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THE
PHILOSOPHY OF THE STOMACH;
 OR,
AN EXCLUSIVELY ANIMAL DIET
 (WITHOUT ANY VEGETABLE OR CONDIMENT WHATEVER)
 IS THE MOST WHOLESOME AND FIT FOR MAN.

Illustrated by Experiments upon Himself.

BY BERNARD MONCRIFFE.

"ONE FACT IS BETTER THAN A HUNDRED THEORIES."

WITH TWO ENGRAVINGS.

ENTERED AT STATIONERS' HALL.

LONDON:
 LONGMAN, BROWN, GREEN, AND LONGMANS,
 PATERNOSTER ROW.

M.DCCCLVI.

PRICE, TWO SHILLINGS AND SIXPENCE.



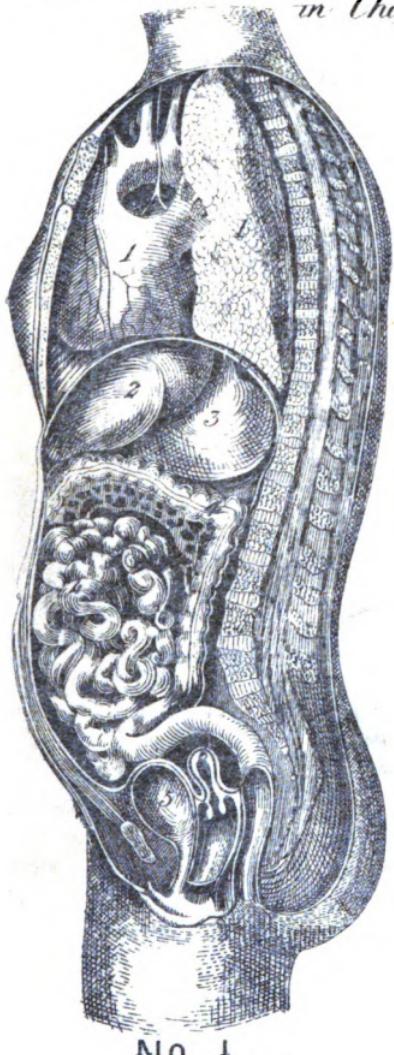
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VERTICAL SECTION

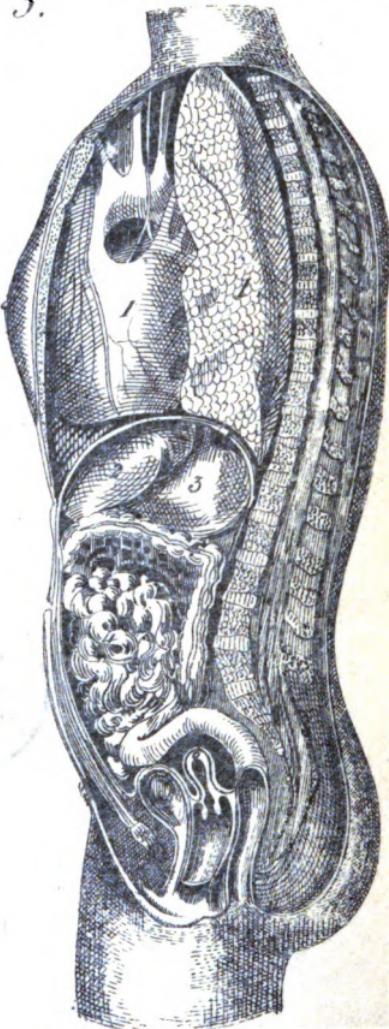
OF THE Trunk of a Woman.

Show ing the probable ratio of the size of the lungs, and the Abdominal Contents under different Diets as explained in Chapter 5.



No 1

No 1. Of a mixed diet.



No 2

No 2. Of an exclusively animal diet. The size of the abdominal viscera reduced by one third and that of the lungs increased correspondingly.

Explanation of figures: 1. Lungs. 2. Liver. 3. Stomach. 4. Intestines.
5. Bladder. 6. Uterus.

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P R E F A C E.

THIS little book is the product of simple notes I have been in the habit of putting down for my own use ever since my change of diet.

Selecting only those relating to the particular subject under consideration, I arranged them into a somewhat book-like shape; but, as I am not used to write the English language,—which is not my own,—I hope the reader will generously overlook any irregularities of style, which will, no doubt, be of frequent occurrence.

I might have written a better book in German; but, from a desire to make exercises in the English language, I had written my notes in English, and I saw no sufficient reason for writing a new book, when I had one nearly ready made.

It is not by eloquence that I wish to persuade my readers, but by facts and arguments, which must remain the same in every language. The German literature being foremost, not only for the loftiness of its conceptions, but still more for the universality of its character, I have no doubt that my propositions will be immediately appropriated by it, and their merits impartially investigated into.

It makes its appearance much earlier than I originally contemplated. I felt the want of a *professional authority*, which, in our time, appears to be so requisite a means

for everybody who has something new to say with regard to health, the sway of the “Doctors” over the bodies of the public being now as great as that of the priests over the mind was in former ages.

The acquisition of a professional competence, however, was quite out of the question ; and a little consideration will show its needlessness for the purposes of this book.

I have no *new medicine* to propose, the efficacy and little obnoxiousness of which should have required to be attested by professional authority and experience. My proposition is that of a *new diet* alike for the medical and the general public, and for the healthy still more than for the unhealthy.

Nor are the articles of such diet something newly invented, some refined and expensive compounds, brought forth by the united efforts of chemistry and cookery. They are simple things present in all climes and zones, *cherished both by princes and beggars*; *they are nothing else but plain animal food without any condiment whatever.*

Yet considering their nutritiousness, and the abundance their inexhaustible sources might be made to yield, they may be said to be the *cheapest* in the market. For even now, when men are taking the food which ought to be left to the animals, and when animal food is consequently dearer than might otherwise be the case ; I say even now, all my meals together, in fact, everything I put into my mouth, cost me no more than *one shilling a day*. Me, a healthy and strong young man, of unremitting activity, who was in the habit of spending four or five shillings for one dinner alone, and who might still do so with little inconvenience if he chose.

But I can conscientiously assure the reader of my belief, that had I a million of money I could not take better or more food, without impairing the perfect health and true enjoyment or life which constitute my present happiness.

To show this, not by declamatory assertions, but by demonstrable facts, is the object of this book.

I entertain the confident hope that what is the case with me might be the case with everybody else who would be possessed of the energy required to overcome his own prejudices, and still more those of others ; and who would learn from my example to purify, and as it were, to "*naturalise*" his sense of taste, and his appetite.

Such is the diet I have to propose. Its merits may be judged of by all well-informed persons, non-professionals as well as doctors. It is only right that persons affected with disease should ask the advice of a medical man in whom they place full confidence. But the healthy want no doctors, and if they wish to know how to preserve their health, they must first study themselves, and then learn from others the means by which these have actually succeeded, or have good reason to hope to preserve it to a great and happy age. This lesson the doctors themselves are very much in need of.

Having thus easily disposed of the want of a professional authority, another consideration weighed the more heavily in the scale of my reflections, and made me hesitate.

I have had a learned home-education, and the doors of science are still open to me, though to my great regret I have not entered them often enough during the ten years preceding the change of my diet. Since that time, however

my appetite for knowledge has been very keen, and my powers of comprehension and observation have also greatly benefitted by the improvement of my health. I cherish the hope that, under the indulgence of Providence, I may reach a great age in good health and enjoyment of life. I may, therefore, be permitted to say without presumption, that I hope there are still some barren tracts left for my labour and industry to venture upon in the immense fields of practical research; and that I shall not go to the grave without leaving behind me some little memorials of such labour and industry.

Had I, therefore, to consult only the wish of my heart, I should certainly not have come forward until, vested with the authority of such an age, I could speak with the argument of such an example.

However, each day happily enjoyed, reminded me more forcibly to delay no longer. I felt it a burden upon my conscience to withhold from public notice what I cannot help considering as an easy means to preserve, if not to recover the greatest treasure to be aimed at by intelligent men: *perfect health and true enjoyment of life.*

By thus giving early publicity to the principles of my diet, my conscience will be relieved, and whatever may be their fate, the responsibility will not rest with me.

I must, however, confess that my own interest did also prompt me to come forward now. My diet must appear singular to persons not accustomed to think for themselves, and as such persons form the great majority in every country, and in every town, I should have liked it better to sacrifice

my own dietetical principles, to take up with small disadvantages, and live like other people. The benefits, however, I derived from my present diet are so great that nothing in the world could make me change it. I am yet unmarried, and entertain the natural wish to meet with a well educated lady, worthy of my sympathies, and reciprocating them; who should feel inclined to embrace my dietetical principles, or, at least, be so much in their favour as to heartily consent to our children being brought up in the same principles. For I should rather remain unmarried than allow myself to be deprived of the privilege of bestowing upon my own children what I cannot help considering the greatest boon I could bestow upon them, namely, to make them *happy*—agreeable to God and the world—by a judicious system of nutrition, both of the body of and mind. The attainment of this object, I hope may be facilitated by this publication.

My position in society is also such as not to allow of my being quite indifferent to the wits of those who, unfortunately, are always more prone to ridicule than to appreciate what they might understand, if they only would. I could, therefore, not fail to perceive it to be a duty to myself to invite publicly the benevolent, but impartial inquiry and judgment, of men of science and experience.

When the lions speak
The dogs are mute.

. I dare flatter myself that, whatever may be the judgment of such men, they will do me the justice that I have been labouring to bottom the dietetical question for myself; and,

- in recommending others to do the same, I have religiously abstained from exaggeration and declamation, which go such great lengths with the uninformed, but which will not captivate the favour of men of science.

I may be permitted to add a few more remarks in conclusion.

This book is one of those which, being directed against deeply-rooted and much-cherished prejudices, will not fail to provoke the embittered and violent attacks of the malevolent. I will say only that I will enter into no controversy myself. I am always willing to learn from everybody, but I have no desire to force my opinions upon anybody. I am well aware that this book may be read by a great many, yet its main object will be appreciated by a comparatively few only. My voice is too feeble to be heard, and my example too insignificant to be regarded, in any but the smallest circle. I hope, however, that the book, together with my example, will be a *seed of life* strewn in the future.

They will disregard my advice, and some will even laugh at my example, as long as I am alive; but they will respect my memory *when I am no more!*

Should, however, during my lifetime, only one person have reason to feel a similar gratitude to this book to what I feel to the little "Discourses" of Lewis Cornaro, I shall have been fully rewarded.

16, WEST SEACOMBE TERRACE,
SEACOMBE, BIRKENHEAD, May, 1856.

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E R R A T A.

Page 58, line 8, *after* extra quantity *read* of water.

Page 60, line 12, *read* three or four pounds *instead of* three quarters of a pound.

Page 61, line 3, *reud* to be *for* be to.

Page 66, line 20, *read* is *for* are.

Page 70, line 17, *read* its *for* his.

Page 71, line 29, *read* after meat *daily*.

Page 72, line 27, *read* that of the one.

THE
PHILOSOPHY OF THE STOMACH.

CHAPTER I.

PRESENT STATE OF PHYSIOLOGY IN GENERAL, AND OF
DIETETICS IN PARTICULAR.—ATHEISM AND RELIGION.

It is admitted on all hands that the present state of Physiology, and the assistance it has been made to afford to Dietetics proper, is very unsatisfactory. Among many high authorities I shall here quote only "The British and Foreign Medico-Chirurgical Review," vol. xii. pp. 403—415. Dr. T. K. Chambers reviewing the latest, and, as the so justly celebrated Dr. Lehmann, of Berlin, styles it, "the indubitably best" hand-book of Dietetics, written by Dr. Moleschott, says :

"The weakness of the human intellect is more strikingly shown in this branch of learning than any other, because from the earliest times it has attracted the attention of all investigators of nature and applicers of science; and the further we go back the more positive is the profession of knowledge on points of which ignorance is now confessed. That which to-day seems established by the most irrefragable experiment, is to-morrow rendered doubtful by equally clear observations. Penelope's fingers are completely outdone."

Well, indeed, may Dr. Lehmann remark, (*Physiol. Chemie.*, vol. iii. p. 261), that such experience should more than any other admonish us to be reserved in our judgment upon those results of researches which appear even absolutely certain. Might not the existence of lactic acid in the gastric juice have been so characterised? Yet has Professor Schmidt "shown," as chemists say, its absence under many circumstances, and the presence of free muriatic; while we see M. Blondlot coming back again to his former belief in the acid phosphate of lime, though the incorrectness of this has been asserted by the best chemists of the day. Who could have expected, after Mr. Bernard's recent experiments on the influence of the vagus* over digestion, that this influence was to be denied, or at least rendered doubtful? Frenchmen see fat resolved into fatty acids and glycerine by the contact of the pancreatic juice, while Germans can scarcely make out that an emulsion of the two substances takes place. Candidly, now, is there among the chaos of different opinions offered by observers any final cause by which to explain the action and intention of the pouring of bile into the intestines? Who could have foreseen, from the state of our present knowledge, that an isolated coil of intestine, with a little alkali inside it, would be in a condition to digest muscle? In short, the intestinal canal exhibits itself to us as a theatre of a host of most mysterious performances, yet still—

"‘ Before the gate
Our spirits stand disconsolate.’"

"These considerations may fairly prevent us from

* The vagus or pneumogastric is the nerve of the respiratory organs and upper part of the alimentary canal.—*Note of the Author.*

wondering at the very little advance which the science of Dietetic proper has made, and the little advantage which has accrued to it from the growth of other sciences. . . . A conscientious writer on this subject is reduced to make a most meagre affair of the real practical part of it."

Dr. Chambers concludes his spirited article as follows : "On the whole, little as is the assistance which the present state of Physiology shows it to be able to give to Dietetics, rare as it is to find in practice any suggestion derived from theory, the volume reviewed really does not seem to have set before us the whole capabilities of the subject."

It is with reluctance that I venture to offer an opinion at the side, and in the face of a man like Lehmann ; but it strikes my humble understanding that much of the present unsatisfactory state of Physiology is to be accounted for, by the physiologists endeavouring to find out *objects* and *intentions*, where *causes* and *effects* only ought to be inquired after. In other words, instead of ascertaining, collecting, and comparing *facts*, always productive, directly or indirectly, of practical results, physiologists have been, and are still contending about theories, the impossibility of verification of which is clearly to be seen beforehand, and which would seem to serve no other purpose but the vanity of their authors. Dr. Chambers himself, in his very exclamation against the "chaos of different opinions" of physiologists, wants to have explained the "intention" of the pouring of bile into the intestines. But who will ever be able to answer this question *satisfactorily to science*? Who can presume to scrutinise and determine the intentions of our Creator?

