

The rise, progress, and present state of medicine : a discourse, delivered at Concord, July 6th, 1791 ; before the Middlesex Medical Association / by B. Waterhouse, M.D. ; professor of the theory and practice of physic in the University of Cambridge, and vice-president of the association.

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THE RISE, PROGRESS, AND
PRESENT STATE OF MEDICINE.

A
DISCOURSE,

Delivered at CONCORD, July 6th, 1791.

BEFORE THE
MIDDLESEX MEDICAL ASSOCIATION.

BY
B. WATERHOUSE, M. D.

PROFESSOR OF THE THEORY AND PRACTICE OF
PHYSIC IN THE UNIVERSITY OF CAMBRIDGE,
AND VICE-PRESIDENT OF THE ASSOCIATION.

CONCORDIA PARVÆ RES CRESCUNT.

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AT a Meeting of the *Middlesex*
Medical Association, held at *Concord*,
July 6th, 1791,

VOTED, That the Hon. *Oliver Prescott*,
James Winthrop, Esq; and the Rev. *Ezra*
Ripley, be a Committee to wait on Doctor
Benjamin Waterhouse, and return him the
Thanks of this Association for his inge-
nious and learned Discourse, delivered this
Day, and request of him a Copy for the Press.

Attest.

Joseph Hunt, Secretary.

SHOULD this Discourse ever be read beyond the bounds of the *Massachusetts*, it perhaps would be necessary to inform the reader, that the *MIDDLESEX Medical Association* is so called from it's being composed of practitioners living in the County of *Middlesex* only.

This county deviates a little from a square, but it's area is nearly equal to a square of forty miles on a side. It is divided into *forty one towns*, and from a late enumeration is found to contain rather more than *forty two thousand inhabitants*.

The principal towns are *Cambridge, Concord, Charlestown, Medford* and *Watertown*. *CAMBRIDGE* is distinguished by the *UNIVERSITY*. A Society, that has for more than a century furnished supplies of Statesmen, qualified to support the rights of mankind, and men eminent in every branch of literature.

CONCORD, a town pleasant and flourishing, is situated nearly in the center of the county. *CHARLESTOWN* is connected with *BOSTON* by a bridge *fifteen hundred feet* long. *Cambridge, Concord, and Charlestown*, were rendered famous by the military events of 1775 and 1776.

Middlesex is watered by five rivers; the *Merimac*, the *Charles*, the *Concord*, the *Nashua*, and the *Misic*.

The southern and northern sides of the country are hilly; but cannot be considered as mountainous, few of the hills exceeding an hundred feet in height, being generally wooded or cultivated quite to the summit.

The climate is very fine, the air generally serene, and the temperature mild. The extreme variation of Fahrenheit's thermometer may be considered as an *hundred degrees* in an year; but it is in very few instances that in the course of the year it reaches either
extreme.

extreme. *Ninety-two* degrees may be considered as the extreme of summer heat ; and *five* or *six* degrees below 0 as that of the winter cold. Instances are to be found of it's exceeding these limits, but they are so rare, as to be exceptions to the general rule.*

Apples, pears, peaches, cherries, grapes, and currants are among our fruits, and by cultivation arrive at great perfection. The three last sorts are indigenous, but it is not so certain of the rest. The oak, chesnut, walnut, oilnut, pine, maple, button or plane tree, elm, ash and birch are among the trees that variegate our forests and beautify the face of the country.

The best part of the foregoing description is extracted from a more particular account of Middlesex, written by Judge Winthrop, which we hope he will publish at large.

An

- * At *Newton*, which joins to *Cambridge*, the bills of mortality have been kept for a series of years with great exactness. By them it appears that the annual number of those who have died within ten years past, is one out of *seventy*, and for the nine years preceeding one out of *eighty*. In *London* and *Paris* it is computed that one out of *twenty* die annually. In *Boston* one out of *forty five*,

An opinion has prevailed that the Americans fall short of the longevity of the inhabitants of Europe. After premising that we are less attentive in collecting the instances of long life here than in Europe, we shall enumerate a few extracts from the news-papers during 1789 and 1790.

Mrs. Kinzey, N. Car. aged 114. Mr. Elithrop, Con. 105. Mr. Carter, Con. 107. Mr. Williams, Con. 101. Mrs. Dowset, Con. 103. Mrs. Dixon, Mass. 101, and Mrs. Newton, 106, whose mother was 113, and sister, 102. Mrs. Chapman, Mass. 101. Mr. Hayley, N. Hamp. 101, and Mrs. Ulrick, 105. Mr. Van Verts, Albany, 124. Dr. Vanlear, Penn. 104, and Mr. Montz, 100, and Mrs. Brenneison, 100.

About forty years ago died at *Newton*, a Mrs. Davis, aged 116. For more particulars see the Rev. Jonathan Homer's Century Sermon, page 23.

An Abstract from the Constitution of the
 MIDDLESEX MEDICAL ASSOCIATION.

I. **A**S health is a blessing which sweetens all enjoyments, and long life that which all men naturally desire, so he who labours to teach his fellow creatures how to secure the one, and to attain the other, may justly be numbered among the benefactors of mankind.

II. **SEEING**, the mind and body have such a mutual influence on each other, that, examined apart, they can never be thoroughly understood, it is incumbent on every one who taketh upon himself the title of Physician, to examine and study the constitution and influence of both, in order that he may preserve to his fellow creatures that greatest of blessing, "*a sound mind in a sound body.*"

III. **IT** is the duty of the Physician, by a skilful direction of the powers of human nature, to preserve as long as possible, the life, the health, and faculties committed to his care. The charge is important, the field extensive, and the calling honourable.

IV. **TO** qualify himself for such noble purposes, it is his duty to examine the animal economy, to attend to the outward operations of nature, and to the qualities and operations of medicines,

in order to investigate the causes of diseases, and to learn their cure.

