us, in the bad use of spirituous liquors? This is a fact certainly, of which none of us can be ignorant.

Now, who can tell how much pain and misery has been brought upon mankind in this way, and who can tell how much human life has been shortened by a bad use of the good things of Divine Providence? When you look abroad, fellow-citizens, upon the material world, and behold that endless variety contained in both the vegetable and mineral kingdoms, you must then remember that all these were made and placed there by God himself, each to answer some valuable purpose in promoting the happiness of his creatures. It should, if we would reason correctly, be an axiom, that nature has never wrought in vain. Let no one imagine that our ignorance of the work of nature, renders in the least degree her productions useless. All the evidence we are able to produce that nature has wrought in vain, is our ignorance; and the importance of this kind of evidence I need not stay to investigate. But it is our duty, fellow-citizens, to investigate what effects the Supreme Being designed to produce, in creating such a multitude of materials as there are in the world around us.

To ascertain correctly what effect nature designed to produce by each of these materials, constitutes true knowledge, and one of the most sublime and useful subjects of human contemplation. In this view of the subject we can see how directly a correct knowledge of a true creature of God, and not a false one of the imagination, tends to promote human happiness: for if human suffering in a great measure arise from applying the wrong means to effect the desired end, then surely it is the want of a correct knowledge of what nature intended to effect by each of these means, that is the cause of all disconsolation, since there is such a multitude of objects in the material world, created by an infinitely wise and benevolent Being for some useful purpose. We may well believe that our happiness must consist in acquiring a knowledge of that purpose.

Admitting the preceding remarks to be true, and acknowledging, as we must, the great variety of materials existing in both the mineral and vegetable kingdoms, and each of these designed for some particular purpose, have we not at least some reason to fear that much human suffering is occasioned by applying some of those materials to produce a great number of effects, each of which were very different in their nature? If it can be said with truth, that the wants of men are many, it can be said with equal truth that we are not compelled to use one thing to supply them all, for nature has pro-

vided also many remedies. We are taught by the great number and variety of articles, which the kind hand of Providence has furnished us, that they were all designed for some one purpose, more than another. I would not, however, be understood to mean barely one single purpose. For example, iron may and does answer all the purposes of husbandry and mechanics for which such a material is necessary. The same may be said with respect to many other substances. I would observe too, that some things are more general, and others more particular in their uses. Now, what I mean by one purpose, is, that each of these will answer the end nature designed to accomplish by them, much better than any other. For if these means, to which the all-wise and powerful hand of nature has given efficacy to effect ends, should be used to effect those ends which it designed to effect by them, then we may expect effects the most salutary will attend our efforts to alleviate human suffering. Taking this view of the subject, we can see clearly how a true and accurate knowledge of things tends to increase human happiness: for I allude to such a knowledge of the proper uses of things as would prevent us from applying any of them to a different end from that for which they were intended.

This knowledge cannot be obtained without a long course of application to study and experience. And it was to be expected that mankind, from the commencement of the world, would make but slow progress in obtaining accurate knowledge of the true creatures of God, for hitherto there have been many barriers in the way to this attainment. To mention some of these barriers shall be the business of the remainder of this discourse.

Before I proceed to the execution of the work I have proposed to myself, I would present in one comprehensive view, the nature and tendency of that knowledge, to which I have already invited your attention. In the concerns of human life, it is indispensably necessary to the happiness and continuance of men upon the earth, than an almost infinite variety of effects should be produced, and that they should be produced by proper and efficient causes. The kind hand of nature has provided causes sufficient to produce those effects, and has established an unfailing connection between each of them, so that when any of the means designed by nature to produce effects are used, the desired result is sure to follow.

The knowledge to which I would invite your attention, is

a familiar and accurate acquaintance with the proper and efficient causes, or means, which nature has provided to produce those effects, with which the happiness and the existence of mankind are connected—for, when those means are used, there can be no failure. The reason why we have been no more successful in promoting human happiness, is a want of knowledge of those means to which nature has given efficacy to produce salutary effects.

I will now proceed to mention some of those barriers which have hitherto prevented our attaining this most important knowledge.

1st. Real knowledge of a true creature of nature, is difficult to attain. We may, it is true, explore and understand the work of art, with a degree of ease and accuracy, for the obvious reason that it is not a production of skill and judgment superior to our own. But the work of nature is executed by skill and judgment infinitely superior to that of men. Hence it requires much accurate discrimination and patient thought to rightly understand it. Perhaps our familiar acquaintance with the works of art, and being daily accustomed to trace the footsteps of the architect, have induced us to adopt the same manner of interpreting the works of nature, as of those of art; and in this way it may be, that we have been led into error upon subjects where the truth would be of the utmost importance to us.

I have observed that nature's work, in its formation, indicates skill and wisdom infinitely superior to that of art The truth of this sentiment I presume we are all willing to acknowledge. For we must remember that nature, in her mysterious operations, works in a great measure beyond the forecast of man, in the present imperfect state of his knowledge; and there she has created, and there she still preserves and keeps in motion, the world of matter and of mind. Beyond the comprehension of man she has formed all those materials, in giving a different color and shape to which, lies all the skill and ingenuity of the artist. But I need not enlarge on this part of the subject; what has already been said, it may be, is sufficient to convince us, that by studying the work of art we never can acquire an accurate knowledge of the useful things of nature.

In obtaining useful knowledge by induction, of the means that nature has provided for our happiness, a patient thinking is required, which is uniformly attended by a disagreeable

sensation in the mind, and when we endeavor to call all the energies of the mind to investigate critically the true connection between cause and effect, we find there is as great a propensity in the mind to fly from this mode of philosophizing, and to resort to imagination and conjecture, as there is in a ball to roll upon an inclined plain. There has been in all ages a solicitude in men to know the causes of phenomena, and this solicitude arises in part from fear and curiosity. We delight in being active, and the more success with which that activity is crowned in discovering the truth, the more curiosity is excited and satisfied, and the more the mind is encouraged to pursue its discoveries. Our minds are so formed, that agreeable sensations uniformly attend us when we make any new discovery in the latent things of nature, and the pleasure which the mind receives in this way excites in us a strong desire to enquire into the causes of phenomena. In this way, curiosity is gratified in an important acquirement to human knowledge.—Fear has also a tendency to excite in us a disposition to enquire into the cause of things. Whatever strange appearances the heavens may assume, if we but know the cause, we are in a great measure satisfied. But let things assume the same aspect, and let the pestilence that walketh in darkness begin to slay its thousands, and let man be ignorant of the cause of this mighty destruction, and this earth is immediately filled with a multitude of anxious and enquiring beings: but should man be made acquainted with the cause, and should it still produce its effects, his anxiety would in a great measure subside. It is, when we behold effects produced we know not how, that the mind is terrified.

Now, this curiosity and fear to which I have alluded, have in all ages, indueed men to exclaim, "Happy is he who is able to discover the true cause of phenomena." This anxiety to know the connection between cause and effect, while it has been conducive to the acquirement of useful knowledge, has at the same time been the means of leading us into gross error. The mind being impatient to ascertain the causes of things, and at the same time unwilling to endure the labor, or to wait the length of time which a critical investigation would require, it immediately resorts to imagination and conjecture, and in this way falsehood is made to answer in the room of truth—a creature of the imagination, in place of a creature of God:—and in this way our intellectual atmosphere has been so filled and darkened with the creatures of conjecture, that the crea-

tures of God are hid beneath their obscurity. Never will mankind make that proficiency in all the useful arts of life which is to be wished, until all these shall have passed away before the clear light of demonstrative truth, like the fog that rolls up the mountain side before the rising glory of the summer's morning.

We should remember, fellow-citizens, that nature, and the laws of mind and matter, comprise all the subjects upon which we can contemplate—and all the books with which the world has been deluged, must treat of something contained in one or the other of these subjects. The best written description of any thing contained in either of those subjects, is only a species of painting, from the real original thing; and there is danger of the picture being defective in two ways—first, a want in the artist of a correct knowledge of the original; secondly, a want of skill to paint accurately from the image in his mind. A defect in a treatise arising from either of these two causes, subjects us to great danger of being led into error.

It is important, therefore, that we for ourselves become intimately acquainted with the actual things of nature. Now, how far mankind have been, from the above causes, decieved, and how far they have operated as barriers to the attainment of useful knowledge, I shall not attempt at this time to say. That they have in no small degree, is very evident—for few works have outlived their authors and exerted an influence on succeeding generations. Among the multitude of books that have been written, how small indeed has been the number, the adamantine basis of whose reputation has borne them unrefuted and unimproved from the earliest ages, down to us, amid the fluctuations of time and acumen of critics, and now govern the opinions of men? The Scriptures, in religion, the Illiad of Homer, in poetry, and some works on the mathematics, alone can with success make pretensions to such a basis: for men have, by discovering the truth of things, learned that what has been said of them is not true. By being made acquainted with things themselves by actual survey, they have seen that the description given by others was incorrect; they have seen that the picture bears but a faint resemblance to the original: and hence multitudes of books have sunk into oblivion. Where, it may be asked, are the writings of the ancient philosophers? where are those systems of ethics and philosophy, in the formation and promulgation of which they endured labors and made exertions not to be described? They

are exploded, and have given place to a more enlightened and consistent philosophy. A Bacon, a Newton, and a Reid, have arisen, and by their discoveries and writings have illuminated the world with new lustre. Cheered by these good omens, we have the consolation in the pleasing hope, that a happier day still awaits the human race, when perversion of every description shall be exploded, and nature restored to her wonted regularity, and the world to its wonted peace and harmony.

2d. An improper and unbounded trust in Divine Providence has been a barrier to our obtaining useful knowledge. I will pass over the endless trust and confidence of the heathen in their imaginary duties and oracles, and come directly home among ourselves, in this christian land. I would observe in the first place, however, that I have an unshaken confidence in the Deity, who gives a permanent and indissoluble connection between cause and effect, so that whenever any of those means are used to produce effects which he designed to produce by them, the divine blessing will invariably follow, and his blessing is to be acknowledged in establishing a connection between means and ends, and for this connection on the Deity we must alone depend. It is undoubtedly a great blessing that there is a connection between eating and satisfying hunger, between drinking and quenching thirst, and between the application of medicines and a restoration to health.

Now, it appears to me we should render more acceptable service to our Maker by trusting and looking to him for wisdom and directions concernig what means to use, than by expecting him to bless whatever means we may indiscriminately employ. We frequently hear it said, while prescribing medicine for the sick, "No matter what the means are—without the divine blessing all will be in vain; on the other hand, with the divine blessing all will be well, let us apply what remedies we may." The above sentiment seems to maintain the idea, that God has established no connection between cause and effect, and that causes are no more adapted to produce one effect than another.

I am willing to own that this connection is depending on the will of the Creator; but I am not willing to own that he has not expressed his will by establishing that connection. Had we sufficient wisdom we should undoubtedly see, that every thing in the moral and natural world is brought about by a connection, in a regular system of cause and effect; and

that connection unquestionably was established at the primeval creation of things, and as God never changes, of course that connection will last as long as the material world. I am free to own that success is altogether depending upon the divine blessing, but that divine blessing will not be received out of the ordinary regulated operations of nature. Nature will never change any of her laws to favor any of her children: nor indeed would it be a favor for her to do so.

Now the evil arising from this improper trust in the supernatural intervention of Divine Providence, appears to be this: it induces us to believe that there is no lasting connection between cause and effect; and if so, it will be of no use to us to examine into the nature of causes, so as to ascertain what effects they will produce;—for, according to this mode of reasoning, there is no connection between them, except when the Divine Being interposes his aid in some supernatural manner; and according to this mode of interpreting things, if certain causes produce certain effects to-day, it is no evidence that the same causes will to-morrow produce similar results. Hence it is of but little consequence to trouble ourselves in learning the nature of any cause; we have only to apply any thing that comes within our reach, and then supplicate the Deity and await his blessing. The injurious effects of such a course, I need not stay to investigate.

3d. An improper discouragement or a want of perseverance has been a barrier to our obtaining extensive and useful knowledge. This I think is especially true with respect to the HEALING ART. There are cases of disease, undoubtedly, when a cure is impossible, in the very nature of the case. Some diseases are incurable in their nature—others perhaps not in their nature, but in certain stages. A disease may be said to be curable in its nature, when no important organ is destroyed. It is reasonable to suppose, that by suitable perseverance in the proper manner, all diseases, curable in their nature, might be removed. But what multitudes who appear destined to drag out a miserable existence by pain arising from diseases curable in their nature! Why, it may be asked, are not their diseases cured? Most people when they are sick, believe that there is something which would cure them, if they did but know what it was and where it was to be found. But the reason why they are not cured, appears to me to be this, they have been carried through a certain round of medicine taking, and because that has not cured them, they are pronounced

incurable, and no more exertion is made in a systematic form for their recovery. How long has it been since doctors have attempted with any degree of success, the cure of epilepsy? (and it is a disease, for aught that we can discover, curable in its nature.) We ought never to be discouraged in the least degree, where a cure is possible in the nature of the case. What has been said respecting medicine, may be said with equal truth respecting most of the arts. If a man once becomes convinced that an object cannot be attained, he never will make any further exertions to attain it.

4th. The fourth barrier to our obtaining useful knowledge, is established institutions. These may be established in two ways, by legal authority and by custom and prejudice. That the well-being of mankind requires societies and institutions, is evident. We are, however, to have a special regard to it, that the formation and continuation of them be in reality for the good of mankind, and not for the misery and degradation of the multitude for the aggrandizement of a few. In an age and country like our own, there is no necessity of sacrificing individual happiness for general good; and on the other hand, there is no necessity for sacrificing the general good to advance individual happiness. But the happiness of individuals is increased by increasing that of the whole, and the happiness of the whole community perhaps is the most effectually advanced, by a general dissemination of knowledge.

Any institutions, therefore, which in any degree operate as a barrier to a general dissemination of knowledge, or as a preventive to improvement and discoveries in the arts, must be considered as injurious and opposed to the true interests of mankind. Our own country, with regard to its civil and religious institutions, has set the nations of the earth a glorious example. The American mind, touched by the miraculous wand of the patriots of the Revolution, to a perception of the true philosophy of civil government and religious liberty, has kept on its way successfully and gloriously; and we are cheered by good omens to believe it will continue to spread, until it shall have disenfranchised the world from the grasp of every species of despotism.

I have remarked that the good of mankind required the formation of institutions. This I think, will appear evident to all. It seems needful there should be institutions of law, medicine, and divinity, and that there should be a certain number of men who should make themselves acquainted with

these institutions, so as to officiate as professional characters; and that a knowledge of each of these professions should be a science, in the illustration of which, books should be written, and that an acquaintance with these books should be necessary to initiate one into the profession. But among all our conveniencies there will still be inconveniencies—and the last cannot well be avoided in the present imperfect state of human nature. I acknowledge, however, that this inconvenience would be obviated in established institutions, had perfection been attained in any of them: but no one will pretend that this is the case. Hence as knowledge is progressive, learned institutions ought not to assume the form of a perpetual encampment.

