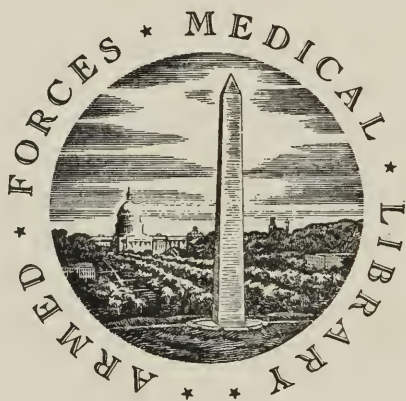




UNITED STATES OF AMERICA



FOUNDED 1836

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WASHINGTON, D.C.





Caldwell (Chas.)

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## A REPLY

TO DR. HAYGARTH'S "LETTER TO DR. PERCIVAL,  
ON INFECTIOUS FEVERS,"

Éc. Éc. Éc.

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*Nath. S. Fisher*

A REPLY

TO

DR. HAYGARTH'S

*“ Letter to Dr. Percival, on Infectious  
Fevers ;”*

AND HIS

*“ ADDRESS TO THE COLLEGE OF PHYSICIANS AT PHILADELPHIA,  
ON THE PREVENTION OF THE AMERICAN PESTILENCE,”*

EXPOSING THE MEDICAL, PHILOSOPHICAL, AND  
LITERARY ERRORS OF THAT AUTHOR,

AND VINDICATING THE RIGHT WHICH THE FACULTY OF  
THE UNITED STATES HAVE TO THINK AND DECIDE FOR  
THEMSELVES, RESPECTING THE DISEASES OF THEIR OWN  
COUNTRY, UNINFLUENCED BY THE NOTIONS OF THE PHY-  
SICIANS OF EUROPE.

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BY CHARLES CALDWELL, M. D.  
FELLOW OF THE COLLEGE OF PHYSICIANS OF  
PHILADELPHIA, &c. &c. &c.

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PHILADELPHIA:

PRINTED BY THOMAS AND WILLIAM BRADFORD,  
BOOKSELLERS AND STATIONERS, NO. 8,  
SOUTH FRONT STREET.

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1802.





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# DEDICATION

TO

SAMUEL L. MITCHILL, M. D.

PROFESSOR OF CHEMISTRY IN COLUMBIA COL-  
LEGE,  
&c. &c.

DEAR SIR,

*The distinguished part you have taken in prostrating error and prejudice respecting pestilential diseases, the just indignation with which you meet the empty pretensions of foreigners, who attempt to teach us what they do not themselves understand, and your patriotic regard for every thing truly American, have induced me to inscribe to you the following memoir. However far its literary merit may be from commanding your approbation as a scholar and philosopher, the friendly sentiments with which it is addressed to you, will not fail to secure your notice as a man. Should my remarks and reasonings, in any part of this hasty little work, appear to you light and superficial, I must beg you to remember the extreme frivolity and frothiness of the publication to which I am replying. Who can bring*

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DEDICATION.

*himself to beat the air with his full force, when he is only repelling the smoke and dust which offer violence to his eyes?*

*At the same time that I pray your goodness to excuse me, for the liberty I have taken of thus publicly addressing you, without your knowledge or permission, allow me to tender you the homage of my respect and friendship.*

THE AUTHOR.

PHILADELPHIA, }  
JANUARY 6<sup>TH</sup>, 1802. }

# A R E P L Y,

Éc. Éc. Éc.

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**H**OWEVER painful it may be to act the part of a perpetuator of regret and sorrow to ourselves and others.—However painful, to revive a subject which awakens sensibility and tortures recollection, by recalling scenes of misfortune and misery, which had nearly ceased to be remembered, a sense of duty urges me to engage in the unwelcome task.

THE late devastations by pestilence, in the seaports and interior parts of the United States, (the keen remembrance of which the influence of time has been gradually mellowing into forgetfulness) have attracted the attention, and employed the pens, of several physicians beyond the Atlantic. Some of these authors, conscious of the difficulty of their subject, and of the insufficiency of their information respecting it to warrant decisive opinions, have written with a becoming degree of modesty and self-distrust. But others have pursued a far

different and much less decorous line of conduct. Elevated on a throne of their own conceit, dazzled by the mock splendor of their own imaginary greatness, and strangely duped into a belief in the infallibility of their knowledge, these latter have ludicrously endeavoured to play the part of medical pontiffs. Instead of addressing us as their equals and associates in science, they have, in appearance, only condescended to compassionate our supposed humble and benighted situation, to offer us instruction, and to frame for us edicts, relative to the origin, nature, prevention, and cure, of the epidemics which have swept with such havoc over our country.

IN the discharge of this preceptorial office, these gentlemen have betrayed a spirit so haughty, a manner so authoritative, and an ignorance of their subject so profound, and have contributed to the perpetuation of such pernicious, yet popular errors, that a reply to their writings is rendered indispensable. For American physicians to remain silent under such circumstances, would appear to the world like a willingness to be bound, "in all cases," by the idle notions of foreign theorists, and would be, in reality, a tame and unmanly submission to insult. But let these medical despots of our mother country know, that neither mind nor spirit has suffered such a degeneracy in the man of the west. Resolved on independence, in all its relations, we feel ourselves

disencumbered of the weight of provincial shackles, no less in the science of medicine than of government. For the latter we do homage to the memory of a WASHINGTON, for the former posterity will do justice to the genius of a RUSH!

THE presumption and folly betrayed by homebred foreigners, in pretending to instruct us in the knowledge of our endemic and epidemic complaints, are strikingly manifested by the following consideration: European physicians, on their first emigration to the United States, never fail to show themselves ignorant of the nature, and incompetent to the treatment of our common diseases, even when cases of them are submitted to their observation and care. They find themselves under a necessity of serving a second apprenticeship, in order to assimilate their ideas and habits to their new situation, and to render them skilful American practitioners. The most enlightened and liberal of them, that have settled in this country, have made repeated acknowledgement of this truth. How then can their brethren and former associates, immured at home, become possessed of, and communicate to others, that knowledge which they acquire only by travel and experience?