V. As of all natural bodies, none are found so variously compounded as the human ; so the inquiry into its nature, is to be placed among the most subtle and difficult of studies. The most improved and readiest measures ought therefore to be pursued to facilitate an inquiry so difficult.

VI. THE Medical Art is the offspring of experience : yet life is too short, occasion too sudden, experiment too dangerous, and judgment too insufficient for any one person to acquire a competent knowledge of diseases, and their remedies, by his own experience.

VII. As Physick therefore must grow up from a succession of discoveries and experiments handed down from generation to generation, it is evident, that any individual, however warmly disposed to promote the utility of his profession, can do but little, unless he has the united observations of others to assist him. Hence the expediency of Societies and Associations.

VIII. OF the various methods of attaining and diffusing Medical knowledge, none is found so effectual or desirable, as a friendly intercourse and association of its professors, especially when their principal aim is mutual improvement.

IX. MOREOVER

IX. MOREOVER, by thus associating, such liberal and generous sentiments will probably be cultivated, as tend to eradicate prejudices and unworthy practices, which at times have not only disgraced the profession, but injured mankind.

X. CONVINCED of these things, and of the necessity of making observations ourselves, instead of relying on those made in a distant quarter of the globe, WE, whose names are hereunto subscribed, do form ourselves into a Society, by the name of the MIDDLESEX MEDICAL ASSOCIATION, and do agree to the regulations following :

I.

THERE shall be annually chosen, by ballot, a *PRESIDENT*, *VICE-PRESIDENT*, *SECRETARY*, Three *COUNSELLORS* and a *TREASURER*.

XIII. *

AND it shall be the duty of each member to promote the interest of this *Association*, to advance its honour and its reputation. He shall vindicate and support the character of each associate, as far as justice and propriety will admit, ever esteeming it dishonourable to advance his own reputation on the ruin of another.

XIV. WHEREAS

* As the other twelve articles relate merely to the internal regulations, and differ very little from those of similar societies, they are omitted.—

XIV.

Whereas manifold inconveniences have arisen, from the want of a regular and uniform method of educating pupils in physick, especially in the country, whereby candidates for practice, when offered to the regularly appointed examiners, have been embarrassed and obstructed, though otherwise not ill informed: It is therefore the desire of this Association to remedy as speedily and prudently as possible, an inconvenience so loudly complained of.

XV.

As this matter may not have been sufficiently considered, it will not perhaps be useless to remark, that for want of regularity and method, the young mind often perplexes itself, and makes not an advantageous use of the real helps within its reach. Much the greatest difficulty the student has to encounter, is to know how to avoid those who are only the compilers and transcribers of those who went before them, and apply himself to the few original authors. The systems of physick are mostly compilations, and differ from one another, rather in neatness, order, and elegance, than in any thing material. Hence the expediency of using a set of approved authors in the various branches of medicine. It is therefore earnestly recommended to each and every

member of this Association, to direct his pupils to as regular and uniform course of study as may be, and to imitate, as nearly as possible, the order now established in the most eminent medical schools.

XVI.

In order that the education of pupils should be more uniform and reputable, it is the sense of this Association, that before a person be qualified to enter upon the study of physick, it is necessary that he have not only an accurate knowledge of his native tongue, but so much of the Latin and Greek, as to translate them by the help of a dictionary.

XVII.

Before any pupil offer himself to the *Censors of the Massachusetts Medical Society*, for examination, the Physician who recommends him shall be certain that he has such a knowledge of *Anatomy* as is necessary to understand the animal economy, both in its sound and morbid state ; likewise an acquaintance with diseases, and the usual method of treating them ; also a knowledge of the principles of *Chemistry*, *Materia Medica*, and the operation of remedies—an acquaintance with at least the elementary parts of *Mathematicks*, of *Natural History*, and *Natural Philosophy*, although not absolutely enjoined, are deemed very desirable.

XVIII. The

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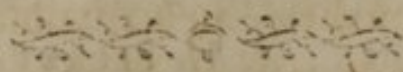
The advantage of teaching Physick by *Lectures* is confessed by the usage of all *Europe*, but has never been enjoyed among us until within a few years : WE being persuaded that great advantages will result from such a systematical mode of teaching all the branches of the medical art, do hereby recommend to all such as are or may become our pupils, to attend the *Medical Lectures* which are annually given at our UNIVERSITY at CAMBRIDGE.

XIX.

By such a procedure, the pupil will be fitted for examination by the *Medical Professors* in the UNIVERSITY, or by the *Censors* of the MASSACHUSETTS MEDICAL SOCIETY.

XX.

By these and similar modes, this Association hope not only to inspire and diffuse a spirit of order and regularity in medical education, but to enlarge the sphere of it ; being thoroughly convinced that it is only from such a system, that quackery can be banished from the land, and the honest physician rise to usefulness and eminance.



QUERIES

*QUERIES put to each Member at the opening
of every meeting.*

1. **H**AVE you met with any thing in any medical author, since our last meeting, suitable to be communicated to this association?
2. What was the last Epidemic that visited the district where you reside, and what were the remedies particularly serviceable in it?
3. Do you know of any instance, since our last meeting, of the resuscitation of any one apparently dead; and the method pursued?
4. Is there any difficult point in the theory or practice of physic, which you would gladly have discussed at this time?
5. Do you know of any deserving beginner in the practice of physic, too young to become a member, whom this association can any way serve or encourage?
6. Have you any weighty affair in hand as a physician, in which you think the advice of this association may be of service?
7. Do you think of any thing at present in which this association may be serviceable to mankind, to their country, or to themselves?

*The OFFICERS of the MIDDLESEX MEDICAL
ASSOCIATION for the year 1792.*

Hon^{ble} OLIVER PRESCOTT, M. D. PRESIDENT.

