

gradually increase among them ; and Colonel Humphries, by selecting for breeding a marked variety, has succeeded in procuring a flock, all of them with deformed bones. If the same causes operate in man, may we not impute to them, many endemic peculiarities found in certain sequestered districts, which have hitherto been imputed to the water, and other localities? And may we not trace a provision against such a deterioration of the race, in that revealed law, by which any sexual intercourse between near relations is forbidden, on pain of death? This prohibition, as far as we can judge, proves sufficient to prevent the too great influence of such an hereditary cause, since the number of maniacs does not increase in proportion to our increased population, and the great exciting causes of madness, namely, increased wealth, and other sources of ambition. Nor is this the only provision we can trace. The worst stages of madness are attended with a total indifference to the sex, not to mention the very general inclination

to suicide, which the utmost vigilance cannot always prevent. Seeing then how little is left in so important a concern to the operation of human institutions, have we not reason to be satisfied with the provisions of Nature, and with the Divine commands? Yet, in the most serious of all hereditary peculiarities, the great susceptibility to madness, celibacy has been recommended as a duty. Before we venture to propose measures contrary to one of the strongest impulses of Nature, and to the first blessing which the Almighty Fiat bestowed on man, it becomes us seriously to weigh the consequences.

Were this opinion universal, it would probably produce its effects only on the most amiable and best disposed, whilst the profligate and unprincipled would indulge themselves, regardless of posterity: It is scarcely necessary to hint at the result. To interdict marriages with the healthy individuals of such families, might do much towards extinguishing that enthusiasm, which,

when well directed, proves the source of those achievements which aggrandize families, which encrease the glory of nations, and improve the condition of mankind. Nor is this confined to heroes and statesmen, but extends to the effusions of genius, and to the cultivation of the softer virtues. It is neither necessary, nor proper to introduce names, they will occur to every one who has lived long enough to become acquainted with the ramifications of families.

We see the influence of climate sufficient to preserve a race suited to particular regions; and where the irregular action is unconnected with climate, we find a Divine law, with other causes arising from the irregularity itself, all tending to restore the original form.

But should there exist a disease, the disposition to which is excited by climate; should such a disposition become hereditary, and should the disease when excited prove incurable, from such a combination of causes we could expect nothing less, than the gra-

dual extinction of the race ; and should the district be re peopled, the same succession of causes and effects must gradually extinguish the descendants of the new Colonists ; yet, such a disease does exist in the finest and most extensive part of the habitable globe. Human institutions have indeed made some feeble attempt at restraining it, but human endeavours must have proved ineffectual. Happily, the same power which permitted such a cause, has fixed limits to its effects.

The *Elephantiasis* of ARETÆUS is peculiar to warm climates ; the disposition to the disease is hereditary, and the disease itself has, hitherto, proved incurable. I have never been able to learn, that it has attacked emigrants from a colder climate, nor their immediate descendants. A residence therefore of some generations, is probably necessary to induce the disposition. When the diseased disposition is *derived* from *inheritance*, the action always commences before the age of puberty ; and the subject never

arrives at that state ; the organs are never evolved, and no other marks of virility appear. When the disease originates with an individual, it usually commences at a more advanced age ; but from that time, the organs which distinguish the sexes decay, and become gradually unfit for their original purposes. This fact of a disease, which arrests the progress to virility of every youth, and emasculates every adult whom it attacks, is so surprising, that after having witnessed it myself, I should have been backward in publishing the result of my observations, had not others been present at every examination ; and I should have been unwilling to draw inferences from them, had not subsequent Writers confirmed my account.\*

Thus is an hereditary disposition to an irregularity of the most formidable nature, which being excited by climate, must have progressively increased in spite of all human

\* See Edinubrgb Medical Journal, vol. v. p. 500, Note.—Gentleman's Magazine, Vol. 81, July to Dec. 1811, p. 145, second Column; and Dr. Gourlay's History of Madeira.

institutions, arrested as soon as it occurs, by those very actions which form a part of the deviation from the usual progress of Nature.

If what has been stated in this and the other parts of the paper should be confirmed by future observations, the result of the Inquiry will be,

That *connate* diseases or privations are not hereditary.

That *dispositions* to certain diseases are more commonly family than hereditary ; that the diseases arising from them usually show themselves at certain ages ; if early in life, that we have little chance of preventing or curing them ; but that such of the children as escape that age, are as safe as the descendants from other families.