As well might an American physician, who had never visited foreign climates, undertake to teach the nature and cure of the Lepra

Græcorum, the Mal d'Aleppo, or the Cochin leg, as a British physician, accustomed only to the complaints of his own country, attempt to impart instruction respecting the diseases of the United States. As well might the parliament of Great Britain, in their present ignorance of our circumstances as a nation, attempt to legislate for all our emergencies, as her faculty to decide for us with regard to the nature, prevention, or cure of our epidemics. By the help of books alone, a physician may, even in his closet, acquire a knowledge of the general principles of disease; but it is only by travel, observation, and experience, that he can learn to apply these principles to the diversified circumstances of different climates and countries.

THE two European physicians, who have rendered themselves, of late, most conspicuous by their writings on the epidemics of the west, and to whose works the following reply will particularly relate, are Dr. Chisholm and Dr. Haygarth.

THOUGH I have connected the names of these gentlemen together, let it not be supposed that I consider them on the same level, either in their general respectability as authors, or in their qualifications to instruct their contemporaries on the subject of pestilential diseases. In these respects, their merits differ as widely as reality differs from empty pretension, and

dignified discussion from misrepresentation and abuse. The latter writes only from hearsay and conjecture, while the former details to us the result of his experience.

ALTHOUGH obliged, by numerous and weighty considerations, to dissent from many of the opinions of Dr. Chisholm, yet I cannot look into his late publication on malignant fever,\* without considering him respectable even in his errors. As long as an acquaintance with climate and situation shall be deemed essential to the knowledge and treatment of endemics; as long as the West Indies and other tropical countries shall continue to be the resort of adventurers from high latitudes, and as long as tropical diseases shall retain their present character, this work will be sought after and read, as a repository of choice information, by practitioners of medicine in warm climates.

DR. CHISHOLM possessed the most ample and favourable opportunities of seeing our late pestilential epidemic in all its grades, and of faithfully considering it in all its relations. He was among the first physicians who were called on to contend with this disease in 1793, when it invaded in such fury the island of Grenada. Here, amidst an extensive practice, he did not rest satisfied with the knowledge

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\* I allude to the second edition of this work.

derived from a close and painful attendance on his patients while living. Like a true philosopher in medicine, he aided the observation of the physician by the knife of the anatomist, thus rendering even death itself subservient to the advancement of the science he professed. Nor was this all: Led partly by official duty, and partly by a laudable ambition of acquiring a more perfect knowledge of, and a greater ascendancy over, this scourge of humanity, he afterwards travelled from island to island of the West Indies, carefully observing and treasuring up every thing that might tend to shed light on the subject. While engaged in this arduous and perilous task, we behold in him the noble enthusiasm of Hippocrates, traversing the islands of the Mediterranean and Adriatic Seas, surrounded by the dangers of shipwreck and pestilence, to swell the treasures of medical science, and to qualify himself to heal the diseases of man. Such opportunities as these, accompanied by such unwearied attention and perseverance in research, give the result of his enquiries a well founded claim to credit and respect. It is the collective force of such circumstances, that give weight to his general pretensions as an author, and that command a peculiar deference to his opinions with regard to the pestilence of the west,

BUT what shall we say to the magisterial pretensions of Dr. Haygarth in this respect? Whence do they originate, and on what are



they founded? Where is the fund of experience to sanction them, or the sources of observation to render them even plausible? Has the doctor a single qualification, either natural or acquired, which designates him as a man prepared to shed light on the subject of our late epidemics? Has he ever expatriated himself for the purpose of enriching the science of medicine, by an examination of nature in foreign countries? Has he ever left the temperate atmosphere of Great Britain, to gain a knowledge of the disease of regions that lie nearer to the sun? Such a journey might have both expanded his capacity and augmented his information. For the sun of the tropics has oftentimes ripened into active intellect the hebetude imported from higher latitudes. Has he ever crossed the Atlantic to study the climates, the topography, and the diseases of the United States? Or, does his mind possess such an exalted station in the region of intellect, as to enable it to overlook the globe, and to descry and comprehend, at a glance, the scenes that are passing in distant hemispheres? Those who know this gentleman best, will be the last to answer these questions in the affirmative.

BUT his conduct may be influenced by different considerations. Perhaps he may found the boldness of his pretensions as an author on the maturity of his years. Many writers less youthful are more modest, and it

is to be lamented that grey hairs give no infallible earnest of either wisdom or liberality. Does he derive his self-sufficiency from an education finished in the schools and hospitals of London and Edinburgh? The public teachers of these places, being themselves inexperienced in true pestilential diseases, are unable to impart a knowledge of them to their pupils. Is the extent of his reading the cause of his imaginary superiority over his brethren in the United States? We will not positively assert that he is not a man of profound erudition; but we have no evidence whatever to convince us that he is. But, be the ease as it may, books are at best but a secondary source of information, and a mere acquaintance with them should never be set in competition with observation and experience. But, perhaps he may pride himself on being a native of the same country which produced a Harvey, a Sydenham, a Cullen, and a Hunter. We entreat him to remember that weeds may infest the ground which has been overshadowed by the lordly Addansonian, and that the same clime gives birth to the lion and the jackal.

WERE Dr. Haygarth much younger than he is, we might ascribe his presumption to the inexperience and temerity of youth; and, if much older, we might commiserate him as being under the influence of dotage. But, flourishing as he is in the meridian of intellectual manhood, we are sorry to say, that we

can trace his unbecoming pretensions and manner to no other source, but the extent of his self-conceit.