The misfortune of Physiology, in my opinion is, that

it had been chosen as the great battle-field of the atheists and their adversaries. The former taking their principal argument from the misery of the human race in past and present times, denied all design of the creation ; and in order to make this misery chargeable against the “un-Providence” of the Creator or “creative forces,” they were eager to point out apparent defects in the mechanical, chemical, and vital conditions of the human body as well as of other animals. Their doctrine had, and has still, its avowed and disguised advocates in this country, as well as throughout the civilised world, especially in France. It commanded at one time the greatest eloquence, *esprit*, sarcasm, wit, and elegance of style ; in fine, all those persuasive means which appeared to secure to atheism universal dominion. But when the nonsense had reached its climax a violent reaction set in, and, as is usual in such reactions, men went from one extreme to the other. As the atheists denied all *intentions*, their triumphant antagonists would now see nothing but *intention*.

However, by maintaining an intention in everything, and consequently a creation from “nothing,” they were shooting beyond the mark, thus supplying the enemy with their own weapons. For if every imaginable thing could be created or annihilated at the *fiat* of Omnipotence, then not only the defects of our body and morals, but also those of the world around us, as earthquakes, volcanoes, hurricanes, &c., would be chargeable against the good-will of the Creator. Besides, it has been proved that a creation from “nothing” was logically equivalent to no creation at all. Thinking theologians and believing philosophers have, therefore, agreed to discard the notion of a creation

from “nothing;” and it is now familiar with every scholar, that God himself can do no *mathematical impossibilities*. It is only owing to the poverty of our language when we must say that the power of God is limited within the bounds of mathematical possibility. It is in reality no limitation, but quite the contrary ; it means that *He cannot annihilate Himself.*

This granted, it followed as a logical consequence, that there must be in the organic as well as in the inorganic creation a great multitude of phenomena the mere effects of mathematical necessity, *well foreseen, and forethought*, but not *intended* by the Creator, in so far as there can be no intention where there is necessity. All the apparent defects of the creation are thus referable to unavoidable necessity, whilst the good may be attributed to the good-will and intention of the Creator.

The anti-atheistic physiologists, actuated by the laudable zeal of proving the *intentionality*, the design in abstract, laboured now to amass a legion of probable and possible intentions, in order surely to crush their adversaries ; for if only the hundredth part of the alleged intentions and objects was real, it would be more than sufficient to silence every atheist in every corner of the globe. Accordingly they nailed down, as it were, the physiological phenomena upon their writing desks, cross-examining them as to the intentions of the Creator, and when they would give no answer, physiologists made the answer themselves. In this manner a host of imaginary intentions has been introduced into Physiology, which caused such a derangement of its foundations that one of the most admirable physiologists, Dr. Lehmann, feels it to be his duty to admonish his colleagues “to be reserved in

their judgment upon those results of researches which appear even absolutely certain."

On the other side the atheists cried "triumph!" over God himself, while they only succeeded in overthrowing a number of phantastic imbeciles in the form of imaginary intentions, brought into the field more to frighten than to fight them. So the war is still going on, disguisedly in this country, but more openly on the continent, the atheists being as unconvinced as ever. In the meantime Physiology, like other provinces where war is raging, is the sufferer, its best establishments being upset and overthrown alike by friend and enemy; or, as Dr. Chambers says, "that what to day seems established by the most irrefragable experiment, is to-morrow rendered doubtful by equally clear observations."

The truth, however, is that the atheists will never be convinced by arguments alone. It is not arguments they are in need of, but a *heart full of life and sentiment*. God cannot be "*shown*, as chemists say," he must be *felt*. A man who does not perceive the design of creation at one glance at the heavens, the world around him, and *within him*, will find it still less in the chemical laboratory. To use a homely *simile*, the Bank of England is considered by all sensible men to be a very rich and solid commercial establishment. Now, if a number of persons should get up and declare that the capital of that establishment, being about fifteen millions sterling, was a paltry sum of money, and the whole concern a poor one, could such persons be convinced of their errors by showing them the bank books? Why, if they considered fifteen millions sterling a paltry sum of money, what would they say of entries, therein made, of 2s. 6d.,

1s. 3d., and even a farthing, and the fraction of a farthing? This is still more strikingly so with the atheists. If they really think the sum total of the creation—as seen in round numbers—a paltry affair, requiring no God to design it, what is the use of showing them the books of creation, where there are entries made of creatures of the size of the two-thousandth part of a line? If the human subject, as represented in the feminine beauty, and in the manly intellect, is no proof of a Supreme designing artificer, what proofs could you find in the laboratory where this beautiful woman is seen to be a mere amassment of simple cells—like a million sterling, which is the aggregate of farthings, each of the same value?

There is, however, this essential difference, that a million sterling is always divisible into simple farthings, while they may always be re-united into a million sterling. Each farthing is a part of the million, and partakes equally in all its properties, while the million is the sum total of all the parts or farthings. But the human intellect, the only thing that stamps man as man, is indivisible; the cells form no part of it, they are merely its instruments.

This truth you cannot discover in the laboratory, but you may read it in your heart. Our understanding goes a comparatively short distance, but our heart can embrace the universe, and even God himself. Those who have no room for God in their hearts will try in vain to lodge Him in their understanding. The truth of religion cannot be proved in a strictly scientific manner, it is only highly probable. But I believe it to be for our happiness that it is so. Because it is with the treasure of religion

as with other treasures. It is of common experience that a man born rich cannot enjoy his fortune as well as another who has gone through the trials of poverty, and built up his fortune by his own exertions. But for the circumstance of no rich man being safe, not to become poor, the man born to riches would enjoy his wealth much less still; however, as it is, the very uncertainty of all human affairs and the exertion it requires to preserve property, becomes a source of enjoyment for those who did not acquire it themselves. It is the same with respect to the treasure of religion, it is enjoyed most by those who have gone through the trials of atheism; but even for those who have been born, as it were, with religion, the very uncertainty of its possession, and the watchfulness it requires to preserve it against the tossings of doubts and adversities, is the main-spring of the blessings they derive from it.

If religious truth was as patent and convincing as mathematical truth, we would derive as little happiness from it as we do from the knowledge, for instance, that a circle is not a square. Mathematical truth is extremely useful, and even necessary for us to know; but if all truths were mathematically demonstrable, *our hearts would dry up into a table of calculation, and there would be an end to our happiness.*

But if patent, and all convincing mathematical truth be not the source of our happiness, mere *instinctiveness*, could it be still less? Man might have been furnished with an irresistible instinct to eat nothing but what was wholesome, and no more than sufficient, and to commit no act but what was good and moral. He then certainly would never become miserable, nor even happy. For a

man to be happy, he must have the full liberty to make himself miserable. It is, therefore, the design of the Creator that every man should have the full liberty to make himself healthy or unhealthy, bad or good, happy or unhappy ; so that the race should go first through the trials of misery before arriving at that state of happiness compatible with human nature. Mankind being only an assemblage of individuals, it is governed by the same laws as these. Much of its misery is of its own making. An individual, however, may often raise himself from the depth of misery by an innate latent energy, suddenly roused by some circumstance unknown to himself. But the race does not progress by jumps, it moves always in circles, which, however, are widening and widening ; Though slow, and almost imperceptible, it always progresses and never retrogrades. Twenty or thirty years mark a great period in the life of an individual ; but a century is as nothing in the history of mankind. An individual is as nothing compared with a generation, and a generation is not much compared with future generations. Yet, so great has been the mercy of the Creator towards the human species, that it is placed within the reach of *every individual, in all ages*, to make himself very happy. Nor is there, probably, any individual that has not actually been happy at some period of his life.

Human happiness, however, can never be complete ; there will always be much more to be wished for, such being inseparable from our nature as finite beings. In fact, nothing worse could happen to a man than that all his wishes should be granted at once ; he would then be panting to die for sheer happiness. The human misery in past and present times, therefore, far from being an

argument for atheism, on the contrary proves that wonderful design by which the steady progress of mankind, from the lowest step to the loftiest heights of happiness, has been combined with the greatest well-being *in posse* of each individual in all times.

There will, however, be atheism among men as long as there will be so much misery, unhealthiness, and want of true enjoyment of life. It could hardly be otherwise. How are men to worship their Creator when they cannot admire His creation *in themselves*? How are they to love others, when they do not love *themselves*? Unhappy, hypochondriac and atheistic men are usually sordid egotists; but it is a great mistake to think their egotism springs from an immoderate love of themselves. It is quite the contrary in such cases. They do nothing for others, because they do little for themselves. If they be poor, they are getting poorer still; and if they happen to be rich, they refuse to *themselves* as well as to others. It is the want of self-respect and confidence, which makes them fear poverty when their coffers are filled with gold. Besides, it is always some consolation for the miserable to see others miserable too. A happy man, on the contrary, the more fond he is of himself, the more ready will he be to do for others, either by personal exertions, or by money if he can afford it. He likes to see others happy too, and by helping them to the best of his power, he is doing for himself as well as for others. One man, of course, cannot help every body, nor can he like every body; but, however circumscribed the circle of his sympathy and friendship, his exertions will be the more felt for it.

The infallible medicine for curing atheism is, there-

fore, *true enjoyment of life—happiness.* This, however, cannot be bought by gold, or conquered by power; but it is inseparable from *perfect health.* Health *not medicated or doctored*, but genuine and pure as it comes forth from the hands of nature, is the grand focus from which all the rays of human happiness are diverging. A perfectly healthy man will always be happy, and a happy man always religious, but no man can be happy without health.

It is for that reason that I feel compassion for the atheists. Of course there are many atheists—not so much by conviction as from vanity, interest, and contentious dispositions; just as there are many professedly religious men—less by conviction than by trade and ambition. Such men deserve no compassion. I hate nobody, but I do not pity everybody. Those poor atheists, however, who are such by conviction, are greatly to be pitied. Whether poor or rich, low or high, ignorant or learned, they must be very unfortunate indeed. A sombre sadness has taken possession of their hearts, nothing pleases them, until they curse nature, deny God, hate their fellow creatures, and despise themselves. Many of them commit suicide, but many more do not live long enough to do it.

Such disposition of the mind does not militate against great talent, and even genius; for it is not the understanding, but the heart that is so much at fault. The very bitterness of their feelings becomes a rich source of those biting sarcasms and brilliant wits with which their writings and conversations are filled. But however seductive their language, they cannot command that simplicity, mildness, and truthfulness which flow only from a truly happy heart.

Enough has been already done by physiologists to prove

the invincibility of the atheists by the minutiae of Physiology, while the believers in the Design need no special argumentation for it. It is hence to be wished that, if war there must be, its scene may be transferred into another province, and a little rest given to Physiology. Let physiologists henceforth be physiologists only, investigators and recorders of the physiological phenomena, and their causes and effects. These will be found to be more harmonising in the laboratories the more the "intentionalising" theorems will have been left behind.

The various branches of physical science being jealous of their high rank do not inquire into the intentions of physical phenomena, but merely into their causes and effects. It is true, that the intentionality is much more obvious in the physiological than in the physical world ; yet it could not exist in the former without being present also in the latter. The geologist might as well put the question, for instance, What is the intention of the waters of the Nile pouring into the Mediterranean rather than into the Atlantic ? The astronomer might inquire into the intention of the rings of Saturn, and so on. Nor would there be a want of more or less plausible theorems to answer such questions. But physicists, true to their science, abstain from grappling with problems, of which it is to be seen beforehand, that they could never be resolved satisfactorily to science. Where the intentions are obvious, it needs no science to point at them ; they are obvious to the commonest understanding, but where they are not obvious, science can succeed neither.

The laws of the creation being not only local, but universal, their intentions are also universal. In ordaining the laws which were to rule the creation, the Creator has

taken into His care even the smallest animalculæ; but for the very same reason, that the smallest creature is taken care of, the creative intentions must be universal. It is to be borne in mind, that the physiological laws are as universal as the physical ones. "He," (says, Sir John Herschel) "must have studied astronomy to little purpose, who can suppose man to be the only object of his Creator's care, or who does not see in the vast and wonderful apparatus around us provision for other races of animated beings." Such being the opinion of the greatest men of science in all countries, it follows, that physiological as well as physical phenomena, as perceived by us, are merely local manifestations of either forces or laws obtaining throughout the universe under similar circumstances. And since it is generally admitted that it was quite impossible for finite beings to form the slightest conception of the immensity of the universe, the still greater impossibility of our having the faintest notion of the intentions of the laws ruling the universe follows as a necessary consequence.

To understand the intention of even a simple parliamentary law, we must be enabled to conceive the circumstances without such law; but no such conception is possible for us with regard to the universal laws. It is not our business to ask for the intentions of the laws ordained by the Creator. Whatever these intentions be, they are for the best of the creatures; but it is our duty to study these laws, and to profit by their application to the best of our knowledge. Their intentionality we may perceive, but not their intentions. All our curiosity must needs end in mere guess work, which may flatter our vanity, but cannot increase the stock of our knowledge, nor lead to

our improvement. On the contrary, it brings only confusion into what is within the reach of our fair investigation.

The following example may serve as a popular illustration of what has just been said: In the very able article, "Dodo," in "Knight's English Cyclopædia," we read an emphatical objection to the conclusion Professor Owen has arrived at with his usual accuracy of discernment, namely, that it (the Dodo) was an extremely modified form of the Raptorial order, subsisting on reptiles, crustacea, &c., which its well developed back toe, and claw, would enable it to seize and hold with a firm gripe. "To make such bird a bird of prey," exclaims the Cyclopædian, "would be to set all the usual laws of adaptation at defiance. How was it to be fed? And not only without wings, but necessarily slow and heavy in progression on its clumsy feet. But no such powers of wing would be required by a bird *appointed* to clear away the decaying and decomposing masses of a luxuriant tropical vegetation—a kind of vulture for vegetable impurities, so to speak, and such an office would not be by any means inconsistent with comparative slowness of pedestrian motion."

Since the Dodo no longer exists, is it not reasonable to ask, who was now performing the important office, the sphere of which has been so neatly delineated by the Cyclopædian? Are there vacancies in the realms of nature as well as in states? Or is it given to a handful of ignorant settlers to blot out such an important office from the budget of creation? And upon such an imaginary "intention" is based the emphatic protest against the matured conclusion of an Owen!

This instance being only one out of hundreds, it is not to be wondered at the "chaos of different opinions"

offered by physiologists about the bile, and other physiological phenomena. Let us suppose, for argument's sake, the digestive effects of the bile upon the chyle as quite certain, we should even then not be justified in putting such effects as the intention of the bile pouring into the intestines. For there are species of animals without any bile at all, as the pigeon and the parrot, yet digesting muscle and other things less digestible. Hence it may be questioned, whether the bile is not altogether a mere necessary effect of some cause or causes, either physical or physiological, active in some and latent in other animals; so that neither its existence nor its pouring into the intestines serves a special purpose, though productive of remarkable effects. Our ignorance of such a cause is no justification in assuming its absence. It is, therefore, the causes and effects of the bile, and not its intention, physiologists ought to inquire into.

