

A
TREATISE

ON THE SUPPOSED
Hereditary Properties of Diseases,

CONTAINING
REMARKS
ON
THE UNFOUNDED TERRORS AND
ILL-JUDGED CAUTIONS
CONSEQUENT ON SUCH ERRONEOUS OPINIONS;

WITH
NOTES,
Illustrative of the Subject,
PARTICULARLY IN MADNESS AND SCROFULA.

Tu ne cede malis sed contra audentior ito
Quam tua te fortuna sinet.

Virgil.

By **JOSEPH ADAMS, M. D. F. L. S.**

Licentiate of the London College of Physicians,
HONORARY SECRETARY TO THE MEDICAL SOCIETY OF LONDON,
PHYSICIAN TO THE HOSPITALS FOR SMALL-POX, INOCULATION
AND VACCINATION; TO THE NEW FINSBURY OR CENTRAL
DISPENSARY, AND AUTHOR OF OBSERVATIONS
ON MORBID POISONS, &c.

LONDON.

Printed for J. CALLOW, Crown Court, Princes Street, Soho.

1814.

Price 5s. 6d.

TO THE
RIGHT HONOURABLE
SIR JOSEPH BANKS,
BARONET,

KNIGHT OF THE MOST NOBLE ORDER OF THE BATH,
MEMBER OF HIS MAJESTY'S MOST HONOURABLE
PRIVY COUNCIL, AND PRESIDENT OF THE
ROYAL SOCIETY OF LONDON.

MY DEAR SIR JOSEPH,

IT cannot be from any wish to inform the world of your Titles, that they are thus enumerated; it is from a real satisfaction at seeing so many Honours so worthily bestowed.

Accept my sincere Thanks for the flattering manner in which you urged the publication of these Sheets; still more, for per-

IV.

mitting your Name thus to precede them ;
and allow me to hope with every Friend
to Science and Humanity, that you may
long continue to preside over that learned
and respectable Body, whose wish must be
the perpetuity of your services as well as of
its own existence.

I have the honour to be, with every senti-
ment of gratitude and esteem,

Your faithful and obedient

Humble Servant,

JOSEPH ADAMS,

Hatton Garden,
May the 21st, 1814.

PREFACE.

TWO great sources of distress, much aggravated by the uncertainty in which they are involved, are the danger of contagion and the apprehension of hereditary diseases. The former has often embittered the enjoyment of all that providence has bestowed upon us, and even stifled the feelings of consanguinity, friendship, and love: the ill effects of the latter have been in proportion, to the strength of the moral feelings. The dread of being the cause of misery to posterity, has prevailed over the most laudable attachment to a beloved object; and a sense of duty has imposed celibacy on those who seemed by nature the best constituted for the duties of a parent!

In these, as in many other highly important questions, men seem afraid of enquiring after truth; cautions on cautions are multiplied, to conceal the skeleton in the

closet, or to prevent its escape, till our very fears bring the object constantly before us, not in its real form, but multiplied into every possible shape, and magnified in all.

Mr. Hunter, by instructing us in the means of ascertaining the laws of contagion, and the characters of morbid poisons, has relieved us from much of this uncertainty. I have endeavoured to continue his mode of research, and to elucidate his doctrines, not by a greater accuracy of expression, but by adopting, where it could be done, a more popular language. The opinion of the medical world has been so much in my favour, that I have only to regret the limited field in which I have been enabled to act as an interpreter to such an oracle. There are, however, sufficient documents to prove, that neither time, industry, danger, expence, nor what, with most of us, is greater than all, obloquy, ever arrested me in those professional inquiries.

Connected with them was one, the value of which I accidentally learned. Whilst Sir Joseph Banks did me the honour of perusing

one of my papers, I waited with some impatience to hear his objection to my remarks on the hereditary properties of diseases. As soon as I learned that the pause did not arise from any difference of opinion, I had no difficulty in determining to make a distinct Essay on what had hitherto been only incidentally noticed.