WHAT less can we say of a man, who, insulated in his observations to the diseases of a few country-towns in Great Britain, and removed a thousand leagues from the scene of action he is examining, presumes to vilify the reasonings of the Academy of Medicine of Philadelphia, a society deliberating on the spot, and consisting of members individually as respectable as himself—What less, I repeat, can we say of such a man, when he has the assurance to annex to the reasonings of such a society, the rude epithets, “frivolous, inadequate, and groundless.” For the sake of whatever reputation he may now possess, we hope he will, in future, have more prudence than to expose himself by attempting to teach what he does not understand; and more delicacy than to insult others for exercising what they conceive to be a well founded right to differ from his crude and visionary notions.

FROM these general reflections, to which nothing but conduct such as Dr. Haygarth’s could have given rise, I will pass to a more particular analysis of, and reply to, this gentleman’s late publication. In doing this I shall be led to offer a few remarks on the

character of the author : 1st, as a scholar; 2dly, as a philosopher, and, 3dly, as a man of candour and veracity. The boldness of his pretensions, and the commanding attitude he has attempted to take, render it necessary that he should be more than commonly accomplished in these respects. How humiliating to him then, should he, on being weighed in the balance, be found shamefully wanting in each of the three !

IN putting the doctor through this ordeal of examination, I feel it incumbent on me to treat him with every mark of fairness and justice. Resolved, therefore, to reject all testimony of a dubious nature, I shall admit nothing in evidence against him, except what has fallen from his own pen. This will be my apology to the reader for troubling him, in the following pages, with more copious extracts from his late work, than the merit of the performance would otherwise justify. This copiousness will also vindicate my own candour against any suspicion of a design to misrepresent our author's meaning ; a practice of which, as will hereafter appear, he has himself been strangely guilty, in his strictures on Mr. Webster's "History of Epidemic and Pestilential Diseases," and on my Oration delivered to the Academy of Medicine in 1798.

I shall also, in my proposed analysis, hold sacred Dr. Haygarth's right to enquire, deliberate, and advise, respecting the origin,

nature, and prevention of such diseases of Great Britain, as fall immediately under his notice. Nor shall I be so rude as to call his opinions relative to these local matters either "frivolous" or "unfounded," whatever reason I may have to think them so. For I cannot withhold my belief, that, relying on observation and experience, and deliberating on the spot, he has a better chance, even with his limited capacity, to arrive at truth respecting the diseases of Chester and Bath, where he appears to have spent the best part of his life, than a physician of the first talents, three thousand miles remote from these places. Had the doctor made a concession equally rational and liberal to the physicians of the United States, it is more than probable, that the errors and absurdities of his late publication would have been suffered to pass silently and securely into the same oblivion, which has already become the grave of his former works. But, as he has attempted to usurp the office of dictator to the medical characters of the west, and, with regard to some of them, has even endeavoured to add injury to insult, it is their duty to meet his pretensions with a becoming spirit, to embalm his follies, his errors, and his faults, and expose them as brazen monuments of his disgrace.\*

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\* I am both a stranger in practice, and, under common circumstances, an enemy in principle to the language of invective.

THE production of this gentleman which I am about to examine, is entitled, "*A Letter to Dr. Percival, on the prevention of Infectious Fevers, and an Address to the College of Physicians at Philadelphia, on the prevention of the American Pestilence.*"



## SECTION I.

STRICTURES ON DR. HAYGARTH'S CHARACTER AS A  
SCHOLAR.

UNDER this head I beg the liberty of quoting a few passages from the foregoing work, and of annexing to each a few remarks.

IN his description of typhus fever, our author tells us, that among other symptoms, the subjects of that complaint experience "pain on the exertion of muscular motion," page 10.

WE have oftentimes heard of muscular exertion, vascular exertion, and mental exertion;

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Should, therefore, any expressions of severity and apparent harshness escape me in this memoir, I will as candidly acknowledge their unfitness to fall from me, as I will stedfastly maintain their propriety when applied to Dr. Haygarth.

but till we were favoured with a vocabulary of phrases by Dr. Haygarth, the "exertion of motion" was an expression unknown to us. What tribute of gratitude and applause will not future authors pay to him, for having taught them thus to diversify modes of speech; and who but the most profound philologist, could have enriched his native language with such a combination!

AGAIN, conceitedly puffing his own pigmy achievements, in having (as he supposes) taught the world how to escape the influence of typhous poison, the doctor gives vent to the following extraordinary paragraph:

"As the cause of these calamities is so fully explained, and as the *means* of preventing them *is* so obvious and so easy, I hope that, *in future*, no physician, surgeon, or medical student, will ever, *in future*, be infected with a typhus fever, in an hospital!!" page 94.

THE numerous and gross enormities of this sentence, silence criticism, and forbid comment. For tautology, grammatical inaccuracy, and, indeed, general outrage on the rules of composition, it offers defiance to any paragraph of the same length in the English language.

IN page 104, our author says, "No medical *or* other visitors were ever suspected to have caught infection in these wards," &c.

THE use of the disjunctive instead of the negative conjunctive particle, is a mode of expression which abounds in all parts of the doctor's writings. To the intelligent reader I need not remark, that a vulgarism so palpable, and so frequently repeated, bespeaks an illiterate state of mind in the man who practises it.

AGAIN, in page 138, we have the following clause, which, not even the devoutness of the sentiment it breathes, can render acceptable to a literary ear.

"ON looking at the world around me," says our author, "I have reason, much reason to be *gratefully thankful* to the Disposer of all things," &c.

"Gratefully thankful!" In plain English, thankfully thankful! How brilliant is the commencement of the nineteenth century! A new and more perfect degree of comparison ushered into existence, to supply the want of energy of the former three. Compared to our own, how beggarly are the languages of other nations and times! The French have only their *reconnaissant*, plus *reconnoissant*, bien *reconnaissant*; the Romans had only their *gratus*,



gratior, gratissimus; and the Greeks their eucharis, eucharion, eucharistos; but, thanks to the inventive powers of a Haygarth, we have our thankful, more thankful, most thankful, and thankfully thankfully! In future we may expect to find in the writings of this gentleman, and of such other happy geniuses as may be able to keep pace with him in his career of improvement, the following elegant and nervous epithets: Foolishly foolish, ignorantly ignorant, illiterately illiterate, and uncandidly uncandid. We are willing to hope, however, that these literati will not always furnish ground for the application of such expressive epithets to themselves.

