ON

THE PRESERVATION OF HEALTH;

OR,

ESSAYS EXPLANATORY OF THE PRINCIPLES TO BE ADOPTED BY THOSE WHO DESIRE TO AVOID DISEASE.

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PREFACE TO THE FIRST EDITION.

The following Essays were written at the suggestion of my friend, Dr. Macgowan, the then proprietor and editor of the *Medical Mirror*, and they first appeared under his auspices. They have been composed at intervals, in the midst of very heavy literary work, and lack the polish which is given by the use of midnight oil. It has been the aim of the author to give, in vigorous language and as plain English as he could command, information to those who desire to keep themselves in health, or to recover health when they have only departed from it to a small extent. In handling his subject, he has ever had before his mind real conversations with various clients who have been able, with his assistance, to trace their sufferings and the necessity for a doctor's advice to some habit thoughtlessly contracted or adopted, with the idea that it was highly beneficial. He has frequently had before his mind the story of the once famous Abernethy who prescibed to his patients a perusal of his book as well as certain medicine, and the author has repeatedly wished that he had some such work to which he could refer those who have consulted him. He is speaking

strictly within the limit of truth when he says that he has often spent an hour with a client before he could impress him or her with the senselessness and injury of some habit or custom which had been slowly but surely impairing vitality and undermining both health and life, and he would then have been glad to be able to refer his interlocutor to some volume where the required information might be studied. However much the author felt the want of such a book, it is probable that he never would have composed one, had it not been for the gentle pressure of Dr. Macgowan, and a desire to serve the interest of an old friend.

When once the composition of the present Essays was resolved upon, the author felt conscious that he should have to touch upon subjects which are very rarely handled, and the question arose in his mind whether these ought or ought not to be wholly ignored. If, on the one hand, they were passed by in silence, any reader would imagine them to be of no importance; if, on the other, they were discussed, the difficulty of finding appropriate language had to be weighed. When he had resolved not to shirk the disagreeable duty, the author felt much in the same way as he did when he determined to join a party to visit a deep salt mine. He was horribly afraid of the yawning chasm, but fully resolved not to show a white feather, so he joined the first batch of descenders and entered the tub before any of the rest of the party. In like manner he resolved to do the most uncongenial portion of his literary work at the outset, so that he might not, as it were, sit for months shivering on the bank of a mental cold bath.

During the long period which has elapsed since the first Essay was published, the author has met with some strictures upon the plainness of his diction, it being held

by learned pundits in the medical profession, that a physician should always be oracular, recondite, and incomprehensible to the vulgar. It has even been considered as a medical crime for a doctor to write a book for the Public to read, it being a canon in "etiquette" that whenever anything spoken of has a technical or Latin word as well as an English one, the last is to be carefully avoided. To this rule the author adhered when he wrote for doctors alone, but to respect the law when he was writing for those who are not supposed to have any medical knowledge would have been the height of absurdity. That he has written this work for the Public, the author fearlessly avows, and he feels in advance some shame at the knowledge that this avowal will be assailed by many who profess themselves to be members of a liberal profession.

12 Rodney street, Liverpool.
April, 1868.

PREFACE TO THE SECOND EDITION.

SINCE the first edition has been printed the author has seen with satisfaction that his anticipation of being reproached for writing on medical matters in plain English has not been wholly realised. On the contrary, he sees in the rising generation a propensity to adopt the plan. A week, for example, has not elapsed since he heard an advanced medical student express the opinion that the cause of Homœopathy or other irregular plans of medication had been promoted by the plainness and apparent truthfulness with which books supporting the system had been written—whereas, on the other hand, almost all works upon orthodox medicine were so written as to be incomprehensible to the vulgar. He very properly remarked that false opinions cannot, amongst sensible people, be disproved by abuse alone; that if regular doctors object to the theories and practices of others, they must not only show that the adversaries are wrong but that they themselves are right. When the former entertain views transparently absurd it is easy to ridicule them—but the greatest success in doing so does not prove that the critic's own ideas are correct. As a

rule, up to within the last few years, the so-called orthodox doctors have avoided such a full exposition of their views as could be tested by an ordinary thinking man. Even in the classic lectures of Sir Thomas Watson, we find no attempt to prove statements upon which are built the most important methods of practice. That author, like others, assumed that blood-letting and mercury are the best remedies for inflammation, but there is no evidence given to show that either is necessary, that they cannot be prejudicial, and that they are superior to all others. The homœopathist affirms that the use of these means is positively baneful, and in his way he proceeds to demonstrate why he holds this opinion. Appealing to the common sense of educated men he is likely to establish his point unless he is fairly met. But, instead of joining issue with him, the regular practitioner attempts to shelter himself in the dignity of *quasi* learned colleges and universities, and declines the combat. It is then his own fault if the public regard him as a Bobadil. Even if our favourite Ecclesiasticus refuses to reply to the apparently truthful statements and arguments of Iconoclastes we lose some faith in him as a standard bearer.

If our medical writers should recognise the necessity which there is for writing in a manner intelligible to the people, we should certainly find a great improvement in their practice. We should not then have lectures published which recommend an obsolete plan of treatment, and one that the professor himself objected to, merely that his teaching may be in harmony with ancient writers who were once called distinguished.

We shall see still further the value of talking plain English in the lecture room, and writing it in treatises if we endeavour to realise the result thereof. In the first

place, every teacher would be obliged to understand his subject; and secondly, he would be induced to make the matter comprehensible to his class. The students again composing this would go into the world with a certain assured knowledge of what they had to do, what they could do, and how to do it in the best manner. On this subject I can speak from personal knowledge. Whilst preparing the lectures on the Principles and Practice of Medicine for my class, I followed at the first my classic predecessors; but in attempting to explain and demonstrate why certain things were done, I soon became dissatisfied with my models, and with myself. One occasion I especially recollect. My subject was Hysteria, and I treated it according to the current fashion; but just at the time when I was bringing the argument to its conclusion, I discovered that I was talking what seemed, to me, to be such utter nonsense that I made myself intentionally obscure; for I could not endure to teach what I disbelieved, and I could not, on the spur of the moment, frame a rational view of the matter. That night saw me hard at work upon the whole subject of Hysteria, and long before the next session I felt able to meet my class with confidence. Similar remarks apply to most of the other matters which it was my duty to handle; and I affirm that nothing, in all my medical career, gave me more real knowledge than the persevering endeavour which I made to enable the students to understand what were, as I think, the true principles and foundation of the practice of medicine.

Whilst on the question of the relative value of a technical and a simple style of writing medical works, it is quite allowable to call attention to the fact that books which are specially addressed to the Profession are very little read by doctors, and if they are perused by the

public, the latter, being mystified, receives no valid information. On the other hand, I have reason to know that medical works, when free from unnecessary technicality, are read and understood both by medical men and their clients.

In fine, I am convinced that for England the period for "craftiness" in medicine is passed. That which James the First called "King Craft," has gone; that which is called "priest craft" has been rudely shaken, though it is not extinct; the "art and mystery" of the apothecary has no sense now; and in like manner medicine should cease to be a sort of trade which can only thrive satisfactorily when it is based upon mystery, or, like a Proteus, lives in darkness.

P.S. Since the above was in type I have heard from a a French gentleman of great attainments that some of the noblest intellects in his country are recognizing the fact that the highest social degree which a learned man can attain to, is earned by his making difficult subjects intelligible to "the masses." In a list framed on such a basis, we may place Arago, Faraday, Huxley, Owen, and Tyndall; and it is to be hoped that Medicine will, sometime or other, be inscribed on the same table.

12 Rodney street, Liverpool,
June, 1870.

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ON

THE PRESERVATION OF HEALTH.

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CHAPTER I.

INTRODUCTORY.

I ONCE examined a gentleman for an insurance company, who told me that he had made up his mind not to die until he was a hundred years old; but, unfortunately, as he had an affection of the heart, he could not persuade the office to believe him. On another occasion a clergyman spelling out my profession, accosted me in a railway carriage, when I was returning from a visit to the great man of the neighbourhood, and propounded the opinion, that every one might live to an indefinite period if he only knew how. He then tried to worm out from me the secret of the elixir vitæ. There is also an old "saw" to the effect, that "man thinks each man mortal save himself."

These may suffice to show that there is within us all a wish to live as long as we can, and to that end we make for ourselves a code of laws to which we adhere. Some of these laws seem bizarre, yet they are not adopted without thought and consideration; the mischief about them is, that the observations on which they are founded are insufficient and the deductions therefrom illogical.

One man thinks he sees in civilisation the main cause of premature decay, and for himself and his children he imitates the wild beast, and goes as bare of clothing as the laws of the land will let him. Another thinks that as the lion, the lamb, and the elephant eat their meals uncooked, so we, if we wish to emulate their strength, gentleness, and longevity, must eschew roast beef and boiled potatoes. Another, hearing of some won-

derful old carp living in a certain pond, thinks that water is wonderfully conducive to the conservation of life, drinks assiduously of that fluid, and sluices himself with the same element at every opportunity. Another, in his or her young days has read that "early to bed and early to rise, makes a man healthy and wealthy and wise," so he buys an alarum to awake himself on every raw cold day in winter, and sits for hours shivering in a cold room, trying to keep warm by thinking of last night's fire. Another has heard that amongst the things which bring men to a premature grave, are good living and laziness, so he takes no end of exercise, and prides himself upon never indulging his appetite. One hears that suppers are steps to eternity, and as he wants to stick to time, he avoids them as he would the gentleman with a tail.

It would weary the reader if I were to tell him all the absurdities firmly believed in by men of sense, simply from habits of careless thought. It is assumed as a fact that civilisation shortens life, but no effort is made to test the truth of the statement. The reverse is the case. The savage is very rarely, if ever, long lived. He becomes prematurely old, and looks a hundred when he is but sixty. Let any one pass through, what is called, primitive Switzerland, examine its natives, and then say whether hard toil, poor food, and lots of fresh air, necessarily bring health and perpetual youth. There he will see scarcely a step from youth to age, from age to decrepitude. The lovely virgin of to day, is a wrinkled hag two years after marriage, and the voice of joy and health combined, is rarely heard save on an occasional fête day.

The Arabs are pointed at as mirrors of longevity, but when the authority is asked for, it is found in the Bible, whose older authors exaggerated to the full as much as do the modern Orientals, who say a hundred when they mean a score.

The sailors in Greenwich, and the soldiers in Chelsea Hospitals are pointed at, to show that campaigning in various climates is eminently healthy, and that seamanship ought to be a first-rate medicine; but few consider that both the one and the other consist of men picked out from their fellows for their healthiness, and that a vast number succumb under their privations long ere they arrive at fifty. The men are long lived because they have had, so to speak, iron constitutions, not because they have led a certain life.

The frequency with which cause and effect are mistaken is extraordinary. In common life nothing is more common than for a man or woman to say to some ailing friend, "Do as I do and you will be as I am. I eat a whole loaf of bread to my breakfast, work incessantly till dinner-time, some nine hours afterwards, I then polish off a pound or two of steak, heaps of

potatoes and flagons of water, and then I get through a good night's work at something else, why should you go on at the miserable rate you do, eating barely enough to keep yourself alive?" and much more of the same kind.

The same man, perchance, has a son, and he is probably a great admirer of Mr. Gladstone's talents. His boy shall, he thinks, rival that statesman, so he is sent to the same school and to the same college in the same university. He eats the same kind of food, drinks the same kind of beverage, works with the same assiduity, and yet in the end, he is probably plain Mr. Bookworm, instead of a brilliant orator. The indignant father complains of his son's stupidity, and reproaches the lad for what is no fault of his, and to blow off steam confides his troubles to a friend. When the latter succeeds in gaining attention, he would probably speak thus:—"I say, old fellow, did you ever go to a horse fair?" "Yes." "And you saw lots of horses?" "Yes." "Was there any difference between one and another?" "Of course," "Well, now, if you wanted a dray horse would you have bought a racer; or if you wished for an useful hack, would you select a cart horse?" "Certainly I would not be so big a fool." "Why not, you know you may train the hunter to draw a cart, and the dray horse to gallop. I dare say if you chose to feed your nice roadster on oil-cake you could get him to rival in bulk one of Barclay's pets!" "What bosh," would be the indignant response. "Now, my friend," would the astute conversationalist rejoin; "let us take in place of the horse-fair, the exchange and the ball-room, and talk of men and women instead of geldings and fillies. You see yon man with broad shoulders, large bones, sturdy limbs, and an eye like Jove's to threaten and command, a stature a trifle above the medium height, and a beard and complexion the envy of his fellows. He can hunt and fish, boat and walk, dance and drink, and all with equal enjoyment. You see in him the *beau ideal* of a chieftain, and when you want a brave companion for a walk through a garotting region, he is the one whom you would select. Turn your eye now upon the man beside him. His stature is medium, but his shoulders fall forward, and are as narrow as the others are broad when compared with their height. The first has a head which looks small; this has one proportionally great; his chest is chicken-breasted, his hair thin and silky, his complexion pallid, his bones small. You feel that a blow of your own arm would almost kill him. Now could you by any course of training make the second equal to the first? Let me take you now to the ball-room, and be your mentor for a while. You see that lady, we say nothing of her beauty—she dances with spirit, chats with vivacity, does not pant after a waltz, enjoys her trifle or her ice, and rejoices in her supper,

She is the sister to the first man we lately saw, and there and there and there you may see her relatives. There are lots of them, for none have died. The family are noted for health, vigour, and endurance. None are sluggards; they are up early and go through no end of visiting in the season. The doctor tells me he might starve if all his patients resembled them. Now look again at that beauty. Did you ever see a complexion more lovely, teeth more clear, hair more glossy and luxuriant, a bust so charming, and a carriage more graceful? But notice the languor of her movements, the carelessness with which she plays with her negus, or allows an ice to become warm. Dance with her and observe how she pants after a lively measure, then adjourn with her to the supper-room, and try to induce her to take a chicken's wing. If you will ask her, and she is disposed to be confidential, she will tell you that she likes, perhaps adores, dancing, but that she pays for it afterwards, lying awake all night with cramps or racked with spasms. Her parents have one or both died of consumption, and she has already lost two or three brothers and sisters with the same disease. Some one has induced her to emulate her neighbours, to ride, boat, walk, dance, and garden, as they do, but she has given it up." "And no wonder," is the answer. "Just so," the observant friend replies; "you are now, I hope, convinced that there is a difference amongst human beings as there is amongst horses. Breeding will do much to improve the race, and training will do much to improve the individual, but you can no more convert a born fool into an orator, than you can make a cow a good hack, a dray horse a good hunter, or turn a sow's ear into a silk purse. You are perhaps a sportsman, and may have trained dogs. Let me ask you would you try to convert a harrier into a staghound, or use a mastiff for a pointer? Certainly not; nor would you bait a bull with a French poodle. If you have an ingenious friend you would give him a pretty terrier to teach rather than a bloodhound; but if you wished to ride secure amongst a lot of turbulents, you would prefer the company of the latter to that of the former."

Here we may drop the conversation which we have introduced to show the good sense used by men respecting horses and dogs, and resume our subject by the remark that as it is with beasts, so it is with men. Some of us are from breeding fitted mainly for intellectual work; and to perform our duties well and satisfactorily to ourselves and others, we require as much care in training and living as do the hunter and the spaniel. Others are by nature fitted for toil—like human cart horses, they are heavy and lumbering, yet strong; they can do with lots of food in their stomachs, but they care little for intellectual dainties. If each of these is in his own place, good and well; but if the man

fitted only for sedentary employment, is obliged to work like one of Perkins's gigantic team, is it wonderful if he breaks down? And if Agricola, who would have been first rate, as Ajax, is stuck to a lawyer's desk, is it not likely that he, too, will feel out of place?

Again, if the overwrought son of toil finds himself overspent will not the same consideration apply to him, as would apply to a hacknied "screw" on its last legs? The latter you may coddle or shoot—the former you must coddle if you can, for you cannot dispose of him with gunpowder, or poison, nor feed the dogs with him.

In days gone by, I heard two strong observations which have stuck to me like wax. The first was from an intelligent milliner, and ran thus:—"My father told me never to kill myself to keep myself, and I am an obedient daughter." The second was from a banker's clerk, dying of consumption. My recommendation was urgent, and often repeated that he should knock off work. His reply was, "Well doctor, the choice is between work and workhouse; if I leave the first, it is for life in the second, and I prefer work and death to pauperism and life." Unfortunately, there are too many of this class in the world, and it is amongst them that the question of the preservation of health is most important.

As a rule, it is easier to keep what we have got, than to replace that which we have lost. Hence, the necessity for learning that which is called *prophylaxis* by the learned, and by the unlearned, "the art of retaining health when you have got it," a science which every lecturer and writer on medical matter professes to teach. Though referred to, however, in books on medicine, it has hitherto been taught much as a blind lecturer might discourse on colour to eyeless auditors. I can remember hearing, when I was a boy, that a spring emetic, an autumnal bleeding, a weekly purging, and, in May, abundant draughts of nettle-beer, were necessary to preserve health. I took physic daily for the same purpose, till I was sick of it, and giving the visitor to my poor stomach a return-ticket sent him back as he came. When very little, I was punished for years, with a morning plunge-bath, and a sponging when I was bigger—had to drink salt water in the summer, as well as to bathe in it, and all for the good of my health, which never was bad. Later on in life I have listened to tirades about feeding-time, diet, bed-time, exercise, and a host of other things in which the speakers have invariably started from the belief, that all men and women were alike in constitution, vigour and vitality, and that whatever suited best to the advice-giver, must be the very best thing possible for the recipient of the recommendation. "Don't eat figs," says one, "for they will give you the cholera," and "don't eat

lobsters," says another, "for they will give you nettle-rash." "Pork is first-rate, and veal particularly digestible," says one, "it is poison" says another, each speaking his own experience, and knowing absolutely nothing of the peculiarities of his neighbours' digestive powers. If such men were calves they would urge the advantages of milk diet upon eaglets—and if they were oxen, would encourage lions to eat grass.

It is the business of the doctor to accumulate the experience of many and to apply it to one, and this he cannot do, so long as he believes all to be alike. It is the business of the patient, whether he be his own physician or applies to a regular M.D., to ascertain, not so much what suits another, but what suits his own individual self. The result of any particular plan of action as regards himself, must be thought more of than what that plan would do for other people, and the study of "number one," will be more important than observation on other numerals.

Our advice then to those individuals who wish to study the preservation of their own or their children's health, is to take a personal, rather than a collective standard for a test of success, the standard person being the one treated. I hope, in future essays, to point out the subjects for consideration and the points to be noticed, and to assist any one in the art of making observations and drawing conclusions.

This Essay I will conclude by a Professional story. After visiting Mrs. ——, repeatedly for a medical friend, I became, in consequence of his leaving town, her regular physician. Her husband was a stirring man, and she did her best to be a very active housewife and a faultless mother; yet she was always ailing, and often laid up entirely by painful boils in the arm-pits. After striving many years to attain the ideal standard which she had placed before herself for copying, she succumbed to my oft repeated persuasions, and consented to lie in bed for an extra hour every morning, and to have daily a half hour's rest on the sofa after dinner. Two years elapsed ere she again had occasion to consult me and then not about herself. After congratulating her upon her good looks, and her long freedom from illness, she answered me, "Do you know Doctor, that I have come to look upon it, as a curse to my comfort, that I ever knew Mrs. Busy. She has a large family, and is indefatigable in her household matters, and never had an illness; she has always been a personal friend of mine, and when I married, I made her my model, hoping in time to equal her in health, by imitating her activity. Yet I never was well after I began the system, and I, probably, never should have been, had I persisted in it. Since I adopted your plan, I have had more comfort and far better health than I ever had before, and, moreover, I find, that having more strength for what I have to do I can get

through more than when I had less vigour and took more time." Possibly, some doctors' wives may read this; if they or any other overworked women do, let them remember that a fresh horse has more "go" in him than a tired one, and that roses may be cultivated in beds.

CHAPTER II.

ON MARRIED LIFE.

An author frequently finds greater difficulty in arranging what he has to say, than to put it down upon paper when its proper place is selected. I have been no exception to this and have hesitated long whether I would begin my remarks with the preservation of health in infancy and go upwards to old age, or begin at once *in medias res* and proceed thence to the extremities of life. At length, I determined to select the last alternative, and consequently the scene opens with a young married couple just entering their united career. Neither of them has a faultless constitution (for we do not now address ourselves to those folks of iron frame, who never have to think of health, and never require a doctor until he has to sign a certificate of death), and both inherit from one or both parents, or have unfortunately acquired for themselves, some tendency to disease. We will presume still farther that, though there is enough to "keep the pot-boiling," yet this cannot be done without the usual amount of daily attention to business on the man's, and due attention to household matters on the woman's part. We will, moreover, assume that our couple are affectionate and proper, living a domestic life, taking due care of each other, and observant of small symptoms.

During the first few months of his career the husband will probably be conscious that he sleeps unusually heavily after dinner; that he is more weary with his work than he used to be, and that he begins to fancy himself *bilious*, has headache in the morning, indigestion in the evening, and some constipation of the bowels. He may too, at times, fancy that wine gets sooner into his head than it did, and that reading small print at night costs an effort, the words having a propensity to run into each other, possibly he learns, for the first time, that he snores heavily during sleep. To overcome this "biliousness,"

he takes a colocyuth and blue pill, or some other concoction and enjoys a "good clear out." But somehow the "biliousness" becomes worse, and there are serious thoughts on foot as to who the family doctor is to be. The "missis" may probably want one by and bye, and if he is first consulted for her spouse, she can judge whether she will like Dr. A. by seeing what he is with her husband. It may be that the lady has become a convert to some accomplished homœopathic physician, while the gentleman has always sworn by Mr. B., the accomplished surgeon of St. Mangle's Hospital, and it is then necessary to decide between the two, or to agree to consult each in turn.

