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Cambridge University Press  
978-1-108-00550-0 - Zoonomia: Or, the Laws of Organic Life, Volume 2  
Erasmus Darwin  
Frontmatter  
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Zoonomia

*Or, the Laws of Organic Life*

VOLUME 2

ERASMUS DARWIN



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Z O O N O M I A ;  
  
O R,  
  
T H E   L A W S  
  
O F  
  
O R G A N I C   L I F E .  
  
  
V O L .   I I .

*By ERASMUS DARWIN, M.D.F.R.S.*  
AUTHOR OF THE BOTANIC GARDEN.

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Principiò cœlum, ac terras, camposque liquentes,  
Lucentemque globum lunæ, titaniaque aëtra,  
Spiritus intùs alit, totamque infusa per artus  
Mens agitat molem, et magno se corpore miscet.  
VIRG. *Æn.* vi.

Earth, on whose lap a thousand nations tread,  
And Ocean, brooding his prolific bed,  
Night's changeful orb, blue pole, and silvery zones,  
Where other worlds encircle other suns,  
One Mind inhabits, one diffusive Soul  
Wields the large limbs, and mingles with the whole.

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1796.

Z O O N O M I A ;  
O R,  
T H E L A W S O F O R G A N I C L I F E .  
  
P A R T I I .  
  
C O N T A I N I N G  
  
A C A T A L O G U E O F D I S E A S E S  
  
D I S T R I B U T E D I N T O  
  
N A T U R A L C L A S S E S A C C O R D I N G T O T H E I R P R O X I M A T E C A U S E S ,  
  
W I T H T H E I R  
  
S U B S E Q U E N T O R D E R S , G E N E R A , A N D S P E C I E S ,  
  
A N D W I T H  
  
T H E I R M E T H O D S O F C U R E .

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Hæc, ut potero, explicabo ; nec tamen, quasi Pythius Apollo, certa ut fint et fixa, quæ  
dixero ; sed ut Homunculus unus e multis probabiliora conjecturâ sequens.

CIC. TUSC. DISP. I. I. 9.

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## P R E F A C E.

**A**LL diseases originate in the exuberance, deficiency, or retrograde action, of the faculties of the sensorium, as their proximate cause; and consist in the disordered motions of the fibres of the body, as the proximate effect of the exertions of those disordered faculties.

The sensorium possesses four distinct powers, or faculties, which are occasionally exerted, and produce all the motions of the fibrous parts of the body; these are the faculties of producing fibrous motions in consequence of irritation which is excited by external bodies; in consequence of sensation which is excited by pleasure or pain; in consequence of volition which is excited by desire or aversion; and in consequence of association which is excited by other fibrous motions. We are hence supplied with four natural classes of diseases derived from their proximate causes; which we shall term those of irritation, those of sensation, those of volition, and those of association.

In the subsequent classification of diseases I have not adhered to the methods of any of those, who have preceded  
VOL. II. A me;

me ; the principal of whom are the great names of Sauvages and Cullen ; but have nevertheless availed myself, as much as I could, of their definitions and distinctions.

The essential characteristic of a disease consists in its proximate cause, as is well observed by Doctor Cullen, in his *Nosologia Methodica*, T. ii. Prolegom. p. xxix. *Similitudo quidem morborum in similitudine causæ eorum proximæ, qualiscunque sit, reverâ consistit.* I have taken the proximate cause for the classic character. The characters of the orders are taken from the excess, or deficiency, or retrograde action, or other properties of the proximate cause. The genus is generally derived from the proximate effect. And the species generally from the locality of the disease in the system.

Many species in this system are termed genera in the systems of other writers ; and the species of those writers are in consequence here termed varieties. Thus in Dr. Cullen's *Nosologia* the variola or small-pox is termed a genus, and the distinct and confluent kinds are termed species. But as the infection from the distinct kind frequently produces the confluent kind, and that of the confluent kind frequently produces the distinct ; it would seem more analogous to botanical arrangement, which these nosologists profess to imitate, to call the distinct and confluent small-pox varieties than species. Because the species of plants in botanical systems propagate others similar to themselves ; which does not uniformly occur in such vegetable productions as are termed varieties.

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In some other genera of nosologists the species have no analogy to each other, either in respect to their proximate cause, or to their proximate effect, though they may be somewhat similar in less essential properties; thus the thin and saline discharge from the nostrils on going into the cold air of a frosty morning, which is owing to the deficient action of the absorbent vessels of the nostrils, is one species; and the viscid mucus discharged from the fecerning vessels of the same membrane, when inflamed, is another species of the same genus, Catarrhus. Which bear no analogy either in respect to their immediate cause or to their immediate effect.

The uses of the method here offered to the public of classing diseases according to their proximate causes are, first, more distinctly to understand their nature by comparing their essential properties. Secondly, to facilitate the knowledge of the methods of cure; since in natural classification of diseases the species of each genus, and indeed the genera of each order, a few perhaps excepted, require the same general medical treatment. And lastly, to discover the nature and the name of any disease previously unknown to the physician; which I am persuaded will be more readily and more certainly done by this natural system, than by the artificial classifications already published.