We believe, for ourselves, that great improvement will be made in the arts, and especially in the healing art; and to the institution of medicine I would confine my remarks. It is my design to show wherein the present institution of medicine has operated as a barrier to the advancement of knowledge in that profession.

It was remarked by Lord Bacon, that medical knowledge had not been much advanced, because physicians reasoned too much in a circle and not enough in a line. With this sentiment, we for ourselves certainly must agree; and we think it must remain so, according to the present establishment of that institution. For, when a young man commences the study of medicine, he receives a catalogue of all the books with which he is to acquaint himself, in order to obtain a sufficient knowledge to enter upon the business of the profession —and when he has finished a certain round of study, he imagines himself completely qualified to enter upon the practice of physic. He does commence this practice, guided by what he has learned from others;—he has read perhaps all authors of much note, from Hypocrates down to the present day, and if he can tell who has been the most ingenious in speculation, he is unable to ascertain who has been the most successful in practice—(and with respect to many important things in medicine, rival authors are nearly equally divided, and it is not certain that either are right, but quite so that both are not correct.)

Such, fellow-citizens, is the present condition of medical knowledge; such the situation of an institution which pretends to be the prop of sinking, dying human nature. If men engaged in the practice of medicine have been unable rightly

to understand the true philosophy of the healing art, for this we blame them not; and if they have in their researches overlooked the truth, there is nothing criminal in all this, although it may have been the source of much human misery. I am not going to say but that there have been and still are, many in the regular practice of medicine, for whom I entertain sentiments of the highest respect. I know that there have been, and hope there still are, true philanthropists and lovers of truth in that profession, who would be glad to know and receive the truth, let it come from what quarter it might. But this is not true with respect to all, neither should we expect it—neither are the bad effects resulting from the establishment of that institution, greater than might be expected in the present imperfect state of human nature.

The medical faculty, viewed in all the traits of its character, possesses a mighty influence over the public mind, not only in medical affairs, but in all other. The statement of a few facts will render the truth of this remark sufficiently evident. In the first place, they are very numerous, and interspersed through every portion of our country. They are, or at least are regarded, as men of more learning than the principal part of community; and with a few exceptions they are men of wealth, and the greater part of community are indebted to them, and the debtor is uniformly a slave to the creditor. They are supposed also to possess knowledge, on which the health and lives of men are depending. Besides all this, it is an institution of long standing: it can boast of every thing venerable in antiquity, and every thing lofty and splendid in intellect—of every thing sublime in erudition, and every thing praiseworthy in benevolence. An institution like this, one might well suppose, had struck its roots to the centre, and that its branches had overshadowed the earth. Such an institution, we can readily perceive, would assume to itself the form of a state of perfection, and operate as an effectual barrier to further investigation;—it would say to the curious mind of the self-taught investigator of the latent principles of nature, "Thus far shall thou push thy discoveries, and here shall thy proud course be staid." It would say to knowledge, while on its rapid flight to ameliorate the condition of man, "Turn in hither, and remain forever in the temple that we have erected." Great importance being attached to it, from these high pretensions, and being fostered by the civil authority, it possesses, of course, great advantages, to check in the bud every appearance of innovation. It may, with a good degree of

accuracy, be compared to a brazen wall, whose foundation is pretended to be laid in the centre, and whose top is pretended to reach the heavens—and all that is known, and all that is honorable, is pretended to be entirely included within its own caverns; and in this way an immovable anchor is cast to a radical reform in the healing art;—for the man who should be found to possess courage sufficient to approach and presume to examine any of its materials, or investigate any of its principles, would immediately be regarded as a dangerous innovator, and expose himself to the shafts of the vindictive displeasure of its adherents. They would soon be aroused from their tranquil repose, and form themselves in warlike array. Soon, like Mount Sinai, the whole faculty would be dark with rage and a tempest of wrath, ready to burst upon the devoted head of the aggressor. The faculty would be instantly awakened from the slumbers of antiquated institutions, and girding itself for the contest, would go forth from conquering to conquer. And, wo unto the man, wo unto his reputation, wo unto his practice, and wo unto his all, on whom shall fall the scath of its blighting indignation!

Why, it may be asked, are physicians so alarmed? Can it be that a tender regard for the good of mankind, has inspired them with such insatiable fury? Surely not—for when men are engaged in promoting that object, a more judicious and humane movement characterizes their conduct. Evidently it is their own interest for their craft, which has inspired them to contend with so much warmth against any innovation.

And now, while all the other arts and sciences are undergoing reform and revolution for the better, it remains for you, fellow-citizens, to say whether one of the most useful and important of all arts, shall linger in the work of reform, and remain based upon the same foundation forever, merely for the gratification and aggrandizement of a few professional characters. I trust that upon this subject you will act worthy of American citizens—worthy of a free, thinking, intelligent people. To engage in the work of reform, we have every possible inducement: our government is auspicious to it; the path already shines brightly before us. A Franklin is in the clear upper skies—a Thomson will soon go to join the American constellation of philosophers and reformers, and the heavens will beam with new light. Beneath its illumination let us walk the journey of life, and at its final termination let us commend our country and all the concerns of the human race, to the Divine benediction.

LECTURE II.

In a preceding discourse, it was my object to illustrate, briefly, the nature and tendency of a correct knowledge of the uses of those things which nature has provided to advance our happiness. And then, secondly, I mentioned some of the barriers to our obtaining that knowledge. In the present lecture I propose to consider the following things :—

1st. What it is to make a discovery. 2d. What qualifications ought a man to possess, and what manner of life ought he to pursue, to render him eligible to make a discovery. 3d. I shall consider Doctor Samuel Thomson, and the discovery he has made in the healing art.

1st. I am to consider what it is to make a discovery in the useful things of nature. It is, unquestionably, a great blessing to us, that we have through the medium of authentic histories, the opinions of men in almost every age, upon all the most important subjects respecting human nature. To become acquainted with the sentiments of the ancients and the moderns upon the arts and sciences generally, constitutes what is usually called learning. And this learning, besides its being a source of much satisfaction to the mind, is in a high degree useful to mankind. But like all other useful things, it may through the weakness of human intellect, not on account of any thing it possesses in itself, be diverted from producing its designed and desired effects : and whatever bad effects may attend the acquirement of learning, it must be acknowledged that its good effects more than balance its evil effects. The labors of the present and past ages have produced a splendid temple of knowledge ; and in examining its materials, we are made acquainted with much important truth, and many useful maxims ; and, indeed, without the experience of past ages, the human race would always continue in an infantile state, as to their knowledge. It must be acknowledged, however, when a man has made himself ever so well acquainted with the writings of others, he has navigated no new sea, seen nothing but what others have explored before him ; he has avoided no frightful rocks and whirlpools which he was not warned to shun, and for which directions were not previously given him. Hence he will be likely to trust altogether in the

skill of his guides who have gone before him. This will induce him to practice upon the theories of others, without ever undertaking to form one himself. In this way he will turn his attention back, instead of pressing forward towards the mark of the prize of the high calling of suffering humanity. We believe, for ourselves, that great discoveries and improvements will be made in all the useful arts of life, so that the knowledge men now possess, will appear to those who have their existence hereafter, as the notions of the ancients do to us. The man therefore, who has made himself acquainted with all that has gone before him, is not entitled to the high appellation of a discoverer. The one has been made acquainted with the work and operations of nature, through the medium of the writings of men. The other makes himself acquainted with the same work, without any such medium. The one studies nature by a species of maps or painting: the other, by actual survey. The one studies the volumes written by men: the other, the volume of nature made intelligible by God himself. The one remains, as to his knowledge, with the rest of mankind: the other ventures alone, without any other guide than his own judgment, to step forth and explore the latent causes of phenomena. The one moves forward to the execution of his work, governed by rules prescribed by others: the other prescribes rules for himself, acts in conformity with them, pursues his discoveries, and leaves mankind in the rear.

Such, my friends, have appeared to me to be some of the distinctions between a man of learning, and a discoverer. We should remember, however, that not every one who makes pretensions to the high honor of a discoverer, is worthy of that name. We are in danger of imposition from this quarter, as well as from all others. A man may proclaim to the world that he has made a discovery merely because he has been successful in imagining what the cause is of a certain effect; and this cause has an existence no where but in his imagination, and on that account it becomes much the more dear to him. He regards it with all the tender solicitude of a parent, and when it has arrived at proper maturity, he endeavors to adopt it into the family of nature, among the sons of God. It becomes us, therefore, to examine with discrimination every thing that presents itself to us, in an attitude of laying claim to be a new discovery. We are to inquire whether it be a production of the imagination, or whether it be a

production of a long course of study and experience. It requires an experimental test to substantiate the truth and utility of any new discovery or invention. For a discovery may be defined in this way: It is to obtain demonstrative knowledge of causes which produce effects of which we were before ignorant, or to discover some unknown cause, and learn by experience what effects it was designed by nature to produce.

2d. What qualifications ought a man to possess, and what manner of life ought he to pursue, in order to render him eligible to make a discovery, according to the above definition of that term? However different the sentiments of men as to the proper answer to the above question, may be in some respects, in one point all will be agreed, and this is, he should be a man of genius, talents and observation. It is a sentiment deeply rooted in man, that when any thing of importance is to be accomplished, it requires great previous preparation. The weakness of mankind is such, whenever he in the limited sphere in which he is destined to move, undertakes to produce any important effects, it taxes all the energies of his mind to make preparation for their production. Hence how many minds, the exertions of which are required, and how much expense and labor necessary, to prepare for one battle. And it is so uniformly where any work of this kind is to be brought about. But nature in the accomplishment of its work, operates in a different manner. There is no long, tedious, preparatory course pursued in sending the pestilence to slay its thousands; and without any clamor, the sun emits millions of oceans of light, to illuminate the earth. It would be incorrect, perhaps, to say that nature wields the mind in making a discovery, in the same manner it does inanimate matter in producing a phenomenon. And still it appears to be the working of nature in the mind, which enables it to explore the work of nature. It appears to be nature investigating its own work, through the medium of the human mind. The subject viewed in this point of light, there would not appear to be any great necessity of *learning*, for comprising any part of the character of a discover. View the subject as we will, it seems difficult to determine how much learning a man should possess, in order to render him capable of making a discovery. But it seems to me not difficult to determine that he should be a man of some learning, and a good degree of originality. My sentiments on this subject may be in some respects a little different from those of some of my fellow-men,

and in asserting them, I only claim the privilege every free man enjoys, without pretending to any superior knowledge. We have remarked that it is a sentiment deeply rooted in the mind of man, that where any thing of great importance is to be accomplished, it requires great previous preparation. We have said also, that nature performs silently, and without any preparatory course, the most stupendous works the mind of man can conceive. And then, we barely suggested this idea, that a tact of mind necessary to make a discovery, is so much the gift of nature, and that its operations are such in the execution of its work as to resemble more the operations of nature than the operations of the human mind, in the acquisition of learning, and in producing effects in which human agency is conspicuously seen. And in this way we hinted that a discovery might be made without pursuing that preparatory course which most men would deem necessary. For were we to consult mankind at large, concerning what qualifications a man ought to possess in order to make a discovery, undoubtedly our attention would be immediately directed towards some character eminent both for learning and family. To prove the above statement, we would cite you to the histories of men who have made themselves eminent by their successful researches into the works of nature. There you would see what exertions are made, not only to exaggerate their attainments in the arts and sciences, but also to prove that they were descended from an ancient lineage of illustrious ancestors. And mankind would be likely to assign a character to one whom they would deem likely to make a discovery, similar to the character they wish to give to the man who had already made a discovery. They would not look for a man in the lower walks of life, who would unfold to them the laws of nature. No, the language of the multitude would be, let him be famous for his birth and blood; and at the time of his emission into the world, let some new aspect appear in the heavens, to be ominous of his future achievements; and let the first dawnings of reason be met by the most accurate descriptions, and the clearest logical deductions; let him associate only with those whose conduct it would be the height of his ambition to imitate; and as he approximates to mature age, let each expansion of every faculty of his mind, be tutored and shaped according to the best fashions of society, and the most perfect models of the schools; let volumes of books be thrown open to his view; let his soul be early

inspired with all the fire and sublimity of Homer and Virgil; let him have free access to all the means of improvement which his native country affords; then let him cross the seas and become a member of institutions of learning venerable for their antiquity; let him explore all the splendid works of art, and view the whole aspect of nature, in all the ancient countries of Europe and Asia. Similar would be the character of the man whom mankind generally would select to add to our present stock of knowledge. Such, undoubtedly, most men would deem the necessary qualifications for a man to possess, in order to bring to light the mysterious things of nature, and to explode pre-conceived opinions, and overthrow long established institutions, and advance human knowledge towards a state of unmingled perfection. But let this prodigy of learning come forth and open his mouth in wisdom, and instruct the human race, and let the world be silent and attentive to his words. If it be a subject in Religion he chooses to discuss, we shall immediately be made acquainted with the sentiments of the fathers. The reasonables and the unreasonables in their creeds will be exhibited, and the heterodox and orthodox will not be forgotten. The text is brought to view as it may be understood in the light of translations, and lengthy, and labored criticisms are made upon the originals. If it be a subject in philosophy, he is able to exhibit the various systems in that science, in their true light; and with a great degree of acumen to show their relations, connexions and tendencies. He will be able to follow with ease and accuracy, his great masters in their sublime speculations and discoveries upon and in the most intricate and lofty subjects. If he should turn his attention to politics, and should he be an American, and visit no foreign clime to obtain instruction in that science, his mind would be all on fire by a right understanding of free institutions, and rational government, from the true, brilliant light, which the heroes and patriots of the Revolution have shed upon the civil world. And here let us digress one moment, barely to make one statement. Of all the men chosen to transact business for others, of which we have any account, none have acted so wisely, so prudently, and so disinterestedly as the illustrious dead, who consummated the American Revolution. They have laid a perfect foundation to erect a political edifice upon, whose fame and salutary influence will extend, we sincerely hope, to all the nations of the earth. Let it be remarked, to the immortal honor

of those who framed it, that our form of government needs not a reform to make us happy, but obedience to its requirements. We will now return to our subject. If the man, concerning whose qualifications we have been speaking, should turn his attention to medical knowledge, he might undoubtedly say and write much, which would, perhaps, be useful to mankind. Should he undertake a work on anatomy, and if he has been more discriminating in dissection, and more perspicuous in description, than his predecessors, his work will be more useful than theirs. He would be able, unquestionably, to follow Linnæus in all his profound researches into the vegetable kingdom. He would understand, according to that author, not only the name of every plant in the vegetable kingdom, but its particular genus and species. And we fear his knowledge of these niceties would be much more accurate than of their medical efficacy, and the proper manner of administering them in curing disease. He would not, undoubtedly, be a stranger to the doctrine of chemistry. He would be able to delineate all its principles with precision and judgment. Following the paths others have beaten before him, he would be able with ease and accuracy, to analyze almost any substance, either in the vegetable or mineral kingdom; and he would be able to explain the effects of minerals and vegetables on organic life; and it is probable he could show with much greater exactness, how much poison it would take to destroy animal life, than how much of nature's assistance it would require to save it, when threatened with destruction by disease. It is evident, fellow-citizens, that the mind of man is not sufficiently capacious to understand every thing; and hence the man who has aspired after universal knowledge, has not made great proficiency in any. Man must bring the feeble, scattered rays of his intellect to a point, if he would look deeply into any of the sciences. If the attention be divided in examining the vast number of subjects which may present themselves to us, the strength of the mind will be exhausted on detached parts, without producing any salutary effects. It is like the march of an army in single companies, to obtain a victory over a powerful, well-organized, and numerous enemy. But if we would be invincible in our exertions to acquire truth, we must bring all our mental powers to bear upon the science of one profession. The man, therefore, whom the generality of mankind would seek as eligible to make a discovery, would not even be so likely to exist in

excel

the acquirement of knowledge, as it may be learned from an acquaintance with the standard authors on the arts and sciences—much less there would he be likely to obtain knowledge of things upon which no author had written. Now, the man relative to whose qualifications we have been speaking, would undoubtedly have a multitude of materials cast into his mind, and it is but reasonable for us to believe, that he would exert his intellectual strength more in the arrangement of those materials in his own mind, which he had acquired by reading, than he would in searching into the unexplored laws of nature. If a man all his life time, has been accustomed to travel a plain, beaten way, he would make but poor steerage in travelling where there is no way at all. And if a man should undertake the investigation of any subject, on which he is acquainted with the opinions of a multitude, he would be far more likely to fall in with some of their views, than to strike out a new mode of interpretation for himself. It is so with mankind, that they had much rather pursue the old, hard-beaten path, than to undertake a new one, although they should be convinced a better one might be known. Hence, the man of erudition would be apt to resort to some favorite author or rule for instruction, instead of critical and demonstrative induction.