As the couple do not altogether agree upon this matter, the husband pours out his troubles to the individual whom we will call "his sensible friend," who talks provokingly of horses, and Benedick asks his opinion as to the course he should follow, and the medical adviser he should select. We can imagine the colloquy would continue thus: "Well, old fellow, you know that you have already taken some pills to remove your biliousness, those were, I take it, ordered for you by Mr. B., and you say that they have not been of any service to you. Don't you think it very probable that if the doctor were to see you now, he would only order the same kind of drug in a different dose; don't you feel that when once you get a surgeon into your house, you don't know when you will get rid of him again. Homœopathy and its professors are just as bad as their neighbours in the last respect, though they have the advantage over the others in not vexing your stomach by nauseous draughts. My advice to you is, never to mind about a doctor at all, and to use your own judgment; and now that I look at you and talk with you, I can't help thinking of that wonderfully fine horse, Barclay's Entire. So superb a fellow was it, that it was more run after than any other in the racing stud, and the number of foals who owned him for father was 'legion,' but he got off his food, became weak in the legs, lost all his 'go,' was sent to the veterinary for repairs, and at length laid by in a paddock. I dare say you can guess the reason. I don't suppose that you, like it, have been indiscriminate in your affections; but it seems to me to use an old saw to a new log, that you 'have loved not wisely but too well.' Human beings are not like certain fountains which seem to be inexhaustible. To follow up the metaphor do you not think that it would be well to try the effect of 'turning the tap off' for a time instead of going to the doctor?" "You astonish me," would probably be the rejoinder, "I have always heard that to indulge oneself alone or with a Midianitish woman was hurtful to the constitution; but I equally understood that with a wife one might indulge affection indefinitely, not only with-

out hurt to the system, but with positive good." "Quite a mistake, my dear sir, I assure you; if you spend money on your wife, you lose it from your coffers as completely as if you had squandered it on yourself or on any other companion. I have myself seen a young fellow who married at seventeen; he was a devoted husband, and his love knew no bounds. But at twenty-four he looked an old man, and was very nearly dying in a hospital of exhaustion, he was indeed a pitiable sight, and the nature of his complaint sorely puzzled his orthodox old doctor; but fortunately for him he met with a young student who divined the cause of his illness. and set him on his legs again." "But you don't mean to tell me seriously do you, that the excess you speak of can produce biliousness?" "Well let us see. Do you know anything of frogs and toads in spring, and how they die after fertilizing the ova of their mate?" "No." "Well then, I'll tell you that the majority die from failure of living power, they have literally expended their own life on giving vitality to their offspring, and even those that survive do not recover their healthy condition for some months; in higher animals the result of such excess is shown in paralysis of the hind quarters. With man there are warnings ere such results appear, and those warnings are the symptoms commonly assigned by men to 'biliousness'—viz., dullness of head, hebetude of body and mind, indigestion, and constipation."

"It is quite true that Nature intended us to pair off in couples, and it is also certain that she has given to the stronger sex a greater amount of power than just what may be necessary to produce offspring, but it is equally true that the force may be exhausted, and that with the exhaustion come disorders in one or more parts of the frame. The man who lives like a fighting-cock and has nothing to do, but to enjoy life, may appear to have the wondrous vigour of chanticleer and exercise it without injury, but he, who has to toil for his living all day, cannot continue his exertion all night without losing his 'shine.' This will certainly happen with those whose constitution is faultless, but if there is a flaw, if consumption be in the family, or insanity, has been in the parents, the prejudicial effects arising from excess will follow more quickly and more certainly than in the healthy individual."

"Let me then recommend you throughout the rest of your life to use moderation in affection if you wish to preserve your health, I cannot give a more accurate definition of the words I use, than to say that you ought to be unconscious, from your subsequent feelings, that you have indulged in love at all. Now, while young, you may have one scale, when advancing in years you will have another, but, whether young or old, mark my words, that for the preservation of health one of the greatest

essentials in a man is, that he shall be very moderate 'at bed and at board,' as the early prayer-book hath it." In "Foundation for New Theory and Practice in Medicine," I have given three instances in which a single indulgence has been followed by almost instant death. The patients had respectively consumption, hæmorrhage, and diabetes. We may indeed thus parody the advice which Ophelia received from her brother (*Hamlet*, Act I., scene iii.)—

> "Keep ever in the rear of your affection,
> For in the morn and liquid dew of youth
> Pernicious blastments are most imminent.
> Be wary then ; best safety lies in fear ;
> Youth to itself is hard, with one who's dear."

Leaving the imaginary conversation given above, I would add, that no one can neglect with impunity the advice given and remain perfectly healthful. The recommendation is advanced not only for the sake of men entering into married life, but for their wives also. Excess of devotion on a husband's part will produce leucorrhœa in the consort, sometimes menorrhagia, and occasionally, spasm of the vaginal muscle of such painful intensity and persistence, that even walking is difficult. The feeling of the majority of men—including I am sorry to say some doctors—is, that where power is evident by the change it induces in the organ, love may be harmlessly enjoyed, and that excess is to be judged of by the quiescence it induces. This is a grievous mistake, for indulgence induces a respondence to a far slighter stimulus than would effect it in health, and a continual desire is often the forerunner of an attack of acute mania. I have myself known three instances of this. In one the satyriasis was followed by suicide, in the second by homicide, and in the third by paralysis.

Presuming that a more careful attention to the exigencies of health will soon restore our Benedick to health, we will leave him for a while, to turn our attention on his partner. She has—we will suppose, noticed that the "visitor," which has before regularly told her of the flight of months, has not appeared as usual, and *sa sage mère* has told her that she must prepare for those "coming events which cast their shadows before." She is now no longer a single being with only her own body to provide for, but has another growing within, whose weight increases, daily, who demands abundance of blood, nutritive material, &c., and with this it is not surprising that a woman experiences the ordinary inconveniences of pregnancy. Without personal experience, she consults her mother, if she have one, as to what she ought to do, and if foiled here, she talks to some matronly friend, or some knowing old woman. From one or all she may hear that morning sickness is peculiarly good for the baby, and that abun-

dance of exercise during the period of its growth will make the infant come almost painlessly into the world, &c., under the idea, that because some savages suffer little during the process of parturition, therefore it is well for a civilised woman to emulate the ways of a Red Indian Squaw.

It is essential to comfort, and sometimes even to health or life, that a woman should understand the management of herself at this period of her life. Let us sketch her condition. She has within her a living germ, small indeed, originally, but becoming at last of great size and weight. At first, the womb and its contents barely weigh two ounces, and do not exceed a lemon in bulk, at last they weigh little short of fourteen pounds, and sometimes more, and their bulk is about that of a common bucket. With this there is frequent sickness, rejection of food, loss of appetite, and indigestion, which prevent the ordinary food being taken, so that the prospective mother has to carry her extra burden on a deficient supply, at the very period when more than an usual amount of nourishment is required.

How is this case to be met? If we order more exercise than usual, and encourage the vomiting, it is clear that we must make matters worse. As it is, every time the wife goes upstairs she takes more exercise than she did as a virgin, for she has a heavier weight to carry, and she becomes daily more distressed. Pain in the back, the result of the extra exertion, wearies her, though she only goes through her household duties, and it distresses her still more if she takes in addition a long walk. Does not common sense dictate in such a case that the woman should pay more attention to herself than to the theories of others, and especially when her own personal experience demonstrates that such are absolutely wrong. So far are they false, that the opposite propositions hold true, for it is a fact that lying in bed an extra hour or two in the morning, resting much on the sofa during the day, and retiring to bed at an early hour will enable a woman to bear with comparative ease a pregnancy which otherwise would be a dreadful burden to her comfort and produce a great impairment of health.

Exercise (or rather exhaustion, for the two are too often synonymous), in the mother will make the fœtus unusually lively, and the distressed mother often passes a wretched night, from internal kicks, after spending a heavy day in shopping or marketing. The husband, while his consort is bearing his image, should be assiduous in sparing his wife from fatigue, while she, on the other hand, should spare her strength during the day, that she may wreathe smiles for her good man while he does her work after the performance of his own.

Moreover, if a woman exhaust herself with exercise during pregnancy, how can she expect to become fitted for nursing?

Here again let us apply to our equestrian friend and ask him

if brood mares are expected, when in foal, to do the same work as when they were "fillies," or if it be more pleasing let us turn to Scripture and the patriarch Jacob. He says when Esau tempts him to travel in his company, "My lord knoweth that the flocks and the herds with young are with me, and if men should overdrive them one day all the flock will die. Let me lead on softly according as the cattle that goeth before me, are able to endure." Genesis xxxiii. 13, 14. Again, Isaiah xl. 2, we read "He shall feed his flock like a shepherd, and gently lead those that are with young." Surely, what the farmer does for his beasts a man should do for his wife, and if he value her health or she should seek to preserve her loveliness, there should be the same fostering care as is described above.

The gist, then, of our present chapter is to persuade the husband to be judicious in his affection and the wife to be gentle with herself. The author has a strong belief that health and happiness come together, and that fatigue and crossness are closely allied; a nasty speech will spoil a dinner, and a snarl will drive sleep from the eyelids. To preserve health then there should be cheerfulness in the home, not occasionally, but habitually, and this there cannot be if at the end of every day the husband is exhausted and the wife is weary.

CHAPTER III.

FEEDING AND FOOD.

In a very few days after the affectionate couple, whom we described in our last chapter, have entered upon their honeymoon, a very important subject daily arises for their consideration, and it is one which is generally discussed after breakfast.

During the first burst of fond devotion, they can leave to a waiter or a landlady the selection of their viands, but, sooner or later, the question is sure to pop up, "My dear, what shall we have for dinner to-day?" At first, this important matter is discussed with great minuteness, each one vying with the other in the desire to please, and studying each other's gastronomic views. As time progresses, and nothing is left of the honeymoon, save the jars, the daily query is discussed in another way, and too often, perhaps, for the wife's comfort, the husband curtly answers the question, *erst* so interesting, with the reply, "Whatever you please, my dear." But if his *cara sposa* takes him at his word, and having a sneaking fondness for a cold leg of mutton, offers to regale him with it too, it is probable that she will soon discover that such an answer is a prelude to a note announcing an unexpected engagement, and a dinner at the club or restaurant. As most wives, however, rather enjoy their good-man's return from his business, and like to hear and retail their varied news, they endeavour to make dinner the pleasantest meal of the day, and in consequence they study the culinary art and its practical application. What it is *advisable for a wife* it is *necessary for a physician* to do in this respect. The first has to cater for one whose appetite and digestion are usually good; the second has to prescribe or suggest a diet for one who loathes ordinary food, or cannot digest it if he takes it. In the days when, as a nice young man, I was admitted to tea-tables round which ladies congregated, I heard many a gossip about the doctors in the town; but of none were such eulogies spoken than of old Doctor St. C.,

whose knowledge of cookery surpassed belief. At a dinner table his abilities were shown in talking of the dishes, and he would tell the ladies who studied the culinary art all the methods in which any particular dainty could be presented. He was equally great on wine, and could discourse eloquently on vintages, but of that the ladies cared little. Words scarcely sufficed to sing his praises in the sick-room, and happy was the lady whose husband could afford to pay for his attendance. He would sometimes himself make a delicious basin of arrowroot, or he would instruct the cook how to make a tempting omelet, or a most appetizing custard. Then, perhaps, after a chat, prolonged until the subject was exhausted, my respected aunt, who used to patronize me on such occasions, would turn to me—then a medical apprentice—andsay : "There, Tom, you hear that if you want to be a successful doctor you must learn to be a good cook." I took her advice, and years after repaid it in kind.

Now, however much the wife of whom we have spoken may dislike the answer, "Whatever you like," to the question about dinner, she would, I fancy, dislike still further a dissertation on the value of food in general, and of each dainty in particular; nor can I imagine that the reader of these pages would relish a long story any more than the lady; what we have to say, therefore, upon feeding and food should be short and to the purpose.

As a rule, dinners should be hot, appetizing, and digestible. The dictum is short enough, but may form a text for a long sermon.

Like many divines, however, we will ignore our text and treat the subject in our usual fashion, and, by studying others, draw some deductions for ourselves. We observe, in the first place, that nature has provided, for the young of all mammalia, milk as a sustenance. On that fluid they thrive, increase in weight and strength, and develop bone and intellect. It is clear, therefore, that milk is a very valuable nutrient. But then we notice further that cows run dry, that jenny-asses and mares do not always carry full udders; it is equally clear, therefore, that other esculent than milk is intended for all animals after the period of infancy.

The food of the young creature when weaned is, in some classes, purely vegetable, in others, purely animal, and in some it is mixed; and the philosopher knows that the diet is not dictated by necessity, but by instinct. The Creator has made the jaws of some to grind down roots and boughs, and those of others to kill, tear, and rend other animals. There is a corresponding disparity in the conformation of the stomach. The grass-eating deer becomes fat and fleet, the flesh-eating wolf is gaunt and slow; but the endurance of the latter will run down the former,

and make it food for itself. Again, the deer, camel, ass, ox, and horse all live on the same sort of food, yet have little in common save their bulk. The dog lives on flesh, like the lion, the leopard, and the cat, yet they are each distinct in their habits and characters. It is not then its food that makes the tiger roar, the sheep bleat, or the donkey bray. No matter what the particular sort of food taken, each animal retains its own personal propensities. It is true that the use of one rather than another method of feeding will make sheep, pigs, and oxen more or less fat or *tasty*, but as men do not feed themselves with a view to the gastronomic enjoyment of ogres, we need not descant upon this part of the subject. But though a pig will never be a cat, however you may feed him, there are some striking physical characteristics about certain classes of animals. As a rule, all vegetable eaters are fat, whilst all animal feeders are spare, thin, or meagre. *Cæteris paribus*, the two have equal strength, but the last have the greatest power of enduring prolonged muscular exertion.

In this respect, however, there is a farther distinction to be made, the horse at ease in the fields can derive sufficient from the grass to keep him alive and well, but, if his master wants the creature to go through heavy work, he takes him from the pasture and gives him dry food, and still farther, if he wants to test his endurance to the utmost, he will give him beef and beer—the former in the shape of a steak round his bit, the latter as a drink pure—or mixed with meal. But the careful jobmaster or thoughtful squire knows that a perpetual diet on hard corn cannot be kept up for years without injuring his horses, and he judiciously mingles the dry beans or meal with vetches, carrots, freshly cut grass, or green oats. From all these observations we deduce that a comparatively fluid diet makes creatures look sleek and fat, but does not make them strong, and we can recall with ease the picture of many a plump looking woman who is, nevertheless, always complaining of weak nerves, because she is trying to live on a diet of bread and butter and tea. Such may be compared to whales, who have blubber rather than fat, or to water-melons, which owe their size to the same cause which makes anemones and other occupants of the marine aquarium so huge.

We deduce, in the second place, that although a vegetable diet may encourage fatness and give adequate strength and agility, yet that it does not impart endurance ; and we remember how we have read of Frenchmen, living on pulse, vainly attempting to do the work of an English navvy, a task which they fulfilled with ease when they imitated his diet, and indulged in meats and solids.

An animal diet, weight for weight, imparts more than double

the support to life yielded by a vegetable one, and is, therefore, specially adapted when prolonged muscular exertion is required. But it requires more digestive power to live on beef than on bread.

The lion who gorges himself on "ox" requires a sleep after dinner, while the deer who stuffs himself with grass seems rarely to sleep at all, we conclude, therefore, that for one whose business requires unceasing toil, a vegetable diet must be preferable to an animal, whilst to another whose avocations are comparatively fitful, and with whom a long rest alternates with intense bodily fatigue, a pound of steak will do better than a quarter of a stone of potatoes. These considerations may enable a man to say how far he will prefer a vegetarian feast to an animal banquet, or a combination of the two.

But there are other considerations to be thought of. One man may dine early, and have the appetite and digestion of a wolf, another may be obliged to attend to his business incessantly from morn to dewy eve, the first would relish anything not absolutely bad, the latter has to be tempted with dainties. The one sniffs the sirloin from afar, and feels his mouth watering; the other scents it too, but his "gorge rises," and his appetite disappears. I can well remember feasting with great gusto at a certain London eating house, while the Medical session was new, and I was "a young man from the country," yet at the end of the session my disgust of that same house was so strong that I could not endure even to enter the street where it was situated.

Whenever exhaustion precedes the meal, the repast should be prefaced by something very light and easy of digestion, hence, soup and fish should form the first remove of late dinners, although except in winter they are rarely requisite at lunch. Who, with a beef appetite, cares to sup broth, and how many are there, on the other hand, who can eat from a gigot *because* they have prefaced with vermicelli? Those who live in the country and come home to a late dinner, after a long day's work in town, will find great comfort from a cup of tea and a slice of bread and butter ere they leave, to go on their return journey, and will find that a slight repast, like that, will prepare them for a heavier one. Sometimes a glass of sherry, with or without bitters, will answer the same purpose.

There is yet another method of looking at diet which cannot be altogether passed by. I will introduce it thus:—A plant abundantly fed by manure, &c., gradually becomes "double," *i.e.*, it becomes a noble specimen of its species, but it has no offspring. I have even known vines, which are generally very prolific, nourished until their leaves were as large as those of rhubarb, whilst only one tiny bunch of grapes on each tree gave scant promise of a numerous progeny.

In like manner, the too-abundant manuring of a wheat field will increase *straw* rather than grain. On the other hand, the gardener who wants flowers and *seed* cuts off from his plants both water and dung. It is much the same with us: The pampered sons of wealth have few children, while the sons of toil and poverty have abundant flocks. The peerage dies out, whilst commoners increase abundantly.

We can fancy some who would like to live so well, that no noisy infants might disturb their repose, but with such we have no sympathy, and we leave them to their own devices. Our hearts would rather warm towards those who see with pain year after year pass by without any branches springing from the parent-stock. "Doctor," said such an one who had so suffered, to me, "I want to tell you something." The young man was the *beau ideal* of youthful health, and at the time of our colloquy was about twenty-seven years of age. He was a private gentleman living on his means, but studying medicine as a sort of luxury, and attending my class. His words ran thus: "Did you ever hear of bread and milk being associated with a family?" "Not exactly," said I, "but why?" "Well," he said, "my wife and I had been married five years and had no children, though we were both particularly anxious for them. One day I read in some book that a diet of bread and milk would sometimes enable folks to overcome sterility, and, telling this to my wife, she agreed to try the diet, if I would. We both faithfully carried on this plan, and ere five weeks had elapsed she found the first evidence of pregnancy. Since then we have had a yearly increase."

We have got thus far without saying definitely anything about the digestibility of this or that dish; but the reader must not wonder, for we consider everything, which ordinarily comes to table, fit to eat. If the stomach and palate enjoy it, good and well; if not, few people will indulge in it or in anything.

I have been asked a thousand times, "Doctor, what may I eat?" My answer always is: "Whatever you like best." If the illness is such that no choice can be made, I suggest a dish, as I would a medicine.

There are some instances in which this rule does not wholly apply, but I could not enter into them without writing a dissertation upon indigestion, &c. Practically, there are, amongst the healthy, no exceptions to the rule that people may just eat what they like; or, to put the same idea into another form, people like to eat what they know is good for them. It is curious, nevertheless, that the stomach will often quarrel with a new dish or a new flavour, to which it will ultimately give a welcome reception; and thus, what may produce a fit of indigestion to-day, will readily be borne when taken daily for a week.

It is time now for us to return to our text. We said, that, as a rule, dinners should be *hot*. A few minutes' thought will show the reasonableness of the rule. The temperature of the stomach is 96° Fahrenheit, and that amount or degree of heat is important to digestion. If, during the artificial digestion which the chemist shows to students during his lectures, he reduces the temperature of the mass below 70°, the process stops; the ingredients are all as they were before except the caloric, but they no longer act. In the same way, an individual whose circulation is not strong enough to keep up the warmth in his stomach by a vigorous supply of new blood, to replace that which has been chilled, cannot take a cold dinner, or an ice after a hot one, without having evidence that his digestion has been impeded. A hot dinner gives an impulse to life, a cold one draws upon the vital powers of the man who eats it ere it recruits him. I can imagine some of our navvies eating frozen horse with impunity, but I cannot believe that a similar chunk given to one of Franklin's starving sailors, staggering literally on his last legs, in the vain hope of reaching safety, would have revived his energy; being cold enough already, a mass of cold meat would not warm him. Many can remember accounts of death arising from drinking cold water when the frame has been exhausted by violent exercise, and cold meat is quite as bad. The jaded mechanic will digest with ease a slice of mutton fresh from the baker's oven, whilst a similar joint, if quite cold, will take a return ticket, and instead of becoming chyme in the stomach, will become "heartburn" in his throat. Even "Nature" knows this much, and always warms the milk with which she feeds her sucking young ones.

Cold cheese to many is indigestible as leather, yet I have never found a stomach which quarrelled with it when hot. Cheese, if the *fromage* be a good toaster, fresh from the Dutch oven, is one of the most digestible dainties which enters the dining or sick-room; and toasted cheese with stewed maccaroni has sometimes formed the only dish which a man, dying slowly of want of digestive power, has been able to retain on his stomach. In one case such a meal was taken, and apparently digested a few hours only before death.

It will readily be seen, that the sensation of warmth imparted by such condiments as pepper, mustard, and horse-radish, is not equal in value to the heat given by fire. The first may make soups appetizing, but they can't make cold mutton equal to hot. We have shown elsewhere that cold wine is not so good as hot negus, and that cold brandy-and-water will sometimes produce eructations which a hot mixture will allay.

These matters are of small importance when persons are in high health; but where the constitution is somewhat impaired, they cannot be neglected with impunity.

Again, a dinner should be such as to suggest the idea of pleasure in eating it. Now, a man does not like, as a rule, to sit down to a strange dish, or sometimes to an old dainty under a new form. We can eat ducks which revel in mud, and swine who eat with their feet in the pig trough, yet our gorge rises at horse-steaks, and a bit of a "bow-wow" will produce an indigestion in an Alderman. We can relish oysters but can't manage snails, and revel in whitebait while we reject frogs' thighs. Stomachs, like their owners, are, as we have already remarked, apt to follow a sort of beaten track, which they refuse to leave for novelties. New flavours are, therefore, more apt to disagree than old ones, and a familiar dish will suit a tired man while a new one will give him dyspepsia.

It matters little what the old repast is. It may be to the Esquimaux a bit of half putrid seal, to the Irishman a hard potato, to the Frenchman a clove of garlic, to the Alderman some green fat, or to an African traveller, like Baker, stewed hippopotamus. Yet if it "make the mouth water" it will be appetizing and digestible. To ordinary beings ordinary diet is better than perpetual change.

When we say that a meal should be digestible, this presupposes a knowledge of the individual who is to eat it, and the condition of his stomach. I have been told, that in the first Arctic expedition of Franklin, the cook of the party came to him one day with the remark that he "wanted the leather breeches he wore, to cook them for dinner!" and Franklin told my informant that he not only gave them, but partook of them with relish; but no one would thence infer that leather was digestible, and would make soup equal to "Julienne." Baker, too, informs us that he has seen negroes eat with relish a buffalo's head which was swarming with maggots, that rushed out in myriads as soon as the heat of the fire penetrated the putrescent mass. I have also some friends who, from the exigencies of their position, enjoy tainted fish and stinking eggs; yet, personally, I should find these indigestible in the extreme. Cucumber is said to be one of the worst things going for the stomach; yet I know a delicate woman who almost lives upon it during the time it is in season. I knew another lady who had for years been contending with a slow "decline," who suffered misery from a meat diet, and yet throve upon cold fruit. Some of us revel in dishes swimming with fat, oil, or butter; others cannot bear even a *soupçon* of oleaginous matters. No code therefore, can be drawn up which shall suit every one; and each, must be a judge for himself.