That *hereditary predispositions* to the most prevalent diseases are brought into action, either by climate, which destroys at an early age those who would be the means of transmitting such predispositions to posterity, or by such external causes as may often be prevented.

That whenever an *hereditary* or *family susceptibility* to any disease is suspected, the changes in the constitution induced by gestation, parturition, and the more advanced climacterics, should be particularly attended to.

That if the human race, like other animals, has a constant disposition to restore itself from every irregularity, the Divine law, which forbids any sexual intercourse between near relations, seems sufficient to correct every peculiarity unconnected with climate.

That if an *hereditary disposition* is generated by climate, it must progressively increase from the constant operation of such combined causes. That no remedy, therefore, can be sufficient, but the prevention of propagation as soon as the disposition becomes hereditary; and that such provision is made by the diseased action itself.

That as far as our inquiries into these irregularities have hitherto extended, sufficient provision is made for correcting them

by the influence of climate, by the interdiction of sexual intercourse between near relations, and by the effects which the irregularities themselves induce.

That all interference, therefore, with the dictates of Nature, beyond the expression of revealed will, appears unnecessary.

That to lessen anxiety, as well as from a regard to the moral principle, family peculiarities, instead of being carefully concealed, should be accurately traced and faithfully recorded, with a delicacy suited to the subject, and with a discrimination adapted to the only purpose for which such registers can be useful.



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**NOTES.**

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## NOTES.

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NOTE 1, Page 6. — “ *Cautions on Cautions are multiplied, &c.*”

When men gravely tell us, that we cannot be too cautious, or that it is better to take too much than too little care, we can only remind them of the *male sedula nutrix* of Ovid, and the *operosus nihil agenda* of another Latin Poet. A caution ill-directed is a greater evil than no caution at all, inasmuch as it supersedes inquiry, by interrupting the common order of facts, and lulls us into an ideal security, when we have not advanced a step towards so desirable an end. When the English shut themselves up during a pestilential season in the Mediterranean ports, they conclude that they have secured themselves, because when the season is passed, they meet their friends alive. Would it not be worth inquiring, by what means the higher class of natives have escaped for years, without any such cautions? And also, by what means some have fallen a sacrifice, who have fancied themselves safe, in consequence of their caution? On the subject of quarantine, on which so much time has been spent, and by the strict observance of which, every honest trader is so much injured, whilst every unprincipled smuggler is making his harvest, would it not be reasonable to ask, Why the Dutch escape, who use no quarantines? and how Malta should be afflicted, where the most rigid quarantine has been observ-

ed? I am aware it has been urged, that whenever the plague appears, it has always been found, that some infected person or goods, or some person from an infected port, has been discovered. Let us ask, If the same diligence were used at other times, would not the same discovery be made? In short, is it possible, in a commercial port, to preserve a strict quarantine?

The cautions relative to hereditary diseases, if less numerous, have not been better directed. On those moral cautions, which have been repeated by some of the best intentioned writers, I shall offer no remarks in this place. But, as I know only one instance in which Legislature has interfered, and as it is impossible that any future act can be more pointed or cautious, I shall take this opportunity of transcribing the passage, leaving it to the decision of others, whether any, or what effect has been produced by it, towards exterminating such diseases from the families of our sister kingdom.

\* “ Morbo comitali, amentia, mania aut simili  
 “ tabe, quæ facile in prolem transfunditur, laborantes,  
 “ intereos ingenti facta indagine inventos, ne genus  
 “ fœda contagione ab iis qui ex illis prognati forent læ-  
 “ deretur, castraverunt, mulieres hujusmodi morborum  
 “ quavis tabe leprave infectas procul a virorum consor-  
 “ tio ablegaverunt. Quod si harum aliqua concepisse  
 “ inveniebatur, simul cum fœtu nondum edito defo-  
 “ diebatur viva.—Voraces, manducones supra quam  
 “ erat humanum, helluonesque et perpetuæ ebrietati in-

\* Scotorum Historiæ a prima Gentis Origine, cum aliarum et rerum et gentium illustratione non vulgari, Libri XIX. Hectore Boethio Deidonano Auctore. Parisiis, 1574, lib. i. p. 12.