In this way his learning, although it might qualify him to discharge all the duties of any station to which his country might call him, would at the same time, prove a barrier to him in looking into the intricate things of nature; but not on account of any thing learning possesses in itself, nor on account of any influence it appears designed to have, but on account of the limited extent of the human mind. The mind can be but occupied, and when it is occupied with one thing, it cannot at the same time be occupied with another. And if we are extensively acquainted with the histories and opinions of men in the present and past ages, these will excite our attention, and so prevent us from aiming at a reform. Furthermore, when a man has in a regular manner been admitted into a profession, he very properly intends, by it, to obtain his livelihood, and he very contentedly, while performing the duties of his profession, follows rules prescribed to him by his leaders; and so far is he from endeavoring to effect a radical reform, that he does not even desire it—and I am sorry to be compelled to say it, no, not even if he thought the good of mankind imperiously demanded it. This is true, I verily

believe, with respect to some, though I am far from applying it to all. Thus we see, that the man whom the majority of mankind would select as eligible to obtain further knowledge of the nature of things, would be induced not so to do, both from prejudice and interest. Besides, when a man has been regularly and extensively educated to a profession, he contracts a fondness for his favorite authors, and while pursuing his academical and professional studies, he forms many an interesting acquaintance. All these would be like so many cords which would effectually bind him to support, without any radical reform, that profession. But admitting those cords were broken, still he would be deterred from it, were he not a man of invincible courage and perseverance, by the unmeasured and unlimited wrath he would incur from the institution.

The above statement we think, is especially true with respect to the medical establishment; for no set of men, if we except the Catholic clergy, regard with so much implacable displeasure, any innovation, as the physicians. From the preceding statements, it appears pretty evident that a man, unsophisticated in the medical profession, would be more likely to make discoveries, and to operate reforms in that art, than one who, from his youth, had been familiar with the multitude of theories and speculations on that subject. For, in making discoveries, we must work where no one has wrought before; we must investigate that which no one has investigated. And hence, the man whose mind is uncontaminated, and free from all the contradictory opinions and speculations of medical writers, would, in our opinion, be far more likely to attain to originality, than any other. If it should be said that medical men have, within a few centuries past, made great improvements; to this it is replied, that there is such a thing as just reasoning from wrong data. It matters not how high the edifice is carried, or however finished its materials are, if the foundation be radically defective, the fabric must fall; and from its ruins, to be sure, it is to be hoped that some well carved stones may be selected, to assist in erecting the new one upon a better and more rational basis.

3d. We were to consider Dr. Samuel Thomson, and his medical discoveries. But who is Dr. Thomson? He is a man born in New-England, state of New-Hampshire, and now 59 years of age. But who is Dr. Thomson? He is the illiterate *sweat doctor*, or rather, the head of all the sweat doctors! the

greatest impostor in the world, and has been the means of the destruction of thousands! by the deleterious effects of steam, lobelia and capsicum!—But who, it is still asked, is Dr. Thomson? He is a man possessing natural talents, second to no one engaged in the healing art, and if he has had no degreess conferred upon him by any institution, NATURE has not neglected him, for she has conferred on him one degree in physic.

Such are the contradictory opinions of the character of Dr. Thomson. Some are in the belief, and are free to express that belief, that the name of Samuel Thomson will live in all future ages, and continue to brighten in proportion to the circulation and developement of the full extent of his medical discoveries. Others believe that his name will be mentioned in the succeeding age, only to be abhorred and despised. Viewing the relations in which he stands to the whole community, it is as we might expect it would be—a medical reformer may expect the mingled adulations and detractions of his fellow beings.

It has often been said, that "Dr. Thomson is an impostor." Let us proceed and examine the means he has had, from the commencement of his medical career until now, of imposing on the people. Let us bring him before us when but a child, with his parents. At this time they were inhabitants of a new country, and of course his advantages for an early education were very limited. But this privation of schooling was perhaps compensated to him, for this situation afforded him an opportunity to pursue that study for which nature seems to have designed him. There his mind was early expanded—not by a studious attachment to books, or by moving in the fashionable circles of society, but by a studious and youthful attachment to the investigation of the vegetable kingdom. It appears he very early united all his amusements and recreations with some useful and curious experiment. He was, it seems, an ardent lover of knowledge from his very infancy; but he chose to obtain it rather by searching nature, without any medium or rules prescribed by others, than to resort to books. He resided in a place where nature had scattered with a wasteful hand, all those objects which are calculated to excite the admiration and exertions of an ingenious mind.

It was in this romantic retreat that the mind of young Thomson first received that eager curiosity to enquire into the uses of things, which perhaps laid the foundation for his after discoveries. In this retreat he was a stranger to all those

insidious designs which human nature is ever wont to instigate in older and more propitious parts of the country. Here his mind was not contaminated with false notions in any of the sciences, or with undue prejudices for any established institutions, by an acquaintance with the writings of any sectarian zealot. There he seems to have taken nature alone for his guide and instructor; and he was as free to explore its works as it had been beneficial to him, in both giving to his mind a tact favorable for enquiring, and in placing such a variety of objects around him, which seemed to invite his investigation. He continued to follow with unremitted zeal, a course of critical investigation, until he had arrived to years of manhood: nor indeed did his enquiries stop here—for he entered upon those scenes of human life, in which men generally find it for their interest to reduce to practice all the important knowledge they have before known in theory. It was so with Thomson; what he had known before in theory, and what had served him for amusement, now he knew with an experimental certainty, and it served him in saving human life.

It was not until some time after Dr. Thomson had a family, that he thought seriously about giving himself to the practice of medicine; for he informs us in his narrative, that he had a physician living in one of his houses for some time after his marriage, whom he frequently employed in his own family; and it was after this and other medical gentlemen had exhausted their skill to no good effect, in endeavors to remove some diseases in his own family, that Thomson attempted his success in the healing art. He had before this time, however, collected a great many facts respecting remedies in disease. In those cases which we have mentioned, he exercised his best judgment, both in determining what the disease was, and in making a selection in remedies, and his exertions were attended with perfect success.

This success was regarded perhaps by many, and even by himself, as a casual occurrence: but he found, however, by pursuing a similar mode of treatment in many other cases, he met with similar success. Thus, by following that course which his own reason and judgment suggested to him to be proper, he was taught, to a demonstrative certainty, the great principle of life and motion in animal bodies—and before he was actually sensible of it, he had made a great discovery in the healing art; and ere he was aware, he found himself altogether engaged in the practice of medicine.

Dr. Thomson knew the nature of the medicines he administered, and he knew too, the effects they produced, and he saw they were salutary; and from this knowledge of medicine and of its effects, he was led to a clear apprehension of the first moving cause of animal life.

Now, this is the very way which the great Bacon directed to discover truth. But what can we see in this that looks like deception. Admitting he was disposed to deceive, what means has he had of doing it? He had a jealous, scrutinizing community to watch him, which were ever disposed to take the greatest possible advantage of the least misfortune. Add to this, the interest of the physicians required Thomson's persecution and destruction, and they never have hitherto failed of serving to the extent of their ability their interest. If he were a deceiver, he certainly would have been long ere this detected. But amid all their endeavors to destroy him, Dr. Thomson still lives; and notwithstanding all the false reports put in circulation, by invidious, designing men, Dr. Thomson's theory and practice of medicine continue to gain ground with accelerated rapidity.

We have remarked, that Dr. Thomson was intensely engaged in his favorite study; but he pursued his studies in a different manner from many others. Possessing a great degree of originality, a strong and vigorous intellect, and an uncommon share of intuition, without the discipline of an academical course of study, he was able to pursue to the greatest success, his favorite course of investigation. His mind was free and unshackled from all preconceived opinions; the past was hid from his view, by a want of an opportunity to form a familiar acquaintance with history; the present, as it respected politics and religion, was unnoticed, by an insatiable thirst to push his discoveries in the healing art; and hence all the native vigor of his mind was brought to bear upon one point, and that was, the nature and cause of disease. All besides this had nothing inviting to him; and this is the very man whom we should select to make discoveries in the healing art.

Fellow-citizens, Dr. Thomson has made discoveries in the healing art—great and important discoveries. He has conferred substantial benefit upon man, and man will always remember him. He has in simplicity and in honesty, and very frequently without any compensation, been doing his fellow creatures good. He has been successful in removing disease of the most obstinate kind, to the truth of which mul-

titudes can with the greatest cheerfulness bear witness; and most of those engaged in the Thomsonian practice of medicine, have been rescued from the very brink of the grave by its efficacy, and sent back into the world to promulgate its utility. Such is the fact respecting the writer of this discourse; and this success, fellow-citizens, with which the Thomsonian system has been crowned, has brought the unmingled wrath of the whole faculty, down upon Thomson and his mode of practice. *It is this*, which has alarmed them; and it is this which has made our public papers teem with so many false, insidious reports, respecting steam and the steam practice.

It may with truth be said, that Dr. Thomson has had every thing to encounter, since he commenced his medical career. The statement of a few facts will render the truth of the preceding sentence sufficiently evident. In the first place, he was not a man possessing refined education, which is necessary to make a man popular among the more influential part of community. It is a truth, that real merit is not the first qualification to give a man influence among mankind. Doctor Thomson was plain and undisguised in all his manners and movements. Had he assumed more of that pomp and tinsel which characterizes many popular impostors, he would undoubtedly have executed his work with much less difficulty. But he first commenced the practice of medicine in his own family and neighborhood, without making any high pretensions to superior knowledge.

But he found in very truth, that his practice was a great improvement, and he knew by experience that he could relieve the sufferings of his fellow beings; and he moves forward, to do what was in his power to do, as every philanthropist would. But his success in practice was met with the utmost exertion of the faculty for his destruction; and hence he had the whole weight of their influence to contend with. When we remember that Dr. Thomson, some thirty or forty years ago, was what is termed "an illiterate man," traversing the forests of New-England to ascertain the nature and efficacy of vegetables as medicine; when we remember all the persecution and opposition he has received from regular bred physicians and their numerous adherents—and when we remember also, that, notwithstaning all those formidable barriers which have been thrown in the way of his progress, not only by doctors, but by the prejudices of the people and the treachery of confidentials; he has within these United States more

than one million of people disposed to judge favorably of his manner of curing disease. With these facts in view, we shall be induced to believe, that either Dr. Thomson is a man of very uncommon talents, or that his system has uncommon merits.

A few remarks on Dr. Thomson's Theory of Disease, shall close this discourse. He contends that all diseases have one cause, and that cause is, *a want of a proper portion of warmth in the system, to produce an equal and healthful action in all its parts.* When we look abroad and behold that great variety of appearances which things at different times assume, and also that great number and variety of effects which are produced in the world around us, we are naturally disposed to believe that all these are not effected by one agent. Effects so dissimilar in their appearance, men have been induced to believe could not be produced by the same intelligent Being; and hence the number of Gods in one period of the world was multiplied to the enormous degree of 330,000. But Divine revelation and a more enlightened philosophy, unite in teaching us that there is but one great First Cause of all things. It is for the want of more accurate knowledge of the connections which exist in things, which has induced mankind to imagine that the number of causes is equal to the number of effects—whereas one cause may produce many effects, but so different in their appearance that it has been thought they could not all be produced by one cause. Could we see distinctly and follow understandingly, the chain which links together every thing respecting human nature, it would undoubtedly have a powerful tendency to simplify theory. It would, beyond all doubt, resolve many particular principles into general principles. The great Newton, by discovering the gravitation of matter, and by marking the spheres in which the planets revolve, exploded a countless multitude of theories and conjectures in natural philosophy, which had been the production of the studies of philosophers for centuries before. And the immortal Bacon, by his comparatively immeasurable sagacity, saw clearly the endless false distinctions in the sciences generally, made by Aristottle and others, and taught the world a more useful and practical mode of philosophizing.

The truth, fellow-citizens, concerning any subject, is important, and when known, it is simple and easy to be understood; but false theory, conjecture, and technical terms, having no place in the nature of things, are difficult to understand.