Apropos to this part of my subject, I must touch upon what is called "rareness." There are some who love to see their steaks "juicy," and their sirloin full of gravy, there are others

whose stomach is turned by that which bears the look of "rawness," each averring that the condition which he himself enjoys is the most conducive to health.

As regards digestibility, there is, in reality, little difference between the one and the other; and what little there is leans to the side of "rareness." Raw meat is by itself very digestible (even by the infant), far more so than when cooked. But—and the exception is important—underdone meat is apt to produce tapeworm. The dog, fox, wolf, and all carnivorous animals are subject to this disease, and so is that man, who from choice or necessity, eats food insufficiently cooked. The germ or eggs of certain parasites which infest the human body are to be found in an embryo form in the sheep, cow, pig, goat, hare, and rabbit, and, if not killed ere we take them, they begin to grow into the perfect animals in our intestines. Efficient cookery destroys them—such cookery the carnivora cannot command.

A medical friend one time came to me with manifest concern on his features, and drew forth from a mysterious-looking parcel the remains of a leg of pork he and his wife had been dining on. While finishing his meal with a nice little slice from the shank, his eye caught sight of some curious-looking holes,—he thought of "measles" in the pig, and could eat no more. To know the worst he came to me, asking me if there were really any creatures there, and, if so, whether they were alive, for if they were he would take an emetic at once, rather than be a nest for a set of tapeworms. On using the microscope, I soon found myriads of what we call "hydatids," which consist of a ring of sharp hooks and a bladder, which, though very innocent-looking, will grow into a curious creature, which is prettier in a quack doctor's window than in a Christian's bowels, but all were dead, the cooking had effectually killed them, for the germs of tapeworm cannot bear roasting any better than a philosopher. Of trichiniasis, from eating German sausages, it is unnecessary to speak.

It is not pleasant for any of us to think that we may have eaten boiled caterpillars with our cabbages, but it would be far worse to believe that we had swallowed them alive as we do oysters.

CHAPTER IV.

ON THE USE OF TOBACCO.

Amongst the many questions propounded to the doctor by those who are anxious either to preserve their own health or that of some valued relative or friend, is the portentous one, "Doctor, is smoking injurious?" Sometimes this is varied, and the inquiry runs, "Do you think snuff-taking unwholesome?" or, by the comical assertion, "You don't believe that chewing is bad—do you?" In other words, the query may be put, "Does the employment of tobacco as a luxury impair health?" The number of, and variety in, the replies to these interrogatories is great, and they are influenced far more by the predilections of the individual than by the extent of his knowledge. If a man has been brought up in a nice home, where there are plenty of model young ladies, a quiet father of the old school, and a loving, but somewhat starched mamma, it is probable that tobacco is tabooed as an annoyance, and only referred to as if it were in the same category as ardent spirits, horse racing, traviatas, and roulette; if with an impressionable disposition the young doctor has attended missionary and bible meetings, and listened, awe-stricken, to the fearful amount spent by naughty Britons upon cigars, snuff, and tobacco, rather than in sending men to distant nations, who do not require their presence—it is probable that such an one will never indulge himself with "an Havannah," and will, when his opinion is asked as a doctor, frame his reply not according to what he knows, but according to what he has been taught to believe, wholly irrespective of facts.

If, on the other hand, the physician consulted has an iron constitution, and has passed his youth amongst seafaring or fast river boatmen; has enjoyed a whiff from the time he managed a wherry; has learned to chew like an "old salt," to smoke a "dudeen" like a navvy, and to snuff like an old Welshwoman; has visited the veterans at Greenwich Hospital, and feasted with

German students at Heidelberg—it is highly probable that his answer to this question will run thus, "No; there's no harm in tobacco at all. You may use it with impunity." Inadequate opinions such as these the philosophical physician should most carefully eschew. He ought not to permit himself to form his views either upon the *ipse dixit* of another or the prejudices of himself. The question asked is not whether the use of tobacco is annoying to the nostrils of some; whether it is necessarily or generally associated with drunkenness or gambling; whether it is too expensive a luxury for a Christian to indulge in, or whether the physician himself enjoys it; on the contrary the querist seeks to ascertain what the doctor, as a skilled witness, knows about the use of tobacco in all its forms.

Such an inquiry I felt bound to institute whilst I was lecturing upon Materia Medica. The surgeon uses an enema of tobacco, and sometimes the physician also does. This brings the vegetable into the category that I had to descant upon; and feeling obliged to give the sudents attending my class facts rather than opinions, I resolutely devoted myself to investigate the matter thoroughly. My facilities for this were considerable. At one period of my student life snuff became to me almost a necessary, and once smoking made me so ill that I could not indulge in it. Nevertheless, I learned to abandon the "box," and to adopt both the cigar and pipe. Again, I had given up the whole three. Of chewing I knew nothing; yet, abundant experience amongst seamen and Americans enabled me to form some opinion thereupon.

With the belief, however, that the individual experience of one observer is insufficient to enable men to frame a deduction which is valuable—unless indeed his opportunities for observation are "overwhelming," I rummaged through a number of medical archives, in search of cases bearing upon the real effects of tobacco. The most remarkable cases I met with are to be found in Ranking's Half-yearly Abstract of the Medical Sciences, vol. i., pp. 73-77, but they are too long for quotation. The symptoms which are described vary in severity from simple nervousness and indigestion to sufferings the most frightful. Take, for example, the account of S. E., æt. 40, who, after being ill with acidity of the stomach, heartburn, pain in the abdomen, palpitation of the heart, sinking at the stomach, or heart sickness, and a host of nervous symptoms—gloom, nervousness, fear of sudden death, troubled sleep, frightful dreams—felt the cup of his misery filled up by frightful shocks at the pit of his stomach, coming on as he fell asleep at night. These increased in number and severity for two years. The shocks resembled that experienced by the discharge of a Leyden jar. At the end of this time he was incapaciated for business, and was very weak, irresolute, and

desponding. The use of tobacco was now given up, the shocks ceased in three days, and in less than a month he was perfectly well.

Ten such cases are recorded in all, and in each the symptoms are remarkably similar. They are those which attend mental and physical prostration. The brain being enervated cannot act as if it were in first-rate order. A tired man cannot work out a problem in mathematics so well as one renewed by sleep and food. A worn-out debauchee cannot see the rose colour of life as he did when he was young. The debilitated are not much disposed to laugh. The man who abuses tobacco is like one or all of these; not only the brain is weakened, but the heart and stomach are so too, and faintness, palpitation, and indigestion are constant. Indeed, it has been remarked that the abuse of tobacco has much the same effect as excessive onanism. It certainly reduces the sexual desire—as does excess in the use of stimulants.

The surgeon cannot be astonished at this result when he sees the fearful and sometimes deadly prostration that arises from the use of an infusion of tobacco as an enema; a similar effect is often produced by smoking the drug in persons unaccustomed to its use. Under its influence the body seems to resemble that of a corpse, and death appears imminent. It is difficult to believe that a substance so powerful could ever be used by the human body with impunity. But experience tells us that persons do get so much accustomed to its employment as to cease to feel any nauseating effect therefrom. It is upon this foundation that the habitual smoker founds his argument. He points to the men who become accustomed both to opium and to alcohol, and who take with impunity at the end of their lives doses of either which would at first have killed them outright; and to this he adds, "I am quite unconscious of any prejudicial effect following chewing, snuffing, or smoking." But if we cross-examine our friend, and ask what induced him to begin the habit of smoking, &c., and to keep it up, we shall find that it was begun from imitation, and the belief that it was a manly feat to consume cigars, &c.; that the practice was carried to excess under the idea that manliness is to be estimated by the smoking power of the individual, and that the habit is kept up as it prevents a fellow thinking too deeply. If then we put the query, are you now mentally and physically as strong as you were when you smoked little or none? the answer is certain to be in the negative.

Driven into a corner both by reason and experience, the confirmed tobacconist takes refuge in the expression, "You must not judge of the use of anything by the abuse of it practised by many." To this proposition we entirely assent. We are not so

insane as to banish beer from our tables because some sots get drunk and furious over their cups; nor are we so silly as to give up coals in our sitting-room grates because hundreds of men have been blown to bits in coal mines, or children and women have been killed by their pinafores and crinolines igniting. We do not keep to the shady side of a street because the sunshine in India often causes death; we have no objection to use both mustard and salt with our dinner, though both are poisonous if taken in excess.

So it is with tobacco. We do not object to its limited use, nor have we any thing to say against it so long as it is a luxury and harmless. But then comes the question, What is to indicate that tobacco is harmful to any individual using it? In answering this query we may first advert to those points that are to be avoided; for example, one man should not argue that tobacco cannot harm him, because he only smokes half as much as Mr. Strong, who is a paragon of health; nor must he assert that smoking is not likely to hurt him at forty, since he has been accustomed to a pipe daily for twenty years. Both ideas are signally wrong, for all men are not constitutionally equal, nor as able to endure depressing influences when in years as they were when young. We point out these facts repeatedly in the present volume, and they cannot be read too frequently. An ignorance of them is the fruitful cause of unnecessary suffering.

The real test of the prejudicial effect of tobacco is personal experience. A. B. has relaxed sore-throat, thundering cough, perhaps inflammation of the mouth, eyes, and soft palate; accident makes him leave off tobacco, and the symptoms disappear—smoking is resumed, and the disagreeable affections return—surely, here is proof that the habit is harmful. Again, C. D., whenever he visits a friend, and is induced to smoke, suffers from indigestion the next day, and this as often as a cigar is smoked, at or before bedtime. E. D. could use a pipe and Latakia tobacco who was sickened by cavendish or new cigars. G. H. could smoke one pipe with pleasure, but suffered from nervousness after taking two or three. I. J. had habitual "heart symptoms" until he was compelled by circumstances to give up the use of the weed, and then they all vanished. All these cases were those of persons who smoked with perfect apparent impunity at one period of their lives, but who could do so no longer. When young they had a superfluity of strength; when older they felt they had none to spare.

We should be sorry if our readers remained under the impression that we wish to suppress anything that tells in favor of tobacco, and only employ our pen in the abuse thereof. Far from it. We willingly admit that there are periods when smok-

ing is something more than a luxury. Well do we remember our first year of student life, ere we had learned to "blow a cloud"—how, after study as intense as the brain would bear, we went to bed, but not to sleep; how grotesque visions of books, mangled limbs, grinning skulls, large retorts, scalpels, and salts were mingled together, until at last a fearful start shook our limbs, and we turned round to a rest neither sound or refreshing. How again, in our second year we endeavoured to learn to smoke, and used to indulge in a pipe ere we sought the bedchamber—usually half squeamish—bed was then a luxury, we had no dreadful dreams—the brain had been soothed, and sleep was immediate. Again, we remember being worried daily by a provoking correspondence, in which truth and prudence struggled in our mind for precedence, and the sole means by which we could give each their proper place was by calming down our indignation by means of a "fragrant weed" ere we took the pen in hand; our fiery mood sensibly evaporated in the smoke, and when we made a homethrust there was a button on the end of our literary rapier.

A good smoke takes off the keen edge of anger—a man rarely gets into a passion over a pipe. I once visited a man impetuous as a mountain torrent, who was, nevertheless, tethered by the slowly moving chain of a law-suit. Unable to bear the strain, he cut his throat, but did not kill himself. The blood-letting, however, did not ease his mind or calm his eagerness; but smoking did, and when he felt savage he only vented his anger on the tobacco, and made it consume the faster.

In trouble, passion, agitation, and emotion, tobacco soothes. If I saw a man chafed with having to bear in quiet "the oppressor's wrong, the proud man's contumely," or bursting with passion, which was, nevertheless, controlled, I would offer him a cigar. It is better to drive away care with a gentle Havannah than to drown it in the bowl.

Again, I may say that often since I became an author my mind has been invaded with such a rush of facts and thoughts that I have felt unable to sit still. There they were, like a company of soldiers in a mob, useless for good until marshalled and duly arranged in proper order. At these periods I have longed for tobacco; but, having given up the habit of smoking, have adopted another plan. A quarter of an hour's practice at bagatelle or billiards has been substituted for a *séance* with tobacco. As I write my memory brings before me two men, both in the clerical profession, and distinguished for their learning. One, whilst mentally preparing his sermons, marched about the room like an old captain on his quarter deck, but never smoked; the other, when pregnant with ideas—perhaps we might more correctly say, during the conception of his thoughts—sat

down and smoked, an extra puff betokening the commingling of the elements, whilst a new charge of tobacco indicated the perfection of the argument, peroration, or whatever was in the mind at the time. The non-smoker was impetuous in his oratory, the smoker was ponderous. Genius should indulge in tobacco mildly when it wants to plod. He who has plodded until he has become as near to "genius" as nature will let him, should banish "the weed."

Still farther—and I approach the theme with diffidence—tobacco, like camphor, is an anaphrodisiac. Young men properly brought up, and earnest to conserve their purity and propriety, are frequently troubled, I may indeed say pained, by the violence of their animal propensities. Such, often, come on during the night, and, like a fit of asthma, prohibit sleep. Few, who have not personal experience of the fierce conflicts that youths sometimes experience when alone in the silent night, can have an idea how great an ally smoking tobacco is to personal propriety. It checks those devils that tormented "Christian" in the Valley of the Shadow of Death by putting ideas into his mind so cleverly that he did not know but what they were his own. "The weed," however, is not the sole means of reducing such "presumption" to quiescence. A still more energetic agent is mathematics, or any subject requiring deep thought. To a youth troubled in the manner indicated, the solution of a severe problem in algebra is, for the time, a perfect cure. Thought exhausts the brain in one way, tobacco in another. But all are not competent to thus use their brains. Consequently, there are some virtuous but not over clever young men to whom cigars, &c., should be given as a companion. It is better for a young man to be enervated by smoking—a habit which he can depose—than by one or more habits which will effeminate or injure him for life.

In conclusion, lest I should be charged with giving an uncertain "call" on my bugle, I aver that smoking tobacco in moderation is a beneficent luxury, which may be classed alongside tea, coffee, beer, wine, &c.; that it often does harm, and sometimes great injury to the health—that it is unquestionably disagreeable to those who do not smoke; and, consequently, that every individual who wishes himself to be thought a thorough gentleman ought never to indulge himself in smoking without first satisfying himself that he will not make himself disagreeable to other people. Report says that persons in an exalted position do not always attend to this rule, and we are sorry for it. There is a passage (Eccl. x. 16, 17)—"Woe unto thee, O land, when thy king is a child, and thy princes eat in the morning. Blessed art thou, O land, when thy king is the son of nobles, and thy princes eat in due season for strength and not for drunkenness." A quotation which we would feel disposed to paraphrase—Woe unto any royal house whose scions are snobs.

CHAPTER V.

THE DRINK WE CONSUME.

We have already said, that after breakfast is over, the first question of the loving couple generally is, "What shall we have for dinner to-day?" The query is usually propounded by the lady. When the dinner arrives, the first question from the host to his guest, if he has one of the male sex, is, "What will you take to drink?" I remember well such a question being propounded to me; and as ale, porter, and beer were the beverages presented to my choice, I, having been "sworn at Highgate," answered, selecting in the order given, only to learn that none were on the premises. I can also remember an anecdote told of some water-drinking squire, who remarked after dinner, "Gentlemen, who's for wine? I'm for none," and there being a pause, he added, "John, you may put the bottles by."

These stories, if they stood alone, would suffice to show that very opposite ideas exist amongst us respecting the beverages to be drunk. But when we find large and influential societies advocating a total abstinence from all those drinks which have been for a long time the most popular, we can well conceive that a discussion on the merits of malt and pure water may be frequently indulged in between married couples just entering life. It may be that one or other is a devoted teetotaller, and is not going to change the mind for any consideration; with such we will not interfere. It is far more likely that the man has, ere his wedding, been somewhat jovial as a bachelor, and the lady, as is so common with that sex, contented either with water or very small beer. Both, we will presume, are desirous to live a regular and temperate life, and to conduct themselves in every way as respectable members of society.

The questions which they would discuss are something like the following:—Is it *necessary* to have any malt liquor, or any other alcoholic drink at all? Or, shelving this question as

inconvenient, there might simply be the consideration, "What the tipple shall be—ale, porter, beer, wine, spirit, or something of everything?"

To many, the first inquiry would seem the simplest; the answer, as a general rule, would be in the negative. It is not *necessary* to life that we should drink any form of spirituous liquors, for the experience of travellers in distant countries, and of observant people amongst ourselves, show us that uncounted generations of men have lived and died without drinking any liquid stronger than water. This being undoubtedly the case, it is very natural for anyone to draw the conclusion—"we can do without them, and we will." Let us see the value of this deduction by applying it to something else. In the place of fermented liquors let us take tea, beef, puddings, sugar, and tobacco:—Tea certainly is not a *necessary* of life, yet there is scarcely a temperance festival in which an infusion of the leaf, mixed probably with sugar, milk, and cream, does not flow, like beer does at a common jollification. The Irishman thrives on potatoes, Vegetarians grow fat upon cabbage, and horses flourish on oats; surely, then, it is not *necessary* for Englishmen to have roast beef. They can do without it, and very many are obliged to avoid it as being too costly for their purse to buy. The poor fellow sitting by the roadside breaking stones all day has to endure privation, cold, heat, and wet, and to work hard and incessantly, yet he never gets pudding. I cannot myself remember having eaten pudding during the last twenty years, and I am surely right in concluding that man may live without it; and though "sweets" are much used by high and low, we may say the same of them. No Grecian hero, vaunted in Homeric verse, drank sugar in his tea, and we do not find amongst the luxuries which Lais set before her admirers that there were French bonbons. The hardy Esquimaux, than whom none live a life of greater hardship, know little of life's real *sweets*, and the North American savage is guiltless of crushing the sugar-cane to extract its juice. That all the inhabitants of Northern Europe lived to a good old age without tobacco, none can deny; consequently it is not *necessary* to existence. Yet, beef, pudding, tea, and sugar, grace the table of each teetotaller, and very often the pipe, cigar, and the powdery snuff, are familiar to his lips and nose. If man chooses to indulge in one or all of these as luxuries, why should he not add to them the luxury of ale, if he chooses, or wine if he prefers it? We have heard much twaddle talked at teetotal and religious meetings about the money spent in strong drink, but none of the speakers ever cared to inveigh against the use of other unnecessary luxuries, and yet the amount of taxation paid on the tea, coffee, sugar, &c., imported into Great Britain is not less than fifteen millions of pounds sterling per annum.

It is, however, said that alcohol is a poison, and injurious to health—well, so is the mustard and salt which we eat with our beef; and the tobacco which we smoke is no better, besides, if it be a poison, strong drink certainly is slow in operation. Tectotallers die as early as their neighbours and there are few who do not know many an *old* sot. I was once told by a life insurance friend of a saying of his manager—viz., "At the board where I used to sit was a director, and when a proposal came before him, involving the habitual indulgence in whisky in the life," he said, "I don't believe it's half as bad as people say it is; I had one friend who never drank anything stronger than tea, and another who went to bed drunk every night, yet they lived to the ages of seventy-eight and seventy-nine respectively."

There has been so much nonsense talked of late years upon the real value of fermented liquors, that it is somewhat difficult to separate the grain from the chaff, but we will attempt it, Let anyone who wishes to convince himself of the strict worth say of ale, first dine without it for a week, then for another week take his pint daily, and repeat the double process for the sake of certainty. If he be in good health he will find that when he drinks water he will eat double the quantity which he does when he takes beer, and that when he drinks ale, half the quantity of solids, which used to be necessary to satisfy the cravings of nature, suffices for his wants; and that under both circumstances his health is essentially the same. After having tried these experiments fairly, a man may then elect whether he prefers to run the risk of being a glutton or a drunkard. I will not say that either is probable, but I do know that tectotallers have killed themselves by over-eating, just as tipplers have died from over-drinking. Now, if when I dine, drinking water alone, I require four good slices of mutton, or other food, ere my natural wants are stayed, and while so living I retain my usual bulk and strength, and if when drinking a pint of ale with my dinner, two such slices of meat suffice for my wants, and while so living my bulk and strength remain the same; is it not clear that the pint of ale contains as much nourishment as two slices of pork, or other dish?

To all intents and purposes, then, ale, &c., are food. As food the fermented liquids have their peculiarities, as have meat, bread, milk, sugar, &c. Being liquid, they are very soon digested, being fluid, they soon enter into the blood, and soon pass out again. A slice of mutton will take three or four hours before it is wholly dissolved in the stomach, and before it can enter into the system, although it enters partially during the whole of that time. A pint of ale enters the system in twenty minutes. It has been often said that, after taking spirituous liquors, the person indulging in taking them wants them perpetually. The

same is true of tea. How many are there who can bear the notion of going without their tea, and yet *who* would reject that beverage because they want it every day? The objection, then, is worthless.

But is it true that a man, dining as a teetotaller, can do for a longer time without food than one who takes a moderate amount of beer with his meals? Decidedly not, for the very opposite is the fact. As a rule, of which I have not yet met with an exception, the "abstainer" is always more hungry than the "temperate;" he never seems to have enough. I know many persons who make only one substantial meal in the four-and-twenty hours, but none of them are "teetotal," unless they are monks of "La Trappe."

The most striking instance of the dietetic and even medicinal value of alcohol which I have met with in the course of my reading is to be found in Baker's Albert Nyanza, vol. ii., p. 231-2. That author tells us that when fever-stricken, thin and haggard, he reached a spot near the Upper Nile where sweet potatoes abounded. They were too saccharine to be agreeable as a vegetable, and the traveller contrived a plan for making whisky from them. After describing his method he proceeds to say—"I found an extraordinary change in my health from the time that I commenced drinking the potatoe whisky. Every day I drank hot toddy. I became strong, and from that time to the present day my fever left me, occurring only once or twice during the first six months, and then quitting me entirely. Not having tasted either wine or spirits for nearly two years, the sudden change from total abstinence to a moderate allowance of stimulant produced a marvellous effect." This experience tallies with the experience of those who reside in the aguish districts of the American Virginia, who take a morning dram of whisky whenever they are obliged to go out of door before the sun's rays have had time to warm the earth. My own experience in the treatment of ague in our hospitals leads me to believe that the value of quinine is doubled by its being administered with some form of alcohol. Even in old times "Peruvian bark" was regarded as almost useless, unless it was administered with wine or other spirituous liquor.