BENJAMIN WATERHOUSE, M. D. VICEPRESIDENT.

Hon^{ble} JOHN BROOKS,

JOSIAH BARTLETT, M. B. } COUNSELLORS.

ISAAC HURD, A. M.

TIMOTHY MINOT, A. M. TREASURER.

JOSEPH HUNT, A. M. SECRETARY.

ON THE
RISE, PROGRESS, AND PRESENT
STATE OF MEDICINE,
A
DISCOURSE.

IN complying with the request of this association, I perceive nothing more difficult, than to bestow on what is common the grace of novelty, and to render so dry a subject as physick in any degree entertaining to a mixed audience. Our theme leading to the frigid and formal style of a lecture, rather than the animated strains of an oration.

THE history of the medical art is so well known to the members of this society, that my task will be rather to remind than inform them: Yet what subject can be more suitable for our first discourse, than the history of *the rise and progress of the* HEALING ART: That art whose improvement and diffusion is the end and aim of our association?

THE

THE origin of most arts is involved in fable, and wrapt in great obscurity ; that of medicine seems covered with almost an impenetrable veil. Until the greater purposes of society were answered, the necessities of mankind supplied, architecture and other necessary arts introduced, men of genius had neither leisure nor inclination to record their theories of the origin of mankind, and the rise of the arts. The remedies first sought for, in the earlier ages, were probably some mild, tenacious, plastic substances, suitable to defend a wound from air, and secure it from external injuries. Accident and random experiment may have increased the number of such simple remedies, which may have been treasured up by a particular family, or some individual of a tribe. But at these early periods of society, when letters were unknown, what was once out of sight was lost forever.

IF we search the oldest book we have for information on this subject, we search in vain. This will not appear so extraordinary to those, who reflect that the sacred history is confined to but a part of *Asia*, and a small portion of the north east part of *Africa* ; and that it is so concise in regard to time, that the history of twenty centuries is comprised in eleven short chapters.*

WE

* See Genesis,

WE find the author of these annals, the hebrew legislator and general, giving directions for the health of his people; but no mention is made of Physicians, as a distinct profession, until the embalming of *Jacob*. Prior to these writings, is the æra of absolute darkness; and we have no account by which we can judge of ancient tradition, unless we admit that of the *Chinese*, whose great antiquity, corroborated by astronomical observations, carries the history of the human race a vast way further back. Yet their slight acquaintance with anatomy, and their ignorance of chemistry, render their great knowledge in physic as doubtful as their chronology.

As we receive so little light from these ancient prose writers, let us turn towards those earlier luminaries the Poets.

POETRY has every where preceded prose, and the powers of the imagination always have been indulged, before the operations of the judgment were exercised. Those early effusions of genius were epic poetry, or exaggerated history, recording battles, heroes and ghosts; dwelling on the marvellous, and often the incredible. In these fabulous ages it was the custom to dress instruction in the garb of allegory. Thus the *Egyptian*, *Grecian* and *Roman* poets attributed the origin of the Healing Art to the Sun, who was called *Orus* by
the

the Egyptians, *Phœbus* and *Apollo* by the Greeks and Romans. Conceiving the sun to be the parent of life and cheerfulness, whose genial warmth and vivifying energy animated and sustained all nature; they adored it as the resplendent source of light, life, health and joy. They saw nothing on earth which bore so striking a resemblance to this heavenly luminary, as he, who relieved pain, dissipated melancholy, dispelled diseases, and prolonged life. Thence they concluded that the first physician was an offspring or emanation of the "*Prime cheerer light.*" Accordingly we find the classical poets representing *Apollo*, as the primary GOD of physic; and his son *Æsculapius* whom they also deified, as its first professor. They likened the human body to a delicate musical instrument, easily disordered, and therefore united music and medicine in *Apollo*. They conceived that the office of the physician, was to tune this complicated organ the body, to make every part act in concert, and reduce the whole to harmony. *

THE person of *Æsculapius* is so enveloped in fable, that we scarcely know when, or where he lived. He is confounded by some with *Melampus*, who lived about 100 years after *Moses*, and who having travelled into Egypt, brought from thence into Greece, not only the art of physic, but much of their theology and superstition, together with their magic or divination.

. From

* See Bacon de augment. Scientiar.

FROM every account we must conclude, that *Æsculapius* was highly venerated for his knowledge and usefulness. The antients not only placed him among their GODS, but erected more than sixty temples to his honor in Greece, and in the Grecian colonies. These *Æsculapian* temples were the first schools of physic. People resorted to them from all quarters, in order to be healed of their diseases. Remarkable cures were engraven and hung round their walls in form of votive tablets;* and from thence were sent out the first clinical practitioners.

AMONG the ruder nations, the priest, the conjuror, and the physician were united in the same person. † It was so among the *Ægyptians*, *Babylonians* and *Grecians*; among the people of *India*,

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* The learned *Gruterus* has preserved several of these inscriptions. One is as follows: "*Lucio affecto lateris dolore, et desperato ab omnibus hominibus, oraculum reddidit Deus. Veniret; et ex tribomo tolleret cinerem, et unâ cum vino comisceret, & poneret supra latus, Et convaluit; et publicè gratias egit Deo; et populus congratulatus est illi.*" What a pompous account of that application so frequently employed by our country people, a bag of ashes for the side ach!

† *Diodorus* relates that it was the custom antiently to apply to the professors of vaticination to obtain health. L. v. p. 235. We find in scripture, that when *Asa* applied to the physicians, it was condemned as an impiety. Chron. xvi. 12. *Jeroboam* sent his wife to the prophet when his son *Abijah* was sick.

where they are called *Brachmans*; among the ancient Germans, French, and Britons, where they were called *Druids*. It was so among the *Mexicans* and *Peruvians*; and obtains at this day among our Aborigines. The untutored mind is apt to ascribe all dismal diseases and shocking accidents to the influence of invisible beings: and the priests, not only cherished this opinion, but studiously inculcated, that their cure must be sought from the Deities, through the interposition of their ministers.