Such is my humble opinion.

It is not presumption that has prompted me in giving it utterance, but I am one of those disciples whose questions are the bolder the more eager they are to learn. My admiration for our great physiologists is not less than for the illustrious men of other sciences. The very unsatisfactory state of physiology ought, in my opinion, to raise those men in our estimation who have devoted their time and talents to such tedious and unthankful researches, the most brilliant results of which are, and must be so for some time to come, tinged with the marks of uncertainty. Great and admirable as have unquestionably been the self-sacrificing labours of our astronomers, they knew well at the outset that a problem once solved, a discovery at last made, would command universal

con-sent and admiration, for they could point to ocular demonstration or mathematical evidence; but, owing to the minuteness and variability of objects of physiological investigation, the greatest talent combined with the greatest disinterestedness will meet with extreme difficulties, to be surmounted only by the untiring labours of a great many, and for a long time. Yet is the revelation of the "host of mysterious performances of the *intestinal canal*" alone not of greater importance to us than all the splendours of the *milky way*?

CHAPTER II.

DIETETICAL THEORIES AND DIETETICAL FACTS.

In no branch of knowledge is there such a prevalence of *theories* over *facts* as in Dietetics proper, while on the other hand *facts* would seem to be nowhere so easily ascertained, accumulating in such steady numbers, *waiting for observers*, as in dietetics. A mere handful is the number of those able to read and record the facts of the heavens and the bowels of the earth, yet both astronomy and geology are rich in well-established facts, ascertainable only by the most accomplished and expert observers. But universal is the practice of eating, and the number of dieticians is legion, yet the science of Dietetics proper is almost a desert with regard to well-established facts, and where they do exist they often appear overgrown with theories and prejudices.

In the course of this paper there will be found some instances of even physiologists, of great eminence, having allowed themselves to be misled by plausible theories in their judgment upon matters of common and daily use. Such instances might have been multiplied but for my constant desire to leave others alone.

It would appear that the very universality of eating becomes a source of many dietetical prejudices prevailing among well-informed persons. The *vox populi vox Dei*, though much circumscribed, even in politics, is almost undisputed in dietetics. The dietetical prejudices imbibed from childhood, and deeply rooted by the force of habit,

which is of so great momentum in matters of diet, are looked upon as *instinctive* indications of our nature, while in truth they are like other prejudices, merely the offspring of ignorance cherished by inertness. The dietetical writers themselves, though highly accomplished, and unprejudiced in other respects, are being fettered by the force of habit with dietetical prejudices, long before they acquire the ability of philosophical inquiry; whereas astronomers, geologists, and other cultivators of science, begin their practice only after having completed their education.

Great commercial interests are also engaged in the use of many articles of diet, the obnoxiousness of which would otherwise have been unanimously acknowledged long ago.

Many articles of diet have been chemically analyzed over and over again, and according to their composition and properties their greater or less fitness theoretically assumed. However, to arrive at *perfectly reliable* dietetical facts, it will be readily admitted, each article of food must be experimented with, not only in the laboratory, but also in the digestive cavity, and this with the greatest possible exclusion of interfering ingredients. Such experiments must last not only for a few days, but for many months, during different seasons and occupations. Now, the only instances of experiments made with single articles of food, that I am aware of, are those of Doctors Lehmann and Boecker. The former lived, at one time, upon crystallized sugar for three days, at another upon hard boiled eggs for some days; Dr. Boecker and a friend of his lived upon rye bread for a week! I have not Dr. Boecker's valuable book at hand, and I do not

remember whether they took any trifle besides. But German rye bread being flavoured with salt, and other ingredients, it cannot strictly pass as a *single* article of diet; and smoking of tobacco being such a general habit amongst all classes of men in Germany, it may be presumed that Dr. Boecker did smoke tobacco during his experiment, which could not but vitiate in some degree the results. But, independent of this, what is a week for a dietetical experiment? It may be safely asserted, that the influence of the diet preceding had not entirely ceased throughout the week of experiment. The renewal of the blood alone takes more than a week.

More lengthened experiments with single articles of food have been instituted upon animals; dogs have been fed with the white of eggs only, or with starch, or with fat alone, and so on; but, as Dr. Carpenter justly remarks, an animal may also be effectually starved by its disgust at the food being such that even if it be swallowed it is not digested.* Besides, neither men nor dogs live upon food alone; their nervous system makes a certain freedom of action necessary for their well-being. Such poor animals, however, kept on experimental diet, besides not having been chosen from the "best society," are being maltreated by forced confinement and the unavoidable curiosity of the experimentalists. Anything like reliable experiments can therefore be made only upon animals of very domesticated habits, which do not suffer much by forced confinement; and the food must be of their natural diet. Experiments upon animals will, however, be under any circumstances only of indirect and secondary value for dietetics. It is certainly of much importance to

* Animal Physiology, par. 159. London, 1851.

ascertain not only the degree of nutritiousness of an article of diet, but also how much urea is being secreted, how much hydrogen perspired, &c., under its influence. The most important question, however, is, in my opinion, what are its effects upon the *nerrous and vital system?* the gladness of existence, the cheerfulness of temper, the soundness of sleep, the activity and energies of body and mind, &c.? It is obvious that experiments made upon animals would be of little avail in these respects, nor those on men of so short a duration as a week or a fortnight.

It is a curious fact, that no dietetical experimentalist has yet come forward restricting his diet to one or two articles of food for a lengthened period. Many scientific men have been swallowing poison, or otherwise submitting their persons to dangerous trials for the mere sake of experiment; but it would appear that less courage was required to look death in the face, as it is termed, on the battle-field, and elsewhere, than to keep death altogether out of sight by a frugal diet. Numbers of men have the courage to make a bold resolve, the execution of which takes only a little time; but few can endure in the passive resistance to lusts and predilections. What is styled "a good dinner" seems to have such a charm, even upon the boldest dietetical experimenters, that they cannot break through it for any length of time.

This is, no doubt, owing to the importance of such experiments not having yet been emphatically enough placed before the public. The popular notion is still in vogue, according to which every eatable and drinkable thing, either in a state of nature or manufactured, is to be presumed as wholesome and fit for man, until the

contrary be proved. This notion is based upon another popular notion, that everything has been made to suit man. The truth, however, is, that man, though entitled to eat, or use otherwise, everything he can take hold of, meets with a comparatively very small number of vegetables that suit him well. All animal food appears to be more or less suitable to him, as far as *mere nutrition* is concerned, his preferences in this respect being determined by taste, and often by mere fancy alone. But besides a great number of vegetables of a fatal or otherwise injurious character, there are only few he could live upon singly for a length of time. Even the favourite wheaten bread, which is popularly styled "the staff of life," cannot support a man by itself, as has been shown by numerous experiments made upon animals. The chemical and structural properties of vegetables necessarily differing very much according to the minerals, and the other conditions their growth, and life depend upon, they could not possibly be suitable for all animals, nor each of them for every animal alike.

Thus we read in "Knight's English Cyclopædia":* "In a state of domesticated nature, that is, where the animal roams at large, and is not stall-fed, or confined to what are called artificial grasses, or to artificial food, we are told in the 'Swedish Pan' (Amaen. Acad., vol. ii.), that 'oxen eat two hundred and seventy-six plants, and refuse two hundred and eighteen; that heifers waste away in enclosures; where the Meadow-sweet (*spiroca ulmaria*) grows in abundance, and covers the ground, so that they can scarce make their way through it.' 'The country people,' says the author, 'are amazed, and imagine

* Natural History Division, Article Bovidæ, pp. 516—17.

that the meadow-sweet affords them no nourishment; whereas the goat, which is bleating on the other side of the hedge, is not suffered to go in, though he longs to be browsing on this plant, which to him is delicate and nourishing food.' The leaves of the Long-leaved Water Hemlock (*circuta virosa*) are fatal to oxen, while the goat feeds heartily and safely upon it."

Linnæus found that this plant was the cause of the terrible disease that raged among the horned cattle at Tornea. He had scarcely left the boat which carried him over the river to the fatal meadow before he was convinced. The cattle, it appeared, died as soon as they left off their winter fodder and returned to grazing; the disease diminished as the summer came on, at which time, as well as in the autumn, few died. The distemper was propagated irregularly, and not by contagion: the cows were driven in the spring to the meadow where Linnæus landed, and where he saw plenty of the long-leaved water hemlock, and there they died swollen and in convulsions. In other places the plant was scarce. "The least attention will convince us," says Linnæus, "that brutes spurn whatever is hurtful to them, and distinguish poisonous plants from salutary, by natural instinct, so that this plant is not eaten by them in the summer and autumn, which is the reason that in these seasons so few cattle die; namely, only such as either accidentally or pressed by extreme hunger eat of it. But when they are let into the pastures in spring, partly from their greediness after fresh herbs, and partly from the emptiness and hunger which they have undergone during a long winter, they devour every green thing which comes in their way. It happens, moreover, that

herbs at this time are small, and scarcely supply food in sufficient quantities. They are also more juicy, being covered with water, and smell less strong ; so that what is noxious is not easily discerned from what is wholesome. I observed, likewise, that the radical leaves were always bitten and the others not, which confirms what I have just said. After I left Tornea, I saw no more of this plant till I came to the vast meadows near Limmingen, where it appeared along the road, and when I got into the town I heard the same complaints as at Tornea of the annual loss of cattle by the same circumstances."

The author of the "Swedish Pan," also observes that, "a hungry stomach will often drive animals to feed on plants that were not intended for them by nature. But, whenever that has happened, they, if they escape, become more cautious for the future, and acquire a certain kind of experience ;" and he instances the "Monks Hood, (*aconitum*), which grows near Fahluna, and is generally left untouched by all the animals that are accustomed to these places ; but if foreign cattle are brought thither, and meet with this vegetable, they venture to take too large a quantity of it, and are killed." He adds, that "the cattle that have been reared in the plains of Schoonen and Westragothia, commonly fall into a dysentery when they come into the woodland parts, because they feed upon some plants which the cattle used to those places have learned to avoid. Meadow Saffron (*colchicum autumnale*) is among the plants deleterious to oxen, if taken in any large quantity, and Hellebore (*helleborus*) is also said to be poisonous to them. Yew (*taxus baccata*) is fatal, as it is to herbivorous quadrupeds generally, the green temptation being probably too strong for cattle kept on short allowance."

While thus oxen instinctively refuse no less than two hundred and eighteen vegetables, and seem, only when driven by an *empty stomach*, to venture upon new food, profiting, however, by the experience acquired for the future; intelligent men appear from an opposite motive, a *replete stomach*, to search for still more vegetables, drugs, condiments, and new compounds of inexhaustible cookery, bakery, brewery, and chemistry. Gentlemen of means seem to think it desirable to let their stomach revolve at least once a month round the cycles of a Parisian bill of fare. If the fine art of cookery is to prosper for another millennium, they will have to call in aid, like in astronomy, the Greek alphabet and mythology, in order to designate the various forms, colours, magnitudes, and nebulosities of the dietetical bodies.

To all these circumstances is to be attributed the great dearth of reliable dietetical facts, and their sub-plantation by "suggestions derived from theory." Where such facts come forward they are often encountered by a formidable phalanx of chemical formulae, the production of which would seem to cost nothing. This reminds me of an anecdote I have heard some years ago. A Spanish lawyer having read in the newspapers the account of a great shipwreck, with all the lives on board the ship lost, conceived the probability of a certain nobleman, who was missing for some time, being among them. He entered into an extensive correspondence, and, having collected all the possible minutiae about the ship and the passengers, he succeeded in convincing the courts of law that the missing nobleman was dead. The property of the latter was accordingly ordered to be divided among the heirs, and his wife married again. It did, however, not last long

before the missing nobleman came back. At first the lawyer would not at all listen to the story, but when they brought him into his presence, he said, "Well, it is true, I see he is alive, but I shall not believe it until you refute my arguments."

Something similar not unfrequently occurs in certain quarters with physiological facts; it is said, not in the same words, but to the same meaning, your facts may be true, but we shall not regard them until you answer our arguments.

It must not be inferred from the above remarks that I am an admirer of empiricism. One fact is certainly better than a hundred theories; but a hundred theories are often required to arrive at one fact. The greatest acquisitions of civilisation have not been picked up in ready-made facts; they have been gained at last by the perseverance upon long, uncertain, and laborious roads of theory. A man without grand theories will never arrive at a great fact. The moment, however, the fact is found, be it by yourself or by others, the theories must be relinquished or corrected without hesitation.

It is with reluctance that I allude to another cause of the dearth of reliable dietetical facts. I should be very sorry to say one word against the medical art, which musters among its cultivators men of the highest distinction and integrity; but it must be borne in mind that it is not the business of the medical practitioners to ruin their trade. Now, it could be seriously doubted by a few only, that the medical practice among the wealthier classes would be reduced to a little above zero, by their adoption of a thoroughly wholesome diet, be this mixed, vegetable, or exclusively animal, judiciously adapted with

regard to quantity and quality, to the wants of the individuals. It is for that reason that the organs devoted to professional interests have room for anything but dietetical facts, communicated by disinterested non-professionals. I do not say this without the proof being in my hands. In February last I sent a very condensed outline of the more striking dietetical facts, ascertained by my experiments, to the editor of the *Medical Times and Gazette*, for insertion in that journal, "in the hope that it might be of some service to the public." But in No. 295 of that periodical, it is to be read among the "answers to correspondents" as follows:—"Mr. B. MONCRIFF.—We regret that the crowded state of our pages prevents us from inserting the interesting paper which has been forwarded to us." Now, the entire paper would have hardly occupied more than a third part of one number of that journal! Might not some of the "crowd" have made a little room for an "interesting" and rare visitor, such as "A Practical Suggestion to the Public?"

CHAPTER III.

ON SIGNOR LEWIS CORNARO, AND MY INDEBTEDNESS TO HIM.

It may not be superfluous to sketch in a few lines the history of Lewis Cornaro, an extraordinary man, whose example could not be put too often before the eyes of the public.