On a discussion so new, some indulgence may be expected in the use of new terms, or rather in assigning to old terms, meanings more strictly appropriate. The work being intended for the general reader, every technical expression is carefully avoided; and in order that the attention may not be distracted from the chain of reasoning, every thing not necessary to illustrate the doctrine is added, in the form of Notes, at the end. The Reader will readily account for, and it is hoped, pardon the unexpected length of one of them.

CONTENTS:

	Page.
Division of the Subject - - - - -	10
Importance of the Distinction between Family and Hereditary Diseases - - - - -	12
Necessary to trace the Degrees of Susceptibility in each Connate Diseases rarely Hereditary - - - - -	13
Dispositions to Disease, when Hereditary, show themselves at certain Ages - - - - -	15
If the Predisposition only is Hereditary, the Disease may be prevented - - - - -	16
Of the supposed Hereditary Properties of Gout and Madness, Consumption and Scrofula - - - - -	17
The Doctrine illustrated - - - - -	from 17 to 27
If Susceptibilities do not appear till the more advanced Climacterics, the Disease may be often prevented - - - - -	27
General Conclusions from this Part of the Inquiry - - - - -	29
Provisions of Nature for preserving and improving the Race—in Climate—in what we see in a State of Nature—and in the Progress of Refinement - - - - -	31
A particular Provision for an Hereditary Susceptibility, which could not be corrected by either of the above Means	37

INDEX TO THE NOTES.

Danger of ill-directed Cautions - - - - -	45
The Author's Claim to Public Indulgence - - - - -	47
Abstract of M. Portal's Paper - - - - -	59
Definition of Madness attempted - - - - -	71
_____ of Scrofula - - - - -	81
Gout and Cretinism, is their Prevalence in certain Districts the Effect of Hereditary Causes? - - - - -	85
Remarks on Elephantiasis and other Cutaneous Diseases, in Answer to Dr. Bateman - - - - -	89
A single Case of supposed Hereditary Deafness - - - - -	124

ERRATUM. P. 46, l. 22, *for* inter eos, *read* inter eos.

A

DISSERTATION,

&c. &c.

THOUGH hereditary peculiarities in Man are infinitely more important than in other Animals, yet the little information hitherto collected on the subject, would lead us to suppose they have been less attended to. MERCATUS, in the beginning of the 17th century, published among his voluminous works, a short but very judicious Treatise, *De morbis hereditariis*. This has been overlooked by every succeeding Writer who has touched incidentally on the question; and from that time to the present, I can meet with no systematic performance on the subject. A late number of the Memoirs of

B

the French National Institute, contains a long paper by M. PORTAL, "*Sur la nature & traitement de quelques maladies hereditaires ou de famille.*"—This appears to have been written as the sequel of several Prize Essays; we may, therefore, consider it to be the present state of our knowledge, as far as has been published: yet in that Essay, so little is done towards arrangement, that we find the terms *connate* or *congenital*, *hereditary*, and *family*, used almost as synonymous, and even confounded with *connutrite*, or diseases derived from nurses.

We can only account for such apparent backwardness in so important an Inquiry, by the great difficulty in selecting facts on a subject which does not admit of experiment; and by the unwillingness to be informed in those who are most interested, on a matter which proves an alloy to their best feelings. Perhaps, however, it may be found in this, as in most other sources of uneasiness, that a more accurate knowledge is less painful than constant suspense: nor can the

inquiry be unimportant to any family, how free soever they may fancy themselves from any hereditary peculiarity; for it will require no argument to prove that, like the varieties in other animals, all these peculiarities must have originated in the offspring of couples who were free from them.

But facts, however numerous and well authenticated, lose much of their value if injudiciously collected, as none but Naturalists are aware of the peculiar characters by which varieties are more strongly marked. In the following paper, therefore, my wish is,

1st. To propose an arrangement, which, after long application to the subject, I have found most convenient in this early stage of Inquiry.