THE state of physic in Greece, at the period celebrated by *Homer*, was very similar to what it now is among the aborigines of this continent. Like their heroes, our Indians know how to treat wounds; and when baffled in the cure of any terrible disorder, have recourse like the Grecians, to incantations and enchantments.* They likewise derived their skill from the same source, random trials, or empiricism.

THE Philosophers of Greece were so much engaged in the vain and useless search after the primary matter, that they neglected medicine, which was so far from being digested into a system, that no one gave it sufficient attention to make it a distinct profession. This was the case till about 400 years before *Christ*, when the famous *HYPPOCRATES* made collections from the public records of cure, the

* See *Homer's* account of the plague in the Grecian camp, B. I.

the inscriptions or tablets in the Æsculapian temples, where he was educated, reduced the whole into some order of science, and laid so just and rational a foundation of physic for future ages, that he deservedly obtained the name of the FATHER OF MEDICINE.*

THEMISON was the founder of the *methodic* sect. He professed to have discovered a short, and easy method of attaining medical knowledge, by reducing all diseases into two classes, viz. from *tension*, and from the opposite fault, *relaxation*.† As this doctrine has lately been revived, we shall speak of it, with its patron *Themison* and his follower *Theffalus*, in another place.

ABOUT 200 years before the christian æra, physic and surgery, which in Greece had been practised by the same person, were separated at Rome into three distinct provinces, the *Dietetic*, *Pharmaceutic* and *Surgical*. The above mentioned sects were in existence when the celebrated GALEN quitted his native country, Asia minor, to practise at Rome. GALEN was a man of real genius, improved by a careful education under the best teachers of the age. He laid the foundation of his greatness in the school of the Stoics, then studied with the Academics, and finish'd with the Peripatetics

* Boerhaav. academ. Lect. v. 1.

† *Juvenal* speaking of him, says, "Quot *Themison* ægro autumnos occiderit uno." Whether this be intended as a compliment, or sarcasm, we leave critics to determine.

patetics and Epicureans. After this he devoted himself to medicine, and collected the writings of the most celebrated physicians, especially *Hippocrates*, whom he professed to admire and follow. There is, however, says *Boerhaave*, this essential difference between the doctrine of *Hippocrates* and *Galen*, the first is almost always supported by experience, and consists of observations, while the other depends almost wholly on reasoning; and it has accordingly happened, that the system of *Hippocrates* has afforded but little matter of exception to those who came after him, whereas, that of *Galen* has been a subject of just and well grounded censure. Nevertheless, *Galen's* doctrine, though in general false, and inapplicable, says *Cullen*, was received and implicitly followed by all the Physicians of *Asia*, *Africa*, and *Europe*, for more than 1400 years! He was supposed to have brought every part of medicine to perfection, and his system thought infallible, and universally appealed to as an oracle.

WE cannot set a very high value on the theories of the antient physicians, when we consider the *data* upon which they reasoned. Their notions respecting the animal œconomy were absurd and confused to the highest degree. They supposed that the veins had their origin in the liver; that they were the only vessels that conveyed blood through the

the body ; that in these it only moved backward and forward : that the arteries arising from the heart, contained the animal spirits which were elaborated in that organ. They believed that the blood never entered the arteries, unless in a diseased state. As to the means of our nourishment, they had no just idea of it, and even supposed that the chyle was absorbed in the liver, and there concocted into blood.*

AFTER the sixth century, a dark and dismal chasm intervened in medicine, literature, and the arts. All was ignorance, wonder, and credulity. The human mind, neglected, uncultivated, and oppressed, sunk to the lowest grade of debasement.†

THE most remarkable revolution recorded in the history of the human mind, is, the darkness and ignorance which enveloped *Europe*, while the *Arabians* were making progress in useful knowledge. The *Caliph Haroun Al Raschid* established an University at *Bagdad*, and qualified his countrymen to be instructors of all Europe. Wherever these Mahometans built a temple for worship, there they erected a medical school and an hospital. They first introduced chemistry into medicine ; and, though blended with many absurdities, its introduction occasioned a great revolution in the theory and practice of physic.

Diseases

* Aikins' Med. Memoirs.

† Millot Elements of Hist.

Diseases were now supposed to arise from a predominant acid, or an alkali; and the various operations of the human body, were attempted to be explained on the principles of *fermentation* or *effervescence*. Nay, they asserted that all the operations of the Universe were explicable on chemical principles. At this period, many wasted their time and talents in the delirious pursuit of transmuting the baser metals into gold.

IN the beginning of the xviiith century, the whole system of Galen, as well as the theory of the chemists, was overturned by the discovery of the circulation of the blood by *Harvey*; who demonstrated *that the human body was an hydraulic machine, whose actions and offices depended upon the circulation of the blood, which alone being stopp'd, the whole must perish*. For, in this system, the blood was considered as the *primum mobile* of the whole machine; and to something in the blood were attributed all the disorders to which we are liable. *Harvey* first made an application of this doctrine by publishing his "*practice of physic conformable to the laws of the circulation,*" and by degrees all Europe followed him,

THIS was the æra of experiment in which several great geniuses flourished. Societies for promoting and diffusing experimental knowledge were established in different parts of Europe, and

and patronized by monarchs.* The *art of printing* had already produced a glorious change in the affairs of men. It gave wings to literature; and spread it around the globe. *Philosophy* revisited the earth, and converted Europe, which a century before was one large field of battle, into a theatre of triumph!