Lewis Cornaro was a native of Venice, a scion of one of those reduced illustrious families which are to be met with in Italy more than anywhere else. Three Doges, Queen Catherine Cornaro of Cyprus, and the very celebrated lady-Doctor of Philosophy, Helena Cornaro, besides the late Venetian Ambassador at the Court of St. James', were of the same family. The precise date of his birth is not known. He died on the 26th of April, 1566, at the age of about a hundred years, according to a notice of his niece, a nun of Padua, or at about a hundred and five years according to another notice. Lessius, who lived in the same century, and who had adopted himself, to his great benefit, the dietetical principles of Lewis Cornaro, says of the latter, "that he was a man of great reputation, much fortune, and still more wit." He was possessed of considerable estates, the value of which was greatly enhanced by the improvements introduced by him. He had only one daughter, but eleven grand-children. His wife would appear to have embraced his principles, and lived to bury her husband. He wrote, besides a comedy, several useful things upon various subjects. His dietetical principles

are expounded in a little book consisting of four "Discourses."* The first of these he wrote when eighty-three years of age, the second at eighty-six, the third, addressed to his friend, the Patriarch-elect Monsignore Barbaro of Aquileia, at ninety-one, and the fourth at ninety-five. His letter to the Patriarch is the best of the number; but the whole book bears the stamp of truthfulness and good sense, though it occasionally takes an enthusiastic turn, and some statements would appear rather exaggerated. It must be remembered that he wrote 300 years ago, and in a language which has always been distinguished more by its poetical liveliness than by sober philosophy. There can, however, be no doubt of the correctness of the main facts of his account, the truth of which is said to have been often corroborated by his relative, the Venetian Ambassador in London.

From his narrative we learn, that having been addicted to great intemperance and vicious habits, his originally weak constitution gave him, between the thirty-fifth and fortieth year of his age, repeated earnest warnings of the near approach of his death, while his physicians held out the hope that by a rigorous regimen of diet and regularity he might yet greatly improve his health. This made such a powerful impression upon his mind that he formed the resolution to adopt the medical advice *bona fide*; and when, after overcoming the first difficulties always attending great changes of habit, he experienced benefits surpassing all his expectations, he joyfully adhered to the same regimen for the rest of his prolonged and happy life.

* *Discorsi della vita sobria, etc.* Venetia, 1620. Translated into English. London, 1768. The first edition was published at Padua, by the Author, in 1658.

We are told that he only took sixteen ounces of fluid, consisting of choice "young wine," and twelve ounces of solid food, daily. It is difficult to say whether the ounces he speaks of are of the same value as our English. Though he does not say so expressly, it appears from the context, as well as from his repeated advice to reduce the quantity of food as age advances, that he ate more before he was grown so old. As to the articles comprised in the twelve ounces we read : "The things I eat are as follows : first bread, panado with an egg, or such other good kind of soup or spoon meat. Of flesh meat I eat veal, kid, and mutton. I eat poultry of every kind ; I eat partridges and other birds, such as thrushes ; I likewise eat fish, for instance the goldney and the like amongst sea fish ; and the pike, and such like amongst fresh water fish." In other places he expressly says, that "fruits, salad, garden-stuff, tarts, pastry, old wines, and pepper," disagreed with him. The following passage is still more precise : "the bread, the yolk of an egg, meat, and soup I eat, weighs in all twelve ounces neither more nor less." From this it would appear that the eatable portion of his diet consisted principally of animal food, which supposing it had been only of the weight of six English ounces daily, must together, with the other things he took, be considered as quite sufficient for a man of such an age, and of such quiet and regular habits. Not to speak of my own example, we have it stated by Sir John Ross,* that he and his party were well fed in the arctic regions with one pound of salmon, daily, each. The great voracity of men in the time of Lewis Cornaro, which he so vividly depicts

* Narrative of a Second Voyage in Search of a North-West Passage. London, 1835.

in his "Discourses," is also manifested by the immense sensation his temperance had created among his contemporaries, among whom were the Professors and Doctors of the University of Padua, who looked upon him as upon a miracle.

At the age of seventy he met with a serious accident on a coach being upset, by which he had a leg and arm dislocated, and the rest of the body much shaken and bruised. He refused, however, all medicine prescribed by the physicians, causing only his leg and arm to be set and ointed. Having entirely recovered his health, he draws the inference: "that whoever leads a sober and regular life, and commits no excess in his diet, can suffer but very little from disorders of any other kind or external accidents." In another place he says: "It cannot be doubted that a regular life removes all causes of illness, and makes both physicians and physics needless. Nay, by attending duly to what I have said, he would become his own physician, and, indeed, the best he could have; since in fact no man can be a perfect physician to any one but himself."

He had, however, the unfortunate idea that "wine was the milk of old age," which was most probably the cause of the severe suffering he saw himself annually subjected to, and which he tried to explain as best he could. "I carry about me a most powerful and mortal enemy, which I can by no means conquer, because it is natural (?), or an occult quality implanted in my body by nature (?); and this is, that every year from the beginning of July till the end of August, I cannot drink any wine of whatever kind or country; for, besides being during these two months quite disgusting to my palate, it disagrees with my stomach. Thus losing my milk—for wine is indeed the

milk of old age—and having nothing to drink—for no change or preparation of water can have the virtue of wine, nor of course do me any good—having nothing, I say, to drink, and my stomach being thereby disordered, I can eat but very little; and this spare diet, with the want of wine, reduces me by the middle of August extremely low; nor is the strongest capon broth or any other remedy of service to me, so that I am ready through mere weakness to sink to the grave."

Had he accustomed himself to *true milk* instead of wine, and strong capon broth, I am persuaded to believe he might have been spared this annual suffering, and other complaints he occasionally mentions.

As to his general habits, we read:—"I have carefully avoided heat, cold, and extraordinary fatigue, interruption of my usual hours of rest, *e dall' eccessivo coito*, making any stay in bad air, and exposing myself to the wind and sun."

"I have ever been very scrupulous to observe the rule, not to take of anything but as much as my stomach can easily digest, and to use those things only which agree with me."

The greatest enjoyments of his life he derived from his intellectual occupations, as studies, writing, music, the exercise of benevolence and friendship, religious contemplations, the care of his large family; and from those bodily recreations, which are always more pleasant to the temperate than the intemperate.

In the discourse written when he arrived at his ninety-fifth year of age, he says:—"I find myself hearty and content, eating with a good appetite, and sleeping soundly. Moreover, all my senses are as good as ever, and in the

highest perfection; my understanding clearer and brighter than ever; my judgment sound, my memory tenacious, my spirits good, and my voice—the first thing which is apt to fail us—grown so strong and sonorous, that I cannot help chanting out aloud my prayers, morning and night, instead of muttering them to myself as was formerly my custom."

Nothing of a later date has been preserved from his pen. But in a "Notice" written by his niece, a nun of Padua, he is stated to have continued healthy, and even vigorous, until he was a hundred years old; that his mind did not at all decline, that he never required spectacles, and did not become deaf; and that even his voice remained strong and harmonious to the close of his life. He is also stated to have resigned his last breath without agony, sitting in an elbow-chair.

Such was Lewis Cornaro. His little book is well worth reading in every household.

It was only a very short time before I had finally resolved to change my diet, that Cornaro's book fell into my hands—my own dietetical theory, dated many years back. It was simply this, that the general diet of man was very faulty, that most people swallowed too much, and a great many articles of diet were unwholesome; while even the wholesome food was not being taken in a proper manner, and at the proper times; and that all this was the main source of the diseases and miseries of men in past and present times. I thought it well worth my while to test the truth of such theory by unmistakable experiments upon my own person. It, however, so happened, that I delayed the execution from year to year. I had no such stimulus for changing my diet as

Lewis Cornaro. He was of a feeble constitution, while mine is very good ; he was addicted to intemperance and debauchery, which brought him to death's door, but I was of pretty regular habits. Up to my twenty-fifth year of age I was kept in the house of my parents. I was their only child alive, my only sister having died, to our great grief, at the age of fifteen years. My father was in very modest, yet easy circumstances, and although himself very little lettered, he had a great admiration for learning, and spared no expense to give me a learned home-education. In fact, he made me learn too much of all sorts of literature, modern as well as antiquated, while he quite neglected music and other fashionable accomplishments. I state this as a matter of fact, and not in the least as a reproach, as nothing could have surpassed our reciprocal love, and my admiration for his high morality, and especially the delicacy with which he treated my mother.

In my twenty-third year of age I was in love with a young lady of little property, while my parents had all but arranged my marriage with another young lady, less pretty but better educated, and possessed of more property. The passion for the girl of my choice had, however, taken such a hold upon my mind that I obstinately resisted all their entreaties. As my parents would not allow me to marry her, she was married to another. Struck with the unaltered sympathy of the young lady of my parents' choice, I now heartily consented to marry her ; but, poor creature, she died of a fit of cholera before our marriage could be accomplished. My dearly beloved mother died soon after, and my father, inconsolable at her loss, followed her in the grave about a year afterwards, leaving me an

orphan, without a soul to share my grief. This was insupportable, and I do not know what would have become of me but for the generous assistance of a noble friend of my father's, whom I had never seen before; but who now came forward, and behaved towards me as a second father. Thanks to his liberality, I was enabled to make lengthened travels in Europe and Asia; and to spend several years rather costly in the capitals of Europe. I might have done so longer, but for my own sense of duty to endeavour to do something for myself. Having been presented, by my noble friend, with a respectable sum of money, besides a moderate allowance, until I should be in a position fully to provide for my future wants I was desirous of becoming a partner in a respectable bookselling establishment—for which inclination and education made me more fit than anything else—when I was again distressed by the death of my generous benefactor. I should be proud to name him but for his wish, repeated again in his last letter to me, not to alloy our friendship by my speaking to others of his liberality towards me. I could not however refrain from paying my due tribute of respect and gratitude, if not to his name, at least to his disinterested conduct. Much pains has been taken by antiquarians to trace the notion of the immortality of the soul to such or such a nation. I believe that this hopeful idea had been conceived by the first person deprived by death of *a real friend*. The loss of parents, however grievous at the time, is so much in the ordinary course of nature, that we become familiar with it from early youth; but a real friend is such a rarity, and his character partakes so little of this world, that we cannot believe in his death, but hope to see him again.

From a desire to see the New World, and with a view of establishing myself there on a scale commensurate to my modest means, I now made for the United States. But, as is often the case with emigrants, I remained stuck on the last station of my journey, waiting for some friends to join me, who were, however, prevented from doing so. I have not yet executed my plan.

Now, when I was in the various capitals of Europe, I not unfrequently met with jovial company; but the stern morality of my father before my eyes, I only seldom allowed myself to be drawn into the usual excesses of young men with liberal allowances at their disposal. In point of liquors I liked good wines, and occasionally what the French euphemistically call "small glasses;" but I do not remember to have ever been drunk. I smoked also very expensive cigars; but this, too, not excessively. The consequence of this was that, when I finally resolved to change my diet, I found myself in a state of pretty good health, in the sense as this is commonly understood.

Thus, besides the very great differences of rank, wealth, and position, there existed also this material difference between Lewis Cornaro and myself, that, whereas he was forced, as it were, to the adoption of his diet as the last resource of escaping the jaws of death, it was with me more a philosophical experiment than anything else. I, however, most heartily acknowledge my indebtedness and great gratitude to the vivid description of his happiness this old man has left us in the above-named little book.

Not that I had, or have even now, a particular desire to arrive at such an extreme age as that of Lewis Cornaro,—I am yet too young to think of old age—but I wish and hope to *live all my life, to enjoy it truly and thoroughly, free*

from the disorders of the body as well as those of the mind. If no accident cuts short my life, this will probably be prolonged beyond the usual measure, and to my satisfaction. Young persons cannot judge of the enjoyments of old age in good health, which is being so rarely met with in our times. But I think that such an age, independent of its own peculiar resources of enjoyment, is most desirable, on account of its affording the proof of the greater part of the previous lifetime having been spent happily and virtuously, because only happy and virtuous persons can expect to reach an old age in good health.

As to his dietetical principles, it will be seen from the following chapters, that I only agree with that great maxim of his, that men had better eat to live, than live to eat; a maxim, the truth of which he triumphantly proved by his example. I, of course, could not think for a moment to have upon my table scales, and to weigh, like a bullion-broker, the morsels that were to go into my mouth. Cornaro himself was possessed of too much good sense to recommend such a course to any body but old persons like himself with such "a puny weak stomach" as his own. It is, however, difficult to believe that his stomach, which held out at least a hundred years, should have been constitutionally as weak as he was persuaded to imagine. I think it much more probable that its weakness was caused by the wine and condiments taken by him in a comparatively considerable quantity.

Having paid a feeble tribute of admiration and gratitude to the venerable memory of Lewis Cornaro, I may now proceed to the relation of my own dietetical doings.

CHAPTER IV.

EXPERIMENT OF A PLAIN MILK DIET EXTENDING OVER SIX MONTHS.

Lewis Cornaro laid it down as fundamental rules of a judicious diet :—

1. Restrain your appetite, and get always up from table with a desire to eat more.
2. Do not touch anything that does not agree with your stomach, be it most agreeable to the palate.

These rules have since been adopted in principle by all dieticians of eminence ; but, probably from their severity in practice, the example of Cornaro has not been followed even by those who cannot find words enough to recommend it to others. It seems that objections, based on the inapplicability of his rules to the temper of the general community, had been proffered to Cornaro himself ; for, in his second Discourse, we read :—" Others say, that it is better for a man to suffer every year three or four returns of his usual disorders, such as the gout, sciatica, and the like, than be tormented the whole year by not indulging his appetite, and eating everything his palate likes best." Cornaro's answer to this objection is good in its way, but appears to have had little effect upon his conversationalists.

From the very outset of my change of diet I thought the first rule to be wrong. It appeared to me only just that a sound appetite ought not to be restrained, such appetite being the indication of the wants of the system,

which must be satisfied to the full. The great difficulty, however, the dieticians had to contend with, was to know where the sound appetite ends and the false one commences. But it struck me that there could be no unison between a sound, or true appetite, and a false one ; that a perfectly healthy man could have only one appetite, and this a sound one, while the false appetite could only exist with imperfect health.

With the second rule, namely, to abstain from everything disagreeing with the stomach, though most pleasant to the palate, I could not but entirely concur. It, however, always appeared strange to me that man should have been furnished with a sense of taste so perverted as to make him like those things best which are the least wholesome for him. This we see to be actually the case with civilised nations ; for though there are numbers of sensible men abstaining from those articles of diet which proved unwholesome to them, yet they could not say that they did not like them better than many other things of unquestionable wholesomeness. From the quotations made in the second chapter we have learned the opinion of Linnaeus, that “the least attention will convince us that brutes spurn whatever is hurtful to them, and distinguish poisonous plants from salutary by natural instinct ;” and that they eat only of noxious plants when pressed by extreme hunger. Now it must not be imagined that a brute spurns what is hurtful to it because it instinctively *knows* that it was hurtful to it. This would be absurd : a brute *knows* nothing ; but it simply rejects it, because it is repulsive or inattractive to its sense of taste or smell, which repugnance or indifference is being overcome by extreme hunger. I thought it, therefore, very probable

that the same was the case with men of an incorrupted, sound natural sense of taste and smell ; that they would, namely, reject everything unwholesome to them, not out of a knowledge of its unwholesomeness, but simply because it was repulsive or indifferent to their taste. In order to recover, as much as possible, my sound and natural sense of taste ; to get rid of the dietetical prejudices imbibed from childhood ; and, lastly, in order to prove to myself the complete command of my mind over my body, I resolved to live for a lengthened period—say five or six months—exclusively or mainly upon plain milk, without sugar, salt, or any condiment whatever. I thus made myself, as it were, a baby again, fancying for a moment dietetics as a “*tabula rasa*,” and myself as having nothing to guide me except my own experience.