The creatures of the imagination, and not the creatures of God, appear dark and intricate; and when we imagine we see an hundred distinct objects, where we in reality see only one, exhibited in various points of light, with all its diversified appearances—if we should let such a view of things have a practical influence, we should undoubtedly be led into gross error. Accurate discrimination is of vital importance in discovering truth, especially in the science of medicine. But who does not know how endless are the theories of diseases, introduced into the world by the great leaders in physic? It is a plain fact, fellow-citizens, that opinions the most contradictory, concerning the causes and remedies of disease, are advocated by physicians, from the most learned and profound authors down to the humblest practitioners. Does this look, fellow-citizens, as though the healing art, according to the present established institutions, is based upon as rational and immovable a foundation, as that on which Newton has placed natural philosophy? Or, does it not appear that physicians have arrived at no general principles in physic, which are sufficiently clear to produce uniformity among themselves? They certainly have not. With all their high pretensions then, to knowledge, are they entitled to any other appellation than that of *Quacks?*

But shall we despair, fellow-citizens, of ever obtaining any general remedies of disease, or a knowledge of what constitutes motion and life in animal bodies, sufficient to direct us with more certainty in the application of medicine? We ought surely never despair of obtaining more accurate knowledge on both of these subjects. We may receive it as a self-evident truth, that the God of Nature has provided better means for curing disease than those used by regular physicians. If he has not, an imputation of malevolence might be brought to bear upon his character: and if he has provided better means to cure disease, why is not Dr. Thomson as likely to obtain a knowledge of them as any other man? He was born in a country which has produced as great men as the world ever knew, and he has pursued that manner of life which good reason, in our opinion, dictated, in order to render a man eligible to obtain such knowledge. He comes forth to the world laboring under every embarrassment, which every thing else but a good cause and a good conscience could create, affirming that he has made the desired discovery—and he demonstrates the truth of his affirmation by practice, the sure test of all theory.

Dr. Thomson's discoveries have a tendency to simplify the theory and practice of medicine—to have all the great discoveries in that branch of knowledge in which they were made. Discoveries in other sciences have taught the world that there is but one object, where mankind had before imagined there were thousands. Dr. Thomson, by discovering that all diseases have one cause, and that they differ in degree and location only, has, in our opinion, shown clearly that the endless distinctions and names given to diseases, are unlearned and unphilosophical. He has taught that there is but one object, where others had imagined there were multitudes. By seeing the connection in things, he learned that truth tended to simplify, but falsehood to complicate theory. It is, fellow-citizens, a well known fact, that all the discoveries in the arts have had a great influence to simplify, while some have come forward to the world laying claim to the high honor of discoveries, but possessing no merit, except what may be claimed by false speculation and technical terms.

Although Dr. Thomson has asserted, and pretty clearly proved, that all diseases arise in consequence of cold or a loss of heat in the system, still he does not say but that the heat may escape the body by various causes. But he contends, that no cause can produce disease until it has diminished the heat in the system. Dr. Thomson maintains, that heat is animal life, or the cause of it. Learned doctors are not agreed whether it is heat or cold, or either of them.

Dr. Thomson's views of diseases and practice of medicine is conformable to this sentiment, that one man has but one life, and that in disease there is a sympathy in every part of the system. Learned doctors views of diseases and practice of medicine, would seem to indicate that there were several lives in one man, each of which exists independent of the other, and that in disease there is no sympathy between the parts of the system.

Dr. Thomson administers medicine upon a regular system. Learned doctors have no system at all. Dr. Thomson's theory shows that the material world is kept in motion by one agent, and that there is a mighty connection between all the works of God. Learned doctors tell us nothing about the first moving cause.

LECTURE III.

IN my first Lecture, I endeavored to show the nature and tendency of a correct knowledge of the proper uses of things, which Providence has provided to advance our happiness; 2d, I mentioned some of the barriers to our obtaining that knowledge. In my second Lecture, I considered briefly, 1st, what it is to make a discovery in the latent things of nature: 2d, what qualifications a man ought to possess, in order to render him eligible to make a discovery; 3d, I noticed Dr. Thomson and some of the features of his medical discoveries. At the close of this last discourse I made a very general statement of Dr. Thomson's Theory of Disease, without producing any of the evidences of its truth, which did appear to him and to many others, to amount to demonstration. I then promised you, that in my next, those proofs should be produced. The business, therefore, of the present Lecture, shall be to advance those evidences.

I feel, fellow-citizens, while advocating the vegetable practice and Thomson's theory, that I am performing a work for which posterity will thank me, although I should receive nothing better than neglect and obloquy from the present age. Firmly believing as I do, in the unrivalled efficacy of the vegetable practice of medicine, and in the truth and great utility of Dr. Thomson's discovery, I cannot for a moment endure the thought that the great and inestimable good which would result to posterity from their prevalence, should be prevented, and they both sent into oblivion, by the fury and selfish zeal of the present established medical institutions. It has occurred to me, that man never acts more indicative of his rationality and benevolence, than when he acts for the good of those who will live after he is dead. I can truly say, that my anxiety to save an important discovery and salutary practice of medicine, from that destruction to which it appears obnoxious, from the persecutions of a privileged and legalized institution, has had no secondary influence in inducing me to engage in this cause, and endeavor to secure their prominent advantages to posterity.

When I turn a prospective eye forward, over the long continued succession of rising generations, the dim appearance,

of unborn nations passes in solemn review before me; and each, by every sympathy which binds man to man, implores us to be steadfast and immovable in this cause. It is the dolorous voice of suffering humanity, which we have heard arising from town and country, cottage and palace, that stimulates us to action; and though the cry is not directed to us, for it knows us not, still we hear it, as though directed to us, for we believe we have a knowledge of that for which it languishes, and we are determined, let whatever barrier superstition or selfishness may throw in our way, to promulgate that knowledge. For we have witnessed and we have felt the sufferings incident to our race, from sickness; and we have seen, and experienced too, how unavailing the efforts of the popular institutions are, in relieving those sufferings.

We have in a small degree made an estimate of the misery of this world, caused by perversion of our temporal blessings. We have seen the young and the aged, at equal distance from the grave, and the former hastening towards "that bourne from whence no traveller ever returns," with as rapid a flight as the latter. We have seen the promising and talented student arrested in his career, while attempting to climb the hill of science, and compelled to drag out a miserable existence under the influence of a chronic disease; and we have seen him, while stung with the keen remembrance of disappointment in pursuit, going from one physician to another, to obtain, if possible, a healing balm for his disease: but this balm he has not found. We have seen pious and zealous clergymen and studious and benevolent physicians, languish and die, when we thought, and indeed had good evidence to believe, that a different mode of treatment from what they received, might have saved them and the benefit of their labors to mankind. And we have seen too, the literati and philosopher diverted from accomplishing their godlike designs, leaving the world to mourn their premature departure. We have seen (we are sorry to be compelled to say it) the poor, and even the widow and fatherless, obliged to hand over, as it were, their last morsel to an opulent practitioner, for that from which they had received no benefit.

Now, we do not pretend, fellow-citizens, that we have found a remedy for all those evils. Amelioration is all that we expect by a medicinal reform. And again, we are induced to be engaged in this cause on another account. A great man, fellow-citizens, has arisen from among us, and has made a

great and important discovery in the science of medicine, and he has thus far received but little else than persecution, from the present age. A great man, and a great benefactor of his species, a man of whom the nation will hereafter boast, is a going to live and die amongst us, unnoticed and unhonored.

There is no mistake here, fellow-citizens, for no age will come, in which the name of Thomson, will be less conspicuous, than in the present. He has, as we remarked in our preceding Lecture, conferred substantial benefits upon man; and man will always remember him. Now, that such a man should be unappreciated by his cotemporaries, argues either a shameful want of discernment, or undue prejudice excited against him, by existing institutions; and, that the name of Thomson, should go down to posterity, with an attempt from the present age to extinguish from among men both his discovery, and the remembrance of his name, will appear a matter of no small importance to every one who regards the character of the present generation, and who appreciates the worth of his labors. For, if the future age should receive his character from the present, loaded with slander, it will, nevertheless, place a due estimate upon that practice of medicine which he originated amidst the persecution and calumny of the present generation; and they will do justice to his name, and to his medical discovery, and then how tremendous will be the reaction of an imputation of disgrace upon his persecutors!

It is not only to arouse the nation to a sense of the pre-eminent utility of the vegetable practice of medicine, for which we labor, but to save also, or prevent that disgrace, which must, if not by some means prevented, rest upon the medical establishment, in consequence of its treatment of Dr. Thomson. Justice, fellow-citizens, and a practical conviction of real worth, will not always slumber; and when human nature is once awakened to redress the wrongs of an individual, its movements are without measure, and without control.—Having completed my introductory remarks, I will proceed to the business of this Lecture.

According to a previous promise, fellow citizens, you have a right to expect a statement of Dr. Thomson's theory, and the evidences of its truth. Dr. Thompson's theory is this, that all diseases have one general cause, and that cause is a diminution or an unequal distribution of free caloric in the system. Let the remote causes of diseases be what they may, it is quite evident to me, and I hope I shall be able to make

it appear so to all, that the approximate cause is what Dr. Thomson has stated. The remote causes of diseases, are undoubtedly very numerous and various, but the remote cause never will produce disease until it has produced the approximate cause, or in other words, a cold will not produce a fever until it has produced an unequal distribution of free caloric. The same may be said with respect to other causes of disease, such as contagions of different kinds, and indigestible food remaining in the stomach, and so producing obstructions, and causing disease. Hurts and bruises and the like, cause disease also; but none of them will produce disease in the system generally, until they have effected an unequal distribution of free caloric. For so long as there is an equal distribution of free caloric in the system, there will be also an equal action in the circulatory system; and so long as there is an equal action in this system, the perspiration will be free; and when the circulation is equal, and the perspiration free, and the digestion good, the man must be in good health. And these vital and natural functions are performed by a proper portion and equal distribution of free caloric throughout the whole system. It is readily acknowledged by me, and I presume would be by Dr. Thompson, that the heat may be, and unquestionably is, diminished and disturbed by numerous and various causes. But the question is, whether these causes can produce obstructions and disease, until they have diminished and disturbed the free caloric, and whether an unequal distribution of this caloric can take place without its diminution. These are questions, undoubtedly, of much importance, and they require much patient thought to answer them correctly.

We think the former, however, much less difficult to answer than the latter, for it is an obvious fact, the truth of which may be clearly seen and demonstrated from daily experience, that caloric has as powerful a tendency to produce action in organic life, as on inanimate substances. For indeed, without caloric, there would be no other than inanimate substances. And so, on the contrary, where there is a due proportion of caloric, no mechanical power can prevent action.

It is by an effort to prevent action in the particles of water excited by a communication of caloric, that the steam engine receives all its power. The expansive nature of the fire communicated to the water confined in the boiler swells it, and the water being thus compelled to pass off by vapour or steam, is forced by the active and powerful influence of caloric, to

pass through a small tube with almost inconceivable power. But I need not spend much time to prove to you the active tendency of caloric on material matter. But the questions are, whether any cause can produce disease until it has disturbed the heat in the system, and whether the heat is ever disturbed without its diminution. But before these questions can be answered, we must consider the very important agency of caloric in producing and continuing organic life. It is my design, fellow-citizens, to show that free caloric, or heat, is the cause of life and motion in the animal, and in the vegetable kingdoms, or, in other words, that fire is the first moving cause throughout animated nature.

In the first place, fellow-citizens, cast your eyes upon the vegetable kingdom, and behold the earth, as it were, teeming with animation. View the landscape covered with vegetation, both to delight the imagination, and to supply man and beast with food. See the rivers and the rills flowing smoothly and gently, within their channels; and behold even the earth and the water begin to teem with animated being; and even the stubborn oak, which disdained to bend before the northern blast, obeys the call of nature, and dresses itself in green, to be an ornament to the forest. But what has effected this pleasing, this wonderful change in nature. Let a few short months pass away, and the earth exhibits a very different prospect. Now the earth is bound in icy fetters. The frost has withered the herbage of the field; the landscape recently so beautiful, is covered with snow, and the fowls of heaven have taken their flight to a warmer clime. What, it may be asked again, is the cause of this change. The sun, fellow-citizens, with his enlivening and warming rays has withdrawn, and the spirit of animation which it infused into the earth by its heat, has escaped, and left the earth to coldness, inactivity and death.

It needs no process of reasoning, fellow-citizens, to prove that heat is the cause of life in the vegetable kingdom. For, would the corn ever grow were it not for the heat of the sun? and would the leaves and flowers of the trees ever appear, were it not for the return of Spring? Surely they would not. You may put the seed into the ground, and you may water it, but in vain do you look for the tender shoot to appear without heat. Without this principle, the snow would be eternal, and the water would be forever retained in ice.

Let the heat be diminished, and inaction and death follow,

but let it be increased, and all nature will teem with life and beauty. I trust there is not one individual present, who is not convinced of the truth of the proposition which I am engaged to illustrate : I will not say to prove, for it needs not argument to arrive at its truth, but observation.

2d. We are told by philosophers and naturalists, that there is a connexion between the vegetable and animal kingdoms, and that from the most insensible plant, there is a gradual ascent up to rational man. That is, the most sensitive plant approximates so near to some of the lower species of animals, such as the polypus, that it is very difficult to describe any very general distinction between them. That the vegetable kingdom arises in activity and apparent life so as to form upon the animal kingdom, in one continued chain of being. That the link which connects the two, is no longer than that which joins different species of one genus. And what has been remarked with respect to vegetables and animals, has also been observed of animals and man.

That the most sagacious of beasts approach in rationality so near to the most wild and untutored of our species, that the distinction between them is not so conspicuous, as that between some men and some beasts. Now it would seem, if the connexion between vegetables and animals be what naturalists have told us, that analogy would require that they both should be kept in motion by one exciting cause. If there is a similarity in the circulating fluids, and if either of them would die when it stops, it is but reasonable to believe, that the same propelling power moves the one that does the other. And would the sap ever circulate through the pores of wood, were it not for the influence of heat? Surely it would not. And would the blood circulate through the arteries and veins of the human system, without the influence of the same element? I think the answer to this question is as obvious as that of the first. Vegetables obtain their support immediately from the earth ; man obtains his from vegetables. But vegetables would not grow from the earth, were it not for heat, and vegetables would not sustain animal life, were it not for heat. You may plant the seed in a fruitful spot of earth, and you may water it, but it will not grow without heat. And is it not so with animals? You may place them in a country where the air is healthy, and you may keep them on the most nutritious food, but without caloric they would languish and die. When the pores in wood are so destroyed as to prevent

the circulation of sap, it decays ; when the circulatory system of animals is destroyed, the heat escapes, and the animal dies. A suitable quantity of caloric to animate the whole system, is as necessary to the proper digestion of our food, as it is to enable the roots of vegetables to suck their nourishment from the ground. The means provided to sustain vegetable life would be unavailing without fire, and so would those provided to sustain animal life. We see, in the hot season of the year, the earth as it were converted into insects and plants, the former apparently without a parent, and the latter without a seed. I say apparently, for I do not pretend to affirm that such is the fact. My present object does not demand any discussion of that subject. Neither does it require me even to give my sentiments on that point. It is only necessary for me to remark that heat has a direct tendency to multiply them both in an astonishing degree. And its influence is as direct to increase the one as the other. We see, too, that the approach of winter is as fatal to the life of the one as the other. Hence we conclude, that heat is equally the life and motion in the one as in the other. These things, fellow-citizens, we have all learned from observation. But we shall dwell no longer on this part of the subject.