THERE are many weak and narrow minded Christians, who, judging of the divine taste by their own, suppose that the Deity delights in rags and wretchedness, in the appearance of those who approach him in worship. Perhaps our author, possessed of similar ideas with regard to language, may conceive a sentiment of gratitude to be acceptable to the "Disposer of all things," only in proportion to the coarseness of the manner in which it is expressed. If this opinion be just, I beg him to accept my congratulation on the uncommon acceptability of the sentiment conveyed in the above quotation.

SUCH are a few of the evidences, derived from his own writings, which throw a shade

on the reputation of Dr. Haygarth as a scholar. More, many more, equally striking might be drawn from the same source. Indeed I will venture to say, that scarcely three successive pages can be found throughout his whole works, that do not betray some flagrant violation of the rules of composition. Shades of Waller, Addison, and Johnston, descend, and bear in your hands a chaplet for your countryman, who is so rapidly carrying to perfection the improvements in philology which you only began!

I shall proceed to

## SECTION II.

### STRICTURES ON THE CHARACTER OF DR. HAYGARTH AS A PHILOSOPHER.

UNDER this head the same course will be pursued as under the former. To each quotation from our author's late work a few critical remarks will be subjoined.

THE first part of this publication, where I shall call in question the doctor's philosophy, is that in which he undertakes to teach us "what dose of typhous poison is infectious." On this subject he expresses himself in the following terms:

“BY the assistance of these preliminary principles, we are well prepared to enquire, what dose of the typhous poison is required to produce infection. The quantity will undoubtedly vary according to different circumstances, but we shall be enabled to judge with some accuracy, what are the limits of this variation.

“IN this whole investigation, you will, I am certain, keep in mind one medical truth, it cannot be called a theory, a term often applied to doubtful disquisitions. The larger the dose of a poison or drug, the greater in general is the effect which it produces. Many of the most powerful and salutary medicines, when taken in too large a quantity, are poisons, as opium, antimony, mercury, hemlock, aconite, fox-glove, &c. Even arsenic itself, *the most virulent and unmanageable of all poisons*, by the skill and attention of physycians, has been reclaimed from the class of mischievous substances, and by a diminution of the dose, is held, on good authority, to be a safe and useful remedy.

“ON this subject a farther analogy ought to be taken into consideration. In different constitutions, and in different indispositions, there is a certain degree of variety in the operation of any drugs; in some more than in others.

Few drugs are so uncertain in their effects as antimony; four or six times the dose of it may be required for one patient more than for another, or for the same person in different diseases. In most other medicines and poisons, the difference between the least and greatest operating dose is much less than what is here stated. The mischievous quantity of infectious miasms, as might be expected, from the analogy here explained, admits of some degree of variation. They propagate the small-pox, however, with much uniformity, as has been proved in the *Inquiry* and the *Sketch*. It is not improbable that debility, or indisposition, or fear, or exposure to cold or fatigue, or, as some suppose, a difference of diet, may occasion greater variety in the quantity of poisonous miasms requisite to produce an infectious fever than the small-pox. In these peculiar circumstances, a sufficient, which can only be a small, allowance may be made for the difference, without much difficulty." (Pages 35, 36, 37, and 38.)

IT is universally admitted, that an author can always write with ease and perspicuity on whatever subject he clearly understands. Under such circumstances there is neither labour in his manner, confusion in his arrangement, obscurity in his style, nor a want of connection between his propositions. His reasoning is lucid and intelligible, his remarks have a

specific and obvious reference, and tend directly to the establishment of the point he has in view. What, then, shall we say of Dr. Haygarth's knowledge respecting the subject of the preceding paragraphs? Were ever the component parts of any thing, that bore the name of reasoning, so perfectly deficient in point of relationship to each other, and of specific affinity to some common end? He tells us, in the beginning of them, that he intends to teach us what "dose" (by which I suppose he means *quantity*) of typhous poison is requisite to produce infection. It is peculiarly fortunate that he has informed us of his intention, as his subsequent remarks furnish no clue to conduct us to a knowledge of it. The country-painter's inscription, "*This is the man, and this is the horse,*" was not more necessary to prevent mistakes respecting the works of his pencil, than such information is, in the present instance, to prevent similiar consequences relative to the production of Dr. Haygarth's pen.

LET us briefly analyse this strange quotation, and see to what the matter contained in it amounts.

THE doctor first tells us, that "truth" and "theory" are not necessarily synonomous terms. In proof of this he need only refer us to his own speculations. He goes on to inform us, that a large dose of medicine will operate

more powerfully than a small one, that a sufficient quantity of tartar emetic (*tartarized antimony*) will puke a person to death, that opium is a medicine or a poison according to the dose in which it is administered, and, (mirabile dictu!) that even arsenic may, under skilful management, be converted to medical purposes. But these pieces of information, *new and important* as our author may think them, we could have obtained from his apothecary's boy, as readily as from himself.

HE proceeds in his illustration. In different constitutions, says he, and even in the same constitution under different indispositions, the same drug will be productive of different effects; but few drugs are so uncertain in their operation as antimony. From these loose propositions, which he appears to consider as preliminary principles, he next, with his customary perspicuity of reasoning, infers, that "the mischievous quantity of infectious miasms admits of some degree of variation," and then refers us to his "*Inquiry*" and his "*Sketch*" for *proofs* respecting the propagation of small-pox, which every intelligent reader of them will agree with me these obsolete productions do not contain. He closes with a strange medly of words, which, with more than his usual modesty, he admits to be the signs of something *only conjectural*. What this something is, common attention in reading has not

enabled me to ascertain ; and I feel no disposition to sacrifice further either my time or my ease for the sake of the discovery.