There is another very important peculiarity of alcoholic food which must not be lost sight of—viz., that when individuals, whether children and adults, are too weak, or too fatigued, to eat solid meat, they will be able to do so after they have had a drink of beer. This will bring them an appetite, and a glass of wine will give to a very exhausted man the courage to put other food into his mouth. I have had much to do in the way of giving advice respecting the best way of bringing up the young members of delicate families. I have known boys and girls, varying

from three to five years of age, go for hours without touching their food, or going to steal any from the pantry. The bread and milk for breakfast reappears at dinner only to go away again untasted. Happy the child if it goes away without having first experienced the terrors of the rod or whip, for those who know that you may take a horse to the water, and yet be unable to make him drink, imagine that a child is more tractable, and he can be made to eat by punishing his skin. If to such children a wine-glassful of sweet brandy and water, or any other stimulant be given, the food will generally be taken with avidity afterwards. In carrying out my views I have met with frequent opposition, but in no instance that I can recall has the prejudice, that to treat children thus rationally is a sin and a sowing of the seed of drunkenness, when once overcome, found itself justified.

As a physician, I know that in many cases of delicacy of constitution, which shows itself in wasting away, and in a loathing of all ordinary food, good ale, wine, or brandy and water, well sweetened to the palate, will not only sustain life, but positively restore the invalid to health, quite independently of any other diet.

With such facts as these before us, it is impossible to doubt that stimulants, as they are often called, are food. They are so to the horse as well as to man. Travelling once in Ireland, I came to a place where I could get no car to take me forward, and I was pressed for time to arrive at my destination. The driver of my vehicle, then, seeing the difficulty, offered to take his own beast on, provided that I would pay for some meal and whisky for it. I did so, saw the two duly mingled, and taken by the animal with great pleasure, and the horse's second performance in harness was just as good as the first: the two stages together were about forty-five miles, and the time of our stop about ten minutes. Since then I have known of a great many horses treated with wine and whisky for exhaustion, and completely restored, when others, under similar circumstances, but not so treated, have died.

That "liquors" are food, being once granted, it behoves us to inquire into their varied value. As a rule, ale contains more nourishment than porter, and a glass of it suffices to "stay" the appetite, if taken as a luncheon, for about three hours, or less, according to the density of the ale, but it has a propensity to make a woman fat, and a young man bilious. It is of great help to nursing mothers; but, if taken in too great abundance, puts flesh upon the nurse's bones, rather than milk into her breasts. Porter is somewhat inferior to ale as a feeder, but with some stomachs it agrees better; taken in excess it gives a tendency to gout and rheumatism. The two combined, as half-

and-half, form a tipple to which I still give individual preference. Beer is simply either the one or the other in a weaker form.

To a man exhausted by fatiguing labour, and to a woman pulled down by diarrhœa whilst nursing, ale is preferable to wine. It combines quantity, food, and stimulant, more nicely blended than any other fluid which I know.

If any of these disagree with the stomach, or produce nausea, headache, &c., they may be changed for wine or other liquid.

Indulgence to excess in any spirituous liquor is very likely to produce gout. Yet it is a very remarkable fact that gout is very uncommon amongst our drunkards, and is common amongst the intellectual and temperate. I know one man who has been a teetotaller for twenty-two years who has been seriously injured in his business by it; for his trade involved much walking and constant locomotion; and another who is strictly temperate, yet almost a martyr to gout. The late Lord Derby who died of gout was very abstemious, and so is Mr. Disraeli, who has himself been laid up by the disease in question.

Wine, as a rule, is stronger than beer, and in estimating its value, or its effects, we may consider it as a necessary, and as a luxury. We want "a glass of wine" when we are thoroughly tired with mental work, or when the day is too hot, and we are too perspiring to indulge in much fluid. On such occasions we go to wine, because it is, so to speak, brandy and water ready mixed, and the stronger it is, *the better for our purpose*. Port and sherry are those we usually select for this. If, on the other hand, we are fatigued by prolonged exercise, during which the waste of tissue is considerable, we require a glass of ale or porter rather than a glass of wine; and he must be a rabid teetotaller, indeed, who can persuade himself that in such a case a draught of water is of more good than a pint of beer. I have been a great pedestrian in my day, and have repeatedly contrasted the effect of water and ale when fatigued, and I say, without the smallest hesitation, that malt liquor, so taken, is both food and drink.

But though wine is often required as a necessary, it is far more generally drunk as a luxury. When Paterfamilias thinks of stocking his cellar, if he has one, or ordering a dozen bottles from his wine merchant, he considers, or he ought to do, for what he is ordering his wine, whether for his own drinking, for his friends' consumption, or for ostentation; whether he wants to get fuddled for the smallest possible cost, or whether he wants to avoid being "heady" at all.

If he wants to go to sleep after dinner and feel "tight" for a small sum, he will very naturally buy cheap and new Port, Sherry, Malaga, or Marsala. If, on the contrary, he wishes to

regale his friends and enjoy their conversation, he will put before them, and indulge himself with old Port and Sherry, "East Indian Madeira," and abundance of fine Claret or other light wine, which abound in ether rather than with alcohol.

The heavy, compared with the light wines, are, amongst liquid foods, what beef is to bread amongst the solid ones. Such wines as the French, Rhenish, Hungarian, and Greek, are spurs to the imagination and oil to the tongue. Who is there who cannot remember how, in his younger days, the champagne at supper helped to make an evening party more delightful than did the tea, and how it gave brilliancy to his wit, during the subsequent dances, and how the sparkles that flew from beauty's eyes were brighter during the latter part of a *fête champêtre*, where corks and beaux were "popping" more satisfactorily than they were before luncheon, when water and small talk came together?

On the other hand, many of us may recall with pain scenes of uproarious argument and quarrelsome conversation which have followed potations of Port. The heavy wines dull the imagination and promote stupidity and passion, while at the same time they clog the tongue and make us roar when we only ought to speak.

To those who have a proclivity to gout, and who can afford to drink light wines, the latter will prove more eligible for an ordinary beverage than ale, porter, or beer. As a rule, the white are better than the dark wines. It was long ere I knew the difference between them. Both are the product of a dark purple grape, the colouring matter of whose skin is not soluble in water, though it dissolves in a solution of alcohol. In the making of white wine the grape juice is drawn off before fermentation begins, and the grape skins do not come into contact with the spirit of the wine at all. In the dark wines the expressed juice remains mingled with the skins, stems, and stones of the grape, until fermentation has advanced sufficiently to produce alcohol, which then dissolves the colouring matter, and gives a purple tinge to the fluid. As the skin, stones, and stems thus macerated contain some tannin or astringent matter, the dark wines have a somewhat more "binding" influence on the bowels than the lighter varieties.

The various forms of spirits differ from ale and wine in their strength, and I think also in their effects on some constitutions. Champagne amongst wines, and brandy amongst spirits, are prominent in their value of curing or alleviating vomiting; none are more useful in allaying sea-sickness; yet, if taken to excess, there are none which produce such an amount of nausea and "good-for-nothingness." There is no spirit which seems to have a stronger influence over the sexual organs in the male than brandy, and indulgence in it will go far to produce a total loss of

power. I have known strong young men who could not take it at night without an unexpected discharge during sleep, and I have known others who, recovering from the effects of an excessive flow, have rendered themselves hopelessly effete by prolonged orgies on brandy and water.

In an earlier part of this chapter, I spoke about *old* wine. Those who pay close attention to the value of everything with which they come into contact, think equally of *old* brandy, rum, or whiskey. *The same may be said of medicinal tinctures*, especially of the Tinctura Ferri Sesquichloridi. *Age improves them all.* The reason is, not that time *dissipates* the alcohol they contain, but that in all these liquors a slow conversion takes place of the spirit into a form of ether, which, as a stimulant, is far more pleasant to the palate, the stomach, and the constitution, than coarse alcohol is. I have repeatedly met with instances in which the stomach has rejected every form of stimulant but *old* brandy.

Whiskey, whether Scotch or Irish, is, so far as I can learn, the most wholesome or the least innocuous of all the spirits. Yet I have known a single wine-glassful of whiskey toddy, taken by a nursing mother, invariably produce vomiting during the whole of the next day in the infant, a result not brought about by any other spirit.

To indulge in rum is not judicious in any one, as that fluid is apt to taint the breath, and make it more foul than will garlic, onions, or any other cause.

Gin, a very common tipple, has apparently a special influence over the kidneys, and in some nurses on the breast-milk; hence the physician administers it in cases of dropsy, and recommends it to mothers whose strength is somewhat overtasked by their daily toil, and who would, in consequence, if it were not for the stimulant, have bad and "windy" milk for their babies during the night. A glass of gin and water taken by Materfamilias at bed-time will make her and the baby, and, consequently, the husband, sleep undisturbed.

Much has been said upon the prejudicial effects of spirits upon the liver: after investigating the subject closely for five and twenty years, I can find no logical evidence whatever to support the assertion. Temperance story-books tell tales of "gin drinkers' liver;" but as the disease occurs in those who are strictly temperate, and in cows, who do not certainly frequent gin-palaces, it is clearly not due to the spirit.

The really bad effects of alcohols are, that they make the mouth uncomfortably dry some hours after they have been imbibed, produce a fall in the animal heat about the same period, and, if taken to excess, exhaust the nervous system. But here let me say a word about exhaustion. Men who have often to

get through an immense amount of work in a short period (as engineers and lawyers have, when preparing for passing "standing orders" in Parliament), are unable to find time to eat a dinner or if they do, it incapacitates them for work. To enable them, therefore, to get along in their match against Time, they sip wine or brandy and water. When all is over, the brains and men are weak and prostrate, and teetotal lecturers—who are generally good-hearted, narrow-minded, and very illogical individuals—preach to them that "it is all along of their having indulged in stimulants." Surely, the real blame must be thrown upon the toil which the liquor has enabled them to go through.

There is yet another thing which I would like to point out ere I leave my subject,—viz., that drunkenness, or the propensity to drink to excess, is an hereditary disease. In the vast majority of instances it is a form of insanity, and, as such, is attended with other manifestations of disordered brain. It is associated in some with religious enthusiasm, and the alternations from excess of piety to excessive drunkenness often scandalise those who do not know that both phases have a common source: sometimes drunkenness or "oinomania" is associated with propensity to lawless love or other forms of badness, and very generally it is associated with great cleverness. It has long been a matter of common observation that a great number of the best workmen in every trade are drunkards, and masters are obliged to tolerate them, inasmuch as none others of temperate habits can be found to replace them. An immense number of people drink largely without having delirium tremens, and they who do suffer from that disease are the people in whose blood insanity already exists. It is this union between fits of drunkenness, insanity, and crime which has pointed the shafts of so many teetotal advocates, and frightened so many weak minds from taking such moderate amounts of alcoholic food as would be good for them.

We have said so much upon the use of fermented liquids that we have left ourselves small space to talk of others. *N'importe*, we have not much to say. People may please themselves whether they take tea, coffee, or chocolate. Tea, as a general rule, is "tired Nature's sweet restorer." The Australian explorers tell us that every man in their expedition thought more of tea than of brandy, and would rather lose a keg of tobacco than a store of Bohea.

Once I was an unbeliever in tea, and during the many days of solitary misery which I had to endure in consequence of the delicacy of children and their absence with Mamma at the seaside, I tried to do without it. Hot water and cold, milk and cream, soda-water and brandy, water and nothing at all, were tried in succession to sweep those cobwebs from the brain, which

a dinner and a consequent snooze left behind them. It was all in vain,—I was good for nothing ; and the evenings intended to be devoted to work were passed in smoking, gossip, or novel reading. I took to tea, and all was changed ; and now I fully believe that a good dinner, "forty winks," and a cup of strong tea afterwards will enable a man to get through "no end" of work, especially of a mental kind.

Yet tea is not harmless ; and there are few things which are more certain to produce flatulence in the overworked female than the beverage.

Green tea is especially an excitant of the nervous system, and drives away sleep by exaggerating the faint noises which occur in every house at night, and making them appear dreadful sounds, such as those that are supposed to indicate fire, burglary, or murder. I have been a careful reader of all those accounts which tell of endurance of prolonged fatigue, and have been so struck with the almost unanimous evidence in favour of vegetable diet and tea as a beverage, that I have determined in every instance where long nursing, as of a fever patient, is required to recommend nothing stronger than tea for the watcher. But it must ever be borne in mind that tea, though good as a stay, cannot be trusted to as a staff. Folks who live mainly on the infusion of China's herb become even more "shaky" than those who live on gin.

To sum up our views, we would say once again, let each one who values health, drink that which seemeth best to him or her, irrespective of the opinions of others. If he has no reason to complain of its effects, he may fairly neglect the diatribes of twaddlers. One who believes that He who made the vine to grow had a Son who converted water into wine for the benefit of those at a feast, who had already drunk the ordinary provision made for them, may well afford to laugh at the satires of the teetotaller. "The Son of Man came eating and drinking, and was called 'a wine bibber,' the friend of publicans and sinners." What He bore, His followers may do; and the temperate Christian may yet hold his own against any "total abstinence" opponent.

CHAPTER VI.

IS ALCOHOL AN ALIMENT?

It is marvellous to any one who is not familiar with the weaknesses of the human mind to notice the amount of froth which the agitation of the above question has raised; and it is particularly lamentable to find that men who assume to be leaders of medical opinion should have advanced, and continue to support, propositions as illogical and illiberal as if they had been propounded by the pupils in a dame's school. One starts from the axiom, alcohol cannot be food, and draws the necessary conclusion that it is not. Another defies any one to show that alcohol can do good, and then fancies that he has proved his case, and even if his challenge is accepted declares that no amount of evidence will convince him that it does; and then, as all decline to enter the list with him on such terms, he flaunts his assertion as being incontrovertible.

Starting from points like these, we may well conceive what the nature of any controversy has been—twaddle on the one side and irony on the other—intolerance, perhaps, on both. The philosopher, however, ought to examine the question without any other object than to attain to certainty—and, under no circumstances, ought he, like the bigot, to desire to make a surmise appear a fact. When any writer indulges in such a luxury he is very ready to bespatter his opponents with a large amount of dirt, and refuses to believe in statements at which he can launch a sneer. If a lady affirm that for a certain period she has lived on brandy and water—pooh, pooh, nonsense, is the reply—she must have gone to the larder in her sleep and eaten everything the cat was accused of stealing! If such a doctor, when attending a bedridden woman, be told that she subsists solely on rum and water—oh, gammon! he answers—she can't do so, and she does not—she is an impostor. Or if the individual be a metropolitan physician, and he is told of such cases as occurring in

the country—"all my eye," or other equivalent phrase for "nonsense," is the remark, "we don't believe in country doctors here—they don't carry scales in their pockets—and they do believe every cock-and-bull story that comes across them." If he sees that a typhoid fever patient takes nothing but wine, or spirit and water, and "pulls through" safely, while another, who had physic and cold water alone, succumbs—though his original condition was more favourable than that of the other—pooh, pooh, he says, the wine did not feed the first, and if it did, beef tea would have done so better. And when, in the course of another case, he finds that wine, &c., seem to cure when beef tea seems to be useless, he declares triumphantly—"oh, that proves nothing—typhus is a disease, and we want to know whether wine is food in a state of health."

These are by no means uncommon samples of the so-called arguments used by amiable teetotal writers. Their other reasonings on the subject are much on a par with them. One earnest advocate says—"You will surely allow that people can exist without alcohol." "Certainly," is the reply. "And you allow that they can't subsist without food?" "Certainly." "Well, does not that prove that alcohol is not food?" "Lucidly put, no doubt," we say, "but let us for alcohol read beef—how will the matter stand then?" "An Irishman or Hindoo lives long, and never touches a bovine carcass,—is beef, therefore, not food?"

Returning to the charge, however, the teetotaller urges,—"well, you must allow that a perseverence in alcohol without other food will produce disease, and very probably death; it is therefore a poison, and poison cannot be food?" "Very prettily argued," is the answer—"but let us once again substitute some other word for alcohol, *e.g.*, flour, bread, salt beef, &c. We know that travellers by land and sea, are frequently obliged to live entirely upon bread and butter, tea, salt beef, &c., that under its continued use they contract a peculiar disease, which repeatedly carries them off to the grave—flour, therefore, and preserved meats are poisonous and cannot be food! Is that argument to your taste?"

"Oh," is the rejoinder, "that may be, but you must allow that alcohol does much more harm than beef and mutton?" "Certainly, I allow it, and you must also allow that alcohol may cure a man in fever, while beef would make him worse—but what then?—that is not the question we are discussing."

Endeavouring to strengthen his position, the opponent of alcohol turns to the chemists, and seeks for support from Liebig, whose theories upon food have been so blindly, yet generally, mistaken for established facts; but finding that the learned German is dead against them, they turn to France, and find that obser-

vers there have demonstrated the fact that some alcohol passes out of the body unchanged. If so, it is argued, alcohol cannot be food. From this staggering blow he expects that his adversary cannot rise, and is, therefore, somewhat surprised to hear again a suggestion for an extension of the inquiry. The philosopher turns, in the first place, to the records of the experiments, and finds that the quantity detected as emerging from the body is infinitely small. He sees that the whole quantity of alcohol imbibed has never been recovered. He sees, moreover, that the alcohol so discharged is in a state of vapour, and knowing that this vapour, when mingled with certain proportions of air, forms an explosive compound, he concludes that, if even a very large portion of what was taken were outbreathed, the atmosphere of a room whose doors and windows were closed during a symposium of whiskey drinking, would be explosive; and as no explosions, save of fun or anger, occur on these occasions, he infers that much alcohol cannot be exhaled. He remembers, moreover, that many acknowledged articles of food can be detected out of the body after they have been taken in. A fasting man can recognise in the breath of a full one the nature of the food he has taken, as well as the drink he has imbibed. Roast goose and toasted cheese are more easily recognisable than beef and mutton, and onions than both; yet all are as readily recognised as beer or rum and water. Water, an absolute necessary of life, passes out of the body unchanged. And any one conversant with fecal philosophy knows that a considerable portion of the food of man and horse passes out of the body nearly in the same condition in which it was taken. All, then, that the French experiments show is this: that chemistry can recognise the previous imbibition of alcohol at a later period than the nose can.

Foiled thus far in the thrusts he most trusts to, the teetotal advocate makes another attempt with weapons of more doubtful value. "Alcohol," it is affirmed, is the product of fermentation in an alimentary substance, and as fermentation has changed the chemical and physical condition of this, it must change all its other attributes—if, therefore, the starch or sugar from which the alcohol was produced were food, the alcohol *cannot* be so." "Very pretty," again is the reply, "and worthy a logical philosopher;" but we must again substitute one word for another—and taking the *acetous* in place of vinous fermentation, ask whether vinegar is not one of the best preservatives against scurvy, and, therefore, under given circumstances, an essential article of food?—and we drop *sotto voce* the remark that spirit of turpentine comes next in rank to it. With wondrous alacrity the logician replies, "Yes, but you see that the acetous fermentation affects a change in the alcohol which was the product of the vinous fermentation, and consequently, vinegar may be

nutrient when wine is not." "Ah, I see," is the ingenious rejoinder, "the cause of a fact I never knew before, viz,, that wine only does good when it turns sour on the stomach. A valuable piece of information truly."

This appeal to chemistry by the teetotaller is a dangerous thing, for it may be used in a manner which will bother any one considerably. As a sample, let us turn the tables on him thus:—"Now, Sir, are you aware of the fact that the saliva which we are obliged to mingle freely with all our farinaceous food has the property of converting starchy material into a saccharine compound which readily ferments on exposure to warm air? Do you know that one of the functions of the liver is to form sugar, glucose, or other saccharine material which mingles with the venous blood?" "Yes, I do." "And do you know that a solution of sugar, such for example as the hepatic or diabetic, when exposed to oxygen at a temperature of 96° ferments and forms alcohol with the extrication of carbonic acid?" "Yes, I do." "And do you not know that the lungs are organs by which warm oxygen is brought to the venous saccharine solution —that in expiration we find that carbonic acid is exhaled?" "Yes, I know all that." "Well, then, is not that a proof that the lungs are intended as organs for the formation of alcohol in the blood?" "I never thought of that," is the reply. "What, have you never called pure draughts of mountain air 'inspiriting?'—of course you have—and have you never heard Irishmen and others talk of the exhilirating effects of mountain dew, and yet, have you never fancied they had anything in common with each other?"

"Again, have you never noticed how frisky a horse became after you have fed him upon oats? Do you not know how much such food increases the stream of carbonic acid from his lungs—and have you never heard how porter, ale, or whiskey is given as a substitute for a common feed, and after such potation have you not noticed how his spirits seem to rise, and with all this, has it never occurred to you that the oats which all horses so enjoy become converted into alcohol in the lungs? And does not this idea become much more important, when we find it stated by agricultural members of parliament (see debate July 4, 1862), that malt is of far greater value in the rearing and feeding of cattle, than is the barley from which it was made, thus showing, that some grain, at least, has the greater nutritive quality in direct proportion to the ease with which it may become alcohol in the pulmonary fermentating vat? And do you not see, too, that animals who live upon flesh, in which there is a minimum of sugar and alcohol producing material, are never so fat and comely as those who live upon food which is readily converted into sugar, in the stomach and alcohol in the lungs?" "Oh,

don't you run on at that rate," the alarmed teetotaller answers. "You know that alcohol has never been found in the pulmonary veins—*ergo*, it does not exist." "Excuse me," the philosopher replies, "I know that it has never been looked for, and, consequently, has never been found. Sugar existed in the liver long before Bernard found it, and Pavy demonstrated that it was not sugar at all that was there. Wait until some Pavy has analysed living blood from the pulmonary veins, with especial reference to the alcoholic question, ere you assume as a fact that the lungs are not the human fermenting vat." *

"And, still further, ere we leave the chemistry of the subject, let me ask you the real difference between arrowroot, starch, sugar, and such like, and brandy and soda-water? In both there are the same elements and equivalents, and there is no more difficulty in the belief that the system can assimilate one than the other."

To escape from the various difficulties surrounding the question we must set about our investigation in a judicial manner, rigidly excluding all theory, ignoring no known fact, fairly testing the value of every scrap of evidence, and stoutly submerging all preconceived ideas. It is not easy, we allow, to divest ourselves of prejudice. We all, more or less, worship the idols of the tribe, the cave, the theatre, and the market place. Yet we must be ruthless iconoclasts if we aim at truth.

Let us ask what we mean by food? what we mean by alcohol (using the word generically)? and whether our definition of the former can include the latter?