We shall, thirdly, show more directly, that free caloric is the first moving cause of organic life. It may be said with truth, that the Supreme Being is the great first cause of all action in the animate and inanimate world, but still he moves them both by means, and we know as little of the innate nature of many of the means, as of himself. Who can tell what sin is, only by its effects ? And who can tell what invisible beings are, only by their actions ? Our knowledge of the great causes of action in the natural and moral world, is obtained by marking their effects. We see a multitude of actions and changes produced in the vegetable and animal kingdoms, and we behold great and mighty changes in the earth, and skies, but the agent which produces all these, acts invisibly to us. We can witness the growth of trees and plants, and we can see men and beasts walk and exhibit clear proofs of their activity ; and we can behold the horizon begin to thicken, and the air begin to darken with the rising tempest : but the efficient cause of all these great works, acts behind the curtain. It is I think a very clear point, that material matter, in all the actions of which it can be the subject, is passive. By material matter, I mean earth, water, and all those substances

necessary to the support of animal and vegetable life. But those materials without that spirit of animation which caloric diffuses through nature, would remain forever inactive, inasmuch as the body without the spirit is dead, so is the earth without fire. And it is a question unsettled yet, whether caloric be a distinct substance of itself, or whether it be only an attribute of matter; whether it be a subtle fluid or gas, penetrating into, and descending from all bodies, or whether it be only an attribute of matter, and brought forth by friction. The great point with us, as physicians, is, to know what principles are active, and what passive, in animal motion. The nature of the active power, and the nature of that on which it is exerted. For there must be such an agent as active power, and this active power acts on material substances. It is necessary for the physician to have correct views of the active power, for in diseases the active power is weakened and diminished by inanimate matter, and it must be assisted to put matter in proper motion. This active power I shall call free caloric, and the substance on which it acts, animal bodies, or the human system.

Let us for a moment, take a cursory survey of the human system. We see it is composed of bones to sustain the weight of the body, and to defend the vital organs of life, and to give shape and strength to the whole system. The bones are tied together by muscles and ligaments, and clothed with flesh. Internally, there is the stomach to receive our food, and liver to secrete bile for its proper digestion; and the alimentary duct, with its numerous vessels to suck up the nutriment contained in our food, and to impart life and vigor to the whole system. And these are the two glands that separate the urine from the blood, and the urinary bladder in which it is deposited for emission. The lungs are two viscera, situated in the chest, by means of which we breathe, and it is supposed the blood receives oxigen from the air, while passing through those organs. The heart is a hollow, muscular viscus, situated near the pericardium, for the circulation of the blood. The heart is the great centre of the circulatory system. Through the medium of arteries and corresponding veins, the blood is conveyed to every part of the body. The nerves have their origin in the brain, and in the spinal marrow; all the parts of the human body are composed of a porous substance, through which a fluid, or animal juice, is constantly flowing. But all these organs may be properly arranged in

an animal without life. If we examine the bones, we can discover nothing in them but inanimate substance. They appear to be totally destitute of any active power inherent in themselves. And what has been said of the bones, may with equal truth be said of the muscles, ligaments and glands. All these seem in themselves to be deprived of that visincita, necessary to muscular motion in man. They have no motion only as they are acted upon. All the action of which they are the subjects, is caused by some other agent. If we investigate the alimentary canal, we can discover nothing in the absorbent vessels, why they should be active, why they should absorb the nutriment from what we receive into the stomach.

It is very evident, that something must put these in action, independent of themselves. Nor can we be persuaded to believe that the substance of the lungs contains any active power, which enables us to breathe: for, when the animal is dead, although the lungs should be sound, there is surely no respiration. When the spirit of animation has fled, all the vital actions at once cease. Why, it may be asked, does the blood circulate? In its motion does it obey the laws of gravitation? Surely not—neither is it excited to action by any chemical power; and still the blood flows through the arteries and veins of the system, with regularity and speed.

What, in animal bodies, is the cause of motion? On examining them we find they are composed of various mineral substances, gasses and water. But those substances have no life in themselves. The mineral or vegetable substance may and unquestionably does exist in animal bodies without life. It cannot be true that matter possesses the power of action within itself; or, in other words, matter is not self-excited to action. But in living animal bodies, there is action in material substance. What, it may be asked, produces this action? Does the water in the system produce it? Water, to be sure, produces action by its gravity; but no one will pretend that the animal functions are maintained by the gravitation of water—for water is as dependent on some agent or cause for its action, as any other substance.—It may be imagined, however, that, although earth and water should be found to possess no self-moving power, that animal gas does. But this gas, or air, is found in the dead as well as in the living body. It cannot, therefore, be the first cause of vital action in man.

Well, if matter contains no self-determining power, and if

he animal functions are not maintained by the gravity of water, nor the active tendency of gas, where shall we look next for the cause of action in organic life? Add *fire* to the system, and all will be well; add *fire* to the animal economy, and all its functions will be regularly discharged. Then the expanding lungs will immediately inhale the vital air, and the heart begin to beat;—then the crimson liquid will begin to flow through the arteries and veins of the system, and the water and the gas be excited to action, and begin to pass off by insensible perspiration. Now the nervous system is aroused into action, and the sensorial fluid equally distributed, to impart feeling to every part of the body. Let free caloric have an equal residence in every part of the human body, and the digestion will be good; then the absorbent system will be excited to a healthful action, and the vitiated fluid emitted from the body, and solids purified and rendered healthful. Then the pale, emaciated appearance of decline will be changed to beauty and strength; then the countenance will glow with the lustre of beauty and youth; then an irritable and petulent disposition will be guarded and supported by a well braced nervous system; then a weak and irresolute determination will be rendered irrevocable by a vigorous and elastic muscular action.

Add *fire* to the system, and this most wonderful and curious of all machines, (the human body) will be in complete operation. Let there be an equal distribution of free caloric in all its parts, and this harp of ten thousand strings will be in complete tune; but if you diminish the heat in any degree, there will be immediately heard discordant notes. Diminish it to a certain degree, and the harp is mute. Then the dilating lungs and the beating heart cease to act, and the crimson flood ceases to flow.

It appears quite evident to me, that were we to search the whole animal and vegetable economy, and with the most accurate discrimination, in quest of the first cause of action, if *heat* be absent we should search in vain. Why fire is active, I do not pretend to say. It is sufficient for my purpose to know that it is so. No one will, I presume, deny this. What fire is, separate from its effects, I do not pretend to explain; but such appears to be the present organization of things, that where earth, water and atmospherical air, accompanied with a due proportion of heat, are found, vegetables will grow—and where these grow, are found animals and men.

You will readily perceive, fellow-citizens, from the preceding remarks, that it is our belief, that *heat is the cause of life and motion in the human system.* To prove this, it seems only necessary to remark, that the dead body has every thing the living one has, except free caloric. In the dead body there is the animal and the vegetable substances, and there is the water and the air, but no active heat is to be discovered. Hence we conclude, that the substantial difference between a live animal and a dead one is, that the dead one has lost that temperature of *heat* necessary to keep up the vital functions of the animal economy, which the living one possesses.

Lest any one should say that we simplify in too great a degree, animal life, and the theory of disease, I remark, that the heat in the system is supplied through the medium of the lungs, and by the various and numerous action of the animal economy; and these actions, by which heat is maintained in the system, are performed by the influence of free caloric on the solids and fluids of the body.

Now, when the solids or vessels, and organs of the system become so far destroyed, as to be unable to retain the heat, no medicine on earth can save the life of the patient. Such is the case in pulmonary consumption, when one lobe of the lungs is gone, and in almost all cases of gangrene. Some times the whole system is so debilitated and apparently destroyed, as to render it extremely difficult to raise and continue that heat in the system, on which health is depending. A continuation of free caloric in the system depends in a great measure, on the state of the solids. The solids may be so injured as to cause the heat to go out, or escape, by numerous avenues: but they cannot be rendered healthy, except with such means as are directly designed to produce action on them. There are no means hitherto discovered, which appear to have this tendency, except those which tend to increase the heat in the system;—for heat is, in an astonishing degree, penetrating, and is as active and purifying as it is penetrating and powerful. Raise the heat in the system to a suitable temperature, and the solids will immediately be put in motion; then the wind which caused disease in the viscera, is expelled, and the water, which was before extinguishing the vital spark, is thrown off by perspiration. The viscid matter then, which had collected on the stomach and intestines, and contaminated the blood, and indeed all the fluids of the body, is compelled to pass off, by some of the natural evacuations of the

animal economy. Then that acrimonious acid, which accumulates in the system by a want of action, caused by a want of heat sufficient to move the obstructions, will either be neutralized or emitted from the system, and so be prevented from producing canker, indigestion, and the whole train of nervous affections, connected with dyspepsia.

But it is time to show, how disease is produced, by a diminution of free caloric in the system. In doing this, you will at once perceive from the preceding remarks, that it is not an opinion with us, that *fever* is a disease, but that it is a disturbed state of the heat, occasioned by the disease.

Let us, for the sake of illustrating this point, suppose a case, which perhaps we have all seen:—Let us suppose a case of fever, in a man of robust constitution—one who had arrived at thirty years of age, and had never been the subject of a fit of sickness during his life. Antecedent to his illness he had been perhaps exposed to the inclemency of the weather, and perhaps he had gone much longer than usual without nutriment, and his labor had been such as to compel him to exert too intensely the whole muscular system. This man comes into the house, where the air is in a considerabe degree rarified, and takes his seat by the fire, with his limbs chilled with cold and worn out with fatigue. But before the welcome influence of the fire restores comfort to the limbs and the exterior of the system, he is seized with ague fits, which appear to him and to his friends to be ominous of future disease. It is then the unanimous voice of all, that the man has taken cold, and unless it can be thrown off it will throw him into a fever. To do this, the anxious friends try, if possible, to produce perspiration; but they are unsuccessful in their efforts. The cold chills continue, until the external appearance shows clearly that the fatal malady has commenced its direful effects on the interior of the system:—For, now the skin is intensely hot and dry, the pores are closed, the tongue is immediately coated, and the mouth and throat are parched and cankered—the man is confined to his room, and laid prostrate upon a bed of languishing.

Approach and behold him, fellow-citizens, with solemnity, for it is the chamber of death! It is the last earthly emporium of an immortal spirit! See one taken from the concerns of life and activity, and thrown upon the bed of death, with a mortal disease collecting around his vitals! See how that, in exact proportion as the disease approaches to its fatal crisis,

the heat is extinguished, until the last vital spark goes out in death!

At the commencement of the disease, the doctor is called. He ascertains in the first place, the cause, and then the constitution of the patient, and after he has made the usual inquiry, he learns that he is a man of strong nature, and has never been much sick before. The physician then proceeds critically to examine his pulse, his tongue, and his skin. The first is very hard and frequent—the second appears dry and coated—and the third very hot. He immediately commences a course of treatment, with the following sentiments deeply rooted in his mind, full in view—1st. That he is a man of a strong constitution, and that such an one is more likely to sink under this disease than any other. 2d. It is the first attack the man ever had, and this is an inauspicious circumstance. 3d. The apparent increased heat in the system is the disease. 4th. In order to produce a cure the heat must be destroyed.

His treatment in this case, will be the practical part of the above theory; and hence, he will use the most powerful and refrigerant means in his knowledge. His aim is the destruction of the heat, which he believes to be the disease. He in the first place throws in the lancet and draws copiously from the crimson fountain, to reduce the arterial action; in the next place he uses a very poisonous mineral for an emetic, which, to be sure, may dislodge the contents of the stomach, but like other minerals, it has no direct tendency to stimulate any part of the system to action, only as it has a direct tendency to destroy animal life—and when they are taken into the stomach, they produce action only by arousing the energies of the system to resist their deleterious effects. In this way, it may be said, they stimulate the system; but they stimulate to destroy.

It has been frequently said, that every article which operates as an emetic or cathartic, contains some poison; but to this it may be replied, that there are medicines which will operate as emetics and cathartics, and if the same should be applied for an external application, it would prove itself to be, by its effects, in a high degree, cleansing and healing to the flesh. Would they produce those effects were they poison? They surely would not. But will antimony and mercury have similar effects, when applied in a similar manner? It is well known they will not; they can neither of them be used externally, without producing the greatest irritation. But I must proceed.

Now, all these violent means he uses in an increased degree, because the fever seems high and the man has a good constitution. He believes he must conquer the fever, or the fever will the patient. Hence he resorts again to his deptitive means, and by each repetition of them he diminishes the heat, and by each diminution of the heat, the patient is advanced, step by step, towards the grave.

Those means are continued, until the fatal end is accomplished. At last, the heat gives way, and great debility follows. A deathly chill begins to creep to the extremities. A cold, clammy sweat, appears on the forehead. The small remains of heat, like the blaze of an expiring lamp, gathers around the vitals, and then trembles only to go out. The free caloric continues to escape, and the cold approaches nearer and nearer the seat of life. Now the eyes are set, the surrounding parts being stiffened by the cold; the blood is clotted in the arteries and veins, and the man is no more. He is dead—he is cold.

The fever, to be sure, is destroyed, but the man and the fever (or heat) both go together;—for, when the heat is gone, the cause of action is gone, and the body is a lifeless lump of clay.

It may be useful, as well as interesting to us, to spend a few moments in examining the nature and the cause of the disease we have been contemplating, and also the propriety of its treatment. In the first place, let us notice its cause, and how it produced its effects on the system. We have already remarked, however, that it was cold that produced the fever in the case we have mentioned. But this disease is sometimes brought on by other causes, such as contagions, and indigestible food remaining in the stomach; or, indeed, whatever tends to diminish the heat of the body, will cause a fever, and other diseases of the same class; or when there are obstructions in the bowels, an equal distribution of free caloric cannot take place, because obstructions in any part of the system, immediately disturb the heat, and so produce disease in the system generally by sympathy. When by some cause or other, the gastric juice of the stomach is destroyed or contaminated, or when there are in the gall ducts some obstructions, or when the liver is diseased, and a want of a proper secretion of bile to promote digestion, the food will remain in the stomach, producing a diseased action of all the vessels through the whole length of the alimentary canal. Now, this state of the

vessels will tend to inactivity, or a diminution of internal free caloric, and so soon as this takes place, there will always be an accumulation of diseased fluid, and this will produce what are called billious, typhus and putrid fevers. But the case we mentioned, was caused by a sudden cold, or a sudden loss of heat. To be exposed to the inclemency of a stormy winter's day, and to go destitute of our regular meals, and over-act the system by hard labor, have a direct tendency to diminish the animal heat of the system.