SUCH are the particulars of Dr. Haygarth's revery (I will not call it reasoning) relative to the infectious dose of typhous poison. But I intreat the reader to turn back, examine again the foregoing quotation, reconsider it attentively, and then judge of it for himself. As for me, I can give him no aid in tracing its connection, or in deciphering its drift. I feel myself either bewildered by the darkness, or dazzled into blindness by the brilliancy of the author's mind. In relation to the extract I might, with a few verbal alterations, adopt the exclamation of the poet on a different occasion,

“ It has no worth, or I no worth can spy,  
“ It is all nonsense, or all blindness I!”

It would be improper to pass, without due notice, our author's assertion, that arsenic is “ *the most virulent and unmanageable of all poisons.*” There are vegetable poisons which, on being applied to the human system, require fewer minutes than arsenic does hours, to complete the work of destruction. For further information on this subject, I beg leave to refer the *philosopher of Bath*, to the *unlettered savage* on the banks of the Oronoquo.\*

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\* IN this reference, though I do not, in plain and uncourtly language, call the doctor an Ignoramus, he will please

IN pages 55 and 56 of Dr. Haygarth's work, we find the following clause: "Every chemist must be convinced, that the insensible perspiration is *dissolved in the air, because it is insensible*. And the vapour which arises from respiration is also *dissolved*, except when made visible by cold air."

A blunder in science similar to this, Dr. Mitchill has very happily exposed, in his admirable review of our author's publication. (Vid. Méd. Repos. vol. v. p. 179, et seq:) such a blunder would not only exclude an applicant from a doctor's degree, in the University of Pennsylvania, but would effectually procure the rejection of a candidate from the junior medical society of this city.

"EVERY chemist must be convinced, that the insensible perspiration," or matter of perspiration is *not* "dissolved in air." It is dissolved in caloric, or the matter of heat. Place the human body in vacuo, and the perspirable gas will rise with more facility, and be (if the expression be admissible) even *more insensible* than in the open air, because its ascent will be no longer impeded by the pressure of the atmosphere. These remarks are equally applicable to the "vapour which



arises from respiration." Cold air renders this halitus visible only by robbing it of the matter of heat which held it in solution.

AGAIN, in pages 56 and 57, in attempting to prove the solution of his "infectious miasms" in air, the doctor says, "It is maintained that no two substances do, *in any instance whatsoever* exist together in a *perfectly pellucid state*, unless they are *chemically united with each other*."

Pray, doctor, by whom is this assertion, so repugnant to the principles of pneumatics, "maintained?" Is it by yourself, or by some of your friends, whose stock of information is more scanty than your own? No one, who has ever heard of the modern improvements in chemistry can believe it, till he reject the evidence of the best of his senses. Have you never seen an admixture of oxygenous and inflammable airs, of oxygenous and nitrogenous airs, and of carbonic acid gas with the common airs of the atmosphere. Are not these mixtures "perfectly pellucid," and will you or your friends undertake to "maintain" that the elements which constitute them are "chemically united with each other?" Does not our atmosphere itself, the most transparent of all bodies, consist of two gases in a state of *mixture* and not of *chemical union*? But, I feel that I am uselessly wasting words; for

you have shown yourself so profoundly ignorant of these subjects, that I really doubt your capacity even to comprehend truth respecting them, when laid before you.

In page 117, our author remarks, "Contagious fevers appear to be the *chief cause* why there is a much greater proportional mortality in large than in small towns, and houses dispersed in country situations."

This is certainly not true in America, and it is highly improbable even when applied to other countries. London and Paris are not more infested by contagious fevers (small-pox perhaps excepted) than many of the small inland towns of Great Britain and France. The principal cause of the greater proportional mortality in large cities appears to be, *artificial debility in the systems of their inhabitants*, induced by an impure atmosphere\*, intense summer heat, sedentary occupations, high living, early incontinence, and other modes of dissipation and irregularity. When the human frame is debilitated by such means as

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\* Not only does the general impregnation of the atmospheres of large cities with heterogeneous substances, produce chronic debility in their inhabitants; but their contamination with the gas resulting from the process of putrefaction peculiarly predisposes to bilious diseases, which contribute in a high degree to swell the bills of mortality in such places.

these, it is not only less able to contend with disease, but is also predisposed to invite and suffer it in a more exalted degree. For debility and an increase of irritability are, for the most part, concomitants in the human system.

Dr. Haygarth's long habits of attention to the typhus fever of Chester and its neighbourhood, and the melancholy and extensive ravages which he has no doubt seen produced by that disease, appear to have given a settled cast to his thoughts, and to have induced him too hastily to attribute the mortality of towns and cities in general to a similar cause.

In page 148, our author, modestly contradicting the physicians of the United States, who derive yellow fever from the putrefaction of animal and vegetable substances, furnishes us with another extraordinary specimen of his philosophical attainments.

“It is too obvious,” says he, “to escape notice, that the stench arising from the hold of a ship, proceeds from the putrefaction of substances which belong to all the *three* kingdoms of nature, vegetable, animal, and *mineral*.”

“*The putrefaction of mineral substances!*” strange and unheard of phenomenon! Here (to use an epithet of his own) Dr. Haygarth “mar-

vellously" improves on his own absurdities. He "out-Herod's Herod." This is a blunder more gross and palpable to sense, than that which he committed, when he asserted his belief in the "putrefaction of typhous poison." (Vid. Med. Repos. vol. v. p. 189.) As well might the doctor declare his belief in the putrefaction of iron, magnesia, or silex, as in that of any other substance truly mineral. This process is exclusively confined to the animal and vegetable kingdoms.