Lewes has already pointed out the difficulty of an accurate definition of the word food; † but no such definition is necessary when all know the meaning, though it is rigorously demanded on occasions when an author has some special desire either to include or exclude some particular article; and yet, when this desire is present, definition is almost impossible. By substitution we may see how difficult it is to define the most common

* I would call attention here to the fact that a fermentable material enters largely into the food of all creatures; in the graminivora more abundantly, of course, than in the carnivora. That hunters who have been deprived of food for a long period have found, empirically, that the liver of any animal is more nutritious than the other parts of the body. We may even carry the idea still farther and notice the resemblance there is between the scurvy resulting from too exclusive a diet upon bread, &c., and the purpura so common in young children who are indulged with too much gin by their parents.

† Mr. Lewes, whose writings on the physiology of common life are masterpieces of philosophic observation, induction, and reasoning was, I believe, the first to broach distinctly the idea that alcohol was food. Prior to this time many had satisfied themselves, from personal observation, that beer, ale, wine, &c., were not simple luxuries, and that they were, in many instances, as essentially necessary as cooking is, yet no one ventured to put alcohol in the same category as starch, sugar, or bread.

and well-known word. We all know what we mean by "a woman"—but a Chevalier d'Eon appears who is claimed by both sexes as their own. The law then has to define what constitutes a woman. A woman must have, it will say, long hair—no beard—large mammæ—womb, ovaries, and vagina—this seems simple—but Mrs. A. is bald—Madame B., with three children, &c., has a masculine beard—Mrs. C., a capital nurse, has breasts no larger than a man's—Mrs. D. has no trace of vagina, or uterus—while, on the other hand, Mr. E. has long hair, no beard, large breasts, and an aperture very like that of the vulva. In cases of doubt, the *tout ensemble* is necessarily relied on. So let it be with our definition of food, let us consider that anything is food which satisfies our hunger, and, at the same time, enables us to keep up our existing normal condition. Both clauses are essential, for we know that tobacco, fear, or other powerful emotion of the mind, sleep, opium, clay, &c., may, for a time, take away the sensation of hunger, while "water" which for a time keeps up the existing condition, does not satisfy the appetite; and flour, which in scurvy keeps up the flesh of those who eat it, does not satiate the cravings of hunger.

This definition may seem simple, but it is not so; food may be given to a person who has no feeling of hunger, and it may nourish him. A hungry man may find his pangs appeased by taking a certain food which he must vomit up again, although another person could relish it. To a starving Britisher the whale's blubber, which an Esquimaux revels in, would be poison. Again, young children, invalids, and drunkards have a form of hunger for which it is useless to give solid food. In these, and other instances, therefore hunger merges into thirst, and we have to distinguish between food and drink. To escape this difficulty the Physiologist chooses to consider the words food and aliment as being strictly synonymous. If, however, we so modify the meaning of "food," we must, in like manner, modify the meaning of the word "hunger," for to a desire for fluid we give the word thirst. To reconcile this difficulty we may use the word craving, but that unfortunately conveys the idea of a longing desire for a deleterious thing. Yet, if truth must be told, "hunger" and "thirst" are no more than expressions of the fact that the system craves for something to remove it from its then abnormal condition. Whatever satisfies that want is food.

Without going farther into definition, or into the various forms of food which have been used under various circumstances, by various ages, and by various ranks of men, let us examine the effects produced by food on the animal economy generally, when such food is not inappropriate, nor taken in excess, of course leaving out of the category the immediate subject of dispute, fermented liquors.

To begin with infancy and childhood, we know that its proper food is milk, and that without such food an infant is with difficulty reared, while with a very young child an animal diet will produce convulsions of great severity; and this not during the primary part of digestion, but what is called the secondary. In connection with the diet of infants we must notice that no article of diet agrees well with them unless it contains such saccharine ingredients as are capable of fermentation in the lungs; and, farther, that in cases where infants are brought up by hand, weak brandy or other spirit and water, sweetened, will agree with the constitution and nourish the individual when all other articles of food are rejected; nor does it much signify whether the alcohol is introduced by the stomach, by the rectum, in vapour by the lungs, or even, where possible, by the skin.

I have repeatedly witnessed in infancy and early childhood the superiority of brandy and water over beef tea. In my own eldest son the use of the latter produced *laryngismus stridulus* and general convulsions, while the spirit and water always did good and never did harm. Of course too much spirit is as bad as too much beef, though in a different way, Too animal a diet will equally produce convulsions in patients who have been much exhausted by loss of blood.

When adult age is attained it is rare in this country for us to see the effects of gormandizing, so much so that to say a man could be stupidly drunk with beef or mutton would be to write oneself an ass. Yet we do find here and there records in history or books of travel which justify us in saying that too much beef may be as bad as too much beer.

Our own chronicle tells us that Henry the First was so much addicted to feeding that he died of a surfeit of lampreys; but as he may possibly have taken whiskey, bitter ale, or rum and water, or some other stuff which was only known long after his death with it, we have nothing like "clinical precision" that he did not die of too much grog.

Gibbon, who is careful to give the authority on which he makes a statement, tells us that Solimau the Second, on one occasion, ate at one meal 70 pomegranates, a kid, six fowls, and a huge quantity of grapes: and that he subsequently died of an indigestion, after a meal consisting of two baskets of eggs and figs, which he ate alternately, finishing off with marrow and sugar. But, although he was a Mussulman, he was also a Caliph, and might have indulged himself, as do the Japanese, with Champagne or French Brandy, and, consequently, we have no "absolute certainty" that he did not destroy himself by drink, and—as some writers argue now, he *might have done*, therefore *he did*—we must seek up another authority, where such possibility is removed.

Sir George Simpson, the then Governor of the British Canadian Fur Company, has written a very interesting account of a journey through Siberia. While there he heard of some professional gormandisers; and in vol. 2, page 309, he tells us that he hired two, that he might see what they could do. He provided 36 lb. avoirdupoise of boiled beef and 18 lb. of melted butter for each man, and he or his Scotch orderly stood by watching them for three hours, until the whole was consumed. No spiritous liquor was taken, but the result was a comatose lethargy for three or four days.* It is clear, therefore, that too much beef, or food in general, produces coma quite as profound, and certainly more lasting, than that following a debauch on gin.

Captain Lyon gives an even more disgusting account of an Esquimaux meal. "From Koolituck," he says, (Journal p. 181) "I learnt a new Esquimaux luxury. He had eaten till he was drunk, and every moment fell asleep, with a flushed and burning face and his mouth open. By his side sat Arnalooa (his wife), who was attending her cooking pot, and at short intervals she awakened her spouse in order to cram as much as was possible of a large piece of half boiled flesh into his mouth with the assistance of her forefinger, and having filled it quite full cut off the morsel close to his lips. This he slowly chewed, and as soon as a small vacancy became perceptible, this was filled again by a lump of raw blubber. During this operation the happy man moved no part of him but his jaw, not even opening his eyes; but his extreme satisfaction was occasionally shown by a most expressive grunt, whenever he enjoyed sufficient room for the passage of sound. The drippings from the savoury repast had so plentifully covered his face and neck, that I had no hesitation in determining that *a man may look more like a beast by overeating than by drinking to excess.*"† (Quoted from Lubbock's *Prehistoric Times*, 3nd edit., p. 486. The italics are of our own adoption.

* A gentleman in Liverpool was given up for two days with apoplexy from indulgence, after dinner, in strawberries and cream; he vomited, and was cured.

† When kings, caliphs, Siberians, Chinese mandarins, and Esquimaux, who cannot get alcohol, make beasts of themselves by eating an amount which a boa-constrictor might envy, we can readily conceive that those who can get alcohol, and cannot get or do not care for beef, may indulge in the former as much as others do in the latter; but I doubt whether there is any definite information current as to the actual quantity of drink occasionally consumed.

As it is contrary to our notions of propriety to institute an experiment with gin similar to that tried by Sir G. Simpson with meat, we are necessarily driven to gain our knowledge by the collation of many facts and statements, a plan of which a former Editor of the *British Medical Journal*. who raised the writer's ire by the silly way in which he tried to explain away facts which told in favour of the real value of alcohol, seems to have no conception of.

For many years I have sought for such facts as I could collect, and I am

This point being established, let us proceed to the physical condition of those who eat too much, and examine whether they differ from those who drink too much. In the Siberian case,

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astonished, first at the uniformity of the results ; secondly, at the enormous quantity of alcohol which can be taken with impunity, and for years together.

I will record a few :—No. 1, when he voyages, as he repeatedly does, between Liverpool and Belfast, always has a quarrel with the steward as to whether he has had twenty-one or twenty-two glasses of whiskey and water. No. 2. was known to have taken twenty-three, and No. 3 twenty-six such glasses at a sitting. No. 4, an elderly man, has a sort of weekly feast at an hotel, his allowance for the night being two bottles of whiskey. No. 5 habitually has a bottle of sherry at dinner, a bottle of port afterwards, and after that an unlimited supply of whiskey toddy. No. 5 took four gallons of ale in one day. Nos. 7, 8, and 9, a woman and two men, were in the habit of drinking together ; during one sitting they drank forty-eight bottles of port wine, six bottles of gin, and six bottles of brandy.

All these are put into the shade by No. 10, of whom I was told by Mr. Long, one of the surgeons of our Royal Infirmary, and who had verified the particulars during an attendance upon the individual during his last illness. The man was a publican, whose business was managed by his wife, and she gave instructions to the barmen that everything the master took was to be paid for or put down daily to his debit. Everything being brought to an uniform standard,—*e.g.*, a glass of whiskey was charged sixpence, a glass of ale, threepence ; two glasses of ale, therefore, counted as one of whiskey. Now, for seven years doubtfully, but for five years certainly, this man's daily average of liquor was thirty-six glasses of whiskey—the quantity sometimes falling as low as thirty-two and rising sometimes as high as forty-two glasses. He regularly went to bed drunk twice a day. During the period described he occasionally, but very rarely, ate a hearty meal ; he picked at strange food, such as pickles, &c., rather than ate, yet he never had *delirium tremens* or other illness. His death was preceded by a fortnight or three weeks of stuperose listlessness, during which he cared for nothing of any kind. At the end of this period a fetid fermentation, similar to that which is so common in hot weather after death from disease of the stomach, set in gradually, increasing till it flooded the throat, poured from the mouth, covered the bed, and ran over the floor. This continued for about eighteen hours, the lungs gradually becoming filled by the bubbling matter, and death ensued from asthenia and apnœa combined, at the age of forty-nine.

One case like this is sufficient to show that alcohol is not the poison it has been represented to be.

Nos. 11, 12, 13, drank at one sitting seven bottles of good strong Scotch whiskey, and all went home sober.

A party of eleven drank at one sitting two dozen bottles of sherry, one dozen of champagne, one dozen of port, and eleven bottles of brandy.

A party of four drank at a sitting sixteen bottles of brandy ; two dying from the effects of the potation, and the other two not being much the worse. My information respecting the two last instances came from one who was of the party.

As it is not strictly *apropos* to my present paper, I will not pursue this part of the question further than to remark that there is a strong resemblance between the action of chloroform and alcohol. Some are poisoned by a very small and apparently inadequate dose, while others, who have taken a certain amount, appear to be able to increase that amount *ad libitum* without any poisonous effects, and a quantity can be taken slowly in one way which would have been deadly if introduced in another way, and at once.

one of the men was very thin, and could almost wrap his abdominal integuments round his flank; the other was stoutish. In the accounts given by Eyre, of the guzzling Australian, and by Sullivan, of the Red Indians, the large eaters were usually found to be thin. All the large eaters I have known were spare men; and, indeed, if we turn to the wide page of nature, we find, as a general rule, that all carnivorous animals are lean, and almost all graminivorous animals are fat. The effect of food, therefore, upon a man's condition, depends upon the quality of the food taken, as well as labour, health, individual peculiarity, and other circumstances.

And here let me make a small digression, and examine into the moral condition of those whom necessity, accident, or religious feeling, have confined to the use of a diet in which alcohol primarily finds no part.

It requires no Daniel to tell us that the fierce tiger, the ruthless lion, the brutal wolf, the pugnacious stag, the vindictive elephant, the gluttonous pig, the lazy sloth, the courageous bull, the grumbling camel, and the patient ox, do not owe their respective propensities to the use of beer. The crafty Indian, whose childish sport is torture—whose passport to manhood requires that he shall despise human feeling—whose atrocities have connected his name with fiendish brutality, the sensual Mandarins, to whom cruelty and vindictiveness are pastimes; the bloody Turk; the ruthless Cannibal; the lying child; and the turbulent schoolboy—are all strict teetotallers. Away, then, with the idea that alcohol is the father of crime—the egg from which all vice and misery are hatched.

To resume: let us notice some of the more immediate effects of such food as beef—or any other meat—duly mingled with potatoes, rice or other pudding, and cheese and bread, &c. First, there is the cessation of hunger, then a feeling of comfort, enjoyment, and repose, with a tendency to sleep; then follows a consciousness of our having more blood in our body, and of our veins being fuller; the pulse, moreover, is usually stronger, firmer, and faster; there is increased warmth of surface; a greater capacity for labour; and, unless a large quantity of water has been taken with the meal, there is thirst; after a time comes a renewed craving for a repetition of food, and tea is longed for, often with intense desire: and so the day wags on. We want a breakfast, and after it a dinner, and after it a tea. The baby at the mother's breast feeds to repletion, and is content, yet soon cries bitterly for a fresh supply; yet no one calls milk a poison. But if, when the baby becomes a man, he drinks a glass of ale, finds himself satisfied for a time, but, subsequently, wants another, he is told that he is indulging in Satan's nectar, one draught of which entails the want of second, third and fourth.

Ere, however, we go further, let us inquire into alcohol, and the claims it has to be considered food. Under this name we include all fermented liquors, and the products distilled from them—beer, ale, porter, mead, ava (from cassava root), wines, brandy, rum, gin, whiskey, arrack, liqueurs, tinctures, spirit of wine, ethers, &c. Under no circumstances does the physiologist refer, when speaking of the value of alcohol, to that chemical curiosity to which chemists give the name. He uses it as generically as the physician employs the word medicine.

In fermented liquors we all know that there are numerous ingredients, such as sugar, essential oils, extractive, peculiar vegetable principles, and the like. If we choose to examine closely, we may know in every instance what is the peculiar effects produced by these, irrespective of the alcohol they contain. Infusion of malt, infusion of hops, of Spanish-juice, of juniper, grapes, raisins, and the like, have all at various times been used medicinally; but no one has ever taken to them as articles of diet, or put a continued faith in their medical virtues. When, however, these are combined with the spirit resulting from fermentation, they have some definite effect, just as the "tincture" of anything is superior to its infusion. Ale and porter have some subtle difference which the stomach occasionally detects. They differ again from wine: "wines" vary to a slight extent, and "spirits" to a greater degree. They vary, *cæteris paribus*, in the rapidity of the action, the intensity of their effect, and their duration: and, of course, the effects vary with the quantity taken. There is a more marked difference between the physiological effects of rum and gin, brandy and whiskey, than there is betweeen those of beef and mutton, goose and duck. There is more difference between the results of champagne or sparkling moselle, and port or sherry, than there is between the tasteless dishes of the French and the full-flavoured feast of the Britons. An observant wife can tell from her husband's manner, when he returns home late from a social gathering, whether he has been indulging in wine or spirits, far more surely than whether he has been to a fishmongers' dinner, a beefsteak club, a teetotal feast, a vegetarian banquet, or a simple repast in a strawberry-garden. Prolonged indulgence, or, let me use the words, an exclusive diet of gin, or of ale, has as marked a difference on the physical condition of a man, as a diet on animal and vegetable food has. Convert in fancy, all the figures in Hogarth's "Beer-lane" and "Gin-alley" into various kinds of beasts, and in one you will recognise many specimens of graminivora, in the other of carnivora.

If any one takes the trouble to notice the effect of the various drinks we have named, under circumstances favourable to drawing an exact conclusion, he will find that they have a general and

a specific influence, which varies according to the bodily condition and the quantity imbibed, Take, for example, the man whose habit is to dine at one, but who is, by circumstances, obliged to wait occasionally till five or six. He feels the want of a lunch, and tries in succession a sandwich or two, a biscuit and a glass of wine, a glass of milk and a bun, a plate of bread and butter and a glass of water, bread and cheese and beer, beer alone, ale, porter, spirit and water, pure water, opium, or a cigar. All these experiments I have repeatedly tried. The result has been the deduction that opium and tobacco spoil the stomach's digestive power at the subsequent dinner; that water is equivalent to taking nothing—it fills no void, and seems to go nowhere. Milk is too heavy for comfort. The effect of wine passes off too soon, and leaves one yawny and feeling very empty. Spirit and water makes a greater void than wine. Of all the things I have named, none are superior to a sandwich or two, with water, or a pint bottle of ale or porter alone. The effects of these are closely alike. I can distinguish no difference, physiologically speaking, between the one and the other as a lunch; but I usually prefer the liquid, for it is more easily obtainable, and its consumption requires the least time. The same corporeal results follow from both, viz., the sense of hunger is destroyed—the void before felt is filled—the pulse becomes fuller and firmer—the veins contain more blood—the voice is firmer—and the strength temporarily reduced is renovated. Increase the quantity of beer, or increase the quantity of meat beyond a certain point, there is then uncomfortableness about the head, followed by a tendency to sleep. Having satisfied one's self upon these broad points, the experiment may then be extended to the comparative value or effect of various ales, porters, and wines. I need not detail results farther than to say that there are varieties in the effects of various liquors, which depend chiefly upon their strength and flavour and the peculiarity of the stomach at the time, this organ rarely digesting a new fluid so well as one it is accustomed to.

But there is still another way of testing the value or otherwise of alcohol, which may be readily practised by any one in robust health, and which many a schoolmaster, paterfamilias, or others, familiar with lads, unconsciously tries, viz., by noticing the relative amount of ordinary food consumed by the water-drinkers, and by those who take ale or porter at dinner.

Now there are few things more generally known, to those who have to provide dinners for youths, than that healthy young boys have a huge appetite, and that, as a general rule, they dislike beer, though they take to it wonderfully after puberty. To find out whether there is any real connection between these two facts, I carefully noticed the amount eaten by the beer and water-drinkers in my own family, and compared the physical

condition of the two. Circumstances, which I need not detail, enabled me to remark the result when the beer-drinkers took to water, and the water-drinkers to beer, and I found that the large eater ate less when he drank ale, and the ale-drinker ate more when he took to water. Still farther I was able to observe when from any cause there was a loss of appetite in both, that the water-drinker always suffered the soonest from debility, and was anxious to resume the beer, whilst he who took beer wanted to increase his quantum. This suggested a series of personal observations, and as my habits of life were regular, my health good, and my digestion perfect, I resolved to mark the effect which would follow, if I substituted water for the use of ale at dinner. The first day I made the experiment I noticed that my usual supply of solids failed to take away the sense of hunger; but, as I had swallowed the same absolute quantity of material as I ordinarily did, I abstained from eating more, and rising unsatisfied, found that the next meal was required much earlier than usual. The next day and the next the same phenomena occurred with gradual increasing urgency, and, as I continued the trial, it was clear that I must become thinner in flesh, a gormandizer, or else return to my daily allowance of beer. This observation was followed by the converse. I diminished my ordinary allowance of solids and increased my quantum of beer, and I found that the appetite was satisfied as usual. The deduction from all this was, that beer was the equivalent of a certain amount of food. We may state the conclusion more clearly thus :—"If a man drinking a pint of ale with his dinner requires only half-a-pound of meat to satisfy his appetite, and when he drinks only water, finds that his hunger demands a whole pound of meat ere it is satisfied, it follows clearly that a pint of ale is the equivalent of a pound of animal food.

As however deductions drawn from one set of personal experiments may be valueless from some peculiarity in the individual, I laid my friends under contribution, and sought far and wide for observations upon the amount eaten by teetotallers and others. I conversed with some who were abstainers from choice, some from accident, and some from necessity. I dined with some and ate of the same dishes as they did. I knew their habits, health, strength, and condition, and could readily compare them with others. Some of these when dining with friends, took wine or beer, the result thereof may be put into their own words. "When teetotal, we eat more than those who drink beer, and whenever we drink wine &c., we always eat less." "Why?" "Because we do not feel to want it."

Having thus been led, against my own prejudices, by clear induction to the belief that alcohol is food, I looked out for other sources of information, and specially inquired, whenever I

had a chance, into the eating habits of those who drank immoderately of ale, wine, or spirits. Some such unfortunates I knew personally, and was able to corroborate my own observasions with those made by attached wives or husbands. In all cases the burden of the remark ran—"It is wonderful how so and so lives, for he or she does not eat enough to keep a sparrow living." I stayed at the house of one gentleman, for example, for about ten days, and was in his company from the time he came down stairs in the morning to the time of his returning to bed. We walked, fished, and coursed together, &c., yet the sole amount of food he took was the back of a partridge at dinner with a bit of bread, and his wife assured me that this was an unusual quantity, and that she was always glad when the game season came on, for that was the only thing which tempted her husband to eat. He very rarely was intoxicated, but he was in the habit of taking a glass of ale, wine, or gin every two or three hours throughout the day, and this went on for ten years at least to my knowledge. But the poor appetite of a drunkard is too notorious to require much proof. Having attained thus far I became desirous of trying other experiments. I had under my notice two families in which the children were particularly delicate, and very small eaters; whenever they began to grow rapidly, their appetite failed entirely, this was soon followed by symptoms of cerebral exhaustion, and in one instance by convulsions. Under such circumstances, I have myself administered such food as bread and milk, milk, custard, beef tea, and arrow root, and have had it vomited back again over my hand. The same have been given as enemata without any definite result. Afer these things have been duly tried, in deference to maternal prejudices, recourse has been had to brandy and water, or other form of alcohol, and the effect has been immediate; the same results following as from a meal under ordinary circumstances; disordered secretions return to their healthy state, fretfulness disappears, the natural sleep is re-established, the hot head cools, the spirits revive, the soft flesh becomes firm, and, in a few days, the natural appetite returns. Now as this occurs repeatedly, and without any change of air or any other circumstance to account for the improvement, we are logically bound to accept the inference that the improvement is caused by the alcohol. I am the more convinced of this as in both families the mothers have had much prejudice to overcome, and have done everything which either they or I could think of, to disprove the value of alcohol as an article of food (including even the withholding of it for twice the number of days which had previously elapsed between the beginning of the illness and the use of the wine, &c., on these occasions the improvement, on resuming the wine &c., has been more marked than ever).

Observation and experiment having brought the subject to this point, all that remained was to ascertain whether it was possible for any one to live entirely upon ale, wine, or spirits, for a length of time greater than they could upon water alone, and, if so, whether they retained apparent health, bulk, and strength.