“dulgentes aut addictos, ne tam fœda monstra in  
 “patriæ dedecus superessent flumine mergentes, prius  
 “quantum libuit et cibi et potus vorare ac ingurgitare  
 “eis præbentes, miti supplicio exterminarunt.”

How severe soever these laws may seem, they may be easily justified by saying, that *one cannot be too cautious*; and perhaps, future ages may be of opinion, that they are not more cruel than the destruction of a year's harvest of the staple commodity of an island, the crowding pestilential subjects into a Lazaretto, and confining those who are in health by a *cordon* within the sphere of a pestilential atmosphere. It may be thought unreasonable to compare the institutions of the present day with the laws of a less enlightened period, but we shall see, that these cautions for the preservation of a sound progeny, were mixed with others, founded on sentiments which would do honor to any nation or age.

“In bellis autem gerendis aut privatis item inimicitiis, nihil dolo, nihilque fraude agebant. Aperto Marte discernere ac vincere generosum ducentes. Turpe vero arbitrabantur inimicitias blandiloquio occultantes, per dolum postea nec opinantibus insultare, censentes id esse imbecillium, nec suis viribus confidentium. Simpliciter omnes sinceritatemque ex æquo semper colebant.”\*

NOTE 2, Page 7. — “Neither time, industry, expence, nor obloquy.”

To improve what Mr. Hunter has done must appear a bold undertaking. It may therefore be pro-

\* Id. loco citato.

per to inform the general reader, that in the opinion of most medical men, the writings of that justly celebrated physiologist are often obscure, and that he concludes his TREATISE with some "remarks on diseases resembling Lues Venerea," acknowledging, that what he has "said, should be rather considered as hints for others to prosecute the Inquiry, than as a complete account of the subject."

My first attempt was to execute an obligation imposed on me by the last conversation I had with that great man. This was to defend him from a host of writers, who had opposed, I might almost say abused, without understanding him. To do this, it was only necessary to explain his meaning; a task very much facilitated, by pointing out the mistakes of his enemies. This naturally led me to the attempt of "prosecuting the Inquiry which he left for others." In doing this, all the information that could be collected, by conversation among the most experienced practitioners, by the access they allowed me to their respective hospitals and libraries, as well as from correspondence, was brought into aid. The fruits of my conversations enabled me, among other things, to announce the cow-pox to the Public two years before the ingenious discoverer. Every reader attached to physiological researches, will easily conceive, with how much reluctance I restrained myself from pursuing this inquiry, especially as it strongly confirmed one of Mr. Hunter's conjectural theories. But Mr. Cline, from whom I received my information, assured me, that Dr. Jenner was actively employed in some important experiments. It would, therefore, have been great injustice to have interfered, till the result of his observations were made public.

Various difficulties occurred in prosecuting the other inquiries. Conscious, therefore, how imperfect the work still remained, I concluded by inviting the communications of all my brethren, and particularly of those whose residence allowed them a full opportunity of investigating certain local diseases. My own industry, however, did not relax. Nothing that could be personally examined was afterward omitted. The leprosy of Madeira was supposed so highly contagious, that the physician who had the charge of the unhappy objects, had never ventured into the Lazaretto destined for their reception. In this place, I spent a considerable part of several days. Finding the insect, which was, by some, supposed to be the cause of the Itch, very common in the island, I determined to put the controversy on this subject at rest, by inserting two of the *acari* into my own hand. Not perfectly satisfied with any history of the African Yaws that could be met with, nor with the correspondence I had instituted with some West Indian practitioners, it was my resolution to repair to those islands, had not a case occurred to me in Madeira.

My researches into books were not confined to medical writers. Every publication that came in my way, particularly those accounts of voyages which mention the diseases of the countries, were carefully examined in those passages. By comparing them, I was convinced, that a disease said to have been carried from Europe to Otaheite, and to have depopulated those Islands, had never been known in any of them; and the subsequent report of Mr. Wilson,

Surgeon in his Majesty's Navy, who arrived under a conviction that the disease existed there in all its forms, has proved the truth of my suspicion.

On my return to England, to prepare my Second Edition, I was disappointed in finding that none of the northern practitioners had furnished me with any information on the subject of a morbid poison, known only in that kingdom, and hitherto imperfectly described. The only remedy was, to repair to Scotland, and spend as much time in the district, as might be necessary for a fair investigation of the disease: and this I made no scruple to undertake.