But the most striking specimen of our author's ignorance both of books and things is yet to come. In page 150 he says, "previous to the accusation of *putrid coffee* as the cause of pestilence in 1793, *no medical author*, as far as I recollect, has ever ascribed to vegetables in such a situation, a power to generate an infectious fever, *or any fever, or indeed any other disorder whatsoever.*"

That a physician who has had access to public schools, public libraries, and the conversation and correspondence of learned men; and who has even acquired some reputation in a country distinguished for medical literature; should make such a confession as this, surpasses expectation and almost belief. Were Dr. Haygarth subject to intoxication, or did he possess genius enough to predispose him to madness, I should really be inclined to suspect,

that he had written the above extract in a paroxysm of the one or the other, and had neglected to erase it on his return to his sober senses. Madness or intoxication would be the most reputable apology for such unparalleled ignorance. What, I beg leave to ask the Dr. is *marsh miasma*, but a gas resulting principally, perhaps, wholly, from vegetable putrefaction? But why do I attempt to remonstrate or to reason with such a man? Scarcely an author of respectability has written on *bilious diseases* for a century past, who has not attributed them to the putrefaction of vegetable or animal substances, or to a combination of both.

I shall pass to

### SECTION III.

STRICTURES ON DR. HAYGARTH'S CHARACTER, AS A MAN  
OF CANDOUR AND VERACITY.

The reader will, no doubt think, on a first view of things, that I am pushing matters to a serious issue, in arraigining our author on points of such magnitude and concern. But while facts support me I am regardless of the extent to which I proceed. If the doctor's own writings give evidence against him—if they prove him to have repeatedly outraged these

cardinal attributes of man, it is an act of public justice to collect and embody this evidence, in such a manner, as to convict him of the deed. Nor have I the smallest doubt of gaining the assent of the candid reader to this truth, that, on the present, as on former occasions, his own works are the organ of his condemnation.

Resolved to say something (though in fact he knew nothing) respecting the origin of the first epidemic of Philadelphia, he observes, "But a physician of eminent abilities (alluding to Dr. Rush) in an evil hour, most unfortunately, ascribed the generation of the pestilence with which *America* was afflicted in 1793, to *putrid coffee*, without any proof, or the slightest degree of probability." P. 146—147.

How uncandid, illiberal, and presuming are such insinuations and assertions! "The pestilence with which *America* was afflicted in 1793!" As if the disease which Dr. Rush declared to have had so simple an origin, as a quantity of putrid coffee, had overspread the *continent of America*; whereas, it was, as is well known, exclusively confined to the city of Philadelphia. But, be this as it may, which of the two was most competent to judge of "proof" and "probability" on this subject, Dr. Rush in Philadelphia, or Dr. Haygarth at Chester in England? The great medical teacher of the West, enquiring and reflecting on the spot, or the author of a neglected "*Inquiry*"

and "Sketch" indulging his idle conjectures at the distance of more than three thousand miles? But I have no words to express my sentiments of such assuming and spurious pretensions. They must be left to the keener lash of silence and contempt.

Determined boldly to assert the worst (no matter whether true or false) which his imagination could suggest, respecting the advocates of the American origin of our late epidemics, Dr. Haygarth, in another place, says:

"It is not a little curious, and indeed highly *instructive* to observe, that Dr. Caldwell signed this opinion, that the yellow fever of America was generated from *putrid vegetables*, as an individual, in answer to Governor Mifflin's letter, dated 6th November 1797, and assented to it as an Academician on the 20th day of March 1798. Yet in an oration spoken on the 17th of December 1798, with great declamatory parade, bold assertions, and flowery diction, *he takes no notice whatsoever of this doctrine*, but ascribes the *whole mischief* to a peculiar constitution of the atmosphere, as proved by the multitude of grass-hoppers, flies, and muskitos. *The dirt of Philadelphia he also blames*, but does not allege that it existed in any unusual degree. *No clearer proof need be required of self-contradiction and condemnation.*" P. 151.

I am not a little gratified at being told, that any part of my writings has furnished our author either with a *curiosity* for his amusement, or with matter “instructive” to him. He appears to possess a mind of that flimsy cast, which is most devoted to amusement, and, certain I am, that no man stands more deeply in need of *instruction*. He is at liberty, therefore, to read the few works I have written as often as he pleases, to rifle them of their instructive matter, to play with their curiosities, and even to laugh at the follies which they no doubt contain. But I owe it as a duty both to him and to myself, to warn him not again to disgrace himself, and attempt to injure me, by a palpable misrepresentation of my opinions.

In the foregoing quotation the doctor, as the reader has observed, very delicately alleges, that I have been guilty of “*self-contradiction*,” in having ascribed the origin of the late epidemics of Philadelphia, *at different times to different sources*. He asserts that, on two occasions, I subscribed to the opinion, that these diseases were “generated from putrid vegetables,” and afterwards in my Oration of December 1798, attributed “the whole mischief, to a peculiar constitution of the atmosphere,” without taking any “notice whatsoever of the former doctrine.”



Those who have ever looked into my Oration here referred to, need not be informed, that the latter part of this assertion is unequivocally false. In no part of that work did I ascribe our late epidemics *exclusively* to a general malignity of the atmosphere, in no part of it did I lose sight of the influence of putrid vegetable effluvia in the production of these evils. At all times, both in my Oration and elsewhere, have I attributed the diseases in question to the co-operation of these two causes. At all times have I declared it as my belief, that, without such co-operation, pestilence can but rarely become epidemic.

The flagrant injustice which Dr. Haygarth has done me, in asserting that, in my oration to the Academy of Medicine, I take no notice of the doctrine which derives yellow fever from the influence of putrid vegetables, will be most effectually exposed by the following quotation from that work :

After having, in general terms, assigned the "filth" of Philadelphia as one of the causes of the repeated calamities she had suffered, I proceed thus : "To enumerate all the sources of our domestic filth is not my present object. This has already been ably done in several

memorials\* by the Academy of Medicine. There exist, however, two sources of putrefaction, to which, I will be pardoned for thinking, that the public attention has not been directed in a manner sufficiently forcible. These are, the vast quantity of *putrid and putrefying timber*, which enters into the formation of our docks and wharves, and the immensity of animal and *vegetable* substances, strewn in a putriferous state, along the commons, in a south-western direction from the city." See *Semi-annual Oration*, p. 25.