THE

- * The English Bishops possessed the power of licencing practitioners of physic until the beginning of the 16th century, when this grievance was redressed by the establishment of the *London College of Physicians* by an act of *Henry viiith*. By virtue of this authority it is expressly declared, that no one shall be permitted to exercise physic in any of the dioceses in England till he be examined by the President and three of the Elects, or *Censors*, and have letters testimonial from them; unless he be a *graduate* in either University, who, as such, by his very degree, has a right to practise all over England. See *Friend's history Phys.* vol. 2. The *Edinburgh royal College of Physicians* was founded in 1681. It has similar powers to the royal College of London. But that the rights of the University may not be infringed, their charter declares, that the College are to licence all persons, who have taken their degrees in any of the Universities in Scotland—And that all persons who have taken the degree of Master of Arts in said Universities, or a degree of Doctor in any celebrated Universities abroad, shall, upon producing their respective Diplomas to the President and College, be licenced by them to practise physic within their jurisdiction, without passing a trial on that occasion. See their charter in *Maitland's history of Edinb.* p. 376.

The *Royal Society of London* was founded in 1663. L' *Academie Royale de Sciences* was erected in France 1666. The *Academia Naturæ Curiosorum* was established

UPON the discovery of any new principles by philosophers or the introduction of any new and popular theory, physicians almost always attempt to apply them to the explanation of the actions of the human body, and all the causes of diseases. Thus, when *Galileo* had introduced mathematical reasoning, and excited the world to investigate the laws of mechanics, physicians attempted to explain all the phænomena of the animal œconomy, on mathematical and mechanical principles. The same was noticed concerning the chemists, and may be remarked at this time of the laws of electricity.

THE

lished in Germany in 1670. A royal literary society was instituted at Berlin in 1711. Another at Petersbourg 1725. The King of Sweden followed the example of Peter the great, and erected a literary academy in 1739, as did the King of Denmark in 1746. In 1731 an Academy for surgery was founded in Paris. The present King founded the *Royal Society for Medicine* in 1776.

The *University of Paris*, founded by *Charlemagne* in the year 800, was the first that conferred the degrees of bachelor and doctor in the year 1231. The *University of Leyden* was founded in 1574. It has twenty-six professors. There is no college of Physicians in any of the United Provinces. Physicians, before they can be legally authorised to practise, are required to produce a Diploma from some Dutch University, which is registered by the magistrates of the town in which they mean to reside. Our *University of Cambridge* was founded in 1638, but the medical professorships not till 1782.

THE famous *Stabl* perceiving the insufficiency of the preceeding systems, maintained that the rational and immaterial soul was the true source of every function, both vital and natural. Thus experiment, or the use of our senses, was discarded for a time from medicine, and metaphysics, or reasoning on probabilities, usurped its place.

SUCH was the state of medicine when *Boerhaave* began to teach. The figure this great man made in the medical world, will justify our dwelling a little on his character and works. It is perhaps unnecessary to say, that he was a professor in the University of *Leyden*, and that he died about 50 years ago. *Boerhaave* was son of the parish minister of a village near *Leyden*, and he himself was educated for that profession. From the information of his biographers and his own writings, we learn, that from the perusal of early writers in divinity, he was struck with the profoundest veneration for the simplicity and purity of their doctrines, and the sanctity of their discipline; but as he descended to the lower ages, he found the peace of christianity broken by useless controversies, and its doctrines sophisticated by the subtleties of the schools. He found the holy writers interpreted according to the reigning philosophers, and chimeras of metaphysicians adopted as articles of faith. He then quitted the pursuit of divinity,

and applied to the study of physic, when he was more than xxx years of age. But he found it nearly the same in physic as he experienced in divinity. He perceived that the moderns had widely deviated from the simplicity and purity of the antients ; chimeras and idle notions adopted as articles of belief, or rules of practice, and the writings of the founder of our profession strangely corrupted and misapplied.

WHEN *Boerhaave* began to practise physic, he received but little encouragement. His business was at first very small, and his circumstances by no means easy. But superior to every discouragement, he continued his search after truth and knowledge ; determined that prosperity, were he ever to enjoy it, should be the consequence, not of mean artifice, cringing solicitation, or degrading complacency, but of real merit and solid learning. Nor was he disappointed. After giving lectures at *Leyden* for a series of years with great applause, his reputation bore some proportion to his merit, and extended itself to distant countries ; insomuch, that scarcely a learned society in Europe, but was eager to elect him a member, scarcely a crowned head, but sought some means to honor him. He died at *Leyden* in the year 1738, aged 79 years, leaving behind a glorious and untainted memory. *

BOERHAAVE'S

* Schulten's life of Boerh.
—also his life by Johnson.

Med. Dict. Art. Boerh.

BOERHAAVE'S *Institutes*, or *theoretical* work, contains all the discoveries in anatomy and physiology known at that time; and whatever relates to the laws of the animal œconomy and the operations of medicines. His *aphorisms* or *practical* work, are collected from the Greek medicinal writers, the Arabians and some of the Moderns; and his reasonings are founded on the structure of the parts and laws of mechanics. In his lectures on these aphorisms he laboured to shew how nature acts in producing the symptoms of distempers, and her methods of relieving herself either with, or without the assistance of art. Perhaps it comprises more medical knowledge, than any book extant of its size.

THE most striking feature in the Boerhaavian theory, is the explanation of all the phænomena of the animal œconomy on mechanical principles. It asserts, that the human body is truly a mechanical structure, and possesses all the properties belonging to a subject best qualified for mechanical speculation; therefore a mechanical frame and that the human machine, is by the same laws explicable by geometry; and there is nothing, he thinks, in all its solids or fluids but what is explicable upon mathematical principles.

He founds his *pathology*, or *doctrine of diseases*, on the change of the *quality* of the fluids, producing sometimes a predominant *acid*, and sometimes

times a predominant *alkali*. Another fruitful source of diseases, was a *spontaneous gluten*, or *lentos* in the fluids, and a too *violent motion* of the circulating blood; this he supposed arose from the preternatural irritation of the heart, or from some acrimony present in the blood itself. These opinions make the foundation of his theory of *fevers* and *inflammations*.