When I commenced this diet I was in my thirty-fourth year of age ; my height is five feet five inches, and the weight of my body was then about eleven stones. I need hardly say that I gave up smoking of tobacco altogether. The milk I took was very good country milk, not boiled, but lukewarm. Putting no restraint to my appetite, the quantity of milk consumed daily was two quarts. Sometimes I took, besides the milk, the yolk of an egg, and much oftener about a dozen or two of blanched sweet almonds, which, among vegetables, appear the most similar to milk. In order to habituate myself to a very good mastication, I ate the almonds one by one. It is a common mistake to be met with in books as well as in conversation, that milk taken in too large a quantity was purgative. It may be so when swallowed like water to quench the thirst ; but if you take it as *food*, like chocolate, and at proper intervals, it is being gently absorbed

by the system without affecting the evacuation of the bowels otherwise than to make it easier. It has been shown by experiments that milk soon coagulates in the stomach, by means of the higher temperature of the latter, and the organic substances of the gastric juice. Human milk, however, has been tested and found not to coagulate, after an addition of chlor-acid gas, during twelve hours, while cow's milk coagulates at once under similar circumstances.* When we, therefore, read that the human milk, owing to its greater quantity of salts, has at first a purgative effect upon the suckling,† it may be asked whether such purgative quality is not being imparted to it by the condiments and other extraneous matters taken by the mother with her food; and whether the great mortality of children, in the first month of their birth, may not be in a measure attributed to this defective state of the milk? ‡ The passions, too, exercise a deleterious, and, according to Professor Valentin, sometimes even a poisonous influence upon the milk.

This plain milk diet I continued for six months. During all this time my health was perfect in every respect, not the slightest indication of a cold or any other indisposition having manifested itself. The sleep was always sound, dreams less frequent, and for the most part pleasant; my mind contented, happy, cheerful, and active. At the close of the six months the weight of my body, owing to my great bodily exercises, and to the want

* See Fr. Simon. *Die Frauen-Milch nach ihrem chemischen und physiologischen Verhalten dargestellt.* Berlin, 1838. Octavo.

† See Professor Valentin's Text-book of Human Physiology. § 1709. Original text.

‡ This mortality amounts even in this country to fully *ten per cent.*! See Dr. A. Combe on the Physiological and Moral Management of Infancy. Dr. Carpenter's *Animal Physiology*, p. 4.

of renewal of superfluous fat, had, to my great satisfaction, decreased about twenty pounds. In consequence of this the movements of my body became much quickened, my countenance more agile and manly. My face, from being rather sallow, became clear and youthful, my eyes serene and mirrors of happiness.

In order to give the reader a full insight into the state of mind I was then in, I shall place here a literal extract of my diary, written during the last month of my plain milk diet. The reader will pardon a little enthusiasm, which is the inseparable companion of joyfulness :—

“The change I perceived during the last five months was very great indeed. John Hunter said fat formed no part of the body. He did not mean this literally, but was denouncing, by that strong expression, the superfluous accumulation of fat many persons are so fond of. I felt in myself the truth of Hunter’s saying. It appeared to me as if a load was being taken from my heart ; as if my arms, legs, and entire body, had been kept down by some forcible encumbrance, which was now being gently removed, permitting the muscles and nerves to expand, spring-like, with renewed vigour. I began to feel a great want for vigorous bodily exercise. All the movements of my body appeared to me to have been formerly rather slow, compared to what they became now. It gave me unknown, or, rather, forgotten pleasure, to jump over ditch and hedge, and to make those exercises which required muscular strength. But my mind longed still more after vigorous exercise ; and those scientific books which only shortly before appeared to me as dry and wearisome, were, and are now, a source of great delight.

" I had been made to learn a good deal in my youth ; but as my studies were not intended for professional purposes, but only as educational accomplishments, I neglected them, for the most part, in latter years, indulging my literary appetite principally in politics, and other exciting literature, which now appears to me, to a certain extent, to be as intoxicating a food for the mind as brandy is for the body.

" I regret to say that I have forgotten much of what I should be most happy to know, while I remember many things I should like to have forgotten, or rather never learned at all. I hope, however, that in the course of a few years I shall succeed in replenishing my exhausted stock of knowledge, so as to be able to follow leisurely, and at a distance, the progress of science in its principal branches.

" Although I saw little or no company during the last five months, I was always cheerful, indulging frequently in songs, which now came with a rush into my memory. The time is never too long to me. The Americans say, ' time is money ; ' but I see that it is more than money—it is *life* for those who truly enjoy it.

" I now fully understand Lewis Cornaro. What a miserable pittance the most sumptuous dinner as compared with a single hour of perfect health and true enjoyment of life !

" I am now like a king who, having just escaped the poisoned daggers of a knot of conspirators, is anxious to surround himself with a faithful body-guard. In selecting the men he should certainly like them to be fine-looking fellows, in order to make a good appearance on the parade and in the drawing-room ; but his paramount

consideration being *faithfulness*, the moment a well-founded suspicion in that respect is proffered against any of them he will strike his name out of the list, however fine-looking he might be. I have just learned to value perfect health and true enjoyment of life above a kingdom ; and in re-constructing the list of my diet I should certainly like best to find the most wholesome articles to be also the most palatable ; but *wholesomeness* being my paramount consideration, I shall strike out everything justly suspected in that respect."

Fortunately, however, I had no occasion for the exercise of this "kingly" prerogative.

CHAPTER V.

MY REGENERATED SENSE OF TASTE, AND ITS REVELATIONS. —MY ADOPTION OF AN EXCLUSIVELY ANIMAL DIET, AND ITS REASONS.

AFTER the six months of this plain milk diet had passed, I thought my sense of taste sufficiently purified, and freed from its former prejudices, as to be a tolerably impartial judge of what was really, that is, *naturally*, palatable. I began my tasting experiments with plain butcher's meat, the flavour of which now appeared to me superior to what it did before. By that little I ate during the last six months, namely, a dozen or two of blanched almonds now and then, I accustomed myself to a very good mastication, by which I now profited in a marked manner, the power of my jaws having much increased, so as to reduce easily the meat, even when much under-done. It appeared also to me, that the good mastication made the flavour of the meat better perceptible ; a fact, of which I have convinced myself very frequently afterwards. But, when I tried choice liquors and beverages, which I formerly liked best, as Bordeaux wines, port, sherry, bitter ales, coffee and tea, both of which latter I formerly took without sugar, and frequently without milk or cream, I was surprised to find every one of these articles repulsive to my regenerated sense of taste. The same was the case with salt, pepper, mustard, vinegar, apples, pears, and some of the most fashionable "fish-sauces," which happened to be in my possession. Even sugar and honey had lost much of their attraction for my palate. Since

my adoption of an exclusively animal diet, which is now more than twelve months, I have not felt the slightest inclination for tasting either a bit of sugar or of the most cherished fruits. Indeed, I look with the utmost indifference upon anything but animal food. Among the constituents of milk the saccharine, or sugary principle, is estimated to be about five per cent., and, my sense of taste having become more acute than formerly, I perceive this principle very distinctly. But in the same way as most persons prefer a warm bath to a hot, and a cool breeze to a cold wind, so do I like the sweetness of milk better than that of sugar, and the acidity of meat better than that of fruits. I tried the most favourite vegetables proper, as bread, potatoes, &c., but I found their flavour to be very much inferior to that of either meat or milk.

I, therefore, naturally resolved to take only what I *liked best*. Among all beverages I like milk best, hence I take no other fluid but milk. Of all eatables I like meat best, I eat, therefore, of it in preference to anything else.

It will, however, presently be seen, that my "paramount consideration," *wholesomeness*, was, and is my principal motive in adhering to an exclusively animal diet. I shall only briefly state that the revelations of my regenerated sense of taste are nothing peculiar, or, as the Germans say, "subjective," to myself. All the reports of travellers agree in the repulsive effects of most condiments, fruits, drinks, and even some plain vegetables, upon the incorrupted tongues of those tribes who, by force of circumstances, have been restricted to an exclusively animal diet. So, for instance, the exclusively carnivorous Esquimaux of whom Sir John Ross tells us, that they,

although very desirous to oblige him, could not help rejecting, with wry faecs, fish with citron juice, meat with salt, plum pudding, rice, cheese, and "brandy as odious as our pudding." "Nor, assuredly, had these men," says Sir John in another place, "any reason to envy the refined tables of the south as among those they would not only have experienced disgust, but felt pity for our barbarism and ignorance, while, if they had been induced to partake, it could have been only under the impulse of starvation."* Nor is it the novelty which makes those tribes reject cheese, &c., for they at once cherish any artificial food free from ingredients disagreeable to their palate. They, however, always prefer animal food to vegetables. Of omnivorous animals it has also been observed, that they preferred animal to vegetable food. So, for instance, the harvest mouse. Mr. Bingley, who was led to believe that she was merely a granivorous animal, was one evening surprised at seeing her springing along the wires of her cage, against which a fly happened to buzz. "From that time," says Mr. Bingley, "I fed her with insects whenever I could get them, and she always preferred them to every other kind of food." On the other hand, an omnivorous animal may be made to reject animal food by being fed for a long time exclusively with vegetables. So Mr. Flourens tells us, that the bear in his possession would not touch meat after having been kept for five years on an exclusively vegetable diet.† But we need not call in the barbarians as evidence. All smokers well remember the most disgusting effects they

* See Narrative of a Second Voyage in Search of a North-West Passage, London 1835, page 247.

† On Human Longevity.

experienced at first from the tobacco; yet by dint of habit they have forced themselves to like it often better even than their meals. Not that they derive any pleasure from it, but its deprivation has been made disagreeable to them by the force of habit. All the difference between smokers and non-smokers is, that while the former feel for a time miserable by the deprivation of tobacco, the latter are quite well without it, saving besides a considerable item of expense. The first repulsive effects of most condiments, liquors, tea, coffee, &c., are quite forgotten by most people, these articles being, unfortunately, introduced into the diet of children of all classes. Yet it is frequently to be observed of children, not yet quite habituated differently, that they reject, when left to their own choice, everything salt, sour, bitter, and hot.

It would, however, appear that the use of some vegetables easily bridges over the chasm which exists between a natural diet and that constructed by the arts of cookery, brewery, and distillery. For while to the carnivorous Esquimaux "our brandy was as odious as our pudding," it became very familiar with the vegetarian Indians in America. Something similar may also be observed amongst the animals. The elephant soon gets a great liking for brandy,—probably induced by the acridity of the wood upon which it feeds; but even the dog, which would do almost anything to please its master, has not yet been taught, as far as I am aware of, to take brandy or bitter ale.

Notwithstanding that I take nothing but what I like best, I have no occasion of putting any restraint to my appetite; this being thoroughly sound, and not stimulated by condiments and other extraneous matter, I give it full

satisfaction. I do not mean to say that I could not eat a little more; but it is with my eating as with my sleep. I regularly get up after a sound sleep of about seven hours' duration. Now I might sleep another hour; but as I know that seven hours' sleep is amply sufficient for me, and as I do not sleep for pastime, I get up immediately after. In like manner I might eat a little more; yet as I do not eat for the mere sake of gratifying my palate, but to satisfy my appetite, I cease eating when I have had enough. But with your condiments, drugs, and drinks, you cannot say when you have had enough. "L'appetit vient en mangent," says the French proverb. It is, in fact, more the sense of repletion or the fear of disease which makes you leave off. Although my appetite gets full satisfaction, my meals, owing to their comparatively small volumen and their freedom from excitants, far from making me indisposed for work, only reanimate my energies.

I have thus succeeded in resolving for myself the great problem of dietetics, namely, how a man is to take only what he likes best, and yet put no restraint to his appetite. I only take what I like best, and put no *restraint* to my *appetite*, although I do not *overstrain* my *palate*.

I shall now proceed to the paramount consideration of *wholesomeness*.

It is acknowledged on all hands, that the most *digestible* article of diet is also the most wholesome; and the great superiority of animal over vegetable food, in point of digestibility, being unanimously admitted, the greater wholesomeness of the former follows as a consequence. There is, however, a very remarkable fact which has not yet been touched upon by physiologists. This fact, the

the truth of which I have experienced in myself during the last twelve months, is:—That the most wholesome diet is that which requires the least quantity of *matter* to be introduced into the digestive cavity for the support of the system. It would appear that because water costs nothing, the dieticians have taken no account of it in comparing the nutritiousness of animal food with that of vegetable. The stomach, however, does not tax the articles by their marketable price, but by their weight, digestibility, and other chemical and mechanical properties. There is no such thing as neutrality in our system. Everything that enters it must do something—either good or bad. One of the effects of water is, according to very careful experiments by Dr. Boecker, made upon himself, “That it increases the interstitial metamorphosis of tissue and consequent loss of weight.” “The necessity for food keeps pace with the metamorphosis of tissue.” Dr. Chambers* considers this property of water as an advantage, inasmuch as new tissues are better than old ones, just as a lady would like a new dress every day. But if she had to make the dress herself, she would certainly prefer to wear those dresses that are in good condition, only not quite new. Now, the new tissues must be made by the system itself; and it is, therefore, a bad plan to force it to make new tissues when the old ones are still in good condition. It is hence obvious, that in instituting a comparison between the nutritiousness of solid animal food, and vegetable, not only their own relative weight, but also that of the extra quantity of fluid required for their digestion must be taken into account. The proportion of the nutritiousness of animal food to that of vegetable has not yet been even

* The British and Foreign Medico Chirurgical Review, vol. xiv. 1854.

approximately established. I have made two experiments upon myself, to be mentioned presently, from which it results, that taking the extra quantity of water required by the use of potatoes or bread into consideration, plain butcher's meat, from a roast joint; is more than six times as nutritive as potatoes, and more than seven times as nutritive than wheaten bread. Leaving the extra quantity out of account, the ratio of the nutritiousness of meat to that of potatoes is at least as three to one; and to that of bread as three and one-third to one.

Since I have been taking plain meat off a roast joint, I reduced the quantity of milk from two quarts daily to about one quart and a quarter, which is equal to about two pounds and fourteen ounces. The average weight of the meat consumed by me daily I estimate at about three quarters of a pound; and as I take no water or anything else besides, the average weight of *all the matter* introduced into my digestive cavity, in every twenty-four hours, is only about three and five-eighths pounds! The weight of the matter swallowed by me daily, previous to my change of diet, I roughly estimate at about nine pounds, namely:—

	Pounds.	Ounces.
Tea (about a pint and a-half)	1	14*
Ale (a pint and a-half)	1	14
Soups, Wine, and Water (a quart)	2	8
Viands, Cheese, and Butter	0	8
Bread, Potatoes, Fruits, and Pastry	2	0
	8	12

This bill, I have no doubt, is being exceeded by many persons of my age, without their being considered as intemperate.