The preceding causes no one will deny have frequently given rise to fevers and other acute diseases. But in what way, it may be asked, do those causes produce disease? Their natural tendency is surely to decrease the free caloric. If any one should contend that they do not have this influence, he would reason as absurdly as he who should endeavor to prove, that if the windows and doors of this room should be thrown open, and the stove filled with ice, the temperature would not be lowered. The vital actions of the animal body, to be sure, conspire to maintain a proper degree of heat above the surrounding atmosphere. And on this account an equilibrium of heat will take place much sooner in inanimate substances, than in the living animal body. For, heat is generated in the system by friction, by a discharge of the vital functions, and this tends to prevent an equilibrium. But those vital functions are dependent upon some other agent besides themselves, for their power to act. And when that stimulation necessary to their activity ceases to be given, they, of course, cease to act, and then an equilibrium immediately takes place, and the animal is left lifeless. This stimulation may be destroyed by over action or fasting, or we may remain exposed to a cold atmosphere till an equilibrium takes place, or indeed, in any way that proves an outlet to human life. Taking this view of the subject, we see that action produces heat, and then again heat produces action. Perhaps some here may be so curious as to enquire, which had an existence first, heat or action? This is, it may be thought by some, a difficult question to answer. In the vegetable kingdom, however, it is evident that heat has an existence first. For, should the warmth of summer never return, there surely never would be any action in the vegetable kingdom.

But man is thrown into a state of existence, with both heat and action. They both commence with his existence, and end only with his existence. It appears to me, however, to

be clear proof, that fire is the first moving cause in organic life, from the fact, that if we lower the temperature of heat in the system, we diminish the action; if we raise it, we increase the action. When there is no heat at all, there is no action at all. When there is an equal distribution of free caloric throughout the system, there is an equal, and of course, a healthy action throughout the system. But we must return to the subject under consideration.

The man, we have already remarked, had taken cold, had been chilled by the cold for considerable time. The temperature of the air with which he had been surrounded, would naturally produce an equilibrium in the extremities, and, indeed, on the whole surface of the body; for those parts would be more exposed to the cold, than any other. Now, the influence which the cold had in the above mentioned case was, to produce a stagnation of the circulatory fluids. The blood in the extremities, and on the exterior of the system, had become inactive, in consequence of the cold. We know that it as that influence. No one who understands the subject, or who understands himself, will deny this. Now, the man, with those effects produced on the system by the influence of cold, comes into the house, where the air is in a considerable degree warmed and rarified, and takes his seat by the fire. The heat in the room immediately excites action in the vessels of the extremities. The blood, which before was stagnated, is now directly put in motion, and the blood which had been chilled with cold, and weakened by hunger, and perhaps contaminated by disease, is thereby thrown from the exterior vessels upon the interior, so as to give rise to the ague fits. And this bolod, as it is thrown from the heart, causes the cold chills to be very general throughout the system. The ague fit sometimes continues two or three hours, and is generally succeeded by a high fever. Then the cold has gained the ascendancy, and heat is driven from the throne of life to the surface, and this diseased fluid when thrown from the exterior vessels to the interior, not only causes the heat to escape, but it also paralyzes the action of all the secretions and exertions of the system. Now the fever rages tremendously on the skin. The perspiration is checked. The gastric juice of the stomach being destroyed, the digestion is suspended. In short, this great loss of heat in the system, produces a torpor in the stomach, bowels and liver, and in all the pores of the body. Then that fluid which is secreted from the blood, and thrown

off by insensible perspiration, is retained in the system. The pores being closed, and the water retained, and the stomach and bowels being torpid, of course all the action is thrown upon the arterial system. Hence the larger vessels appear crowded and distended with blood, and hence the arterial action is greatly increased; the pulse is hard and frequent.

We have remarked that cold had produced inaction, or contracted the whole absorbent system. We all very well know that cold has this tendency on material substances. When iron is red hot, if it should be cooled suddenly, it produces a sensible contraction. It is so with other substances. It is the cold, and not the heat or fever, which produces the contraction in the absorbents, and so prevents perspiration; for, it is the very nature of fire to make water volatile, and when the water and cold prevail within, the fire will be driven to the surface. But when the fire is predominant, the water will flow from the system by perspiration. It is evident, however, when the action is thus thrown upon the arterial system, there is an increased heat created by an increased arterial action, and by frequent oxidations of the blood in the lungs. But this heat is an effort of nature to overcome the cold, rather than a disease; for, if there was no disposition in the animal economy to resist the effects of disease, in vain should we ever attempt the healing art.

But we need not despair on this ground, for nature has provided many outlets to disease, and uniformly makes efforts to free the system of it, and will always consent to be assisted in all cases. Now, when the excitement is thus produced in the arterial system, there immediately commences a conflict between nature and disease. Free caloric is created in the arterial system by action; canker and death in the stomach and bowels by the cold; and the physician will promote life or death in proportion as he assists one or the other. For, if he should assist the cold, or in other words, if his medicine should have a tendency to lower the temperature of heat, then the torpor will be increased, and the obstructions rendered more difficult to remove. Bearing in mind this great and important truth, that free caloric is the cause of action, surely when it is diminished, we shall see inaction to be the consequence. When the arterial action is greatly increased, we are not to imagine that all the functions are excited also. This evidently is not the case, for whenever there is an increased action in one part of the system, we may be assured

there is a diminished action in another. It were absurd to believe that the whole system is excited equally, and equally in so great a degree. But the whole system may be, and frequently is, diseased; but not by too much equal action, nor too much free caloric, equally distributed through the system; but by its diminution, a part being destitute, and a part having too much.

When animal and vegetable substances are not in action, they begin to decay. In all diseases there is a want of action, or there are obstructions in some part of the system. This want of action in by far the greater number of diseases, is in the stomach and bowels. Now, as soon as the heat escapes, and leaves the viscera to inactivity, a decay or canker immediately commences in those parts. And here you may see how directly a diminution of heat leads to death. Remove the free caloric, and you destroy the action. Let the action be suspended, and the canker or a decay will prevail; and as the fire continues to die away gradually, torpor will keep pace with it, and as these continue to gain ground, the canker thrusts its deadly claws deeper and deeper into the system, until gangrene steps in and ends the scene. Whereas, if you increase the heat, you will increase the action, and if you increase the action, you will stay the progress of the canker, and prevent mortification.

But it is evident in the case we have mentioned, that the physician is deceived by outward appearances. He sees the surface is hot, and he thinks, therefore, an accumulation of heat is the disease. And still, it seems not a little surprising that he should think so. He knew the cause had been a violent cold, and the patient he knew, too, had been seized with ague fits. How then can he believe the patient has too much heat? Because the skin is hot, and the pulse are hard and quick: surely he is led into the error by outward appearances. When the patient had the cold chills, all were ready to acknowledge that cold was the difficulty, and that stimulating means would be proper, but within one or two hours after, when the disease has taken possession of the seat of life, and driven the free caloric to the surface, then refrigerants must be given to destroy the heat. When nature less needs assistance, it will do to assist it; but when it needs it more, it must be destroyed. But how is it that the disease is so changed in so short a time? Now, the difficulty is cold; and something hot must be administered; one hour hence, the disease is heat,

and something cooling must be administered. How, I would ask, is the cold, or the effects produced by the cold, in so short a time wholly eradicated from the system, without perspiration or any other natural evacuation, and the system so highly surcharged with free caloric, if so be it is general? If it should be said it is created by friction, and by frequent oxidations of the blood; to this it is replied, if the increased arterial action and the little more frequent oxedations of the blood in so short a time, augment the free caloric to such an enormous degree; the natural action of the system, and the common oxidations of the blood, when a man is in good health, would increase it in a few days so as to consume the muscular flesh upon the bones. This, I think, will appear to all to be conclusive proof that the apparent increase of heat is not produced in this way. We cannot perceive, for ourselves, how the diminution of heat in the system, has any tendency to increase it.

It may be expected that I should just sketch the treatment that I should pursue in the case I have mentioned. The theory I have held up to view, will suggest to many what treatment I should pursue. I should, however, in the first place, raise the internal heat with pure vegetable stimulus, until the determining power were excited to the surface, so as to produce perspiration. Then I would give medicine to remove the obstructions in the stomach and bowels, and the pores of the skin. And then I would give medicine to remove the canker from the system, and restore a good digestion, and this is all that is necessary to be done.

It would be a pleasing task to proceed and show how other diseases are produced by a diminution of free caloric, but our present limits will not admit of it. A few general remarks shall close the subject. It is said that fever is an attendant on all other diseases. This is, beyond all doubt, the fact. Now, if fever be a distinct disease of itself, it seems somewhat singular that this disease should always attend all other diseases. If fever be a distinct complaint, then a person never has one disease at a time, but must always have two, for the disease called fever, uniformly accompanies all other diseases. But this, fellow-citizens, cannot be the truth. The fever is not a disease, but the effects of the disease, or a disturbed state of the heat. And what a striking proof of the truth of this proposition, is this, that in all diseases there is some fever, or in all diseases there is a diminution of the heat.

Such, fellow-citizens, is a brief outline of Dr. Thomson's theory of disease. It shows that vegetables, and animals, and men, live by the influence of one agent. It has, you will see, a powerful tendency to simplify the theory of disease. Where physicians and philosophers before supposed, and endeavored to show, that there were multitudes of causes producing disease, Thomson has shown, and pretty clearly demonstrated, that there is but one approximate cause of all disorders; and that is, as I have already remarked, a diminution of free caloric in the system. It must, I think, occur to you, fellow-citizens, that if this theory be correct, and its practice nature's assistant, that of the popular and legalised institutions, must be in a high degree erroneous, and its practice deleterious.

If we are diametrically opposite to one another, concerning the same proposition, we cannot surely both be right. Such is the fact, however, respecting the sentiments of mineral and vegetable physicians, in regard to the causes of disease. If a disagreement be attended with no injurious practical results, it is of but little importance whether we *think* exactly alike or not; but in this case it is not so. Here, any radical disagreement is to be regarded in a momentous point of light: it is fraught with all the importance of human suffering and human life.

If free caloric actually be the cause of life and vigor in animal bodies, then, surely, the physician who, by his practice, endeavors to destroy it—however good his intentions—may be, in reality, destroying human life. If heat, according to Hyppocrates, be nature, it is nature in sickness as well as in health, and the doctor who endeavors to destroy it, destroys the nature of the patient.

It requires an acquaintance with the works of medical men to form an accurate opinion of Dr. Thomson's discoveries. We must acquaint ourselves with the endless jargon of the common practice, before we can fully appreciate his discoveries: we must grope in its darkness for a-while, and try by its dim twilight to penetrate and explore the dark caverns of the animal economy, before we can appreciate the transcendent light which Dr. Thomson's discovery is destined to shed upon the philosophical world. We must contemplate every complaint to which doctors have given different names, to be different diseases, and produced by different causes, and possessing distinct natures; and that a knowledge of those invisible

agents is placed beyond our investigation, only that they are distinct in their nature, because their effects on the system are different. Now, we must imagine that all those agents are so many different enemies to human life, and the destruction of each requires different means, because their nature is different, judging, however, only from their effects; whereas one cause may and does produce many effects, different in their appearance and nature.

You must perceive, fellow-citizens, that this theory would introduce a very doubtful and dangerous practice of medicine —for, it would be impossible for any man to discriminate so nicely as not to be frequently deceived, and any mistake here would be fatal in its consequences. These inexplicable agents, producing disease, must all of them be conquered by different weapons—some of them must be starved, others fed to death; some must be drowned, while others must die with thirst; some must be burned, others frozen; some must be thrown off by emetics, others by cathartics, and some few may be *sweat* to death. Some of those enemies to human life may be slain by arsenic, others by mercury; some may be hurled from the system by the stimulating effects of cantharides— others must be precipitated from it by blood-letting. Now, you must all perceive, that this is a dangerous way to practice medicine; for, if the doctor should undertake to starve one that ought to be fed, or should he undertake to draw one out by blood-letting, which ought to be poisoned, the life of the patient would undoubtedly be in danger.

When, I say, we are made acquainted with all the darkness, difficulty and danger of the popular practice of medicine, we certainly shall, when we understand them both, hail with joy the superior light of Dr. Thomson's discovery!

He has taught us, that a diminution of free caloric produces all those difficulties. Fire is the life of the animal and vegetable economy. It causes every spear of grass, every ear of corn, all the herbage of the field, every leaf upon the trees, and all the fruit of autumn, to grow—and it is no less the cause of life and animation in the animal kingdom. By its influence the reptile creeps upon the earth, and the insect flies in the air: in a word, it supplies life and vigor to all rational and irrational beings, and is emphatically the cause of life and action throughout the material world:—And this element is at the disposal of the Deity.

LECTURE IV.

HAVING in a preceding Lecture called your attention to the outlines of our Theory of Disease, (not altogether in vain, I have the vanity to believe,) it was judged it might be useful to you, by your humble servant, the speaker, and by his and your friends, that you, fellow-citizens, this evening be addressed upon the following subjects:—

1st. On the nature and tendency of what physicians term stimulants.

2d. On the nature and tendency of blood-letting.

3d. On the nature and tendency of steaming, as a medicine in disease.

1st. On the nature and tendency of what physicians term stimulants. These are medicines so termed, which possess a power of exciting the animal energy. The above is the explanation given by learned doctors of the word stimulant. You will perceive, fellow-citizens, according to this definition, that every thing is a stimulant which produces action, whether it be in the mind or body. Hence, a very ingenious writer speaks of sentiments and objects as stimulating the minds and the sensorial power. It may be said that a sublime prospect stimulates the imagination, and indeed the whole intellect to lively action. All the inducements to virtue and morality, such as the unlimited goodness of the Creator, act as stimulations on the mind. But none, perhaps, acts so powerfully as opposition: when we are opposed in our favotite notions, or when indeed we meet with barriers in the way to the enjoyment of our liberties, then the mind is stimulated to the extent of its power. But it is not so important for us, at this time, to notice the mental, as the bodily stimuli.

We are told by Dr. Hooper, that stimulants are medicines which possess power to excite the animal energy. His meaning is, I think, only this—They produce action in the animal system. What he or other physicians mean by "animal energy," more than muscular and nervous action, neither he nor they have seen proper to inform us. We know the word *energy*, means power or force, and stimulants arouse that power or energy to action. But what notions can we form of

power in an animal body without any action? It appears to me, it would be quite contrary to truth were we to say, that an animal possesses power, when at the same time it was destitute of action; and it seems to me, also equally destitute of truth, should we affirm that medicines could excite the animal energy, without exciting the system to action:—for, how can we obtain knowledge of powerfulness or activity of things, unless they are in action or producing action? In no way, surely. It appears to me clearly, that we can get no correct ideas of power, force, energy, (words nearly of the same meaning,) without action;—and it is very necessary that a distinction should be made between that which produces the action, and the action itself. In medical writings, when the terms power, energy, &c. are used, it should be distinctly known whether we refer to the action, or the cause of action —whether the agent producing action, or the action produced, is meant:—for, when it is said that the animal energy is excited, we must remember that an effect is produced upon the active power of the system, for the energy and the active power, I think, are the same agent; or, what Dr. Hooper calls animal energy, I shall term active power.