2dly. To illustrate this arrangement by well authenticated facts, and to show their practical importance by inferences which naturally arise from them.

3dly. To ascertain what provisions are made by Nature to correct any apparent deviations in the human race.

And, lastly, To see how far these provisions may be imitated or improved by Art.

The proposed arrangement consists, first, in keeping always in view the necessary distinction between a *family* and an *hereditary peculiarity of constitution*; and, secondly, in marking the period of life and other circumstances under which such peculiarities, whether family or hereditary, show themselves.

The distinction between a *family* and *hereditary peculiarity* consists in this; that the first is confined to a single generation, to brothers and sisters, the children of the same parents; and the second is traced from generation to generation.

Though these terms are generally used as synonymous, and though some of the peculiarities we shall describe may be applied to either in different families, yet we shall see, as we proceed, the importance of attending to the distinction.

The period of life at which such peculiarities discover themselves is the next

consideration. This will be best illustrated by diseases, because these are most strongly marked; and to these our inquiries into human physiology should be principally directed.

Diseases either appear at birth, in which case they are called *congenital* or *connate*; or they arise afterwards.

The first only can with propriety be called *hereditary* or *family diseases*, all others we should consider as *hereditary* or *family susceptibilities* to certain diseases. The degrees of *susceptibility* are, in one point at least, so strongly marked, as to render it necessary that they should be distinguished by appropriate terms.

If the *family* or *hereditary susceptibility* is such, that the disease, though not existing at birth, is afterwards induced without any external causes, or by causes which can not be distinguished from the functions of the economy, such a state may be called, A DISPOSITION to the disease.

But if the susceptibility, though greater

And, lastly, To see how far these provisions may be imitated or improved by Art.

The proposed arrangement consists, first, in keeping always in view the necessary distinction between a *family* and an *hereditary peculiarity of constitution*; and, secondly, in marking the period of life and other circumstances under which such peculiarities, whether family or hereditary, show themselves.

The distinction between a *family* and *hereditary* peculiarity consists in this; that the first is confined to a single generation, to brothers and sisters, the children of the same parents; and the second is traced from generation to generation.

Though these terms are generally used as synonymous, and though some of the peculiarities we shall describe may be applied to either in different families, yet we shall see, as we proceed, the importance of attending to the distinction.

The period of life at which such peculiarities discover themselves is the next

consideration. This will be best illustrated by diseases, because these are most strongly marked; and to these our inquiries into human physiology should be principally directed.

Diseases either appear at birth, in which case they are called *congenital* or *connate*; or they arise afterwards.

The first only can with propriety be called *hereditary* or *family diseases*, all others we should consider as *hereditary* or *family susceptibilities* to certain diseases. The degrees of *susceptibility* are, in one point at least, so strongly marked, as to render it necessary that they should be distinguished by appropriate terms.

If the *family* or *hereditary susceptibility* is such, that the disease, though not existing at birth, is afterwards induced without any external causes, or by causes which can not be distinguished from the functions of the economy, such a state may be called. A DISPOSITION to the disease.

But if the susceptibility, though greater

than is remarked in other families, is so far less than a disposition as always to require the operation of some external cause to induce the disease; this minor susceptibility may be called, A PREDISPOSITION to the disease.

Having thus marked the distinction between hereditary and family peculiarities, and the division of each into the *connate*, the *disposition* and the *predisposition*, in proportion as the susceptibility may be greater or less; I shall offer some general remarks on the different ages at which family and hereditary diseases as they are called, for the most part show themselves.

Connate or *congenital* diseases are more commonly family, than hereditary: some of them being mortal, cannot indeed be transmitted, of which connate hydrocephalus or watery head is one among other instances: other connate peculiarities are more properly organic privations or imperfections, as connate deafness, or connate cataract.