Can any thing be more explicit and decisive than this paragraph: and can any thing be more unexpected than that a man, with M. D. and F. R. S. annexed to his name, should declare, that the publication containing it, takes no notice of the doctrine which derives the late epidemics of Philadelphia from putrid vegetables? The least I can say on this occasion is, that Dr. Haygarth is either so immoral as voluntarily to violate truth, or so ignorant as not to know, that "*timber*" is a vegetable substance. The only privilege left to him is,

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\* THE memorials, here alluded to, are those in which putrid vegetables are expressly mentioned as one of the sources of yellow fever, and to which, as Dr. Haygarth acknowledges, I had given my assent. This single circumstance is sufficient to invalidate his assertion, that in my address to the Academy I take no notice of the doctrine which derives this disease from vegetable putrefaction.

a liberty to shelter himself under that branch of the dilemma which he thinks least disgraceful to him.

But I have not yet done with the doctor on this subject. In the very same paragraph, where he has the assurance falsely to charge me with "self-contradiction," he most unequivocally contradicts himself: He first asserts that, in my Oration already quoted, I take no notice of the doctrine which derives yellow fever from putrid vegetables, and afterwards acknowledges, that I "blame the *dirt* of Philadelphia" as taking part in the production of this disease. Now I can scarcely conceive a man, even of Dr. Haygarth's shallow capacity, to be so ignorant as not to know, that the dirt, or "filth" (as my Oration expresses it) of a large city, consists in a great measure of putrid vegetable substances. Such is the self-consistency of this strange man, who so boldly arraigns the consistency of others.

But, the injustice done by Dr. Haygarth to Mr. Webster of Connecticut, is no less glaring, than that of which I have convicted him with regard to myself. Speaking of Mr. Webster's "History of Epidemic and Pestilential Diseases," he asserts, that this learned and truly philosophical writer ascribes the generation of these evils "to earthquakes, volcanos,

tornados, hailstones, flights of wild pigeons, large flies, dead haddocks on the coast of Norway, abundance of shads on the American coast, black worms," &c. &c. Vid. p. 155; and again, in p. 156, declares, that "for *the cause* of the pestilence which so sorely afflicted America in 1793, he (Mr. Webster) goes back as far as 1788, to collect an account of all the earthquakes, (in Iceland and in Tuscany) comets, tornados, high tides, hailstones, meteors, sickly fish on the Banks of Newfoundland; a halo; a famine in India and China; dead haddocks on the coast of Norway, &c. &c; and that "to these causes, which happened in distant parts of the world, during a period of five years, he (Mr. Webster) ascribes the American pestilence."

A misrepresentation more gross and slanderous than this, never fell from the pen of an author. Mr. Webster does not attribute pestilential diseases to earthquakes, volcanos, tornados, meteors, famine, nor to any of the causes enumerated, as above, by Dr. Haygarth. He holds these physical enormities and pestilence to be only *concurrent effects* resulting from the operation of the *same cause*. He represents pestilential periods as times of elementary derangement, and considers earthquakes, volcanos, tornados, and pestilence among mankind, fish, and other animals, as the visible effects of such derangement on the material

world. But let us hear Mr. Webster's opinion on this subject delivered in his own words:

“ I cannot however admit,” says he, “ that the *explosion of subterraneous fires*, are the direct exciting cause of pestilential diseases. It is indeed ascertained, beyond all question, that periods of extensive pestilence and mortality, are remarkable for earthquakes and eruptions of volcanos. But the explosions of fire do not so generally *precede* epidemic diseases, as to authorize the supposition that they *produce* those diseases. Earthquakes occur, during the prevalence of pestilential or other mortal epidemics, but in the midst of the period, or sometimes at the conclusion.”

“ Hence,” continues he, “ I deduce an opinion, that earthquakes and pestilence depend *on one common cause*; which excites into action the internal fires\*.”

So much for Mr. Webster's sentiments respecting the connection between earthquakes, volcanos, and pestilence. But he is equally express in denying the agency of all the other phenomena enumerated by Dr. Haygarth, in the production of pestilential diseases, except

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\* See Webster's "History of Epidemic and Pestilential Diseases." Vol. II. p. 83.

*comets*. It must be acknowledged that he seems inclined to a belief, (perhaps a rational one) that these erratic bodies are influential in giving rise to that elementary derangement, which produces pestilence and other irregularities in the dominions of nature. With these remarks I leave the reader to determine for himself, to which of the two we should attribute Dr. Haygarth's misrepresentation of Mr. Webster's opinions, *want of discernment, or want of veracity*. I cannot, however, conceal my own belief, that the *latter* is the true source of such unparalleled perversion. For, in the words of the poet:

“ Eyes without feeling, feeling without sight,  
 “ Ears without hands or eyes, smelling sans all,  
 “ Or but a sickly part of one true sense,  
 “ Could not so mope !”

Though not so enamoured of quoting my publications as Dr. Haygarth is of quoting his\*, yet, for the purpose of further exposing the cavilling spirit with which this author has written, I must beg the reader's attention to another short extract from my Oration to the Academy of Medicine.

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\* In a work containing only 188 pages, the doctor modestly quotes, as authorities, his own writings and opinions, between fifty and sixty times !!

In speaking of the existence of a pestilential constitution of our atmosphere, I remark, that, "though ridiculed of late, by some physicians, under the denomination of an occult quality, reason and observation still declare it (a pestilential constitution) to be a quality resting, for the certainty of its existence, on evidence as substantial, as that which supports the great Newtonian principle, the gravitation of terrestrial bodies."

To this paragraph our author, affecting at once the witling and the philosopher, has been pleased to make the following *pert* and *sagacious* reply :

" *The gravitation of terrestrial bodies is no discovery of Newton's ; (admirably grammatical!) but a fact well known to every inhabitant of the earth ever since the creation.*"  
P. 173.