Our ignorance of the first causes of action in the animal economy, has induced us to name the action and the efficient cause of action, both one. Thus we apply the terms *hot* and *cold*, to the substances themselves, calling those bodies hot which produce in us the sensation of heat, and those cold which communicate the contrary sensation. This ambiguity, though of little consequence in the common affairs of life, has unavoidably led to confusion and perplexity in philosophical discussion. It was to prevent this, that the framers of the new nomenclature adopted the word "caloric," which denotes that which produces the sensation of heat.

To prevent a worse perplexity, and at the same time productive of more good, I shall adopt the term *free caloric*, as the cause of animal action, instead of "active power," "animal energy," and the like.

You will remember I attempted to prove in the last Lecture, that free caloric is the cause of life and energy in the vegetable and animal kingdoms; and this free caloric, or animal heat, instead of animal energy, is what is excited by stimulants. The energy or power of the animal system must be predicated upon the existence of free caloric in the system. Power, and other words of a similar meaning, are relative

terms. If a thing is powerful, something must render it so; and if an animal is active, it is by the agency of something that possesses active power within itself:—And there is nothing hitherto discovered, which appears to possess that, but free caloric. This is surely true with respect to animal and vegetable life: and the power and energy of the system will be in proportion to the increase or diminution of the free caloric in the whole system.

If the preceding remarks be true, we see that accurate discrimination, however unimportant on other subjects, is, on this, of vital consequence. We should surely, in order to think correctly, make a distinction between the animal energy and that which causes the energy. When a learned doctor says, that "stimulants excite the animal energy," and if we remove the ambiguity of his words, he in reality says only this, "stimulants excite the animal action of the actions"—because energy or power, as we have remarked, are relative terms. Fire, to be sure, has energy and power—or, in other words, fire is powerful and active. But still we are to make a distinction between the action, and the agent which produces the action. A man may write, but his writings are not the man himself—they are only the actions of the man. It is exactly so with fire: it possesses energy or power, but neither of these are fire—they are only the effects or properties of fire. So the animal energy must have a cause, and let that cause be what it may, the animal energy cannot be excited without affecting the cause of the animal energy or action. Hence, it is evident, that it would be much more proper to say that "stimulants excite the cause of energy," than "the energy of the animal."

It is well known by all men of reading, that mankind have, from the earliest ages of the world, whenever they have been ignorant of remote causes of phenomena, they have termed the cause and effect one. We see it is so in the subject under consideration. Who does not know, that if Dr. Hooper had known that free caloric is the cause of action in animal bodies, instead of saying that "stimulants excite the animal energy," he would have said "they affect the free caloric, and in that way produce energy in the system"? His very expressions induce us to believe he knew nothing of the cause of animal life, for he uses a word which indicates an effect rather than a cause—for energy, as I have remarked, is a relative term, and in my view of the subject, it would be very impro-

per to say that the actions of the agent are excited to action. Now, it appears to me, and I think it will to every impartial observer, that it is very necessary for the physician to have an accurate perception of the first causes of animal life and action. It will not do, and he must be deemed a quack, if he does content himself by saying it is "animal energy," and the like. I do insist upon it, that a man is not qualified to practice medicine, until he shall have acquired a thorough knowledge of the great principle of organic life. For a man to go into the practice of medicine, without one correct view of the first and great cause of animal life, and so ignorant of physiology as to be unable to define the substantial difference between a live animal and a dead one, is truly lamentable. Such a state of medical knowledge surely does not correspond to the progress our fellow-citizens have made in the other arts.

But, as lamentable as it may appear, such is the condition of medical knowledge in the legalised institutions throughout christendom. Think not, fellow-citizens, that I am not in earnest, for I speak the sentiments of my heart. There is not, I will not say a remaining doubt, for I have never had any since I formed an acquaintance with Dr. Thomson's theory and practice of medicine, but that the people throughout christendom, within a few years, will be convinced of the truth of the sentiments I have expressed. But, to return to our subject: if we possess no certain knowledge of the cause of action in the human system, we shall have no sure guide to direct us in the administration of any medicine, in any disease. If a physician should be directed to excite the animal energy by one of his authors, how could he accomplish that without endangering the life of the patient, while destitute of any correct view of the nature of the animal energy. For what he would term animal energy, might be excited by destroying, as well as by assisting it.

In the remaining part of my remarks upon the nature of stimulants, I shall proceed upon the theory which I advocated in my other Lecture, viz: that free caloric is the cause of life and motion in the animal kingdom. According to our views of this subject, any thing which tends to maintain a proper portion of free caloric in the system, is a stimulant. Our daily food operates, undoubtedly, as a stimulant. When taken into the stomach, it may be considered as the fuel to keep up that heat in the system necessary to life. For, without it, the fire would go out, and the animal would die. Some kinds of

food in particular diseases, if properly taken, will effect a cure. The heat which it affords to the system, will remove the obstructions. But when that is not sufficiently stimulating to remove them, more powerful means, but of the same nature, should be resorted to. Medicine should affect the system in the same manner as our food does, only more powerfully. And we never ought to take any kind of medicine, or in other words, we never ought to take any thing for medicine, the effects of which on the system would not be congenial to our living on the most nutritious food. In removing disease, medicine may, with sufficient accuracy, be compared to the lever which we use in raising the edifice, but food must be the blocking. There are, it must be acknowledged, a great variety of stimuli in the vegetable kingdom. All these stimulate the system by increasing the free caloric, and those are what I term direct stimulants. They possess a power of exciting not the animal energy, but the fire in the system; not by waging war with it, or by diminishing it, but by increasing it.

I am not willing to acknowledge any thing as a stimulant, but what has a direct tendency to increase the free caloric. Such medicines may with propriety be termed stimulants. What the innate nature of these kinds of articles are, we do not undertake to describe, but it is such, we know, as to increase the heat of the system. And this is a part of that great system of nature, so well adapted to advance human happiness. We know by experience that by far the greater number of vegetables found in our country are stimulants. Why may we not regard this as an evidence in favor of Dr. Thomson's theory.

If heat be life, have we not reason to believe that nature would provide many articles to sustain it? I would remark, here, lest I should forget it, that our system of practice does not embrace ardent spirits as a stimulant. That is, we do not use it for a stimulant. Neither do we make use of it, except in one or two preparations. It may, to be sure, raise the heat of the body when first taken into the stomach, but its influence is ultimately to diminish it. And here, fellow-citizens, permit me to remark, that of all the plans hitherto conceived by philanthropists, to stop the growing and threatening evil of intoxication, the vegetable practice of medicine will bear away the palm. I will give you my reasons for believing the above remark. Men who are accustomed to hard labor, and exposed to over action, or sudden heats and colds, will, of

course at times feel the need of something stimulating. They have lost heat, and inaction and dulness will prevail throughout the system—over the mind as well as over the body. Under these circumstances the perspiration is checked, and great soreness in the bones and flesh, attended with uncommon thirst, and a total loss of appetite. The effects are the same in the decline of life, when the system is greatly debilitated with age, and many years of hard labor. Now, the system in both of the above cases loses that heat necessary to both mental and bodily activity. We have remarked in such cases, that something stimulating is needed, and according to the present views of such men, spirituous liquors is the remedy. They have used that before, and it answered the purpose, and therefore it is resorted to again. It does, as we have already said, raise the heat of the system when first received into the stomach, and consequently the mental and bodily dulness subsides. The soreness in the bones and flesh is destroyed. The perspiration is free, and sometimes the appetite is restored and the thirst allayed. But those good effects continue only for a short time, for while it stimulates the system by the heat it contains, it destroys it by its narcotic quality. Could the heat it contains be separated from the narcotic poison, it would surely become a useful medicine. But this has not to my knowledge hitherto been accomplished. Whether it ever can be or not, I am not at present prepared to say. I should hope, however, that it might be achieved. To have ardent spirits so cleansed and purified from all poison, of every description, so that it would be as harmless, and at the same time as salutary and powerful on the system as capsicum, is what I should greatly rejoice to see. To rectify spirituous liquors, so as to prevent it from producing intoxication, would be a curiosity indeed. But I must leave this subject, and return to the one under consideration.

It is, then, the heat, which spirituous liquor possesses, that renders it in any degree salutary and desirable. Take from its stimulating quality, and no one would think of using it in the manner they now do. Now, if something could be introduced into common use, in the room of ardent spirits, containing as much or more heat than that does, without producing any narcotic effects, it would, I have the fullest confidence to believe, be attended with the very best of consequences. To say it would eradicate drunkenness from the earth, is more than I am willing to affirm. But that it would have a more

powerful influence to do it than any thing else hitherto discovered, I feel safe in affirming. For if the system could be stimulated by other means, the same end would be accomplished without intoxication. I do not say that this or any thing else would reclaim the confirmed drunkard. But I believe it would have a powerful tendency to prevent drunkenness. This subject, fellow-citizens, is worthy of your notice. It is worthy, too, of the notice of those well-meaning people, who are extending the knowledge of and circulating the medicine to prevent drunkenness, contrived by Chambers. However useful his medicine may be in reclaiming confirmed drunkards, I shall not attempt to say, although I never knew any good effect attending its administration in such cases; but it is quite certain that his medicine must fail in the most important point. For it has no tendency to prevent those from becoming drunkards who are not so at the present. It has no influence to supply that stimulus to the system which is necessary, and all the way it prevents intoxication, is, it prevents a fondness for it. It creates a disrelish, or loathing, in the individual against it. Therefore it can have no influence to save those from becoming drunkards, who have not at present an uncommon fondness for it, and who are not at the present drunkards. But the great point to be gained, is, to rescue the rising generation from this growing evil. It is much easier to prevent this case than to cure it. We may work to much greater advantage in saving a nation from destruction, by preventing the evil which threatens to destroy it, than by rescuing it from its influence when it has once overtaken it. Now, the vegetable practice of medicine, as taught by Dr. Thomson, would have a powerful influence to prevent this evil, by supplying that stimuli at all times with pure vegetable stimulants. When men are getting up from a fit of sickness, when they have been exposed to cold, or any thing which debilitates the system, there is nothing more common than to resort to ardent spirits. In this way I have no doubt hundreds and thousands have become drunkards. But we use no such stimulants. We supply the system with heat by other means. The prevalence of our system of practice would teach every man, to use in all cases, stimulants which would not produce intoxication. But I have pursued this subject much longer than I intended. We will therefore return to that under consideration.

Physicians have applied the term stimulant, to all those ar-

ticles which produce action in the animal system. This I think is surely, if not unphilosophical in theory, dangerous in its practical results. There are two ways by which the system may be excited to action. One is by directly increasing the free caloric. This is accomplished with pure vegetable stimulus. The other is, by administering such articles as have a direct tendency to destroy the free caloric, so that when they are received into the stomach and come in contact with the heat, they produce action, by arousing all the energy of the fire to resist their deleterious effects. The articles which produce these effects are mercury and antimony, or indeed the whole catalogue of mineral poisons. The former are our ideas of stimulus—the latter those of mineral physicians. We stimulate the system only by augmenting the sum of fire it contains. They stimulate it, not by increasing the fire, but by arousing it into action to conquer an enemy. And to gain a victory over a powerful foe it generally requires the loss of blood. We stimulate nature by assisting it. They try to assist nature by destroying it. Free caloric is the cause of life and motion, throughout animated nature—is the great governing principle in our system. This enables us to proceed with safety and accuracy in the administration of medicine. It is evident both from their theory and practice, that the present tribe of legalized doctors possess no knowledge on this point. This is clearly the case from their views of stimulants. For stimulating the system is only producing action in the system. And no healthy action can be produced in the system but by increasing the cause of action. But the cause of action is free caloric, therefore no healthy action can be produced but by increasing the free caloric. Because if the system is excited to action by any other means but such as have a direct influence to increase the free caloric, it must be by what I have termed indirect stimuli. And if so, it produces action not by increasing the cause of action, but by destroying it. In order to stimulate the system directly, medicine must be given, the effects of which will correspond to the first cause of action in the animal system. That is, it must agree with it and tend to augment it. But the first cause of action in the animal system is *fire*. Any medicine, therefore, which has no tendency to increase the fire, is not in reality a stimulant, or it is not a direct stimulant. Now, I would ask, to what else does the whole refrigerant course of treatment amount, but to what I have termed indirect stimulants. What influence has mercury,

and a host of other cold, mineral poisons, to increase the free caloric, which has been clearly proved to be the cause of animal life? When these are taken into the stomach, being cold dead minerals, their first and natural tendency is to paralyze the action of the absorbent system. But to prevent this, the free caloric in the system is immediately aroused to action, and if there be a sufficient quantity of it in the system, and the constitution of the patient good, they will be prevented from destroying immediately the life of the patient. But they generally lay the foundation for a chronic disease. It is no difficult matter to see how such means exhaust the strength of the patient. For although heat may be created in the conflict between poison and life by the increased action, but still that increased heat is more than overbalanced by an increased disease produced by the poison.

It is a clear case that those means are active only, as they are acted upon by the heat of the system. They of themselves tend to death, and would and do produce it, when not expelled from the system by the active influence of free caloric. It is this which conveys them, or especially mercury, to every part of the body. They are not thus conveyed by their own activity, for they are not active on the system only by destroying it. And when mercury produces an increased secretion of saliva, or what is more commonly termed salivation, it is expelled from the interior to the glandular system, in an effort of nature to free the system of its deadly effects. But, it being a very cold, heavy mineral, it is lodged in the glands; nature is not sufficiently powerful to throw it off, and it remains there for years, or at least its effects do, producing scrofula, and innumerable other difficulties. It is said by calomel doctors in certain diseases, if salivation cannot be effected, the patient must die. This generally is the case, though not always. I regard this mercurial process altogether in the light of an experiment. The truth is this—if the patient be not so far gone, and the free caloric so far exhausted as to prevent action when it is taken into the stomach, the patient had before taking it, life enough to get well, and so salivation will take place. But if the heat be so diminished when the mercury is taken, as to prevent any conflict between the poison and the fire, between the deleterious effects of calomel and nature, the patient of course will immediately sink—when, perhaps, without it he would get up. It has no tendency to cure the patient. But we learn whether he can live or not.

And if he have free caloric sufficient in the system, to overcome the cold, it would do it much sooner, and the patient would be much better when done without, than with the direful effects of mercury. This is surely a dangerous way of learning whether a sick man can get well or not. What has been said of mercury will apply to the whole refrigerant course of treatment. Such, fellow-citizens, is the nature and tendency of what learned doctors term stimulants. I am well aware, fellow-citizens, that I have not done justice to this subject. At present, neither my time or circumstances will admit of it; should my life and health be spared, I may at some future period resume this subject again, as I intend to all the other medical subjects upon which I have written. But it is time to notice my second proposition, which is the nature and tendency of blood-letting.