DISPOSITIONS are found in some families

to diseases which are connate in others; *hydrocephalus*, which we have remarked as connate in some families, in others occurs to several brothers and sisters in succession, as they arrive at a certain age. The disposition to bliadness and deafness is often hereditary, though the connate privation of those senses is, I believe, always confined to a single generation. When the disposition is hereditary, the children are born with perfect organs; but usually about the age of puberty, a dullness of the sense is discovered, which gradually increases for the remainder of life, or till the entire loss of the faculty.

PREDISPOSITIONS also are found in some families, and *dispositions* in others, to diseases in the same organs, and called by the same name, of which the pulmonary consumption may serve as an illustration. In some families, we see a number of brothers and sisters falling into consumption in succession as they arrive at a certain age. This we may strictly call a *family disposition* to the disease, inasmuch as it is confined to a single

generation, and as we can discover no external cause to excite it. Another kind of consumption, and the most common in cold climates, is hereditary; but only in *predisposition*, always requiring the influence of climate to induce it, and consequently always to be prevented, and often relieved, by avoiding the exciting cause. In this instance, we see a disposition in some families, and a predisposition in others, to diseases different in themselves, though called by one common name. We shall now see, that even in the same disease a difference of susceptibility may be discovered in different families: and this difference it will be found not less necessary to mark.

Gout and *madness* are, by almost universal consent, considered hereditary; yet, if we admit the general implication as to their immediate causes, both these diseases, and particularly the former, should be considered as only hereditary in predisposition. If it were true in all, as it is in most cases, that the habits of the sedentary and wealthy are

necessary to induce the gouty action, there could be no question, that it is only hereditary in predisposition; but in some, the susceptibility to gout is so strong as to require no other stimuli for inducing the action, than such as seem absolutely necessary for the support of ordinary health. In *gout*, therefore, we must admit the two degrees of susceptibility, *disposition* and *predisposition*, nor will it be often difficult to fix their exact limits.

In *madness*, the difficulty may seem greater, but this is only on account of the frequent impossibility of ascertaining the state of the mind previous to such a change, and still more from the ill-judged secrecy with which such events are often obscured.

It may be asked, Why this attempt at discrimination, where the differences seem almost to meet? I shall therefore proceed, as proposed,—To illustrate the arrangement by well authenticated facts; and the necessity of it, by inferences which naturally result from them.

Connate or *congenital diseases*, it has been remarked, are rarely hereditary, which is the more remarkable, because peculiarities of form in less important parts are often hereditary. A striking feature is transmitted from generation to generation; but though *congenital cataract* is frequent among brothers and sisters, I have never known, nor can I discover any record, in which it has occurred in their offspring. Those who are born *deaf*, and consequently *dumb*, rarely marry, which makes it difficult to decide the question in them. I have however known an instance, in which a nobleman of this description married and had a numerous offspring, all perfect in those organs: his grand-daughter married, according to the laws of her country, her own uncle, that is, the son of her deaf grand-father; yet, none of her numerous children have any defect in hearing. It is true, in this instance, the grand-father was the only one of the family who was deaf, so that the defect was neither an *hereditary* nor *family privation*.

But though *congenital blindness* and *deafness* are rarely, if ever hereditary, the *disposition* to these defects is often so ; and in such cases it will be found, that the disease usually shows itself at an early period of life. The family of the Le Comptes is a striking illustration of an hereditary disposition to blindness :* many might be adduced of an hereditary disposition to Cataract, and Mr. Bass's family of Peterborough is, as far as the race has extended, one among many other instances, of an hereditary disposition to deafness. All the Le Comptes saw clearly till about the age of 16 or 18 ; at that age, some of them, without any apparent cause, became dim-sighted, and grew gradually more so, till they became dark : such has been the case for three generations, with a certain number in each race ; meanwhile, such as have escaped that critical age, have retained their sight through life. In the Bass family, the same progress has followed

* See Baltimore Med. and Phys. Reg. 1809.