* It must be remembered that milk is a little lighter than water.

Now the experiments mentioned above. For six days consecutively I took, instead of meat, two pounds and a quarter of baked potatoes daily, without salt or any other ingredient. My appetite was not at all as well satisfied as with the three-quarters of a pound of meat, and I felt also a greater thirst to quench, for which I was obliged to take more than two pounds weight of water, besides the usual quantity of milk. A fortnight later, I made a similar experiment with home-made wheaten bread, free from salt and other ingredients, for eight days continually. I took two pounds and a half of bread instead of meat, without my appetite being satisfied, while the thirst was still greater than was the case with respect to the potatoes so as to oblige me taking, besides the milk, more than two pounds and a half of water.

Notwithstanding that the average weight of all the matter introduced into my stomach daily is not much more than the third part of that previous to my change of diet, my appetite is much better satisfied, and my body stronger than formerly. It is true that I was formerly fatter than now, the weight of my body having been, on the day previous to that change, about seventeen pounds more than it is now, and about twenty pounds more than its was during the plain milk diet. But *a good nutrition* is quite a different thing to what the dealers in live stock call *a good condition*, or an accumulation of superfluous fat. Dogs, which were fed only with fat, or with wheaten bread, got also into a good condition; that is, they became fat, but at last they died of hunger. Dissections of the human body show also the comparatively starved condition of the muscles of fat persons.*

* See Knight's English Cyclopædia, Natural Hist. division: Article, Locomotion in Animals, p. 496. Valentin's Text-book of Human Physiology, par. 542.

I do not know how much meat I should require, if I was to take water instead of milk. I have not yet made that experiment; but I think that about one pound and a quarter would be sufficient in that case. I must confess that the statement of Sir John Ross, according to which he and his party were well fed each with one pound of salmon daily, in the severe climate of the Arctic Regions, appears to me to be under the mark. It might have been so for a day or two, but no longer. His other statement, however, seems to be more correct, according to which, the hardiest man in Canada is well fed with about three quarters of a pound of butcher's meat and fish.

Yet, as if to show the utter helplessness of dietetics, we have it stated, by no less distinguished a physiologist than Dr. Carpenter, that an animal diet "is the least economical," and that "it has been calculated" that five pounds of starch, together with five pounds of meat, would go further to support a man than five and twenty pounds of meat alone.* "It has been calculated," yes; but has it been proved? that is the question. I have put it to the test, and found that quite the reverse was the truth. A certain quantity of milk, together with three quarters of a pound of meat, goes further to support myself than the same quantity of milk, together with two and a quarter pounds of potatoes, or two and a half pounds of bread; leaving the extra-quantity of water out of consideration.

Those barbarian tribes who, by force of circumstances, have become exclusively carnivorous, do certainly over-gorge themselves with plain animal food, as well as more civilised persons do with the refined products of cookery

* *Animal Physiology*, par. 163.

and brewery ; and although the voracity of those tribes has been exaggerated by travellers beyond the limits of credibility, it is to be presumed, without seeing them, that they recognise no other restraint but the capacity of their stomach. But, as Sir John Ross justly remarks, they know no other enjoyment than eating. If I was now thrown into a similar position, where I should do nothing else but search for my food by hunting and fishing, I should also eat much more and sleep much longer than desirable, simply for the sake of pastime. But a well educated person who knows better enjoyment than eating, drinking, and smoking, will find it extremely easy to keep the proper limits, with an exclusively animal diet, without condiments, and yet get all the gratification the sense of taste is capable of conveying. Those unfortunate persons who are so fond of strong excitants, in the shape of condiments and beverages, are not aware that the stronger the excitants they take the more they enfeeble their gustatory organs ; and that they might be better gratified with plain animal food if only their gustatory apparatus was in a sound, natural state, with its high sensibility unblunted. But, unfortunately, with a great many civilised persons eating is a pastime as well as with the Esquimaux. Having never acquired, or lost by their sensuality, the taste for higher enjoyments, they do not know what to do with themselves when they do not eat, drink, smoke, gamble, quarrel, or sleep. *Time* is their bitterest enemy, to kill which is their only pre-occupation. Persons, however agreeably occupied, do not think of eating until they get hungry.

The quantity of food I take at present I know by the experience of the last twelve months—during which the weight of my body has increased a little—to be amply

sufficient for me. Yet if I was to add condiments to it, say only common salt, I have no doubt that I should not be satisfied with the same quantity. Nor is it at all probable that if I was to restrict myself nevertheless to the same quantity, my system would not suffer by it ; because, whatever may be said to the contrary by formalists and "calculators," it must be obvious to common sense that the condiments, though exciting the appetite, are interfering with the digestion. What is digestion but a chemical dissolving of the food? Now, we see that meat, for example, exposed to a similar temperature to that of the digestive cavity, is being chemically dissolved or decomposed by atmospheric agency in a much shorter time, when free from, than when prepared with, condiments. The digestive cavity acts more powerfully than the atmosphere ; but the greatest force cannot *annihilate* its antagonist ; it can only overpower it, losing at the same time as much of its strength as is required to check the antagonist. I doubt not that the correctness of this reasoning might be established, with scientific precision, by unmistakeable experiments upon animals. Let chemists, or other well qualified persons think it worth their while to feed two kittens or young dogs of the same litter, and of about the same weight, with an equal quantity of meat and water, but the one free from, and the other prepared with, condiments. I feel confident that the injurious effects of the condiments upon the nutrition will become manifest. Experiments on an extensive scale have been made in France with salt upon military horses, and the result was anything but favourable for the use of this condiment.* The bread served out to the soldiers of most continental

* See Recueil de Mémoires et Observations, sur l'Hygiène et la Medicine Vétérinaires Militaires, p. 509, 1851.

states is free from salt, which is considered by the military authorities as deleterious to the nutrition. Every one walking in a field where cows and sheep are grazing together must be struck with the great difference of consistency of the dung voided by the sheep and the cows, though both animals are of the ruminating order. This cannot be explained upon any other supposition than that the cows, owing to their habit of licking off the salty contents of their nose, by which their thirst is being unduly excited, take a comparatively larger quantity of water than either the sheep or horse. The moisture of the grass swallowed by the cows would appear to be rather less than that swallowed by the sheep and horse, as these two animals bite off younger grass than the cows do. The same salt is probably also exciting the appetite of these animals beyond its natural standard, which is perhaps the cause of their being killed when feeding upon very rich and gaseous plants, such as the Meadow-sweet, which is "to the goat delicate and nourishing food," and which is probably injurious to the ox only by its quantity, and not by its quality.

I shall not here investigate the *direct action* of the condiments upon the nervous and vital system. I leave this task to others better qualified to execute it. I shall base my objection to the use of condiments upon the following three points, of the correctness of which I do not entertain the slightest doubt:—

1.—They are repulsive to the taste of everybody who tries them for the first time.

2.—They excite the appetite and the thirst beyond their natural standard, thus overburdening the system, which cannot fail to be injurious to it.

3.—They interfere with the digestion.

The prejudices in favour of condiments, especially of common salt, are however, so general, that even Dr. Chambers does not hesitate to give currency to a story of some nameless persons, according to which despondency, scurvy, tapeworms, &c., are being produced by the deprivation of this mineral.* It is now more than eighteen months since I have taken any condiment whatever with my food. When I resolved upon the discardment of condiments from my diet, I had just read this threatening story, endorsed by the authority of Dr. Chambers; but it appeared to me too ridiculous to deserve the slightest attention on my part. I now greatly congratulate myself in not having been shaken in my purpose by the "suggestions" of Dr. Chambers and other dieticians in favour of condiments "derived from theory," and, I would add, from story.

That salt and other condiments act beneficially, as a *medicine*, may be true enough; but a healthy man must take no medicine, if he does not want to become sick. Nor is it to be wondered at that ignorant persons, slaves of habit and predilection, should suffer by the "forcible" deprivation of salt; their disgust and fears are enough to make them miserable, the tune of the nervous system being of such powerful influence upon digestion and general health. A similar phenomenon is often presented by drunkards, when forcibly deprived of spirits. Such phenomena, if they prove anything, it is the caution incumbent upon parents not to allow their children to contract bad habits, the discontinuance of which becomes the more difficult the longer they last.

Throughout the last twelve months my health was

* See the British and Foreign Medico-Chirurgical Review, vol. xiv. 1854.

perfect and free from all sorts of indisposition, my mind even more active, peaceful, and cheerful, and my body stronger than under the plain milk diet. I have not felt the slightest disagreeableness arising from the bowels, either in the shape of eructations from the stomach, or obstruction, or dysentry, or of any denomination whatever. Indeed, if it was not from memory, and from books, I should not know that I had such things as a stomach and intestines. The evacuation of the bowels takes place with ease and regularity once every other day. The quantity of both urine and faeces is, as might be expected, much less than formerly. It is remarkable that no bad odour is to be detected in the latter. My nasal secretion has also very much diminished; and my throat and mouth being perfectly clean, I have no occasion to spit. Mainly to these circumstances I ascribe the improvement of my sense of smell and of taste. It is a general law to be met with in all the senses that a sensation is the better perceived the larger the *surface* of sensitive organ acted upon.* Even a weaker agent acts more powerfully than a stronger, provided the sensitive surface acted upon be larger. "The sense of taste, in its ordinary acceptation," says Dr. Carpenter, "may be regarded as a compound of those of smell and touch."† Hence it will be obvious that the cleaner the tongue, the mouth and the nose, the better the perception of the flavour of the food. There is also this to be said in favour of meat, if not too fat, that, even after a liberal allowance of it, the tongue remains perfectly clean, while you cannot take a potato or a bit of bread without the most sensitive part

* Of this law I shall treat at length in another book, where some curious remarks will be found.

† Animal Physiology, par. 501.

of the root of the tongue getting more or less covered by the mealy substance.

Dieticians have drawn a very erroneous inference, in my opinion, from the form of the teeth of man, as indicating his destination for a mixed diet. The molars, far from being disadvantageous are, on the contrary, of great service to an exclusively animal diet. That the digestibility and nutritiousness of meat is increased by a good mastication is too well known to need further demonstration; but I have already stated the fact, that the perception of its flavor is also being increased by it. The full adaptation of the human teeth to the management of flesh is shown by the example of those tribes who prefer it raw to being cooked. Why the carnivorous animals are not furnished with molars instead of cutting teeth is not our business to ask; but if you must have an answer I can give you one. The full action of the molars makes a lateral movement of the jaw indispensable, which could not be present in the carnivorous animals without impairing the strength of their jaws, which are required to enable them to kill and carry off their prey. The form of their teeth enables them also to eat bones. But the mouth of man has not been made to kill the prey, but to eat its flesh, for which purpose the teeth, tongue, and the whole gustatory apparatus, are admirably adapted.

But, after all, the mere form of the human teeth matters very little in a dietetical point of view. Knife and fork will outmatch the most formidable cutting teeth of any lion or any antediluvian monster. Whatever may have been the diet of the primitive men is of no practical purpose to us. The organisation of man has been adapted to the requirements of an essentially intelligent being, and,

however helpless the position of the primitive men, this very helplessness was the means of rousing their intelligence by the subsequent gradual development of which man has become master of the globe. But science will never be able to alter the chemical composition of the teeth or the organisation of the gustatory organs. Now meat is the food which does the least, if any injury to the teeth, either mechanically or chemically. Not to speak of vegetable fibres and grains by which the teeth of the vegetarian animals are being worn away, even mealy and pulpy vegetables, as bread and potatoes, are acting in the same direction, though to a less degree, by their attrition. But the attrition of animal food, owing to its saturation with fat, is minime. As to the chemical effect of animal food upon the teeth, I may only mention that my teeth are perfectly clean inside and out, although I have not used either brush or powder, or even water, during the last twelve months. I only occasionally wash them with milk, and make always use of a golden toothpick. Previous to my adoption of an exclusively animal diet I had my teeth examined and some gold fillings made by the dentist. One molar was quite hollow and discoloured, and the dentist said that it was past filling, and that its extraction would also be difficult. It, however, has not ached since, and has been very useful in mastication. Its colour has also improved a little. The teeth of carnivorous animals in a state of nature have not been seen to be decayed, what is always the case with those of vegetable eaters. The dog, which is often subject to toothache, has probably to thank this to the corruption his natural diet is undergoing in the domesticated state.

The unfavourable mechanical and chemical effects of most vegetables, especially fruits, upon the teeth, resulting

from the chemical composition of the latter, which could never be altered by human art, is, in my opinion, of much greater importance, in a dietetical point of view, than the mere form of the teeth. Professor Valentin is quite at a loss in accounting for it, why nature did construct our teeth of such materials which make them not only unfit for the mastication of many fruits by which they are soon set on edge, but even an obstacle to the use of those which, like grapes and cherries, require little or no mastication. Acids, even when considerably diluted, corrode the enamel, and penetrate in small quantities into the dental sac. Nature might have constructed our teeth advantageously, says Professor Valentin, of solid bone, such as are the teeth of some fishes. We would then have been spared also the inconvenience arising from the cracking of hardy substances, as nuts, &c., by which the enamel is often being broken and the subsequent destruction of the tooth unavoidable.* The idea, however, did not occur to Professor Valentin, or rather it did not please him, that men had better abstain altogether from fruits and everything else unfavourable to the teeth or the stomach.

Fruits, it would appear, are destined in the economy of nature for birds, which are destitute of teeth, and the bill of which is constructed exactly of that substance Professor Valentin would have our teeth made of. All vegetables are, in my opinion, fit only for animals, which in their turn are to serve as food for man. However incredible it may appear to most readers, there is not the slightest doubt in my mind that there will be a time when the entire human race will live upon an exclusively animal diet.

* Text-book of Human Physiology, par. 116.

It is not for me to enter into a controversy with the vegetarians. I shall make only one remark. Their principle must be wrong, because every human principle is wrong which is not applicable to the entire human race. If it was ungodly for one man to kill an unnoxious animal, it would be so for every man alike. Now, suppose the vegetarian principle to be adopted by all men, the consequence would be that the numbers of the animals would increase in such a degree as to leave man no choice but to starve himself. Nor can the most sentimental well-wisher of animals deny that it is better for them to have their life shortened by a quick death, after having been cared for as long as they were permitted to live, than be left to themselves and the helplessness of old age. A calf is as wise as an ox, and, to all appearances, happier than an ox. It therefore matters little whether it lives a few years more or less. An exclusively animal diet, on the contrary, is capable of being adopted by the entire human race, and in all corners of the globe, under the burning sun of Africa as well as in the Arctic regions.