Experience in a manufacturing town in my pupilage had made me familiar with the effect of privation of all food—the gaunt cheek, hollow eyes, sluggish eyeballs, and husky voice, when once observed are readily recognised;—the poor wretches so suffering could drink plenty of water, and did drink much tea; they lay in bed all through the day, smoked or chewed tobacco, and resorted to all means they knew to prevent the too rapid consumption of their body. But these men could afford to get three good meals in a week, and then ate more than a drunkard ordinarily does in a month, and yet a drunkard never looks as they did.

Wanting, however, more definite information, I again placed my friends under contribution, and sought far and wide for cases. They came, greatly to my surprise, in far larger numbers than I thought possible. Dr. Slack, of Liverpool, told me of two females who were, or had been, under his charge, in which all food was loathed, and nothing but alcohol, in one form or another, taken for months; and one of these was, he assured me, fatter at the end of three months than she was at first: she was, however, bedridden. An intimate friend told me of the deplorable state to which a mutual acquaintance had fallen; for, said he, "I stayed in the house for a week, and, though I was always with him, I never saw him eat—he seemed to live wholly upon whiskey and water."

These, and others of less marked character, corroborating, as they did, all other inductions, seem sufficient to establish the necessary conclusion—that alcohol, in reasonable quantity, acts precisely like food of other descriptions.

This set of cases was evidently the keystone of the arch, and, as such, was recognised by a former Editor of the *British Medical Journal*. As, however, from some cause or other, the arch was not to his taste, he determined, regardless of the rest of the building, that the keystone should not be placed.

To prevent this, he took the objection that the facts were not adequately vouched for, therefore were worthless, and therefore untrue—a common form of reasoning with those who indulge in the luxury of hugging prejudices; and the objection was put in a form so extremely offensive that, like persecution, it o'ershot the mark, and afforded me an opportunity of increasing the weight of the keystone and solidity of the arch, as it brought me the two following narratives.

A surgeon's widow, after describing sundry severe illnesses

which she had undergone, including Asiatic cholera, and how she had suffered both before and after her last confinement, says, "after the period of the birth of my son, now a healthy lad of twelve years of age, I never seemed to regain any strength, my appetite failed entirely, but I had at the same time abundance of milk. *For many weeks I took nothing but brandy and water.*" An elderly surgeon, at Wavertree, wrote me to the following effect:—"I attended a young man with hypertrophy and patulous valves of the heart, from Sept. 24, 1855 to April 26, 1860. For the last five years no animal food would remain on his stomach, and farinaceous he seldom would take. In the first two years brandy was the principal nutriment he existed upon, as nothing else remained on his stomach. Subsequently, he lived upon this same beverage. His allowance at first was six ounces of brandy, but it was gradually increased to a pint a day; he kept his flesh and good spirits nearly to the last. I should not have believed except proof positive had taught me. The bowels were seldom acted on—about once in two or three weeks, the motions being small and dark. During the last two years he was dropsical, and died at the age of 25.

I had myself a patient in the Liverpool Royal Infirmary who told me that, in consequence of severe salivation preventing his eating, he had lived for a fortnight upon beer alone; yet he looked liked other people, and said that he had lost no flesh.

To these I may add a case communicated to me by Mr. Nisbet, of Egremont, one of the shrewdest practitioners I know. The individual was a man in the middle class of life, living with a sister. For seven months he had been unable to take food, and had subsisted entirely on spirit and water—the authority for the statement being the man himself and the sister; he was apparently in good health and good condition. I have mentioned two other cases, on the same authority, in my book on the "Theory and Practice of Medicine." In the one, a child with marasmus subsisted for three months on sweet whiskey and water alone, and ultimately recovered. In the other, Scotch ale was the sole article of food taken for a fortnight; the child at the end of that period recovering his appetite for common things.

I had myself a lady patient who was, on two different occasions, on the verge of *delirium tremens*, and I gained an intimate knowledge of her habits from personal observations, from the reports of her husband, of mutual friends residing occasionally in the house with her, of her mother, of her sisters, and of her nurse. She was about 25 years of age, handsome, florid, and inclined to *embonpoint*, of very active habits, yet, withal, of delicate constitution, being soon knocked up. She had two sons in succession —the largest infants and children I ever saw, and apparently

strong and sturdy. She was a devoted mother, and nursed them in every sense of the word. As they gradually increased in size and weight she became daily more and more exhausted, her appetite entirely failed, and all food was loathed; she subsisted then wholly upon bitter ale and brandy and water, still keeping up her flesh, her good looks, her nursing, and her activity. This lasted about twelve months, at the end of which time the nervous system was thoroughly exhausted; yet, like persons in scurvy, or in purpura, there was no emaciation, nor was there absolute prostration of muscular power. Of course it may be alleged that solid food may have been surreptitiously taken; but this is an objection scarcely worth repelling, for where solid food of all kinds is loathed, detested, and shunned far more than the most nauseous medicine would be, it is not very likely that it would be secretly sought for; and even if a bit of something were to be taken occasionally, the quantity must have fallen very far short of the amount necessary to keep up life and bulk without other assistance.

To get over the plain deduction which the preceding considerations involve, an attempt has been made to show that alcohol acts when put into the body in the same way as when the body is put into it—viz., by preventing the living body from decay, as it would the dead from decomposition. This is simply absurd. Neither beer or wine will conserve the dead body or even themselves from decomposition, though they will prevent the living body, under given circumstances, from dying.

The Editor before referred to broaches another view—viz., that alcohol hastens the decomposition of the living body, thus increasing the lymph, which increases the quantity of blood, and enables the body to live the longer on its own ashes. Of the brilliancy of this theory none can have any doubt, especially when they consider that this being so, it must follow that every weary pedestrian who refreshes himself with a glass of brandy and water must become far thinner than he would have been had he taken a drink of water alone! Every winebibber must necessarily be a spare man, and no drunkard can be fat!!

Disintegration of our tissues in health produces the sensation of exhaustion and hunger, and the more rapid the disintegration within certain limits, the greater is the craving for nutrition. If, therefore, alcohol promotes the process, a glass of brandy must necessarily aggravate the hunger of the fatigued huntsman and increase his exhaustion. We know that it does the contrary. Again, if alcohol increases the disintegration of tissue, what shall we say of the effect if it be taken with food? Most of us allow that by food our body is renovated, If, then, we take at the same time food and alcohol, they neutralise each other in their effects; and the dinner of ordinary people is no better than a repast on coals and chalk.

Another theory, and one very popular, respecting the action of alcohol is, that it is a mere stimulant. Well, what then? What is a stimulant? A feed of corn is a stimulant to a tired horse, and so is the rider's armed heel. To which does a drink of whiskey and water come the nearest? Let me relate an anecdote to the purpose:—When travelling in Ireland, and anxious to get to a distant point at a certain hour, our driver took his horse a long stage at a great pace, hoping to put up at the end. When there, we could not get another steed; and the man seeing our disappointment, offered to take us on with the old horse if we would pay for some whiskey to add to his meal and water. He did not ask for a second whip, or put ginger in the horse's, anus, or add pepper to his water. We gave the whiskey; the creature drank it up greedily, and remarking the beast's performance of the second long stage with great interest, I felt certain that no spur or whip could have operated as the liquor did. We had seen the whip used before the whiskey—it was not wanted afterwards. Such proceeding is very common whenever a driver wants to get an unusual amount of work from his horse without producing excessive fatigue.

From horses turn to men who have occasionally to work like them. See that man of law,—that engineer,—that sailor, soldier, navvy, pitman, or simple labourer, who are suddenly required to do in a week what, under ordinary circumstances, would occupy double that period. Some try in succession tea, coffee, milk, soup, and a variety of other fluid food; yet the majority, in the end, find that nothing recruits, supports, and keeps them up to their work like moderate doses of alcohol in one form or another. Do you say, "Yes; but, after all, it is only a spur; the people would do better with beef." Is beef, then, only a spur? But you say again, there comes a period of collapse. So there does after a dinner, if you don't follow it up by another.

But let us develop this idea (of stimulation as it is called to a farther point), and compare alcohol, &c., with other things usually included in the category of stimulants. Let us imagine that we have before us a patient apparently dying with fever, another with hæmorrhage following parturition, another is passing from one fainting fit to another from the simple exhaustion following delivery; another has been shut up for days in a coal mine without food; another is sinking from the effects of pneumonia, bronchitis, diarrhœa, or any other exhausting illness. In all the appetite for solid food is at a low ebb, or gone entirely; and if such food be taken the stomach has not the power to digest it. Under such circumstances every one (for I cannot imagine an exception) would give some form of alcohol. But would all select this stimulant in preference to ammonia, cayenne, tincture of blistering fly, essence of ginger, oil of cloves, peppermint, or cajeput, unless they believed that it possesses properties

different yet superior to them all. Turpentine is a stimulant to every part of the body with which it comes in contact. So is iodide of potassium, so is cantharidine, cayenne and ginger, yet who trusts to these in fever when wine or brandy can be got?

As our paper has, however, reached beyond the limits we have prescribed to ourselves, let us finish by a summary of the facts we have elicited.

1. Nature has provided in the salivary glands—the liver—and the lungs of every mammal an apparatus for converting all food, especially farinaceous, into alcohol; and we have no evidence that such conversion does not take place.

2. One form of alcohol or another is available for the support of life—and for restoration to health when no ordinary food can be or is digested.

3. Alcohol, after being taken, is incorporated with the blood, passes into the various tissues, and ultimately disappears—a small portion only passing away in the breath. We can say no more of bread, potatoes, or oatmeal porridge, a small portion of each of which passes out of the body with the fæces.

4. Alcohol, in the form of ale, porter, wine, &c., relieves hunger and quenches thirst simultaneously, and with a completeness that is not equalled by water, infusion of gentian, cayenne pepper, or by turpentine, *i.e.*, it does not not act as water simply, or as a stimulant alone.

5. Wine, beer, &c., satisfy the appetite when taken alone, and act for the time like any solid food would do.

6. When alcohol is mingled with other food, a less amount of the latter suffices for the wants of the system than if water had been used as the drink.

7. The various forms in which alcohol is taken have as marked and specific effects as have animal and vegetable articles of diet.

8. Individuals have subsisted wholly upon one or other of the various forms of alcohol in common use for periods of great length; and, as it is illogical to conclude that they must have lived on air, without food, or on flies like chameleons, the conclusion is irresistible,

What that conclusion is, we fearlessly leave every thinking man to decide.

Since writing the above, I have met with a more striking effect of the real value of alcohol than any other that I previously knew. Sir S. Baker in his account of his journey to the Albert Nyanza, tells us how he and his wife were prostrated by ague and fever, and almost unable to move. By dint of exertion he contrived to make potatoe whiskey, and this both he and his helpmate took, and the effect was immediate and magical; both recovered their health in a few days, and not only lost the fever and ague for a time, but completely.

CHAPTER VII.

THE HOUSE WE LIVE IN.

When a boy, I heard a canny old surgeon say, in reference to houses, fools *build*, wise men *buy*, but wiser still *take*, but he was at the time tenanting a very convenient residence, and when he was obliged by his landlord to turn out, he built a house for himself, for he could not find another which suited his purpose and that he could hire. It was clear then that the proverb had reference more to the pocket than to the comfort or convenience of the dweller. Can a man, indeed, show himself more of a fool by constructing an edifice where and how he likes, than by tenanting another, faulty both in arrangement and position, and deficient in comfort, health, or both ?

The majority of us, however, are unable to build in towns, where every available space is already filled up, and we are obliged to rent such dwellings as architects or contractors have devised for us ; houses which are run up on the principle of making money go as far as possible, and of bringing in as large an amount in the shape of interest for expenditure as can be got out of the public using them. But, though often obliged to live in a dwelling that we have not specially designed, there are a few who do not indulge at times with building a castle in the air, or fashioning a mansion in the skies, into which there shall enter the largest amount of comfort, and the fewest possible annoyances.

In planning such a house, the designer naturally thinks of all the things at which he grumbles in his present abode, and of the *desiderata* which he requires. Sometimes, good fortune may so far favour him, as to give him the opportunity that he seeks for, and he is enabled to exercise his skill in designing a comfortable family home, and to carry out his intentions.

I was once in such a condition, and amused myself by making plans to-day, only to alter them to-morrow, and to change them

the next day. Whilst going through my studies I found an unexpected ally in a Homœopathic physician who was as successful in his architectural designs as if he had been both born and bred to the business. He kindly invited me to dine with him at the house which he had built; and as I am somewhat cosmopolitan in my notions, and can enjoy social converse with those who differ from me in certain points, as well as with those who agree with me in thinking, I accepted the invitation. The day was bitterly cold, and the walk from the adjoining railway-station to the domicile was through snow that reached to our knees. Being an habitual sufferer from cold feet, visions of misery haunted me during our transit, and I feared that physical suffering would prevent mental enjoyment. My fears were vain, exercise kept me warm until we reached the door; and when once inside I forgot all about the cold which had been gone through.

Let me describe in as few words as possible the characteristics of this dwelling. The kitchen was near the dining room, the front door and the heating apparatus, so that the cook could readily attend to all. No staircase was to be seen, the stairs being considered as subordinate to more substantial comforts, &c. The drawing-room was large enough for a ball or concert-room, and the sitting-rooms opened into it, each other and the staircase. The bed-rooms were all furnished with a ventilating apparatus in the ceiling, which communicated with a main shaft, along which a draught was produced by its opening just under the kitchen fire. This ventilating machinery could be regulated at will by means of openings in or above the door, and a shutter to open or close the aperture in the ceiling. Another shaft, with openings for the different floors, communicated with the open air, and was furnished at the place of entrance with a small furnace and a serpentine arrangement of iron tubing intended to contain boiling water, with a stop-cock for regulating the flow to and from the boiler, so as to keep the temperature of the heated surface at any point desired. So nicely had the servant learned to manage this, that I never once during my prolonged visit felt either too hot or too cold.

Neither before nor since have I been in a residence which seemed to be so thoroughly comfortable, and the doctor and myself were soon at work over the plan of another. Just as mine was finished upon paper, however, I found that I could buy a house, and circumstances almost compelling me to purchase, my ideas were never carried out, and I had to put up with a very ordinary brick and mortar tenement.

Though foiled in my scheme, I have not ceased to think of the conditions necessary for making a dwelling-house comfortable and healthy. The main requisites are, I think, that it shall be dry, airy, warm, and free from "smoking chimneys."

To be dry, a house should, of course, be well drained, and it should also be free from the close vicinity of overshadowing trees. A country mansion or a lowly cottage embowered in woods is picturesque to the eye of the artist, and suggestive of love and domestic felicity to the imagination of the poet; but in stern reality it is too often the abode of rheumatism and ill-health, and its floors are favourite haunts of newts, ascards, frogs, and toads, with occasionally an intrusive snail. In it preserves soon become sour, and even wine is constantly sick. The chimneys in such places usually smoke abominably, and during the cold days of winter no amount of fire seems to give warmth.

To overcome such a state of things some plan of heating the entering air must be adopted, and pans of common quick lime should be kept in the dampest spots. The most effectual cure, however, as I know of my certain knowledge, is to cut down the surrounding trees, which prevent the dissipation of superabundant moisture. A very common way by which a residence may become damp is by daily or at any rate, by frequent washing. In days gone by the floating homes of our seamen were scoured daily under the idea that, as cleanliness was next to godliness, a good scrub of the floors, trodden by the imperial seamen, would compensate for the profanity so common then in the navy. The result was, that disease was so common as to attract the attention of Parliament, and if I recollect rightly, a commission was issued, to ascertain the cause of the insalubrity of the ships, and to suggest, if possible, a remedy. After due consideration a report was drawn up, one of which recommendations was that the use of water in washing the covered decks should be done away with. The advice was followed, and an immediate improvement was noticed in the health of the seamen. Prejudice still, however, induces many active-minded English matrons to deride the experience of great he-fellows in ships who know little of shore life: we will, therefore, give to them an account of Dr. Copland's experience. He was, he tells us, once consulted by a lady respecting the prevalence of scrofula in her school. She had been very successful as a teacher, and was particularly anxious to do her duty, *in loco parentis*, to those under her care. She fed her flock on the best of food, and lodged them in the cleanest and ariest of beds and chambers. The doctor inspected everything, and was at a loss to account for the frequency of the complaint, or to suggest a remedy, as everything inside and out seemed *en régle*. However, a casual remark of his upon the whiteness of the boards of the floors, where they were visible, elicited the information that all of them were washed daily. The sagacious physician at once recognised the cause of mischief which it was his business to discover, and he

recommended an almost total abstinence from use of the pail and scrubbing brush. His advice was followed, and the scholars became as conspicuous for their health as they had previously been for the reverse.

Whilst these sheets were passing through the press, I was myself consulted about a bad case of scrofula in a fine-looking young woman of twenty-one years of age, who had suffered from the disease for many years, and I could not trace it to any other cause than her mother's strong propensity to have the music of scouring daily in her ears, and the smell of wet wood always in her nose. I recommended that the dwelling should be kept dry, and since the plan has been followed the young lady has been free from her complaint.

Let housewives learn hence that an excess of cleanliness is prejudicial to health, rather than a means of ensuring its continuance; and to indulge ourselves in the whim of being *mal à propos,* let us recommend them also to notice that whenever a change of air is recommended for the cure of diseases which are allied to scrofula, they should, where possible, select some spot built on sand or gravel, and not embowered in woods.

The next point about a house is that it should be airy.

Rooms heated by fire and gas, and kept as closely as possible from draughts, are the most fertile sources of "colds," I know this from prolonged experience. For many a night have I faced a cold rain or moist wind when going to and from our medical school to deliver my winter course of lectures, and have come back to a cozy arm chair in a snug study, heated by a jolly fire, and blazing with gas, only to find that I had somehow or other caught another nasty cold.

The sudden change from moist cold to dry heat will make the most healthy catarrhal, or in other words, is sure to give any one "a cold," while the change from a heated chamber to a cold passage or bed-room, will make a sickly patient worse.

When speaking of airiness I do not mean individuals to encourage draughts of cold air about their persons, nor can I recommend them to do as a medical friend of mine is said to do, —viz., open the windows of the bed-room at night, to get the fresh country air, which the town-smoke so vitiates during the day, as to make it too impure for use. There may be differences of opinion on the subject amongst those who observe little, but, amongst those who watch things closely, the belief is entertained that warm air moderately impure (as in a closed bed-room where two or more are sleeping) is less noxious to an invalid and those whose health is shaky, than is cold air with absolute purity. Freshness of air does not counterbalance the effect of the chill which it brings with it. Of this, more anon.

It will be asked, and naturally too, "How can you prevent an

airy house from being cold during the winter?" The answer is simple: all the air which enters it should be warmed. I have lived in a house, where during the coldest day in a very frosty winter, it was a matter of indifference whether the door of the sitting-room was open or shut, and during the time of that residence, colds were almost unknown in the domicile.

Of the value of a heating apparatus the following case is an example:—Mrs. ———, a lady living in the country, in a comfortable old-fashioned house, of active habits, and surrounded with luxuries, began to suffer from sneezing. As soon as she left the bed-room, the fits began, and continued with scarcely two minutes interval throughout the day. Her doctors could not cure her, nor did she find any relief until she reached a warmer atmosphere than the one which she had been breathing. Warned by a recurrence of the attack in the following winter, the husband introduced a heating apparatus into the dwelling, and with its aid he was able to enjoy his wife's presence in person, rather than through the medium of the post-office. Similar instances will be given in our chapter on the value of heat.

The value of airiness and the necessity for *warm*-airiness being once acknowledged, it becomes a matter for consideration how the *desideratum* is to be attained. This will become a question for the architect or the builder more frequently than for the physician. I will content myself with noticing one contrivance only, which can be adopted in any town,—viz., let there be in the hall, or in any other convenient space, a gas stove, and let it communicate below with a tin or other tube of large dimensions, which opens into the outward air. The gaseous products produced by the burning gas, and which consist of carbonic oxide, carbonic acid, some sulphuretted hydrogen and water, though often objected to are not dangerous; theoretically they may be prejudicial; by this method they are practically harmless. In Italy, churches and galleries are warmed by open braziers of charcoal, but so long as there is circulation of air no bad effect is to be noticed. The influence of gas and charcoal on air is chiefly perceptible and prejudicious when it consumes the air we breathe as well as heats it. A gas stove without a feed pipe from the outer air does the one; with such a pipe it introduces far more fresh air than it can by possibility consume.

Lastly, if possible, the house should be free from smoky chimneys. Respecting this we might write a dissertation, but we will content ourselves with a few observations. There cannot be a current up a chimney unless there be ingress, egress, and material to flow. It is clear that if stagnant air, or, still worse, a back bounce from a neighbouring house, does not allow the smoke to get away from the top of the chimney, that it will not

flow along the flue. Equally clear is it that if the doors and windows are so closed and the floor is pasted over with paper so as to protect the carpet from being frayed unequally, at the juncture of the boards, through which chinks the air that supplies our fire grates often enters, that no air can enter the room at all, there can be no current up the chimney even if the egress at the top be free.

It is equally clear that, if there are five fires in a house all burning at once, that air enough must be found to go up five chimneys. If, then, the doors and windows of the dwelling be so closely shut that little air can come through the crannies, it is certain that one or more fires must go out, or that the requisite air must come down some chimney, and if the chimney which it comes down is in use for an upcast it is clear that such an one must "smoke." An easy method of overcoming this difficulty is by carrying a tube behind the skirting board from the outer wall to the fireplace, where it may open by an ornamental grating. Each chimney, however, requires a separate study, and we must leave much to the ingenuity of our readers.

Of the minor arrangements which are requisite in a house we need not speak. If, in conclusion, we were asked to name which of those comforts we have spoken of as necessary, we could consent to forego, we should add first, airiness, secondly, dryness. The most important requisites for health are warmth and a ready egress up the chimney for the air consumed. And if still farther we were asked the temperature most desirable to be kept up, we should say 64° of Fahrenheit's thermometer.

What is true of dwelling-houses applies equally to hospitals, asylums, workhouses, prisons, stables, cowhouses, and to whatever building living warm-blooded beings inhabit. Even a cat likes a warm chimney corner, and the dog basks in the sunshine, surely, therefore, we should let our old folks and young enjoy the same comfort which providence ensures to the brute. The home of a rabbit ought not to be more comfortable than the home of a man, nor the nursery of the human suckling more miserable than the nursery of the polar bear and seal, nor should a bed-room be as comfortless as a lodging upon the cold ground.