A quibble more paltry and contemptible than this, never disgraced the page of a critic. The reader will bear me witness, that the above extract does not attribute to Newton the *discovery* of the gravitation of matter. The evident and only meaning of it is, that that great man was the first who made the proper use of this principle, in explaining the motions of the heavenly bodies. I have not a doubt but that, "ever since the creation," men even possessing

brains *less saturnine* than those of a Haygarth, have known and often experienced, that if their heels were tript up, their heads would come to the ground. But I excuse this medical St. George of Bath. After having, in his own estimation, vanquished the deadly dragon of contagion, he still appears unwilling to rest from his toils. Having, as he supposes, given peace and safety on this score to Britain, his meddling spirit now urges him headlong into the affairs of other countries. On condition, therefore, that he no more pervert the opinions of the medical characters of the United States, he has my full and uncontrolled permission, to give vent, in future, to his pruriency for writing, in scribbling personal squibs and invectives against myself.

With this I take my leave of Dr. Haygarth's publication. It exhibits many other passages no less exceptionable than those I have noticed. Indeed the work throughout is as frothy as it is ostentatious; as weak in argument as it is bold in assertion. Did it contain a single fact or remark of the least respectability, relative to the contagious nature of yellow fever, or its introduction into this country, I would proceed to answer it\*. But, on these

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\* The second memoir in my volume of "Medical and Physical Memoirs," which is already before the public, contains



points, it is, I will not say, *below mediocrity*, but, *completely barren*. Here its author has prudently adopted the knave's expedient, of boldly assuming as self-evident what he is unable to prove. Even the advocates of this doctrine will blush at the recollection of such a beggarly performance.

Among the physicians of the United States, there will be but one sentiment respecting this work. They will all feel it as a thing, which insults their understanding and independence, without adding a single idea to their information. Even the College of Physicians of Philadelphia will constitute no exception to this general sentiment of indignation and contempt. For the gentlemen who compose that institution have too much discernment and sensibility, not to perceive and feel, the weak and arrogant attempt which Dr. Haygarth has made to direct their proceedings. They have too high a sense of their own dignity, and too just an abhorrence of cavilling and misrepresentation, not to repel, in a becoming manner,

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an epitome of my objections to the contagious nature and foreign origin of our late epidemics. To that work, therefore, I beg leave to refer the reader for some knowledge of my opinions and reasonings on these matters. In my reply to Dr. Chisholm's late publication, (a work which merits argument, because it contains it) I shall endeavour to make them subjects of further discussion.

such an intrusive overture from this conceited foreigner, to rule them in a matter respecting which he is equally ignorant and uninterested. For, though I have not the honor to think with this learned body on all subjects, I am confident, that, on the present occasion, they will not fail to feel with me as an independent American.

A few words directed personally to Dr. Haygarth shall close this memoir. Here, then, in reference to my own wrongs, I may address him in the manly expostulation of Hamlet to the passionate and rude Laertes.

“ Hear me, Sir ;

“ What is the reason that you use me thus ?

“ I harm'd you never : But it is no matter ;

“ Let Hercules himself do what he may,

“ The cat will mew, the dog will have his day.”

You have drawn me, sir, into a field I was unwilling to enter, and have provoked me to a contest I would gladly have shunned. The spirit of recrimination is not congenial to me, and I am weary of controversy respecting pestilential diseases. But your matter and your manner demanded a reply. For, by weak minds, silence is oftentimes construed into conviction. You have slandered the productions and endeavoured to be-little the talents of the first medical characters of the United States. You have gone further, and even

attempted to usurp the authority of a dictator to the whole Faculty of the west. With regard to myself, you have basely misrepresented my opinions, charged me with self-contradictions which do not exist, and attacked with harsh invective, what I wrote with moderation, and without the smallest expectation of submitting it to the public.

Had you conducted your late work with the dignity of a gentleman, or the modesty becoming a man necessarily unacquainted with his subject, some of my generous and enlightened countrymen would, no doubt, have undertaken to inform your understanding and correct your judgment, in a manner so mild, as not to have offered offense to your feelings. But you have forfeited all claim to gentleness and delicacy. Your unmannerly interference in matters that do not concern you, and your unprincipled outrage on candour and truth, have forced me to tell you, in plain language, what Americans think of you and your publications.

Go, then, sagacious *measurer of the dose of typhous poison!* enlightened *dissolver* of gaseous fluids in air! fortunate *discoverer* of the *putrefaction* of *contagion* and of *mineral* substances! Go! revolve only in a sphere commensurate with the extent of your intellect and scientific attainments. Feel with empty affectation, and count with mimic wisdom, the enfeebled pulses of the fashionable at Bath.

Superintend, as the only monument of your labours which is likely to outlive you, your first begotten Infirmary at Chester. Dote in solitude (for in this no one will bear you company) on the imaginary perfections of your "*Inquiry*" and your "*Sketch*." And, for the want of a better herald, trumpet in the ears of your correspondents at Manchester the fame of your wonderous works. Such alone are the objects and pursuits which appear to besit you. Of the honours derived from these quarters, I would not pluck a leaf from the wreath, which you behold in imagination encircling your brow. But listen for once to the advice of a young man: Confine your remarks, in future, to the narrow circle of your observation and knowledge. Suffer your distant brethren in medicine to investigate and decide on the nature and causes of the diseases which surround them, without becoming subject to your obloquy and abuse. Keep your weak counsel for the benefit of those whose emergencies may compel them to consult you. Restrain the loose speculations and childish vagaries of your mind, to the circumscribed limits of the island which produced you. But never again so far forget yourself, as to engage in a controversy, where genius and science have entered the lists; never again dare to approach, with hostile intentions, the temple erected to truth on this side of the Atlantic, by the pens of a *Webster*, a *Mitchill*, and a *Rush*!

F I N I S.





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