THE first who ventured to attack the *Boerhaavian system*, was the learned Dr. *Frederic Hoffman*; who asserted that the body was so far from depending on the *quality* of the fluids, that the state and *crasis* of the fluids themselves, entirely depended on the *nervous power*; and that a slight alteration in this power was capable of instantaneously changing the blood, and all the other humors, into a different nature from what they formerly were. He therefore published it as his opinion "that the greater part of diseases, if not all of them, were affections of the *nervous system*." This hypothesis, amplified and further illustrated, is the celebrated *Cullenian System*. *

DR. CULLEN, who died a year or two since in Scotland, after bestowing great encomiums on *Boerhaave*, who he says improved and refined upon every thing that had before been offered, pointed out, as he supposed, the imperfections and

* See Encyclop. Brit. Art. *Medicine*.

and deficiencies of this famous system, in order to shew the necessity of attempting a new one. And he has shewn pretty clearly, that the doctrine of *acidity*, and an *alkali*, is erroneous; and that the causes which *Boerhaave* adduces as producing the *spontaneous gluten*, are by no means probable. Nay, he asserts farther, that *Boerhaave's* doctrine of *acrimony* and *lensor* of the fluids is purely hypothetical; and that the reasonings concerning them, are so far from improving physic, that they have often misled the practice of it.

THE brain is considered in the *Cullenian hypothesis* as the *primary* organ, on which the welfare of the system *principally* depends; and the *Nervous system*, as the *substratum*, or fundamental *stamen* of the whole body: for it supposes the living muscular fibres to be a continuation of the substance of the brain, or congeries of those *infinitessimally* small threads called nerves.* *Cullen* conjectures, that the cortical part of the brain, or common origin of the nerves, is a *secretory organ*, in which the *gluten* of the blood, or *coagulable lymph*, being freed from all saline matter, before adhering to it, becomes fit for the nourishment of the solids,

and

* *Hippocrates* believed that the *heart* and the *blood* constituted the *mainspring* of motion and sensation, but was unacquainted with the properties of the *Nervous system*, which have been in a great measure overlooked by all his successors until the time of Dr *Thomas Willis*, 1650.

and being poured in a sufficiently diluted state, upon the origin of the nerves, is filtrated along their fibres, and is thence conveyed to every part of the body for its nourishment.

By this system, the circulation of the blood instead of being the *principal*, or vital function, as in the *Boerhaavian*, becomes so much a *secondary* one, in the animal œconomy, that it serves little other purpose than the nutrition of the body. When a large blood-vessel is wounded, the evacuation of the blood, causes a *collapse* of the vessels, and death ensues : yet *Cullen* reminds us, that the vessels must necessarily be in a certain state of distention, in order that the nervous fluid should move.* *Boerhaave* tells us, that when a person faints away, or lies some time under water, there is wanted a circumgiration of the liquors in the blood vessels. *Cullen* admitting this, only contends, that the first movement must arise in the nervous system, which exciting the blood vessels to action, they propel the fluids contained in them and life immediately returns, with heat, color, agility, *cogitation*, and every vital and natural action. Hence we see that these eminent teachers meant the same thing, they only began the explanation in different parts of the circle. It would not be very difficult to prove, that both in their theory and their practice, the difference is more
in

* Encyclop. Brit. art. *Medicine*.

in words, than in reality. *Cullen* considers almost all diseases as arising from an affection of the nervous power. This power, or *vis medicatrix nature*, is the same that *Hippocrates* calls "NATURE," whose efficacy he so much celebrates in removing diseases; a power acknowledged and extolled by *Boerhaave*.

THE state of science is very different now from what it was 200 years since. The philosophy of *Aristotle* misunderstood, the false theories of *Galen*, and the jargon of the *Chemists*, formed so thick a cloud, that truth and nature could scarcely be seen through it. When this was dispelled by *Lord Bacon* and others, the æra of experiment followed. Philosophers and physicians labored to accumulate facts. Societies were every where established for this express purpose. A diffusive manner of writing crept in, and grew up among authors. It was the fashion to print not only all that a man thought, but to quote all that he found any body else thought: and he was scarcely esteemed a literary man, who published any thing less than a folio. But now it is wholly different. Instead of that diffusive manner of writing, authors feel the necessity of consolidating and concentrating science. They find that the substance of folios may be digested into a few pages, and the essence of libraries compressed within a few volumes.

The

The late Dr *John Brown* has attempted to simplify the science of medicine, by reducing all diseases to *two* forms, namely, *sthenic* and *asthenic*, the former signifying an excess, and the latter a defect of the *vis vitæ*, or invigorating principle.*

THUS *Themison* 1700 years since, boasted that he had discovered a short and easy method of attaining medical knowledge, by reducing the causes of all diseases to two heads; the one *tension*, and the other *relaxation*; or in the language of Dr. Brown, *sthenic* and *asthenic*. He considered every remedy as a *tonic* or *relaxant*. His follower *Theffalus* carried this doctrine still farther, and by declaring that he could abridge the study of medicine, to six months, he gained many pupils from among those who wished to acquire a science without the trouble of study, or pains of thinking.†

It must be left to the old and experienced physician to determine, whether the disorders arising from those peculiar conditions observable in particular persons, or in particular parts of the body,

* See the author's Synopsis of his course of Lectures from p. 20, to 23.