Furnished with such materials, and with some claim to maturer judgment by lapse of years and by greater experience, my Second Edition appeared on a larger scale, with an attempt to comprehend diseases which, though not strictly Morbid Poisons, are generally considered as contagious. Among these are the yellow fever and plague, neither of which appeared to me contagious. My opinions were principally founded on the facts and reasonings of those who, after a practical knowledge, held a different opinion. To engage, if possible, the public attention, a smaller tract was published, under the title of an "Inquiry into the Laws of different Epidemic Diseases." This was circulated with much industry and some expence, in order that the subject might be more carefully examined by all travellers, who are certainly as capable as medical men of forming an opinion concerning matters of fact. The contagious property of the yellow fever had been long disputed by those who had the most ample means of information, and the controversy was in such hands as must

gradually produce conviction. Such was not the case with the plague. As soon, therefore, as that disease was known to visit Malta, I expressed a wish to Sir JOSEPH BANKS, to be entrusted by Government with such a commission as would have enabled me to put my opinions to the proof, without danger to any one but myself, and such others as might chuse to volunteer with me. In this undertaking, we should have exposed ourselves to the effluvia and contact of all the subjects submitted to our charge, not in the manner Mr. White had done, the whole history of whose proceedings served to confirm the doctrine contained in the "Inquiry."

It is unnecessary to say more than, that in all the delays of office, and the reference to different boards, we had the learned President with us. The correspondence which passed on the occasion is preserved, and may be resumed, if ever the question meets with that fair investigation, to which, by its importance, it is justly entitled.

What has been said will be considered as a vindication against any charge of remissness in duty, not as a claim to any superior merit. No man scruples to plead his industry, especially if those whom he addresses, have no other means of knowing its extent. Industry, with some perspicuity of description, is all that can be inferred from the above account. It is hoped also, that the introduction of the word "obloquy" will not lead to the suspicion of petulance. Few men have better reason to be satisfied than the author. To be destined to an occupation which is followed with delight, and without being prevented from pur-



suing the more intricate inquiries of his favourite science, are enough of themselves to excite gratitude; but for a physician to be distinguished by the College, and to be answered by the Arbitrator of Science in this kingdom, that he should feel flattered in seeing a physiological work which he had perused, dedicated to him, would prove a balm against discontent, if any cause for it existed.

There will, however, arise incidents so congenial to the wishes of the best of men, that any thing less than enthusiasm may excite surprize, which the more designing will readily direct in their own way, as long as it serves their purpose. Perhaps too, when it is feared that the public mind can only be reconciled by acclamation to what is really good, or when it is found necessary to meet invective by invective, the cool reasoner ought to be thankful, if he is only overlooked. Let me conclude, and in some measure, explain the cause of this digression, by subjoining a correspondence, which will show the uniformity of my opinion of Vaccination, and how generally the same is now admitted.

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*“ Copy of a printed Letter from Dr. Hervey, Registrar of the Royal College of Physicians, to Dr. Adams, Physician to the Small-Pox Hospital.*

*“ SIR,*

*“ HIS Majesty has been graciously pleased,  
“ in compliance with an address from the honourable  
“ House of Commons, to direct his Royal College of  
“ Physicians of London to inquire into the present*

“ state of Vaccination in the United Kingdoms, to  
 “ report their observations and opinions upon that  
 “ practice, upon the evidence adduced in its support,  
 “ and upon the causes which have hitherto retarded  
 “ its general adoption.

“ The College are now engaged in the investiga-  
 “ tion of these several propositions, and request you  
 “ to communicate to them the result of your experi-  
 “ ence and inquiries on the subject, that they may be  
 “ thereby assisted in making their report as perfect as  
 “ possible.

“ I am, SIR,

“ Your most obedient servant,

“ JAMES HERVEY,

*Registrar.*

“ By order of the Royal College of }  
 “ Physicians, Oct. 23, 1806.” }

“ *Copy of a Letter from Dr. Joseph Adams to Dr.*  
 “ *Hervey, of the College of Physicians.*

“ November 17, 1806.

“ SIR,

“ I have been honoured with your circular,  
 “ expressing the wish of the Royal College of Physi-  
 “ cians to comply with his Majesty’s gracious com-  
 “ mand, relative to Cow-pox.