We enter a decided protest against the senseless notion of making our domiciles and hospitals cold, chilly, and cheerless, under the pretence of ventilation being an essential to health. Some there are who think that a circulation of air is necessary to the well-being of man and beast. What, let us ask, would such visionaries do in the Arctic circle and in the hut of an Esquimaux? Under what pretence can they assert that the Almighty did not know what is good for his creatures when they see birds' nests and beasts' dens in which ventilation is impossible? Whence can

come a draught of air through the nest of the house-swallow, the lodge of the beaver, the burrow of the water-rat, or the hive of the wild bee? The eider-duck and the dormouse alike make their dwellings as warm and cosy as they can—the house-sparrow and the field-mouse do the same. There are, indeed, few nests in which warmth and closeness do not go together as far as the young ones are concerned. Yet man, the most rational of created beings, is sometimes insane enough to think little of warmth, and to try to revel in cold—in the bath, in the bedroom, in the market-place, in the assembly-room, library, or parlour?

This chapter elicited the following letter from the Physician referred to in pages 28 and 29 :—

Sir,—As Dr. Inman has alluded to the house designed by me in your last number, perhaps your readers would like to hear some more details on the subject. I quite agree with Dr. Inman in most of his remarks, and in his rendering of the old adage that "fools build houses and wise men live in them." No doubt that refers chiefly to the money value or return in the shape of rent, but it would also be, I think, foolish to attempt to build a house without the aid of a properly qualified architect, which I certainly did not do, as perhaps would be inferred; but I was fortunate in obtaining the services of Mr. Henry Summers, of Rumford Place, Liverpool, who gave an unprejudiced hearing to my suggestions, and carried them out practically. The great desideratum in most houses is a sufficient supply of fresh air, which is at the same time not cold. This ought to be easy enough to secure; but one of the first obstacles to getting it is what we should scarcely have thought of, viz., the position of the front door. This is usually placed in the middle of the front of the house, so as to cause the servants to traverse the central hall containing the staircase, in order to open it. All the plans of having doors to be shut before the outer door is opened are practically nugatory as long as the central hall is the general thoroughfare of the house, and each time the door is opened for anybody who chooses to knock, your whole house is cooled to the temperature of the outer air, and the question of warming and ventilation is reduced from that of houses to single rooms, and then as long only as the doors are shut. To obviate this difficulty the door should be at the side of the house, or otherwise so contrived as to open into a small lobby which has a separate entrance to the kitchen. By then putting swing doors on the lobby, no cold air need enter the house proper.

In the house above alluded to this has been done, and then to secure a large volume of fresh air at 60°, a central hall or saloon is made thirty feet long by eighteen broad, and fifteen high. This forms an elegant apartment well fitted for music, and into it it opens the dining-room, drawing-room, and conservatory. It also opens on the staircase which is merely the size necessary, and has no vacant space. The drawing-room opens also into the staircase and into the library, which also opens to the stairs: so that all the rooms are *en suite*, and there are no passages, and warm air can be conveyed from the saloon to all the other rooms. The fresh air from without passes a coil of hot-water pipes in a chamber under the stairs into the saloon, which has also a hot-water pipe round the skirting and the conservatory, so that the saloon can easily be kept at 60°. The passage on the first-floor communicates with the back stairs by a swing door, and as the lower rooms are isolated as above described, the servants have no occasion to pass into the centre of the house except when required in any particular room. It is thus easy to keep up the temperature throughout the house to

the required degree. The foul air is removed by apertures in the ceilings, communicating with a ventilating shaft round the smoke flue of the kitchen chimney, and deriving suction power from the heat of it. A house so constructed with an equable temperature throughout, and no cold draughts, is a comfort that can be appreciated by us all, and would be an unspeakable benefit to invalids. Many a patient affected with bronchial catarrh and other diseases of the respiratory organs, who is now obliged to seek a milder climate in winter, would be able to remain at home. I hope medical men will direct their attention to the subject, and co-operate with architects in endeavouring to promote an improved style of house-building. The difficulties are not most, I think, from the architects, but the public, who are averse to changes in what they have been accustomed to.

I am, yours truly,

Liverpool. J. DRYSDALE, M.D.

CHAPTER VIII.

THE WIFE A MOTHER.

THERE are few more interesting events in the life of a married couple than the meeting of the husband and wife over their first infant. The little stranger, long expected, has at length arrived. The mother has spent a number of weary hours of suffering, varied only by paroxysms of pain, each more intense than the other, culminating in a mighty effort in which agony and determination have marched side by side, and which leave her at length with the delicious feeling that all is over, that her sufferings are ended, and that her reward is immediate. The father has passed hours of anxiety, cheered only by the pleasant small talk of the doctor, who tells him of things in general and those matters which are going on upstairs in particular. But, when the supreme moment arrives, marital agitation will scarcely allow him to remain at the seat of labour, nor yet altogether to remain away. All things, however, have an end, and the friendly *medico* at last announces the birth of a fine boy or of a lovely girl. An interval then elapses, during which the baby passes through the hands of the nurse, who cleanses its skin from its pristine coat, and covers it with decent long clothes, then gives it some butter and honey, usually called "shuggy butty," and at last, after having duly attended to the comfort of the patient, the infant is placed by the mother's side to receive its first tribute of love and fond affection. When the maternal picture is complete, the father is invited to attend; and he naturally enjoys the scene, not as a work of art, but as a charming reality, and he contemplates, with a joy that none but fathers can feel, the sight of two objects of love where he could only see one before.

But the picture is not a group of marble, cunningly devised by

the sculptor's art, and intended to remain for ever in the same condition. The little stranger soon begins to give proof that it has a mouth, which requires filling, and great is the interest in the question as to how it is to be done.

Passing by the first few hours, sometimes amounting to days, during which there is no milk in the maternal breasts, during which the infant may take barley water or any such thin food, as cream and water, gruel, arrowroot, &c., we may suppose that the baby is at length able to get that natural supply which Nature has provided for it in the maternal bosom, and we may linger fondly, for another moment, on the family group, where a loving mother, who had but a short time ago a power of giving affectionate glances to none but her own "good man," now concentrates them all upon a wee infant who cares not for her smile; and where the father, who but a while ago was only happy in his wife's affection, now vies with her in bestowing his love upon some one else.

Supreme is the early bliss which attends the advent of the first pledge of married love, but, like other joys, it is too often of short duration. The mother finds repeatedly that the largest amount of affection will not prevent sore nipples, and that what she hoped would prove a pleasure may be, in reality, a most agonizing duty; while the father discovers that night, which used to give him repose after his daily toil, now brings to him an additional anxiety, and he recognises that his paternal love gets rudely shaken by the almost incessant squalling of his unfortunate offspring.

When a wife suffers from each act of nursing, and the husband from sleepless nights, love is apt to fly out of the window, as it does when poverty comes in at the door; and when once any failure of affection is evident, the health of all parties sensibly suffers. The mother, unable to enjoy the idea of feeding, is equally powerless to lay in a store adequate for herself and her young one. With deficient food her stamina is not adequate to the performance of her duties as wife, mother, and housekeeper; her own health influences that of her baby, and the husband, soured by domestic discomfort and broken rest being added to his daily toil, too often flies for solace to the friendly pipe, the somniferous punch, or the much-abused "Club."

The couple, if sensible, soon find the necessity for advice in the emergency in which they find themselves, and the one has resort to her mother or some female friend, while the other, perhaps, applies to some other "Benedick" and possibly to the doctor. It too often happens that the advice given by the ladies differs greatly from that which the men afford, and as, in a general way, a wife prefers female recommendations to those given by males, whom she supposes to know nothing about such

things, it follows that mistakes are perpetuated, as they naturally must be, when a young blind man consults a sightless old one upon the nature of colours.

There is not a matron who has not a full conviction that she knows as much about "nursing" (by which I mean lactation—or "giving the breast") as any doctor who ever handled a baby. Yet her experience only covers the knowledge of herself and of a few female friends, while that of the *medico* includes the observation of hundreds, possibly thousands, of women.

I cannot imagine any lady liking to compare herself to a milch cow, and her dear "poppet" to a four-legged calf; yet the physiological surgeon does not scruple to think that there is much similarity between them, and that a woman cannot flourish on a plan which would kill "Cushy," nor a "baby darling" thrive on treatment which would injure a lamb.

Yet, though my imagination will not go so far, I can readily believe that every woman would do her best to act sensibly if she was sure that she knew the way. We lords of creation sometimes think hardly of our *cara-sposas*, and laugh at them for their silliness, when in reality we are ourselves quite as absurd.

In the ensuing remarks I will endeavour, as far as possible, and in such a manner that few can misunderstand me, to give the instruction which I wish that my own wife had possessed during our younger days.

We will divide mothers into those who nurse their offspring and those who cannot, and we may again subdivide the former into those who are able to suckle and do not, and the latter into those who cannot do it well but still try.

If a mother has abundance of milk, and from any circumstance does not expend it, her first trouble is to get rid of the supply. The woman who has nursed her baby, and thinks it is proper for her to wean it, experiences a like difficulty. The most simple plan for both is, to reduce all fluid food to the smallest endurable quantity, and to adopt a diet consisting of such nutritious and dry materials, as meat and bread. The breasts must be let alone—but if they become painfully distended they may be relieved by any of those contrivances which matrons praise. The simplest and the best we know consists of a common soda water bottle, or a decanter, which is heated by being filled with hot water, then emptied, after that the end is cooled by cold water, so as not to scald the nipple to which it must be adjusted, and then a towel wet with water is placed round the bottle so as to cool it, the result being a steady suction, which relieves the distended bosom as completely as would an infant's mouth. It is not necessary or even judicious to empty the breast, nor to have recourse to the bottle, except when the distension is painful.

As a rule, the bosom should never be rubbed, friction makes matters worse; strong, firm, and general pressure may be once tried, so as to squeeze out the milk, and be renewed if it affords relief, but if unsuccessful it should be abandoned.

It has been observed that women who do not nurse are more liable to conceive in a short time after confinement than those who use their breasts, and as a consequence, there is a belief generally entertained amongst the female sex, that lactation prevents pregnancy. As a consequence of this notion, it very frequently happens that suckling is protracted to a baneful extent, and the mother's health seriously impaired.

Though the idea is correct in the main, it is not universally so, for with many mothers a new conception often obliges them to suspend lactation, and in some rare cases, one of which I remember particularly, a baby may be nursed by the parent until the day when she brings another into the world. Instead, however, of pursuing exceptions, let us consider the condition of the ordinary nursing mother through those various stages, where advice may be required.

We will imagine that she has abundance of milk, no trouble with her breasts, a good appetite, and her ordinary amount of energy. Her baby too is healthy, it awakes to suck, possets a little, and drops off again to sleep, and as it increases in age, it begins to "take notice" and only cries when hungry, or when it is washed or "changed," for infants do not enjoy "bother" more than other folks, and usually yell when their legs are turned up higher than their heads, preferring apparently comfort to cleanliness. Let such a mother rejoice, for such an one we do not write. Let us rather paint the career of one, who experiences trouble in her own person, in that of a child, or in both.

We will suppose first, the case of one, who has abundance of milk but no appetite, nor ample means of satisfying it, if she have one. Such a woman gradually falls into consumption, develops some other organic disease, or she so impoverishes her system as to bring on palsy, blindness, deafness, intense headache, or insanity. A woman who inherits any disease, no matter what its nature, ought to be specially careful in nursing beyond her strength. My memory teems with cases where young mothers have determinedly suckled, until they have been compelled by one or other of the above mentioned diseases to forbear. They have fancied that the existence of milk in the breast showed that they ought to use it for their infants, and they have themselves died rather than give up their belief, which has been equally fatal to the babes.

One lady whom I knew, handsome, well-made, active, residing in the country, florid and healthy as regards complexion, and

having ample means of living well, nursed in succession two unusually fine boys ; she had ample "dairies" but no appetite, and to keep up the supply of breast milk she drank largely of "bitter beer." Attacks of faintness, giddiness, headache, various pains and sundry other troubles, warned her of her imprudence, yet she persisted in nursing, until insanity was imminent, and only staved off by months of unremitting care. Another such case was not so fortunate, and the lunatic asylum put the finishing stroke to the lactation.

Fortunately for mothers, the first evidence of their going beyond their powers is to be recognised in the infant, for it is a rule, an exception to which I do not know, that "a squalling baby" means a weakly mother. I have been repeatedly asked for some remedy to cure some infant of "wind," and have invariably found that the nursing mother required more attention than her charge.

It is very important that every nursing mother should know the influence which her own health has over that of her child. Dr. Christison has mentioned one remarkable instance wherein very intense mental emotion in a mother so poisoned her milk that the baby was convulsed and died almost as soon as it took her breast. I have myself seen convulsions produced in a child, six months old, from sucking the breast after an excessive paroxysm of anger on the mother's part ; at any rate by the closest possible examination I could discover no other possible cause for the infant's attack.

Again I have seen sickness and vomiting continue for a whole day in a baby, in consequence of its mother, who was unaccustomed to such things, accidentally taking a wineglassful of whiskey-toddy over night. The connection between cause and effect was in this instance tested by an exhaustive series of observations during successive weeks, and successive lactations, so that no doubt about the matter remained.

When this same lady was young she nursed without difficulty, but as each child came in succession to test her strength, her stamina began to fail. The milk was plentiful as usual, but its quality was deteriorated, and the house rang, day and night, with the piteous shrieks, or as they might be more correctly designated, "yells" of a suffering infant. Beer, ale, porter, wine and tonics of all kinds were resorted to by the nurse without any material influence, and it was a question between the father, mother, and doctor, whether the mother and child should separate, or the two together separate from the father, whose business could not be very well carried on during the day, whilst his nights were persistently sleepless. The mother clung to her child until the crisis came in the following guise : —After sundry minor attacks of a similar kind, the infant, who

had been sleeping quietly, was nursed by the mother at about 2 A.M.; it instantly began to shriek, and when I saw it, its cries were more distressing than any I had before heard. They came on at intervals of every two or three minutes, during the next three hours, in spite of everything I tried to relieve the suffering. Had the milk been arsenic it could not have produced a more painful, though it would have insured a more deadly effect. After such a catastrophe as this, the mother concluded that it was her duty to cease tormenting her infant and troubling her husband; and the household as a consequence was once more a comfortable, or at least a quiet one.

As soon as it is evident that a nurse is giving to her offspring more milk than her constitution can afford, it is necessary to supplement the natural food with some other, such as arrowroot, sago, rusks, or other infant diet, into which subject we will not now enter. The mother should resolve only to nurse at intervals of four hours during the day, and never during the night. So resolute should she be in carrying out this rule, that she ought not to allow the baby to be in the same bedroom with her. A milch woman's breath smells of milk, as does that of a cow, and the infant cannot fail to want and cry for the food whose scent comes to its nostrils, any more than a hungry man can sit down when hungry before an appetising dish without wishing to partake of it.

Still further, such a mother should never give her nursling the breast while she has herself an empty stomach, or is fatigued by household or other exertions. Where it is desirable to strain every point for the benefit of the baby's health, and to give it as much as possible the breast, rather than pap or other delicacies, the best diet for the mother is such fluid food as gruel, barley water, milk, custard, with the addition of a moderate amount of ale, porter, or gin and water. As a rule, however, much fermented liquor goes to increase the mother's bulk, rather than the quantity of her milk.

A great trouble which attends a deficient dairy supply in the nurse is sore nipples. The agony arising from this affection is such as to involve the whole female frame, and to make the sufferer faint, as did the victims of the rack, but only to receive one moment of forgetfulness in the midst of the most frightful torture. When such are present there is always a certainty that the supply of milk is deficient. If the breast teem with milk the flow into the child's mouth prevents the necessity for suction; if, on the contrary, there is nothing for the child to get, its instinct teaches it to draw, and draw, and draw, until, in lieu of milk, it gets skin, blood, and flesh.

When things come to this pass the danger of "a gathering" is imminent, and the poor mother may find that from a hope of

saving herself one trouble, she has drawn down upon herself "a peck" of such, for abscess of the breast is both painful and serious.

Let us now for a moment do violence to the human mother by comparing her to a cow. The farmer well knows that he cannot get milk from any in his shippon perpetually. "Cushy" will run dry in spite of him, and, if anxious to get something from the dry udder, "Molly" goes on working at the teat, the cow will kick her over, rather than stand still to be excoriated. In like manner, the farmer will not allow animals to be milked when they are off their food, nor would he think of putting the beasts from which he gets his butter and cheese to do the work of his horses. Just in the same way, the milch woman ought to avoid labour, she cannot be a good nursing mother and a hard working housewife too. If she will work she ought not to nurse much, and if she will nurse much, she ought to be as lazy as she can.

At one time the curse of society was over living and little work; now one of its curses is over work and under living. The doctor preaches judiciousness in all things, and feels disposed to parody a stanza of Crabbe's in the following fashion.

"Oh! fly extremes my friend, refrain, refrain,
I preach for ever, but I preach in vain!"

We have left ourselves but scanty space to talk of those who have no milk for their young ones, and truly very little requires to be said. *Punch* on one occasion parodied a well known advertisement thus: "Advice to those about to marry"—"Don't;" we may parody the same in the following fashion: "Advice to those who can't nurse—don't try." It seems really absurd to write such words, yet I believe them necessary, since I can recal instances in which ladies so situated have been induced by their friends to try to bring milk into the breasts by putting the baby to them, until a mammary abscess has shown at once the evil of the advice, and the injudiciousness of following it.

But if by accident, such as by the occurrence of temporary fever, the milk leaves the maternal breast ere the baby is old enough to be weaned, the flow may sometimes be brought back again, when convalescence is established, by such a contrivance as the use of a mustard plaster placed between the "dairies," so as just to touch them both on their inner edges.

Ere I conclude this chapter, I must say a few words upon one of the accidents of nursing—viz., the occurrence of painful lumps in the breast. I well remember one lady, who consulted me for this, and the trouble we had in consultation ere we could satisfy ourselves as to the cause of the affection. I use the plural, for my patient was far slower to adopt my views than I was to decide upon them. The cause was this: During the first lactation she began to suffer occasionally from these painful lumps,

but she never had them when by accident she was unable to dress as usual, and they were only very bad when she wore one particular article of dress. By dint of an exhaustive analysis it was demonstrated that the bone or steel in the corset was the culprit, and as the lady could not determine to give up its use, this was cut down, where it lay between the breasts almost to the breadth of a lead pencil. But the lumps still appeared, and the patient had to decide between the mainstay bone, and freedom from pain. The latter carried the day; the steel was discarded, and from that period no lump ever arose. I may say that when it was necessary to do something to relieve the pain, nothing was found equal to the use of a wooden bowl steeped in hot water and applied all over the bosom. Rubbing and active treatment always made matters worse. I may also mention that some women suffer much from the weight of the full breasts hanging downwards in spite of the usual contrivances to support them. In these cases it is well to have a jacket specially made to fit the bust closely, which, when buttoned in front, will diffuse the weight over the whole of the shoulders and neck. There are many things respecting the nature, quantity, and quality of milk which we must postpone until we have to speak of the infant just arrived.

We will conclude this essay with pointing our moral thus: Lactation is an exhausting process; whilst, therefore, it is going on, the mother should spare her strength as much as she possibly can, so as to ensure for her offspring a food of irreproachable value.

CHAPTER IX.

THE MOTHER GROWING OLD.

THERE is a time, alas! it comes too soon upon us all, when the beauty and gracefulness of youth begin to merge into sleekness and fat, or from having been soured by the trials of life, to sink into the furrows and leanness of discontent. The charming mother whom we last met with, bending with joy over her infant, becomes in time the portly matron, at the head of a bevy of graceful girls and fine young men, who are coming forward to take their place at their parents' side. No one who sees one of her lovely daughters could mistake the mother for an elder sister, or fail to mark the contrast between youth and age. Yet, clear as is the distinction, none can tell the day, week, or month, in which the change from youth to age began, nor can the lady herself recall the period when first she felt that she was growing old. It may be that she can recall the appearance of the first grey hair among her raven tresses, or the evening when first she declined dancing in every set, but these, she says, are not rightly marks of age. There is little doubt, that as a general rule, every woman considers herself to be "young" until "the change of life" takes place. As some alteration from the daily routine of childhood gives her notice that she has become a woman, so it is considered that the disappearance of a periodic visitor tells her that she has become "aged." In the majority of instances, we think she judges rightly, but there are numbers of strange exceptions to the general rule. There are few who would call a woman who had arrived at the age of fifty-three a young one; yet I was told a few days ago by a lady whose "life" I was examining, that her mother bore her youngest child when she had attained that period. But granting the truth of the general proposition, that "the change of life" marks the limit between youth and age, we are still puzzled to know with anything approaching to

exactness, when that period occurs. No lady knows the future, and can only tell after the lapse of many weeks, or months, that she has seen the friend alluded to for the last time. Vesuvius was once thought to be an extinct volcano, but it blazed up again with fury, and has had many an eruption since; so many a woman who has thought her troubles of her young days for ever over, may find them begin again even more strongly than before.

But, notwithstanding all these irregularities, the female sex has been taught to believe, and doctors have shared—if they have not originated the idea—that "the change of life" is attended with numerous dangers, and many peculiar symptoms. Indeed, we find in systematic medical dictionaries—such, for example, "Copland's Cyclopædia," articles on the "Grand Climacteric," and an account of all the ills which womankind inherits at that period.

As a consequence of this belief, every unusual symptom about which a female complains when between forty and fifty years of age, is attributed to this mysterious cause, and a time of suffering is sometimes endured, unnecessarily, from this view of an individual case. I well remember a lady who came under my care, after a year's increasing illness. Her age I guessed to be about forty-seven, yet she told me she was as regular in her habits as when she first was married. Her doctors—and I was the third on her list, had told her that she was suffering from "change of life," and urged her to take plenty of exercise, and to swallow frequent doses of "blue pills," and other "alteratives." In vain she protested that the habits of her life, or rather of her sex were not changing, and that if they were the alteration would not be expedited by walking for three hours daily, and swallowing seven pills weekly. Under the plans prescribed for her benefit she got no relief until accident separated her from her previous attendants, and put me in their place. My own view of her ailment was, that she was suffering simply from exhaustion, and my chief prescription was the use of a sofa all day, good diet, complete rest, judicious stimulants, and tonic medicine, and the result was that I paid my last visit at the end of about six weeks. Since then, the lady has never been ill, and has continued her regular habits, although I believe she is now upwards of fifty-five years of age.