The common names of diseases are not well adapted to any kind of classification, and least of all to this from their proximate causes. Some of their names in common language are taken from the remote cause, as worms, stone of the bladder; others from the remote effect, as diarrhoea, salivation,

A 2

hydro-

hydrocephalus; others from some accidental symptom of the disease, as tooth-ach, head-ach, heart-burn; in which the pain is only a concomitant circumstance of the excess or deficiency of fibrous actions, and not the cause of them. Others again are taken from the deformity occasioned in consequence of the unnatural fibrous motions, which constitute diseases, as tumours, eruptions, extenuations; all these therefore improperly give names to diseases; and some difficulty is thus occasioned to the reader in endeavouring to discover to what class such disorders belong.

Another difficulty attending the names of diseases is, that one name frequently includes more than one disease, either existing at the same time or in succession. Thus the pain of the bowels from worms is caused by the increased action of the membrane from the stimulus of those animals; but the convulsions, which sometimes succeed these pains in children, are caused by the consequent volition, and belong to another class.

To discover under what class any disease should be arranged, we must first investigate the proximate cause; thus the pain of the tooth-ach is not the cause of any diseased motions, but the effect; the tooth-ach therefore does not belong to the class of Sensation. As the pain is caused by increased or decreased action of the membranes of the tooth, and these actions are owing to the increase or decrease of irritation, the disease is to be placed in the class of irritation.

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To discover the order it must be inquired, whether the pain be owing to increased or defective motion of the pained membrane; which is known by the concomitant heat or coldness of the part. In tooth-ach without inflammation there is generally a coldness attends the cheek in its vicinity; as may be perceived by the hand of the patient himself, compared with the opposite cheek. Hence odontalgia is found to belong to the order of decreased irritation. The genus and species must be found by inspecting the synopsis of the second order of the class of Irritation. See Class I. 2. 4. 12.

This may be further elucidated by considering the natural operation of parturition; the pain is occasioned by the increased action or distention of the vessels of the uterus, in consequence of the stimulus of the fetus; and is therefore caused by increased irritation; but the action of the abdominal muscles in its exclusion are caused by the pain, and belong to the class of increased sensation. See Class II. 1. 1. 12. Hence the difficulty of determining, under what class of diseases parturition should be arranged, consists in there being two kinds of diseased actions comprehended under one word; which have each their different proximate cause.

In Sect. XXXIX. 8. 4. and in Class II. 1. 1. 1. we have endeavoured to give names to four links of animal causation, which conveniently apply to the classification of diseases; thus in common nictitation, or winking with the eyes without our attention to it, the increased irritation is the proximate cause; the stimulus of the air on the dry cornea is the remote cause; the closing of the eyelid is the proximate effect; and the diffusion of tears over the eye-ball is the remote

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remote effect. In some cases two more links of causation may be introduced; one of them may be termed the pre-remote cause; as the warmth or motion of the atmosphere, which causes greater exhalation from the cornea. And the other the post-remote effect; as the renewed pellucidity of the cornea; and thus fix links of causation may be expressed in words.

But if amid these remote links of animal causation any of the four powers or faculties of the sensorium be introduced, the reasoning is not just according to the method here proposed; for these powers of the sensorium are always the proximate causes of the contractions of animal fibres; and therefore in true language cannot be termed their remote causes. From this criterion it may always be determined, whether more diseases than one are comprehended under one name; a circumstance which has much impeded the investigation of the causes, and cures of diseases.

Thus the term fever, is generally given to a collection of morbid symptoms; which are indeed so many distinct diseases, that sometimes appear together, and sometimes separately; hence it has no determinate meaning, except it signifies simply a quick pulse, which continues for some hours; in which sense it is here used.

In naming diseases I have endeavoured to avoid the affectation of making new compound Greek words, where others equally expressive could be procured: as a short periphrasis is easier to be understood, and less burthensome to the memory.

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In the *Methodus Medendi*, which is marked by M. M. at the end of many of the species of diseases, the words *incitantia*, *forbentia*, *torpentina*, &c. refer to the subsequent articles of the *Materia Medica*, explaining the operations of medicines.

The remote causes of many diseases, their periods, and many circumstances concerning them, are treated of in the preceding volume; the descriptions of many of them, which I have omitted for the sake of brevity, may be seen in the *Nofologia Methodica* of Sauvages, and in the *Synopsis Nofologiæ* of Dr. Cullen, and in the authors to which they refer.

In this arduous undertaking the author solicits the candour of the critical reader; as he cannot but foresee, that many errors will be discovered, many additional species will require to be inserted; and others to be transplanted, or erased. If he could expend another forty years in the practice of medicine, he makes no doubt, but that he could bring this work nearer perfection, and thence render it more worthy the attention of philosophers.—As it is, he is induced to hope, that some advantages will be derived from it to the science of medicine, and consequent utility to the public, and leaves the completion of his plan to the industry of future generations.

DERBY, *Jan.* 1, 1796.