“ The College are pleased to expect a communica-  
 “ tion on the three following points :

“ 1st, My own experience in Vaccination.

“ 2dly, The result of my inquiries.

“ 3dly, My opinion of the causes which have hi-  
 “ therto prevented its general adoption.

“ 1st, My own experience fully confirms all that  
 “ *Dr. Jenner* promised in his Inquiry into the Causes  
 “ and Effects of Cow-pox.

“ 2dly, I have made no digest of my inquiries, ex-  
 “ cepting as they lead to experiment, which are con-  
 “ sequently included in the former answer.

“ 3dly, Besides the prudent backwardness of most,  
 “ in admitting novelties into practice, without ample  
 “ proof of their utility, the causes which have pre-  
 “ vented the general adoption of Vaccination, appear  
 “ to me to have been principally the mistaken zeal of  
 “ its friends. It could not be expected, that men  
 “ who value themselves on their talents at investiga-  
 “ tion, and feel conscious of their scrupulous adher-  
 “ ence to truth, could patiently submit to be uncan-  
 “ didly treated for a scepticism induced by events,  
 “ however accidental. When their accuracy was  
 “ questioned, whilst they disregarded the assertions  
 “ of their accusers, they became diligent in collecting  
 “ collateral evidence, and when their reasoning was  
 “ ridiculed, instead of expressing only their doubts,  
 “ they became parties in their own defence.

“ Another inconvenience has arisen from a too  
 “ great forwardness at answering objections before  
 “ they were sufficiently matured ; hence, when Variola  
 “ appeared after Vaccination,\* the event was either  
 “ denied, or explained by so many minute causes as  
 “ were sufficient to frighten the ignorant, disgust the

\* In the year 1796, I gave it as my opinion, that small-pox had  
 occurred twice to the same person; and in 1805, was the first to  
 urge this argument in defence of Vaccination.

“ candid, and induce the prudent to avoid an experi-  
 “ ment, the result of which was not sufficiently un-  
 “ derstood.

“ A practice at one time represented as so simple,  
 “ that the clergy and females were invited to under-  
 “ take it, became at once so mysterious, that only a  
 “ chosen few were said to *understand* Vaccination;  
 “ every untoward event was imputed to ignorance be-  
 “ tween the true and the spurious pustule, to taking  
 “ matter at a too late period, and to other causes still  
 “ less satisfactory.

“ Had these uncertainties really existed, they  
 “ would have been sufficient objections against a  
 “ practice, the object of which is to secure the sub-  
 “ ject from a formidable disease, and from which he  
 “ might be secured by another, certainly less desirable  
 “ but well ascertained operation. But the truth is,  
 “ that Vaccination is as simple as it was at first an-  
 “ nounced; that the true character of its vesicle is  
 “ more certain than the local effect of any other mor-  
 “ bid-poison; that it is impossible to confound it with  
 “ a pustule of any kind; and that every difficulty  
 “ might have been avoided, by requiring a correct  
 “ register of the progress from the period of insertion  
 “ to cicatrization, or for the most part of perfect  
 “ scabbing.

“ I am, Sir,

“ Your obedient,

“ Humble Servant,

“ JOSEPH ADAMS.

“ To Dr. James Hervey,

“ &c. &c.”

*The following is an Extract from the First Edition of my "Answers to the Objections against Vaccination," published for the Benefit of the Small-pox Hospital in 1805.*

" However, if we were to admit, that some instances have occurred of small-pox after cow-pox, I shall show that this is really no objection to the practice. There are three ways in which this may happen. 1st. By an imperfect vaccination.

" 2dly. By the constitution being under the influence of some other disease at the time of vaccination.\*

" And lastly, By the person being liable to the small-pox twice.

" This last seems very strange to those who suppose, that there are rules which admit of no exceptions. But it is well-known, that some people never take the small-pox at all; and it is equally certain, that some few, happily very few, have it twice. I know some say, that this was never thought of till the cow-pock made its appearance; but the following quotation is from a book published before vaccination was practised.

" It is a law with most morbid poisons, that a constitution which has once gone through the action excited by them, is no longer susceptible of it. This is the case, with very few exceptions, in the small-pox; I say with very few exceptions, because some cases to the contrary, have been so well authenticated, that I am not sceptical enough to

\* " See Observations on Morbid Poisons, published by Johnson, 8vo, 1795."