† Pliny observes that altho' *Theffalus* boasted he had so abridged the study of medicine, that he could teach it in six months, he notwithstanding wrote more books on that art than could be read in that time.—See also what *Cælius Aurelianus* says of this "conqueror of Physicians," as he called himself.

body, called *Idiosyncrasies* can be explained by that general principle which pervades the *Brunonian* system. *Boerhaave* and *Cullen* were experienced practitioners, but *Brown* never confirmed his speculations by *much* practice. It is possible that this sudden meteor of intelligence, which for a while may appear to shoot its beams into the regions of obscurity, will as suddenly withdraw its lustre, and leave mortals again to grope their way.*

NEED we be surprised that our profession has been accused of contradictory theories and systems, as well as discordant maxims in practice : or wonder that many suppose it merely a conjectural art ? Have we not seen that opinions prevalent in one age, as truths above the reach of controversy, have been confuted and rejected in another, and have risen again to reception in remoter times ? Yet the ignorance and inattention of some physicians should not be adduced against the stability of the art itself. Amid the fluctuations of theories, a discerning eye may discover certain fundamental principles which are as firmly established as those of any science. Does not daily practice convince us, that both acute and chronic diseases have the same marks annexed to them, which were described 2000 years ago ? Even in *nervous disorders*, amid all their tumultuous anarchy of

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accessary

* See Dr. Johnson's pref. to *Shakesp.*

accessary symptoms, we recognize their *essential* marks and elementary types.*

PHYSIC, like many other arts, may be practised without theory, or knowledge of it's principles. A man may know how to bleed without understanding any thing of physiology, or anatomy. He may have learnt how to stop that bleeding, and yet be ignorant of the circulation of the blood. And a man may learn how to cure an acute pain in the side, by copious bleeding, without knowing there is such a membrane as the pleura. Many practitioners have known the efficacy of *Tartar Emetic*, without having chemistry enough to know it's component parts. And, yet, such is the weakness and credulity of many of our country people, that they often prefer such to a learned physician. The fact is, *theory*, and *practice* are mutually subservient to each other. *Theory* is defective without experience; which in its turn is equally defective without theory. It has been observed that the man who acts from experience alone, though he act ever so well is but an Empiric, or Quack, and that not only in medicine, but in every other subject. It is then only, that we recognize *art*, and that the Empiric quits his name for the more honorable one of *artist*, when to his experience he adds *science*, and is thence enabled to tell us, not only
what

* See Black's historical sketch of Medicine and Surgery.

what is to be done, but *why* it is to be done.*
 Nevertheless a Physician does not establish his character by what he knows and *thinks*, so effectually as by what he *actually does* and orders for the sick.

FEW things discourage the student of medicine more than the great variety of disorders, and astonishing number of concomitant symptoms. When he reflects on the short period of human life, the necessary avocations, which must unavoidably divert his attention, he is ready to relinquish the pursuit in despair.

YET modern improvements in a great measure have removed this inconvenience, by reducing all known disorders that afflict mankind to certain determinate species, in imitation of the writers upon botany. Such a systematic arrangement, called, *Nosology*, by bringing those diseases together, which agree in the greater number of circumstances, and require nearly similar treatment, shews, that though there may be a great variety in the names, there needs not much in the method of cure.

Nosology, therefore, in some measure, has rescued the study of medicine from confusion, and reduced it to such order and simplicity, that the discouraging

* Harris's *Hermes*.

discouraging catalogue of diseases, so perplexing to students, is resolved by Dr. Cullen into *four* classes, and these to 150 genera, which are again divided into 1387 species. So true it is, that the more we know of any art, or science, the greater number of *particulars*, we are able to resolve into *generals*; and thus reduce its principles within narrower bounds.

Anatomy and Physiology have experienced great improvement within these 50 years. One of the great sources of error among our forefathers (says Pott) was the imperfect state of their *anatomy*, which kind of knowledge, has been so cultivated in our times, as to convert ignorance into a vice.*

Baron Haller, has collected and condensed, all the valuable *anatomical* and *physiological* discoveries; and after having displayed every part of the human body, he explained every function, pointed out the errors of preceeding authors, and made such important additions of his own, that were all the books of anatomy and physiology, excepting his, destroyed, they would, alone, be sufficient

* The most important anatomical discovery since that of the circulation by Harvey, is, that which demonstrates the *Lymphatics to be a distinct system appropriated to the sole purpose of absorption.*

sufficient to convey to future ages, the present stock of knowledge in those branches of science.*

Surgery has been cleared from the lumber of a thousand errors, and raised from its state of degradation. Not only the coarse and useless applications, but the multitude of awkward and unmanageable instruments, which encumbered the art, have given way to methods less painful, and more intelligible. Surgeons perform, now, not only many cures by mild and gentle means, which formerly were deemed incurable, but give *nature* an opportunity of exerting those powers with which she is invested by the Creator.

THE study of *Natural History*, so necessary and ornamental to the physician, is now rendered easy and delightful. *Linnaeus*, by his learned classification, leads the student, as by an *Ariadne's* clue,

* *Haller* made a catalogue of medical books. Their number exceeded 30,000, yet from the days of *Hippocrates* to the xvth century (a space of nearly 2000 years) there were not produced *thirty* volumes, which at this day merit perusal. To read the rest would (to adopt the expression of *Voltaire*) *encumber the head with a jumble of words, and burthen the memory to no useful purpose.*

Whoever wishes to see an universal library of medical and surgical books, published during the last 300 years, will be gratified by consulting *Vander Linden*, *Merklin* and *Haller's methodus discendi artem*, &c. with the *literary journals of Italy* : the *Bibliothèque raisonnée of France* : the *Reviews of Leipzig* and of *London*.

clue, through the turnings and labyrinths of the *three kingdoms* of nature. *Botany* too, that beautiful handmaid of physics, so much neglected by the ancients, has been successfully addressed by the moderns. The lovers of botany will find in this country an unexplored treasure, amply rewarding their attention. Notwithstanding theory cannot claim the power of discovering the medicinal virtues of plants, it has nevertheless greatly facilitated this charming study by arranging all the vegetables that diversify and adorn the earth into classes, orders, genera and species.