The keep of meat for many days without condiments would be very difficult in hot climates, it is, however, quite unnecessary. It is a common mistake to think that quite fresh meat was less tender than such as had been kept for several days. The truth is quite reverse. The meat is most tender during the ten or sixteen hours after the animal has been killed. Usually after this time a state sets in which is called by physiologists the *rigor mortis*, when the muscles get rigid and tough. This state lasts for several days, and sometimes more than a week.

It has been found by careful experiments that where a weight of two ounces was sufficient to sever a fresh muscle,

no less than two pounds were required for the same operation when the corresponding muscle of the same animal had entered the state of *rigor*.*

When travelling in those countries where there are no hotels, and where they kill a sheep only when you order a dinner, I had frequent occasion to observe the tenderness of fresh meat. I think an exclusively animal diet would prove still more beneficial in hot than in cold climates; for, as the proper limits are much easier kept with animal than vegetable food, corpulency, which is so troublesome in hot climates, would be of much less frequency than is now the case. Of the deleterious effects of a vegetable diet, on the contrary, there exists no doubt among men well acquainted with the subject. I shall quote here only a passage from Dr. Lankester's "Letters on Diet." "In the first place, the experience of the races and nations of men who partake of animal food is decidedly in his favour. Amongst the northern and European nations this practice is universal; and it is precisely among these people that we see the greatest amount of physical power, and moral and intellectual development existing. Amongst these nations, those individuals and classes who partake most largely or exclusively of a vegetable diet are alike physically, intellectually, and morally degraded. It is a well established fact, that amongst those classes who get the least animal food, as also in those public establishments where meat is only sparingly allowed, mortality is greatest and disease most rife. One of the most common forms of disease generated by an exclusively vegetable diet is scrofula, and when traceable to this cause the most speedy

* See C. F. Burdach, *Die Physiologie als Erfahrungswissenschaft*, Bd. 3. Zweite Auflage, pp. 683, Oct. 1838.

remedy is the addition of animal food to the diet. There are also many other forms of disease produced by the want of animal food, which require for their cure an abundant supply of the needed material. I need not, I am sure, specify facts to verify this statement. The experience of every medical man would confirm it; and there is no surgeon or physician connected with the great medical charities of this country but has every day, unfortunately, ample opportunities of witnessing the ill effects of a vegetable diet, and the benefit, in such cases, of the administration of animal food."

"Nor are we at a loss in accounting for the beneficial action of the flesh of animals as food. From what I have before said, it will be recollected that the muscles and other tissues of animals are composed principally of protein; so that they truly constitute the most nutritious kind of diet. It has also been found, not alone as a matter of general personal experience, but by direct experiment, that animal food is more digestible than vegetable food."

"Could we not find reasons for partaking of animal food in its nutritiouess and digestibility, we might find ample justification from the structure of man."

I shall now touch briefly upon the financial question of an exclusively animal diet. My present diet costs me no more than one shilling a day, which is considerably less than I used to spend formerly—exclusive of cigars—with-out my appetite having been as well satisfied as at present. Supposing three pounds of meat, clean of bones, to be the quantity required by a labourer in this country, it is not difficult to show, that if the English people were to adopt an exclusively animal diet, the price of meat would go

down very much, perhaps to a penny a pound ; and this for the following reasons :—

1. The loss caused by the overripening and drying of grain, by its carriage, milling, baking, brewing, &c., might be saved by the animals feeding upon the plants and vegetables on the spot of their growth in summer and close to it in winter.

2. Civilised men living upon an exclusively animal diet will not overstrain their palate as much as is now the case, corpulency will greatly diminish, and taking my own example as a standard, a saving to the amount of more than twelve per cent. would be effected.

3. The *faeces* voided by men will diminish to about the fourth or fifth part of their present quantity, which is not only being lost to agriculture, but besides, a cause of annoyance and disease in the towns ; while the dung of animals either drops on the fields, or is else easily preserved.

4. The animals themselves would not be fattened in the manner as is now usual. From what has been before said, it will be remembered that carnivorous animals could not live upon fat alone, which is also less wholesome than flesh proper. The meat sold in our market is much too fat. The same quantity of food by which one fat animal is raised might be sufficient for two lean ones, which, even supposing that their aggregate weight would be less than the one, would yet afford more and better nourishment than the fat one would do. There will be no want for fat when vegetables shall disappear from the table. Besides, corpulency interferes with the fertility.

5. Agricultural labour would be greatly reduced, brewing, distilling, &c., entirely done away with ; and the

hands thus set free might be employed in fishing, by which a new supply of animal food would be brought to the market, while the superfluous beasts of burden or their substitutes would go directly to increase the stock of animal food.

6. Not a little will be saved by the simplified preparation of meat. There will be no sausages, and no mincings. Men living upon an exclusively animal diet will like best the meat from a joint, and not too much cooked.

If we take all these circumstances into account, it will not appear as Utopian, when I say that the price of meat might go down to a penny per pound.

I also believe that an exclusively animal diet might prove still more beneficial to the English people than to many others, not only because this country is better adapted to the raising of live-stock than many others, but on account of the malign influence of the English climate being much less felt under an exclusively animal diet. I have already stated the fact, that since my change of diet, which is now more than eighteen months, not the slightest indication of a cold or any other indisposition has manifested itself. Yet I do not fear exposing myself to all sorts of weather, and I have also put aside flannel jackets and other winter apparel. It must be remembered, too, that in winter as well as in summer I take the milk always and the meat most frequently cold. When I am asleep I require more clothes now than formerly when I was fatter; but in a wakeful state I want less, owing to the quickened movements of the body, and my greater activity.

My entire exemption from colds I attribute mainly to the limited amount of fluid I take. Colds, fevers, and

many other diseases, especially those of the lungs, most probably originate in those changes of the atmosphere which make it less capable at one time than another of appropriating to itself the evaporation of animals, by which those in the habit of taking a comparatively large amount of fluid are being exposed to great fluctuations of their needful evaporation. In corroboration of this, may be adduced the fact, that while colds and pulmonary diseases are common among cattle, they are rarely, if at all to be met with among carnivorous animals. The noses of the latter are also much cleaner than those of the vegetable eaters; and I have already mentioned that my nasal secretion has, together with the other secretions, greatly diminished, especially since I replaced a quantity of milk by meat. According to Lavoisier and Seguin,* the average weight of the matter eliminated through the perspiration of the skin and the lungs of a full-grown person amounts to forty-five French ounces—equal, I am told, to fifty-six English ounces—daily, which is by two ounces only less than the entire quantity of matter introduced into my digestive cavity during the same lapse of time!

It will, therefore, be easily understood why the so changeable English climate, which has made England proverbially the “Land of Colds,” can do no harm to me. Indeed, I like it better than any other climate, the influence of which I have yet had an opportunity of experiencing; and this, as well by reason of its greater freedom from extremes, as on account of the beautiful green which meets the eye almost throughout the year.

There is, however, another circumstance to be con-

* See Mémoires de l'Académie des Sciences, 4to, p. 609. Paris, 1797.

sidered, which is, in my opinion, of very great importance in many respects. As I before said the weight of my body had, to my great satisfaction, decreased during the plain-milk diet about twenty pounds. Since then it fluctuated but little, increased, however, on the whole about three pounds. But the circumference of the body an inch below the navel has decreased nearly three inches, while that round the nipples increased more than an inch. A remarkable increase of size is also to be seen in the temporal muscles. The circumference of the head round the temples has increased fully an inch, owing probably to my acquired habit of very good mastication, in which these muscles are principally active. The increase round the shoulders and nipples may be attributed to my frequent practice on the piano, which I have only begun during my present diet. But how is the decrease of the circumference below the navel, in spite of the increase of the weight of the whole body, to be accounted for? First, by the diminution of the quantity of matter contained in the digestive cavity, this quantity having been of about five pounds weight daily during the plain-milk diet, while at present it is only about $3\frac{5}{8}$ pounds. Secondly, it is extremely probable that my bladder, liver, stomach, and the rest of the intestinal canal have gradually decreased in size, which is the case with every animal changing a vegetable for a carnivorous diet. So, for instance, "the tadpole, which lives upon vegetables, possesses an extremely long digestive tube; but in its perfect state, and when its appetite has become altogether carnivorous, the intestines become very much shortened, losing four-fifths of the length which distinguished them when the animal

was in its early stage of existence.*" The domesticated cat, which lives on a mixed diet, has its intestines two-fifths longer than the wild cat. The intestines of the ox have been found to be forty-eight times as long as its body ; those of carnivorous animals are only from three to five times as long as their body. The intestines of men of a mixed diet are presumed to be eight or nine times the length of their body. I see it nowhere stated what is the ratio of the size of the lungs to the body of carnivorous and of vegetarian animals. To judge from the great development of the thorax of carnivorous, as compared with vegetarian animals, I think it very probable that this ratio is as much greater in the carnivorous than in the vegetarian animals as the other ratio, namely, that concerning the intestines is smaller. The great superiority of strength of the carnivorous over the vegetarian animals is due to this double ratio, namely, the greater development of the lungs, and the smaller size of the abdominal contents. The lungs may be said to be the true steam engines of the animal fabric, while the abdominal viscera are merely the receptacles of the fuel and the refuse. In men of a mixed diet the weight of the lungs, when distended with air, has been found to vary from 18 to 53 oz., or from the 1-120th to the 1-40th part of the body. The weight of blood passing through the lungs of a man every minute is estimated at 308 oz. Every one may convince himself by personal experience, or by referring to books upon gymnastics, that all the great exercises of the body, as swimming, running, raising heavy loads, &c., are being

* The English Cyclopædia, Natural History Division. Article : Amphibia, p. 157.

accomplished by means of deep breathing, by which a much larger volume of air is drawn into the lungs than is the case under ordinary circumstances. On the other hand if a man, after taking a copious dinner, had to run for his life, or to swim across a river, or to perform any other great exercise of which he thought himself capable, he could not do it, not so much on account of the additional weight of the dinner as by reason of the capacity of the lungs being impaired by the increase of the blood flowing into them, and of the abdominal contents. It is reported by travellers that the lion has often been seen crossing a river with a horse in its jaws ; but after having over-gorged itself it could not recross the river by itself, when pursued by the hunters. Although the latter part of this statement would appear to be of those embellishments many travellers are so fond of, it contains a deal of truth. The thorax and the abdomen form a continuous cavity, being separated only by a muscular membrane, called the diaphragm. This membrane is being alternately forced down by the expansion of the lungs, and raised up again by the abdominal contents, when the lungs are emptying themselves. From this it will be obvious that not only must those animals be strongest, the abdominal contents of which are proportionally smallest, but that the same animal is stronger when, without being hungry, its belly is in a comparatively easy state. Since it hardly admits of a doubt that the size of the abdominal viscera of man as well as of other animals is decreasing, by a change from a vegetable or mixed to an exclusively animal diet ; and since, on the other hand, the quantity of animal food required for the full support of the system is so much smaller, as to constitute a very considerable diminution of blood flowing

into the heart and the lungs,—I hope to see it generally admitted that the strength of men would be much increased by their adoption of my diet.

I myself have experienced a considerable increase of the strength of my body, especially as far as locomotion is concerned. I run over the same distance in nearly the third part of the time it took me formerly. It is true that the weight of my body is 17 pounds less than previous to my change of diet; but this alone would not account for such a difference.

I shall leave it entirely with the medical men to decide the question, whether the pulmonary complaints so prevalent in this country might not be best prevented, if not cured, by the considerable diminution of blood flowing into the lungs, and by their greater capability of strong breathing consequent upon my diet as just explained.

I must not dismiss this subject without touching upon another of great interest. In *The British and Foreign Medico-Chirurgical Review*, No. XXXII. p. 554, we read as follows :

“ A woman, shortly after pregnancy, suffered intolerable pain after taking food, so that she was afraid to eat; she restricted herself to the most scanty diet until delivery. The child was born at eight months and a half; it weighed scarcely 1500 grammes, but it was very lively, and suckled well. A case is referred to in which M. Depaul succeeded in reducing the size of the child by spare regimen; and M. Dubois refers to another of a woman, who having escaped from pelvic contraction, was subjected in her second pregnancy to a very strict regimen, and the child was so small that it was delivered naturally, yet in condition to live.”

Now I think it may be fairly presumed that the quantity of matter swallowed daily by these poor women was still greater than that introduced into my stomach in the same lapse of time, so that there can be little doubt but that they might have satisfied their appetite to the full, without giving rise to the threatened disorders, had they been living like me upon an exclusively animal diet.

I cannot help thinking that the emetic and other disorders concurrent with pregnancy, and those unnatural pains of delivery, by which the life and health of many women are so much endangered, might be greatly relieved, if not altogether banished, by their adoption of my diet, and this for the following reasons :—

1. Four or five pounds of matter less introduced into the digestive cavity, daily, must very considerably lessen, if not altogether do away with, the reciprocal pressure of the nascent child and viscera, which is the cause of the emetic and other disorders accompanying pregnancy..
2. The functions of deep breathing being so essential in the act of delivery of the child, the above remarks about the lungs may be applied word for word here as well.
3. The mother, not being over-fed herself, her child will also not be hypertrophied ; and consequently its size only such as to make the delivery "*natural.*"
4. The general good health and cheerfulness preserved by a perfect diet will make the woman less nervous, and much better capable of bearing pains which must be borne.*

To return to myself, what I value above all is the sober gladness and true enjoyment of life, the always ready activity of the mind and body, and the inexhaustible

* See Frontispiece.

cheerfulness which has been my happy lot ever since my change of diet. My mind and body appear to have come into perfect harmony with one another. My means of subsistence are very moderate, but sufficient to make me independent and comfortable. I am always occupied, and for the most part intellectually. It is astonishing what an amount of pleasure and enjoyment may be found in a neat but small parlour, with a piano and a few good books in it, when you are blessed with perfect health. It is only during my present diet that I have begun to learn to play on the piano. My music-master is astonished at the quick progress I have made in so short a time; and still more at the tenacity of my memory, by means of which I learn by heart all the notes of a piece almost immediately. The improvement of my memory I also perceive in my studies. It is probably owing mainly to the great pleasure I derive from good books as well as from the music, and to the clearness of my mind, which not being distracted by the pre-occupations of passion and sensuality, enables me to pay a close attention to everything I do.

It is a misfortune that perfect health and true enjoyment of life are still rarely to be met with, and little understood. They will, however, spread amongst men; and the more extensively, the better they will be understood. "All men," says Buffon, "live in contention, and most men die of anger." "With our customs," exclaims Mr. Flourens, "our habits, our passions, men do not die—they kill themselves." Contentment, happiness and true enjoyment of life are inseparable from perfect health. But perfect health cannot be upheld except by a very judicious diet—be this vegetable, mixed, or exclusively animal.