There is a right way to do every thing respecting human happiness and human life. When they are brought about in that way, the desired end will always be accomplished. But how are we to be directed in obtaining a knowledge of that way? The answer is at hand. By examining with critical attention the way that nature directs. It is by tracing the channels in which the great architect of nature designed things to flow, that we are to get the most important instruction respecting the proper uses of things, and the way to produce effects connected with which is human happiness. In doing this it requires an accurate discrimination between art and nature, between truth and what appears to be truth—the work of man and the work of God. Our eyes are frequently dazzled with the work of art, so that those channels which nature has provided, and through which good is continually flowing to the human race, are not discovered. This is especially so in regard to the science of medicine. Theories of disease are built in art and not in nature, and then a course of treatment is fabricated in art and not in nature to remove it. To affirm that there is nothing in the appearance or nature of things indicating to us their use, would be to affirm that the earth was made without design, and that its Creator has no wisdom. We know and can clearly see great designs in many things, such as the uses of our hands, and feet, and the like.

Now, since this design is so apparent in the more important things, why may we not expect it in all others? No one is qualified to answer in the negative, until he has penetrated the dark cloud of conjecture, and examined, one by one, the

whole arcanum of nature. It is of great importance, in regard to our food and medicine, that we pursue the way that nature points out.

We will now be a little more particular in our remarks. When disease is introduced into the human system, it must, by some means and by some avenues or other, be thrown off, to save the life of the patient and restore health to man. In disease it is a clear point, that there is something which must be eradicated from the system: but how is this to be effected? What way does nature point out? The natural evacuations of the animal economy, surely; by emetics, cathartics, diuretics and diaphoretics—or, in other words, by purging, vomiting and sweating. These are, undoubtedly, the natural outlets to disease. But where has nature made any provision for blood-letting? You will say, perhaps, in the veins of the arm, and in other parts of the system. Nature has given men necks too, and sharpened steel will sever them from the body; but no one will imagine that nature has given men necks to show us that our heads should be cut off. Not only so, the arteries and veins of the body have another and important use, besides being placed there for us to *cut;* but the pores and other evacuations have no other use, but to throw off disease, and what would create it, if not emitted from the system. Hence we conclude, that blood-letting is contrary to nature, and must of course, be injurious. Its nature is to destroy life. When a patient has taken violent cold, and the pulse is hard and quick, attended with a great suspension of action in the stomach and bowels, a hot surface and perhaps local inflamation—under such circumstances, physicians, in the present day, imagine blood-letting necessary.

It is true, in such cases the arterial action is greatly excited, and the larger veins and arteries appear distended. But what is the cause of this? Is it because the patient has too much blood? or, is it because there is not an equal circulation, and because the perspiration is checked, and the action thereby thrown upon the arterial system, and the water retained which should be emitted? When a man is in good health, it is well known by critical observers, that water is continually thrown off by insensible perspiration; but when the system is diseased, those particles are retained, and conspire with other causes to produce distension in the vessels and hardness of pulse—which induces the physician to believe that the patient has too much blood; whereas he has not too much blood, but too

much water and diseased fluid, which ought to pass off by some of the natural evacuations.

Now, in the above case, nature must be assisted. But how? By taking blood? Yes, say learned doctors. But what tendency has that to remove the cold? None, surely. It certainly can have no influence to remove the cause of disease; besides, it has a direct tendency to weaken the patient, because the best blood is taken. This, perhaps, may be, by some, disputed—but a little reflection will teach us that is the fact: for, nature in the animal economy, has made provision to resist the effects of disease, and efforts are always made to clear the system of disease. Those particles which produce distension in the arteries and disease in the system, nature or free caloric uniformly makes efforts to throw off. When an incision is made into an artery or vein, those particles are on their way to the skin; hence the good blood is drawn from the body, and those particles are excited back again, and thus perspiration is checked and the disease increased by this retrograde action. This course of treatment is evidently contrary to nature. In such cases those means should be used which would excite an equal and healthful action, in every part of the system. Then the disease would pass off by the natural evacuations. But that bleeding might be of some use in falls and the like, I shall not attempt to deny, although I think other means might be used in by far the greater number of such cases, to more advantage.

I have only time now, fellow-citizens, to give you a few hints on this important subject—for, should I think to satisfy my own mind on this point, the present limits I have set to my remarks would be too much extended.

My 3d proposition remains to be noticed—which is, *the nature and tendency of steaming, as a medicine in disease.* This application has given character more than any other, to the Thomsonian practice of medicine. Although it is quite a subordinate part of his practice, still the community have been so misinformed as to be induced to believe it is all the means he uses. It is true, steaming is the only remedy mentioned in his book, which imprudence can wield to the injury of the patient; but it is nevertheless useful, as doctors of all descriptions have long since acknowledged. The tendency it has in removing disease, has been perhaps already suggested to you in the preceding Lectures. You need not be informed again, that it is our sentiment that heat is the cause of animal life

and its diminution the cause of all diseases. This point I undertook to prove to you, in my last Lecture. Any means, therefore, which will increase the free caloric, without injuring the constitution, must, according to our theory, be salutary.

But, it has often been remarked, that sweating by steaming, is very dangerous and injurious to the constitution. That a man can be killed with steam, no one denies. Concerning its tendency to injure the constitution, we shall make some remarks. What bad effects can sweating, by a proper application of steam, together with pure vegetable stimulants, taken into the stomach, produce, that sweating by exercise will not produce? for, surely, it is not believed that sweating in a warm day, when a man is at work, injures his constitution. In the first place, the perspiration is excited by taking stimulants to raise the internal heat, and then by applying the steam-bath to rarify the surrounding atmosphere—and this treatment is pursued until the water becomes volatile. In the second place, the perspiration is produced by exercise, the heat is increased by friction and frequent oxidations of the blood in the lungs. In one case, the free caloric is increased without exercise; in the other, with it. In one case, the sweating is effected without muscular action; in the other, it is produced by it. Hence we conclude, that perspiration produced by labor, would be more likely to injure the constitution.

For the sake of illustrating the effects of steam, as a medicine in disease, we will take for example an inflamation of the brain. We will proceed and show the cause and nature of that disease, and what tendency steaming has, with other things, to remove it. Inflamation of the brain is characterized by strong fever, hard and frequent pulse, vomiting, griping pains of the bowels, a sudden check of perspiration, and indeed a want of action in all the secretory and excretory vessels of the system. But this inactivity exists more in the stomach and bowels and extremities of the system—in consequence of which, the blood and heat is in a very powerful degree impelled to the head. Now, that free caloric which produced an equal action before in the whole body, is propelled to the arteries, and especially the vessels of the head. This change is brought about by cold, producing a spasm or contraction in the absorbent vessels. Now, we must remember that the increased heat, and of course action in the head, is not the disease, but the effects of the disease. The cause is not in the head, but in the stomach and bowels—and it is nothing un-

common when phrenitis terminates fatally, to see first appearances of gangrene in the region of the stomach and bowels. In this disease our legalized doctors bleed most copiously, to reduce the action and to allay the heat. Permit me, fellow-citizens, to make one remark here with respect to such treatment, in this and in all similar cases. It is the object of the doctor, to be sure, to produce an equilibrium in the circulation, but he endeavors to do it by reducing the action in the part where the sympathetic disease is located, down to an equilibrium with the action in the part where the primary disease is seated. But there is but little action in the part where the radical disease is situated, and when the action in the head, or wherever the increased action is located, is reduced to an equilibrium with the action in the part where the radical disease is, the patient is either dead or so reduced that a cure is impossible. This is taking the patient away from the disease, and not the disease away from the patient.—This, fellow-citizens, is a great error in the practice of medicine. Its consequences are, in numerous cases, I have no doubt, fatal. Such are the sentiments of those doctors which the laws of this state compel you to employ. In such cases they pay no attention to the cold, which is the cause of the complaint; they scarcely ever give any medicine to excite perspiration, or to arouse the absorbent system, or to equalize the circulation.

In the case of phrenitis which I have mentioned, I should in the first place, clear the stomach and bowels, and raise the internal heat, and then apply the steam-bath to throw open the pores. By this process, a cure can generally be effected. Sweating has a tendency to excite the determining powers to the surface, by producing action in the external absorbents. By this, I mean it has an influence to maintain insensible perspiration. This, besides its tendency to prevent many diseases, or indeed all diseases, causes our food to nourish the system much more than it otherwise would; for, without it, it would pass directly through the system without imparting any strength to it. Hence, sweating is necessary in all chronic diseases. But it is important that the internal heat should be raised before steaming.

We might make many more remarks upon this important process to remove disease; but my present limits will not admit of it. What I have written was done in great haste, for I have not at present, time to be either more diffuse or more critical in my obsesvations. I cannot dismiss this subject,

however, without answering one objection, that is frequently raised against the Thomsonian theory of disease. The objection is this—When the fever is the highest the patient is the most thirsty, and that this must arise from an accumulation of heat in the stomach and in the region of the stomach; and so it is said, that, in fevers, the heat is not driven from the centre to the surface, but that the system is too highly charged with it throughout;—whereas, our sentiment is, that the heat has left the centre for the surface, being driven therefrom by the cold—and that the thirst is caused by a want of heat, rather than by an excess of it.

You will perceive that our sentiments and those of the legalized physicians, are very different on this, as well as on all other subjects of a medical description—and if they are in the right, we are in the wrong; and on the other hand, if we are right, they must be wrong, and their practice very injurious.

We believe then, that the cold in the stomach occasions the thirst; the calomel doctor believes it is heat in the surface of the mouth, fauces and stomach. In order to understand this subject, we must resort to experience; we must learn what substances, taken into the stomach, are the most likely to allay the thirst, and what the most likely to produce it. In high fever, according to Dr. Currie, the cold bath immediately allayed the thirst, not, it cannot surely be believed, by absorption of water, but by impelling the heat from the surface to the centre, and thereby causing action in the exhalents. It is known from experience, that vegetable stimulants will quench thirst; the applications then, which will allay the thirst, favors our theory. Now, let us in the second place, see what will produce thirst;—it is well known from experience, that salt has a great influence to increase thirst, and it is equally as well known too, that it is a very cold substance. After a man has been travelling during a very cold day, he is very apt to be thirsty; and in short, when a man has taken cold, and it terminates in a fever, he is very thirsty. I conclude, that what has been said on this subject, will be sufficient to convince every reflecting man, that thirst is caused by cold in the stomach, and not by heat.

In view of all that has been said on this subject, I would ask, does Dr. Thomson deserve imprisonment and all the persecution he has received from regular physicians? Dr. Thomson's practice is rational, and in a high degree salutary in its effects;

and his discovery shows as many absurdities and transubstantiations in the common theory of diseases, as the reformation and a more enlightened philosophy have in the religion of catholics, or in the legends of monkish superstition.

Some remarks on the recent act of the Legislature of this state, in respect to the practice of medicine, shall conclude this Lecture. The act to which I refer, is in substance this: No man shall practice medicine without a diploma from the present medical establishment—if he does, he shall be guilty of a misdemeanor, and punished by fine and imprisonment, or both, at the discretion of the court.—I know of men, who have been in the habit of attending upon the sick, and have made themselves acquainted with many useful medicines, and who have very frequently cured diseases, which those doctors, whom you are now compelled to employ or none, could not—and indeed, in almost every neighborhood, such a man can be found.—Fellow-citizens, will you suffer such an act to be, in point of law, a misdemeanor, punishable by fine or imprisonment, or both? Will you permit the man in your neighborhood to be taken to prison, for doing you good? for, it is the good which vegetable physicians have done, and not the evil, which has induced the doctors to seek their destruction. Believe me, fellow-citizens, this new act has been brought about by the faculty, to rob you of your rights. It is not going to injure vegetable physicians, for they have never received but little compensation for their services. This is not our object: that is to teach you to be your own physicians, and so ultimately throw off that grievous burden that you now have to bear. The fear the faculty have that we shall effect this, have induced them to pursue the measures they have taken. It will be in vain for them to tell you, that they have acted for your good, for they are never better suited than when they have full employ—and if steam-doctors do so much injury as is pretended, it will only increase their business. It is the success with which the vegetable practice has been crowned, that has carried dismay into the ranks of their enemies.

We do not make these remarks, fellow-citizens, because we are in fear that the vegetable practice is in danger of being destroyed, or that Dr. Thomson's fame is not safe—for we believe they are both placed beyond the influence of professional malice. The malignity of the faculty has been such, as to convince us, that if they do not totally eradicate the vegetable practice, it will be because they *cannot*. Yet the measures they

have taken are as indicative of their stupidity, as their theory and practice of medicine is of their ignorance. They might have known that this movement would have shown their evil designs;—they ought to have known that the people of this state are too enlightened, too zealous of their rights, to suffer this offspring of despotism to exist for any length of time. According to this law, people are compelled to employ such physicians, and such only, as the medical establishment shall send among them. They are not left to choose for themselves: the faculty has, they would fain have you believe, kindly provided for the safety and well-being of your bodies.

This law is productive of evil on many accounts. And first, it is an effectual barrier against improvement in the healing art. I have elsewhere remarked, that from the fact that knowledge is progressive, knowledge ought not to assume the form of a perpetual encampment. Its tendency is to remove all exciting causes to emulation. The law now prohibits any opposition line whatever. This is giving them privileges which no class of men, whatever, has enjoyed since the inquisition. They have a right to give what they please for medicine, and then charge what they please for it, and no tribunal but one made up of *themselves*, can call them to an account. We are in no greater need of a medical establishment, than of a religious establishment, and one is equally as contrary to free government as the other; and the only reason why the former is not as much detested as the latter, is because we have been more accustomed to it. When community is once awakened to the importance of this subject, justice will undoubtedly take place. Then it will be seen how they have endeavored to keep the people in ignorance, and how they have attempted to extinguish the transcendent light which Thomson's theory sheds upon the healing art. Were it a fact that their views of disease are correct, and their practice nature's assistant, it would be some palliation, but the most stupid ignorance is conspicuous in all, or nearly all their notions of disease. Their whole system is a jargon of contradictions, which will be regarded by future ages in the same point of light as exploded systems in philosophy and religion are by the present age. Truth, fellow-citizens, needs not law to support it. In an enlightened country like our own, the ever watchful eye of self-preservation, is the safeguard to our freedom. Our liberty is in imminent danger when it is intrusted to any set of men over which we have no control. The notion that we must trust the soul to the priest, the body to the doctor, and our liberties to the lawyer, is an erroneous one. These, fellow-citizens, may be all useful, but still they are to act under the inspection of the community. The people are to be the judges of their honesty and merits. But according to the recent act respecting the practice of medicine, the people are excluded from the privilege of exercising any authority over the medical establishment.

ERRATA.—In perusing these Lectures, the reader will please notice the following corrections:—

In page 6, 14 lines from bottom, for "is," read *it*.
—— 7, 26 lines from top, for "different," read *differently*.
—— 13, 6 lines from top, for "that nature," read *that the nature*.
—— 24, 22 lines from top, for "lengthy," read *long*.
—— 24, last line, for "exist," read *excel*.
—— 41, 16 lines from bottom, for "sin," read *fire*.
—— 52, 3 lines from top, for "so," read *too*.