SINCE knowledge has become more generally diffused, a benevolent philosophy, subservient to life and public utility, has taken the place of those theological disputations, which distracted the last century. A spirit of free inquiry distinguishes the medical, and other professions. The authority of great names is less venerated. The world begins to grow weary of theories which lead to no useful consequences, and have no foundation but in the imagination of ingenious men.*

MUCH literary as well as political advantages have accrued to the UNITED STATES, and to those of *New-England* in particular, from the *American Revolution*.

* Gregory's comparative view.

Revolution. It had been heretofore thought indispensably necessary to resort to foreign universities, to complete the system of medical education, and to acquire *there* the theory and practice of physic, which the want of regular schools and established hospitals in this country, rendered unattainable. At that period, an ambition of acquiring the highest qualifications in the profession, naturally led the medical student to the celebrated European Schools : and the honors they bestowed, were considered as conferring distinction and respectability on the candidates. The ambition was laudable. But it must at the same time be confessed, that from the novelty of situation, it sometimes failed of being followed by the advantages expected ; and the expence attending it was a circumstance, which must necessarily have cramped their exertions.

THE various institutions founded within a few years in this commonwealth, have laid a broad foundation for improvement in science, and the arts : and the establishment of a MEDICAL SCHOOL in the UNIVERSITY at CAMBRIDGE, by affording regular means of instruction, in the different branches of the profession, has given to the *present* a decided superiority over *former* times, and in a great degree has forever precluded the necessity of a foreign education.

A country so completely independent in other respects as the *United States*, however ready to receive information in the higher grades of science, by the cultivation of literary correspondences abroad, should blush to be indebted to foreign seminaries for the *first principles of professional instruction*.

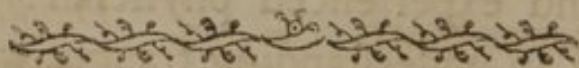
Of the various methods of cultivating and diffusing medical knowledge, none is more desirable, than an amicable association of neighbouring practitioners; especially when their aim is mutual improvement and the good of mankind. These generous sentiments gave birth to the *Middlesex Medical Association*; a society whose grand object is to improve our art by a free and friendly communication of our skill and experience, and to cultivate those manly sentiments, which tend to eradicate narrow prejudices and unworthy practices.

A military spark, which was first struck out in *this County*, burst into a flame and spread throughout the continent. This till then almost unnoticed part of the world, drew the attention of all nations, who regarded us with admiration, while we conquered armies, and founded such an Empire as the world has never seen, and framed a constitution, which is the pride of man, and glory of the human understanding. The European world
still

still regards us : many with an anxious solicitude to see in what order and degree those *dispositions* and arts, which characterize polished humanity arise among us. They cannot but observe that the County so famous for having *first* dared to resist what they deemed to be despotism, stands the first in the cultivation of those arts which grace social life and encrease human happiness. MIDDLESEX, so distinguished for its University and for its *Militia* ; so celebrated in arts and arms, will we doubt not, still continue to take a liberal pride in promoting those arts which improve the world and dignify mankind.

A noble example is afforded in your worthy townsman Dr. *Cuming*. You who were his fellow citizens must feel at the mention of his name the tender remembrance of friendship reviving in your breasts ! you, who recollect him the sensible, generous, warmhearted, upright friend ; the able honest and experienced physician ! Dr. *Cuming* possessed an understanding fraught with the principles of his profession, happily blended with great benevolence. And his generous donation to the medical branch of your University, while it excites *our* gratitude sufficiently evinces his opinion of the importance, and practicability of a complete medical education within ourselves.

ANIMATED by the example of the *Eminent*, who have gone before us, let us press on to still further improvements. Let us leave the flowery path of speculation for the more arduous one of experiment. That benevolent philosophy which distinguishes this age, and this country, will help us to cultivate and diffuse the benefits of the art we profess, and inspire us with the pleasing hope of being able to preserve to our fellow creatures, that greatest of blessings, "A SOUND MIND, IN A SOUND BODY."—The field is extensive, the charge important, and the calling honourable.



A List of the Members of the Middlesex Medical
Association, and their places of residence.

Josiah Bartlett,	- -	<i>Charlestown.</i>
William Bowers,	-	<i>Billerica.</i>
John Brooks,	- -	<i>Medford.</i>
Amos Cotting,	-	<i>Marlborough.</i>
Joseph Fisk,	- -	<i>Lexington.</i>
Joseph Fisk, jun.	-	<i>Lexington.</i>
William Gamage,	-	<i>Cambridge.</i>
Timothy Harrington,	-	<i>Chelmsford.</i>
John Hart,	- -	<i>Reading.</i>
John Hay,	- -	<i>Reading.</i>
Martin Herrick,	-	<i>Reading.</i>
Joseph Hunt,	- -	<i>Concord.</i>
Isaac Hurd,	- -	<i>Concord.</i>
T. L. Jennison,	-	<i>Cambridge.</i>
Timothy Minot,	-	<i>Concord.</i>
Oliver Prescott,	-	<i>Groton.</i>
Oliver Prescott, jun.	-	<i>Groton.</i>
* Isaac Rand,	- -	<i>Cambridge.</i>
Marshall Spring	-	<i>Watertown.</i>
Ebenezer Starr,	- -	<i>Dunstable.</i>
Benjamin Waterhouse,	-	<i>Cambridge.</i>
* Samuel Whitwell,	-	<i>Newtown.</i>
Leonard Williams,	-	<i>Waltham.</i>
Charles Whitman,	-	<i>Stowe.</i>

HONORARY MEMBERS,

Rev. Ezra Ripley,	-	<i>Concord.</i>
James Winthrop, Esq;	-	<i>Cambridge.</i>