Persons imagine themselves to be healthy when they can go to their business or occupations, free from bodily pains. In fact, bad colds, headaches, toothaches, biliousness, and other occasional indispositions, are not thought of, and rather looked upon as accessory to good breed and gentle habits. But the painful diseases are not the worst, they do not last long, they either kill their man or are killed themselves. The worst, and unfortunately the most general, disease is, that creeping vitiation of the nervous and vital system; that craving for excitement and *kill-times*; that tossing of indefinite desirings, which gradually deprive you of the sober gladness of life; deadening and embittering even those pleasures you are so anxious for. A perfectly healthy man, sound in body and mind, is not fond of excitement. Happiness being his lot, he does not want *kill-times*; he is not anxious to exchange the real present for the uncertain future. *Time* is his best friend, he likes it to last. His desires are tuned to the key of his capabilities, and the favour of circumstances. *Passions form no part of the soul*, they are disorders of the mind, generated by the vicious nutrition of both the body and mind. "All babies are good," said Lord Palmerston; but there was some remonstrance made against it by "a father of twelve children." I would say, that where babies are bad, the parents are, assuredly, *still* worse. New born children are, of course, as good and healthy "as a new born child;" and it is fortunately only in a comparatively few cases where the defects of the parents are partially implanted in their innocent offsprings. But for this there would be no hope for the human race. Good babies, however, become bad lads and girls, and these, still worse men and women by the vici-

ous system of nutrition of the body, as well as the mind. There is, however, this to be said, that while errors may be corrected, and the cultivation of the mind successfully undertaken at later periods of life, health once seriously compromised cannot be recovered again. Both true religion and true philosophy have little power over the passions. These are, no doubt, being fostered by ignorance and bad books; but they may be guarded against or extirpated by perfect health. A perfectly healthy man will not easily be corrupted by either stupid or hyperwise doctrines. He will eagerly learn what is worth knowing, and heartily believe what is conducive to, and inspired by happiness.

Our desires are good and their gratification is beneficial as long as they remain natural and healthy. Then they are not troublesome, only gently stimulating a person to be active for their gratification. But when desires become passions, then they are unnatural and bad; torturing and precipitating headlong, generating new passions still worse than themselves. So is ambition a good desire. Every man likes or ought to like to be something, or to become something more in the world, the state, the county, the town, or the village, as the case may be. As long as ambition remains a desire it is not troublesome, only gently stimulating the activity, and its object being commensurate to the capabilities and circumstances of the man, its gratification is not difficult to obtain. This is beneficial to the individual as well as to the community of which he is a member. The natural object of a natural ambition is, to be held in, or deserving the respect of, his fellow-men. Such respect may manifest itself by looks or gestures only, or by trusts of responsibility and honour.

A perfectly healthy, and consequently happy and good man, will not find it difficult to gratify his ambition by commensurate activity. Where he is not respected, it is not his fault, but that of his fellow-men. But, being so much *within himself*, he will not be troubled by the desire to be also something in the world, or in the state, or in the county, or in the town, or in the village where he happens to reside.

But when ambition has degenerated into a passion, then it is bad, troublesome, and generating other passions worse than itself. Its gratification is beneficial neither to the individual nor to the community of which he is a member or the head.

The passion of ambition has been most strikingly illustrated in its baneful character by Napoleon I. Nobody denies him great talent, and even genius ; yet every one is astonished at his folly in not having stopped at or near the zenith of his power and fortune. But if his ambition had been of a nature to allow him to stop, he would never have become an emperor at all. His genius would always have secured him a high position in the world, if not in the state ; but he would never have become an emperor. Only because his ambition degenerated early into an unnatural passion, he was (the temptations and opportunities of the times being so great) precipitated by it headlong, first upwards and then downwards. He was as clever as his critics ; he knew well that he was playing for "all or nothing," but he could not help it. A similar though less striking illustration we have witnessed ourselves only a short time ago. The Emperor Nicholas was considered as the cleverest statesman in Europe, and his power was greater than that of any of his predecessors ;

yet, when he began the war, every one saw that he could not succeed against Turkey, opposed as he was by England and France. Himself knew it very well, as has been evidenced by the secret correspondence published in the blue books ; yet his passion precipitated him into defeat and death. If a true biography of Napoleon and Nicholas, written by themselves, could be had, it would be seen that, even in the zenith of their power and fortune, they were unhappy, their heart having necessarily become the abode of other passions still worse than that of ambition.

Although hypocritically invoking God in their proclamations and *public* devotions, they were poor atheists by their conviction as well as by their crimes.

It is not party-spirit that makes me say so. I have renounced all allegiance to any party since I have become much more healthy and happy. I feel no sympathy with any war-party, be it white or black, national or cosmopolitan, democratic or monarchical, liberal or anti-liberal. The Russian war-party is, no doubt, by far the worst, combining the greatest accomplishments of civilisation with the most abject superstition and barbarism. But all war-parties are bad, only one is worse than the other. I do not approve of those who would disarm this country, or maintain peace at any price. As long as other countries are arming and warring, this country must be armed too; but war may at best be excused, it can never be a glory or a virtue. Since the English are foremost in so many branches of progress and civilisation, especially in what regards political institutions, it is to be hoped that they will also be the first to give the example of discountenancing the war-spirit which is, unfortunately, still so much in vogue amongst all classes of society. The best

remedy for exterminating the war-spirit is again perfect health and true enjoyment of life. Persons will cease admiring others for their *contempt of life*, when they will have learned to value and enjoy truly their own lives.

With regard to the oppressed nationalities and peoples, I certainly do not call a partizan a man who likes to be free. A man is only a man when he is free. But freedom cannot be established by war, although it may be maintained in spite of war. The loudest mouthpieces of liberty become tyrants in their turn from the moment they are established in power. It is quite horrible to think of the numbers of victims devoured by that insatiable monster, *revolution*, the bastard produced by the unnatural union of freedom and war. But since you cannot conquer the despots by arms, the clinking of which makes them more obstinate and suspicious, try a means which, for its being innocent, is nevertheless infallible. *Give to the rulers happiness!* Then they will be sure to grant to their subjects all reasonable liberties, for they will feel their happiness an hundredfold increased by doing for others the best in their power.

Like the desire of ambition is that of acquiring property; in fact, all original desires are good, and their gratification beneficial as long as they remain desires, and do not degenerate into passions.

But how do good desires degenerate into bad passions? By the vicious system of nutrition of the body as well as of the mind. The stomachical disclosures of St. Helena are, in my opinion, as good a clue to the insane passions of Napoleon as his proclamations and despatches. I have had frequent occasion to see the Emperor Nicholas, and to hear also something of his private affairs, which

leaves me no doubt but that his stomach was in great disorder. Hitherto chroniclers and historians have paid little attention to the eating habits of their heroes, and of nations, their imagination having been absorbed principally by the "byrnyngs of houses and warres," by "bom-
bardments and campaigns." But I believe that the character of a prince may be traced as well into his dining-
room as into his cabinet, and that the eating habits of a nation form at least as important a topic of history as its tragedies and comedies.

CHAPTER VI.

UNITY AND SIMPLICITY OF AN EXCLUSIVELY ANIMAL DIET —DEFINITION OF THE ANIMAL KINGDOM.

I AM so well pleased with butcher's meat that I have not yet taken an opportunity of tasting either fish, or fowl, or game; the two latter of which I formerly liked better than butcher's meat. But the oftener I eat of this, the better I like it. A natural, sound sense of taste, far from getting tired of the sameness of the food, only likes it the better for it. But as disease is the opposite of health, so a diseased taste likes the change, while a sound one prefers the sameness. Multifarious are the ways of corruption; but unity, simplicity, and harmony, are the attributes of perfection in all things. An exclusively animal diet is unique, simple, and harmonious in its character, although the articles may be derived from animals of various orders. Because there is less chemical difference between the flesh of an elephant and that of a chicken, or a salmon, than there often exists between the potatoes of one and the same field. It is, however, not the number of dishes or the variety of forms, but the diversity of the *chemical properties* of the food which constitute a multifarious diet.

An appropriate term has not yet been discovered by which to draw a line between the animal and vegetable kingdom. After a summary of the various definitions offered by naturalists from Aristotle down to Dr. Carpenter, "The English Cyclopaedia" says, "In this way

the naturalists and physiologists have tried to contend with the difficulty. Within the last few years, chemistry has invaded the domain of the anatomist, and supplied him with the means of determining the problem of the difference of animal and vegetable life It is clear, however, that no single character is sufficient to mark the line between the two kingdoms.” *

I hope it will not be considered as presumption on my part for venturing to give the following definition, which may perhaps be acceptable until a better be discovered. The difference between animal and vegetable life may be thus defined:—The principle of *animal life* is so unique in its cause and harmonising in its effects as to constitute the entire animal kingdom—from the minutest animalcule to the largest whale, into *one mass, as to its chemical similarity, and its mutual convertibility from dead into new living matter.* For, although a great many animals providentially refuse animal food, there cannot be the least doubt of their capability of digesting animal matter and converting it into their own tissues. I do not know what amount of credit is due to the statement, according to which, “The sheep in Tartary are eating bones like a dog.” † John Hunter, it is recorded, fed a sheep on animal food. Rabbits if kept fasting a long time, will, according to Sir James Eyre, eat meat greedily. At any rate, I may assert without fear of contradiction, that *all dead animal matter* introduced somehow or other into the digestive cavity of every animal, without an exception, is being converted into *living matter* of the same animal.

* Natural History Division. Article: Animal Kingdom, page 199.

† The English Cyclopædia. Article: Ovaæ.

The principle of *vegetable life*, on the contrary, is not unique in its cause, and its effects are consequently diversified. *Some* plants live upon *some* other plants, but no plant can convert every other vegetable matter into its own living matter, and the *mutual convertibility* is entirely wanting.

I presume, therefore, that the *unlimited mutual convertibility* is a “single character, sufficient to mark the line between the two kingdoms;” it being present in the animal, and absent from the vegetable kingdom.

It is this chemical similarity and mutual convertibility which gives to an exclusively animal diet the character of singleness, simplicity, and harmony.

I have not yet spoken of the saving, cleanliness, and comfort of an exclusively animal diet consequent upon the great reduction of the kitchen fire, implements, and the manipulation of cooks. I take my meat most frequently cold. I like a warm joint better than a cold; but the difference is very slight, and my preference in this respect is very probably still a remnant of the old force of habit, as I formerly very rarely took cold meat. I now prefer, however, the cold meat of a roast joint to warm steaks or chops, which are usually dirty and not so flavoury as the meat of a roast joint. The milk I like better cool or tepid than warm. Hot drinks raise the temperature of the body momentarily; but by increasing at the same time the perspiration, they give rise to a sensation of cold afterwards. This fluctuation of the temperature of the body during and after meal-times has been called the “fever of digestion;” but since my change of diet I have not felt anything of the kind, which is obviously attributable to the moderate temperature of the matter introduced

into my stomach. The predilection for either warm or cold food appears to depend entirely on habit. The Esquimaux, in the Arctic Regions, prefer cold to warm food, while the inhabitants of southern countries like their coffee as hot as possible. In Russia there are numbers of persons of all classes who are in the habit of rolling their bodies in snow immediately after having come out of a hot vapour bath. Something similar may be observed in coffee-houses, of persons swallowing hot coffee first, and immediately afterwards iced water.

Such phenomena are, however, only symptoms of a diseased taste. The “golden media” are best adapted as well as most agreeable to our nature, when in a state of perfect health.

I do not bind myself to certain hours, but eat whenever, and only when I have a good appetite. The French say: “*l'appétit vient en mangent* ;” but with me the case is different; my appetite not being stimulated by condiments, it goes off with its satisfaction, and returns in due time again without being called forth by artificial means. At the beginning of my present diet I still adhered to the general rule and my former habit of three meals daily, taking, I believe, about four ounces of meat at a time. I gave, however, up this practice upon finding that it answered much better to leave the appetite sole master to determine the hours and frequency of the meals, as well as the quantity of the food. I now make most frequently only two meals of meat daily, while I take a glass of milk whenever I please. As a rule however, I take nothing in the last two hours before going to bed, which greatly contributes to the uninterrupted soundness of sleep. The quantity of milk consumed daily is always constant, but

that of the meat varies a little according to my appetite. This is greater in winter than in summer. My habits in other respects are free from artificial restraint. I have made it a rule to do nothing that is disagreeable to me, if I can help it. I frequently take a tepid or cool sponge bath, but I should not like again either a vapour, shower, warm or cold bath. I am a good swimmer; but since I play on the piano, I like this practice much better than either swimming, skating, or shooting. In summer I get up early and go to bed early; in winter I go to bed late, and get up later. I have already stated that my meals, owing to their small volumen, and great digestibility, do not in the least make me indisposed for work. But how different is it with other persons! Sir James Eyre emphatically insists upon the following rule: "Two hours, whenever possible, must be spent by every one after dinner in perfect repose. Even the newspaper is not to be read!"* Now, I would rather do almost anything than be condemned for two hours to such boa-like repose without sleep. In fact, I cannot help looking upon much of what has been written about the stomach and digestion with a similar smile to that of modern astronomers when perusing astrological works. There is nothing more simple and constant than the digestion of wholesome food, taken in the proper quantity and manner. All the "difficulties" you have to contend with are of your own making; it is not the stomach, but your understanding that requires to be corrected.

I am very fond of agreeable company, and should be most happy to see myself surrounded by a little family. The repugnance, or utmost indifference with which I

* The Stomach and its Difficulties, p. 90. London, 1855,

now look upon those articles of diet, which I formerly so much liked, makes me believe that children brought up with an exclusively animal diet, and made conscious of the great advantages of such diet, would stand proof against the temptations of pot-houses as well as of divans. That the force of habit should be so great in matters of diet is a wise provision of nature, by which the innumerable species of animals are kept in the boundaries prescribed for them from the commencement. But man has been gifted with ever-increasing intelligence in order to direct his natural desires into the best channels, and to be always master of them. The same force which makes you so reluctant to give up a bad habit will make you still more persistent in a good one: The change is, certainly, difficult; but the trial is short, while the reward lasts for ever. Others may pride themselves with having looked *death* into the face on many a battle-field; I congratulate myself in having had the courage to look *true life* into the face. Charmed by its beauties, I have become its constant admirer. But those unable to break the force of habit ought the more to feel admonished not to fetter their innocent offspring with any other habits than such as are clearly indicated by nature herself to be beneficial. The vegetarian animals are either born with teeth, or these make their appearance very soon after birth, thus indicating the will of nature that those animals should not be fed with milk only a moment longer than was absolutely necessary. But the human teeth appear at a much later period than even those of the lion and tiger. Well, then, imitate nature, and feed your children exclusively on animal food, until they can judge for themselves.

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