An example like this set me thinking, and I asked myself, "What can possibly have led to the current belief, that a natural change, which all women experience equally, must necessarily be a dangerous one, and mark the epoch of life when it occurs, as the most trying in a female's existence?" I first tried to ascertain what the period was, so that I might consult the tables of the Registrar-General, and ascertain whether an unusual

number of women died in or about that particular time of life; but the more I searched the more completely was I baffled. I inquired of all my friends and patients as to their experience, and found that some had placed themselves in the same category as the ancient Sarah (see Genesis xviii., 11) before they had arrived at forty, others were still in a different category at fifty, and I found that there were some, who, in the particular sense referred to, had never been women at all, during any period of their lives. Some again, were so regularly irregular, that they never could tell within one year what might happen next, or when their friend would visit them again. It was perfectly clear, from all this, that ladies could not be so very dependent upon the courses of the months for their health, as they had been told by their doctors to believe. If women can do without "visitors" for a twelvemonth without feeling any ill effects whatever, it surely cannot be a very dreadful matter to be free from them for two years, and if for two years, a longer immunity ought not to cause anxiety.

In the course of my enquiry, I found that the belief generally entertained to be that "the change" takes place usually at, or about the age of forty-five. Then leaving the question, whether the notion was true or false for future consideration. I began to consider what usually happened at, or about that period of female existence. Not one can deny that at such an age a woman is no longer young—she has passed through half the period of her existence, and has naturally become somewhat more feeble than she was in the heyday of her youthful vigour—it is probable that she has had a family, and endured the trials of nursing and the trouble of bringing children up. The boys and girls who were sent to bed at eight o'clock have now become young men and women, and have, each for themselves, a separate room. This involves a considerable amount of close attention and of extra work. Tom and Dick want new shirts, and their "fronts," "wristbands," and collars, are often out of order, their stockings want darning continually, and their "things" must be looked after, ere they go to, and when they return from the wash. Mary has a tenderness to untidyness, and mamma must pay a daily visit to her room, to see that everything is proper. Lucy and Fanny, too, are hourly coming for advice and assistance in a variety of occupations, and visitors and calling consume much of her time. The household linen has also increased as the people have grown up, and the exigencies of society occupy a large portion of the nights. With all this toil—and few, but women, know how hard-working a woman is in her domestic domain—there is also taken, a considerable amount of exercise, either for the mother's own presumed benefit, or for the improvement of a daughter's health, and long morning shoppings are

often as necessary as a round of calls. In other words, with failing strength, the woman goes through a greater amount of labour than she did when her vigour was at its height. At the period when she has earned repose, a mother is more active than ever, and when at last she suffers, the illness is attributed to anything but its right cause. When as a girl she got muscular pains in the side from romping or laughing, she thought nothing of them—for gala days then came rarely—when she gets the same kind of pains as a woman, she thinks much of them, for the cause is of daily recurrence, and the suffering is more or less habitual. The doctor, naturally, is not resorted to until the patient has tried her own hand at globules, if she be of the homœopathic, and with pills, or other physic, if she be an adherent of the old school, and found relief from none. She then has recourse to the family physician, who reads the symptoms as indicating disease, or disorder of the liver, the stomach, the spleen, the womb, or the kidneys, according to the locality of the pain, and his pet notions or routine hypotheses. He does his best to drive the ailment away, with "alteratives" and other "doctor's stuff," but usually fails, as signally as the patient did when she was her own prescriber. As a last resource, the patient is sent to the seaside, or some other watering place, where she takes lodgings, lives like a fine lady, and gets well, coming back with the belief that for her "the change of life" has passed. So it has, but not in the manner she and her doctor suppose—by no means—all that has occurred is simply that she has accepted the fact that she is more of an old woman than a young girl, and has resolved to act accordingly. But had she exercised that good sense on which women pride themselves so justly, she might have come to the same conclusion without leaving home and its comforts or undergoing suffering at all.

It is a great mistake to suppose that women do not begin to grow old until the time when their "health" changes, and that before that period they may act in every way as if they still were young. A greater mistake is it to suppose that when human energies begin to flag, they can be restored by additional toil or exercise.

It is a common thing for women to find, that as they advance in years, they lose far more blood periodically than they did in earlier years. This flow it is sometimes difficult to check, and then it has to be borne. When an inordinate drain occurs, it is usually followed by impoverishment of the remainder of the blood left in the system, and as a result—faintness, headache, and palpitation, are common symptoms, there is also very little appetite, and too frequently, indigestion. If, with these, the individual is obliged to go through her domestic duties as usual, there are superadded, pains in various parts of the body, at the

back of the head, between the shoulders, in or below the breasts, and sometimes in the central region and flanks, leading to the belief that there is disease of the womb.

A woman cannot be in this condition without suffering from low spirits, and she consequently indulges herself with the belief that she is the victim of some internal ailment, which her doctor cannot discover, and which it is beyond the skill of the physician to cure.

The amount of misery that some ladies suffer about this period of life, few, but themselves, their immediate relatives, and their doctors, know. It may, however, be saved entirely, if the patient will but act a sensible part, and curtail her labour when the power to perform it is diminished. At each recurrence of a visit from the gushing friend, recourse should be had to bed; not to a luxuriant mass of down, or a springy sofa on which the sufferer may roll at ease, but to a hard mattress, on which she can lie at full length, and remain cool about the very regions where coldness is required. The warmth of a feather-bed is apt, not only to increase "a flow," but to make the parts so tender, that such flow will recur more frequently than it otherwise would.

In conclusion, we would advise all who wish to get over the period, spoken of as "the Grand Climacteric," to treat themselves upon a common sense plan. If their strength is firm, their health unexceptionable, their appetite good, and their activity unbounded, they need not have a care, but if, on the contrary, anyone should begin to find herself a little "pursy" on running up stairs, a sufferer from frequent headache, or pains in body and limbs, if she begins to be low-spirited without an adequate cause, unable to eat, and disliking to drink, or to have an indefinable sense of something being wrong, let her just believe that she is beginning to go down the hill of life, and "lock a wheel," lest she run down too fast. We know many a hard-working woman, who looks sixty ere she is forty, and we know many a buxom matron at fifty who may readily be mistaken for one below forty: the first has gone down the declivity of years with giant strides; the second has put the drag on, and, by taking things easy, has remained near the top.

We are great admirers of female loveliness, and grieve to see the bonny features of youth become wrinkled with age, and we think that we give to women sound advice when we tell them, as they advance in years, to take things easy, or as the Irishman says, "If you can't take things asy, take them as asy as you can;" for as the poet says—

> Danger, long travel, want, or woe,
> Soon change the form that best we know—
> For deadly fear can time out-go,

And blanch at once the hair.
Hard toil can roughen form and face,
And want can quell the eye's bright grace,
Nor does old age a wrinkle trace
More deeply than despair.

MARMION, Canto 1, stanza 27.

Fatigue brings frowns to the brow, grey hairs to the head, and bitter words to the tongue, while healthy ease wreathes smiles o'er the face, and frames honeyed stories for the lips, whether the matron be in middle life or advanced age.

CHAPTER X.

THE FATHER GETTING INTO YEARS.

THERE are few men who do not grow old. Even kings die "sometimes," but neither monarchs like to believe themselves mortals, nor do men like to feel that they are no longer young. The youth who has read his "Shakespeare" diligently in his poetical days, remembers the saying of the Chief Justice when talking with Falstaff: "Do you set down your name in the scroll of youth that are written down old with all the character of age? Have you not a moist eye, a dry hand, a yellow cheek, a white beard, a decreasing leg, an increasing belly? Is not your voice broken, your wind short, your chin double, your wit single?"—Second Part Henry II., Act I., Scene 2. And when that youth grows older he considers that he may still write himself down as juvenile if he does not present the above characteristics. Yet, though "the immortal bard" is generally unapproachable in his descriptions, he sometimes fails, and we cannot trust him implicitly in his description of the marks which tell of age. His definition, such as it is, may answer for one who has become an old man: it certainly does not fit one who is only "getting into years."

With the indisposition which all of us have to believe that for us "time is on the wing," we naturally blind ourselves wilfully to the first signs of advancing life, or rather of dawning senility, and trust to our feelings rather than to facts to decide into which category we are to be placed.

It does not signify much whether a bachelor or paterfamilias chooses to *call* himself a young man when he is fat and forty, provided that he does not act upon the belief—or if he does, that he only indulges in a nice wig, artificial teeth, clothes of immaculate cut, or other harmless affectation—but if, with the determination to appear juvenile after youth has passed away, he acts, in every way, as if he were only five-and-twenty, he

does serious damage to his health, and instead of prolonging his adolescence, he increases the stride of his own senility. In some story-book will be found the account, that human life may be compared to a clock, whose fingers go upwards from six to twelve, and then come steadily downwards to six again. Life, like the mainspring, carries the man up to the highest point on the dial, and as certainly carries him down again to the mysterious void whence he emerged. As nothing will prevent the clock ticking on, save its *quasi* destruction, so nothing will prevent our descent into years except annihilation at once. It is well to accept the fact, and to endeavour to enjoy our decadence as much as we did our advance. It is true that the pleasures of youth are more entrancing than those of age, yet maturity has gratifications unknown to boyhood, and the fulfilment of duties of which the juvenile is careless, gives enjoyment to senescence.

There are few who do not agree with the truth of what I say, yet there are none who would not be disposed to rejoin: "At what period of life do you think that the clock finger points downwards? Can you tell us when we ought to treat ourselves as if we had entered upon the first days of Autumn?"

With all of us, the day when decadence begins is unknown. Some one may feel that he turned the corner with his first attack of gout; another with that misfortune which placed his name on the list of bankrupts. One dates his age from the period when he lost his wife, or his dearest child; another from an accident, when he lost much blood. Yet, as a rule, no such starting points can be named, and we get into years, and become "old folks" without our being conscious of it. One man told me that the only mark by which he could judge of his advance into age was, that whereas in attending mercantile sales he once felt himself a young man amongst old ones, now he found that the youngsters had begun to predominate, and that he was regarded as a Nestor.

It is not absolutely necessary for anyone to *feel* that he is growing old. We, ourselves, hope, indeed, to carry our young feelings onwards till our pulses cease to beat, but it is certainly advisable for us to act as if we were no longer young. Yet, if we are not to trust to our feelings, my readers may naturally ask—to what other criterion are we to look if we wish to ascertain when we are actually or physiologically "getting into years?" It appears to me that there are two classes of symptoms which infallibly tell of the departure of youth—one physical, the other physiological.

One of the first physical signs of advancing age is to be met with in the great toe. During our early manhood that

important part of the foot is on the same line with that of the instep, and if we examine a footmark on the sand, as closely as did Robinson Crusoe, we can tell whether the savage who made it is above or below thirty-five. After this period, the great toe begins to turn towards its fellows, and often ends by completely overlapping them. The natural result is, that its owner finds his old shoes uncomfortable, and complains of big bunions, or of numerous corns. By the art of the shoemaker this change may be disguised, but it cannot be overcome. We have, indeed, heard that this change is due to the use of high boots, or ill-fitting shoes, but it is far too common to have such a cause. The alteration occurs in the poor and the rich alike, no matter what has been the nature of the covering of the foot. The next change that we may mention, requires the aid of tweezers; as women, when they have passed their "grand climacteric," find that hairs, sometimes of formidable size, grow upon the lip and chin, where none but small and silky ones flourished before, so men find, that about the age of forty, great outgrowths proceed from their eyebrows, like tall "Jackstraws" out of a well-kept lawn. About the same period the hairs at the back of the whiskers become grey, and crown of the head is more or less bald, or some hairs become silvery. The skin, too, which once was "shiny," begins to look dull and dry, and wrinkles appear where none were seen before. This change is more apparent about the eye, the forehead, and below the chin than elsewhere, but it may be masked entirely, where, with advancing years, there is an increase of fatty bulk.

The physiological evidences of increasing age have no definite time for their approach. Some, who have passed *une jeunesse orageuse*, begin to feel old while their years are few, and others, who have "kept themselves well," still are as they were in youth, though their years are many. Failure in sight is, perhaps, one of the most constant marks of senility, and few attain the age of forty-five without requiring the aid of spectacles to read the ordinary newspapers by gaslight. There are, however, sundry other marks which tell the same tale. Few there are, at forty, who can run up-stairs as lightly as at twenty, or who can spring up after dinner to play cricket as readily as they could at school, and it is probable that there are few who can wear clothes of the same cut as they could while they were apprentices. Man usually increases in breadth from twenty-five to thirty, and after the latter period, increases in girth round the abdomen, so that his well-kept wedding suit seems very small to the father who can count his grown-up sons.

Well, I can fancy hearing some reader exclaim: "What of all this? To what is all this rigmarole to conduct us?" To a

very simple conclusion—viz., that when a man is old he ought not to act as if he were still young.

This sounds ridiculously insignificant, yet if we examine the deduction closely, it will assume considerable importance.

When young, a man "drives" his business morning, noon, and night; he slaves to make a "connection;" late and early, at home and abroad, in the counting-house and on the exchange he pursues his work, and cares not to eat, except to enable him to continue his exertions. To him it matters little whether he dines at noon or at night, or goes without a meal at all. He "succeeds" at length in his attempts to establish his house as a good mercantile establishment, or he becomes a noted lawyer, or a popular chemist, and then his business drives him. Day by day, week by week, and year by year, he is kept "hard at it;" the connection made has to be kept up; clerks and managers have to be supervised; and the labour which once was easy, becomes at length an irksome duty. Age cannot effect without the accompaniment of physical suffering that which youth could manage with ease; the iron frame becomes rusty, the elastic spring is enfeebled, the animal caoutchouc becomes rigid, or in other words, the "go" is gone. When this occurs, the individual must select between "keeping his nose to the grindstone," making as much money as possible, and dying comparatively early, or taking things easy, and going down hill slowly and pleasantly.

It is difficult, sometimes, to make men believe that to continue to do what they have done all their life, can be prejudicial to them, simply because they carry more grey, or fewer brown, hairs on their head than they did when boys. But so it is, and I cannot point the moral better than by telling the following case:—A gentleman, of healthy family, of active habits, regular in living, comfortable in position, as happy as most are in his domestic relations, residing in a salubrious part of the country, and quite independent in circumstances, began, at the age of sixty-four, to suffer from sickness and vomiting. His ordinary day's work consisted first of inspecting his garden and greenhouses, breakfasting, and taking a five miles' journey by rail and steamboat, to his place of business. His occupation was that of a merchant, banker, agent, and general philanthropist, and he toiled at it from half-past nine till four o'clock, without lunch, or any rest. His friends, and he had very many, began at last to notice that he was "ageing" fast, and that at certain meetings, which involved some anxiety of mind, the gentleman became faint and sick, and that he sometimes vomited. The affection, which at first was occasional, became at length a daily occurrence, and not only was nausea produced by labour, but the smell of food induced prolonged retch-

ing, and dinner was daily rejected. The patient, in spite of the recommendations of a physician, continued his daily routine, and at length became so ill, that he was morally compelled, by a dear friend of his boyhood, who was a doctor, to take care of himself. He then placed himself under a physician's care, whose sole prescription was "perfect rest." The direction was carried out, and in less than three weeks, the patient was well. For a short time he attended carefully to the physician's direction, and remained at work only for two hours. As he did this with impunity, he increased his daily toil until it reached its old limit. All the symptoms then returned, and ere two more months elapsed, he died from pure exhaustion.

We might multiply indefinitely, cases such as the above, though we could give none more striking than this. In general, persons of the male sex carry their years well, so long as they retain a fair appetite and good digestion, unless their bodily or mental labour is excessive. As a rule, the desire for food diminishes as age advances, and the digestion becomes more slow. A boy of sixteen can eat in one day more than a man of sixty could comfortably consume in three, and the former will digest in two hours what the latter can scarcely dispose of wholly in six.

Again, unless each has acquired the habit of a glutton, the aged are far more rapidly pulled down by medicine than the young. An aperient dose, which will make a lad more lively than before will give his father half a week of flatulence, and the blue pill, which was thought to clear the liver of the juvenile *bon vivant*, is sure to promote biliousness in the senile feaster. Those who, in advanced years, go to the druggist for a calomel, or other smart or active purge, to clear away the remains of some aldermanic banquet, are rendering themselves most apt to die suddenly of apoplexy, for that which has long been trusted as a valued friend becomes at length the deadliest of enemies. But there is another point connected with advancing years which we must advert to, tender though the ground may be. There is a time in the life of woman when Nature sets a limit to her power of reproduction. There are few like Sarah, who become mothers in old age. In man, however, there is no such limit. Abraham, we are told, when he was at least one hundred and thirty-seven years' old, and probably one hundred and fifty, had a family by Keturah after his first old wife was dead, and though the aged David could lie quietly by the lovely Abishag at the age of eighty, or thereabouts, yet the story runs, that "old Parr" was arraigned at a still more advanced period of his life for having violated some young woman. A wide experience of the world tells that marriages occasionally are solemnized between aged men and young wives, and that these are sometimes followed by

a family whose paternity is undoubted. This being so, there is a general belief that men usually carry into years the powers which they have in youth, and, consequently, individuals try to demonstrate, year after year, to themselves that no sign of age has yet fallen on them. I once heard, with the most profound disgust, an old colonel of seventy-five say, in a mixed company, that his fourth wife was treated as well as his first, and his tone and manner showed how proud he was of making the boast, yet a few months only elapsed ere he succumbed to an attack of fever, apparently mild.

Some may live to make such assertions as the foregoing, but the majority die in the process. There are, indeed, few rocks on which advanced years are more liable to shipwreck than the continued indulgence of juvenile affections. There are some who, by injudicious love, bring on insanity; others who escape with indigestion alone. The most common phenomenon arising from *excess,* and it will readily be understood that there is a sliding scale by which to gauge the value of this word, is that the individual, feeling the effects of the drain, endeavours to make up for it by increasing his usual quantity of stimulants. As years advance, man has naturally more control over his passions than he had when in youth, and if he chose to follow the dictates of Nature, he would have nothing of which to complain, but unfortunately, he who has allowed his feelings "a full sweep" while juvenile, will try to solicit them by every available means when old. Than this, there is nothing more prejudicial to health. Man has many phases. While young he is learning facts and gleaning opinions. Youth and strength impel him to marry, and when his family grows up, it is his business to instruct them. Youth is the time for action; age is the period for judgment. The head cannot think powerfully if its living energies are frittered away in corporeal pleasures. It has long been known in the medical profession that the men who use their brains the "hardest" have but small propensity to indulge their loves, while those who allow themselves to enjoy affection to the utmost, have very little intellect to cultivate. If this be true, we can readily understand how fast those must "age" whose brain work increases with their years, whilst their connubial enjoyments continue unchanged.

I will close this chapter with a case in point. I was consulted by a gentleman, who detailed to me a number of symptoms, pointing unmistakably to nervous exhaustion. He was aged about forty, of medium height and size, comfortable in his circumstances, married, and of very regular habits. As he told me his case, the idea of delirium tremens became uppermost in my mind, yet I could not find any evidence of habitual or even occasional tippling. In ascertaining the cause, I purposely left

to the end of my examination the question respecting marital relationship. As I anticipated, and I may say *en passant*, that there are many cases in which a glance at the countenance tells the educated physician the cause and nature of his client's illness —the gentleman had been too regular in his habits. I told him so, and impressed upon him, as best I could, the advisability of self-control. He left me, but returned in about a month. His manner appalled me. He seemed as if under a fatal influence. I feared that he would die in my consulting-room. Such an apparent wreck I never before had seen. Fearing that I might have misunderstood his case at our first interview, I carefully went over it again, and "driven into a corner," fairly apologised for asking whether he had made any change at home. "There you have me Doctor," was his reply. "I tell you honestly that I did not believe you, and I was determined to demonstrate that you were wrong. To my wife's remonstrances, and she quite agreed with you, I answered brusquely, and was worse than ever. I plead guilty, and have come to say so. Do the best you can for me; I'll obey you now."

After such a confession, can any man doubt that age differs from youth, or refuse to see that wisdom ought to be more allied to hoary locks than passion, and that age should indulge in reason rather than in love? If we wish to conserve health, the effect will be produced less by taking drugs than by avoiding those causes which are certain to impair it.

CHAPTER XI.

THE INFANT JUST ARRIVED AND ITS MANAGEMENT.

I WELL remember, though, alas! a quarter of a century has elapsed since then—the pleasure with which I ushered my first-born into the world. But the joy was of short duration, for he had not been in the nurse's arms a minute, ere I learned that another baby was following him. As the second emerged into light, the pride of having twins, and a feeling of the cares which must necessarily ensue, struggled for mastery in my mind; only to be displaced by the alarming fact that the second seemed quite dead. My business demanded instant attention to the duties of resuscitating it, and just as breathing began to be established, the attendant nurse summoned me authoritatively to the bedside of my wife who was in danger of death from flooding. All things, however, seemed right at last, and I suspended my medical cares for a time whilst I wrote to friends to tell of the happy event. On paying my next visit I found the twins duly dressed, both sleeping in one cot and looking very bonny; as mamma too was doing well, I would not have exchanged places, with any one. There is a time in which we can cordially enjoy the poetry of life and I revelled in it fully. But the prose came soon. I watched the first contact between the infant lips and the maternal bosom, but the interest was changed into painful concern when I saw the natural food which was eagerly gulped down returned as yellow as if it had been dyed with turmeric. Time after time did the tiny twins go to their natural source of nourishment only to reject their food after the same fashion. A wet nurse was tried, but she was no better a cow than the mother, for the children still rejected breast-milk, and always with apparently the same amount of bile mixed therewith. We then went through a series of trials of slops of various kinds, and not content with that, adopted a change from town to country air. It was all in vain, and at the end of two months I followed the

second to his grave, to which he had been brought by sheer starvation, dying of hunger in the midst of plenty; and pining to death, though constantly taking what to others would have been food. Through two long years we nursed the first with anxious care; he went through frequent attacks of diarrhœa, convulsions, false croup, water in the head, mesenteric disease and abscesses of the bones; but he weathered the storms which blew around his infant barque, and now gladdens us all by his strength, manliness, and cordiality. He is, indeed, the sturdiest of my flock. After this lad had ceased to trouble us as regards his health, another came, a noble looking boy who knew how to wreathe himself round his parent's heart; him I lost from hydrocephalus—a girl next arrived only to sicken of the same complaint, though not to die. But as I am not writing my family history, I will say no more than that of all my children only the half survive, all died ere they had attained their fifth year, and I have consequently had abundant cause to know the anxiety which attends the life of infants during their early years.

I should fill a volume were I to attempt to tell all that I have unlearned, and all which I have ascertained from experience. How to select the most salient points and to compress them into a single chapter is a puzzle indeed, yet we must attempt it.

Let us begin with a child who is nursed by its mother or some hired substitute; we have little to do with it so long as it is kept warm, comfortable, and free from physic: it awakes to suck, lies down to sleep, pees and possets, and once or twice a day makes a golden deposit in a snowy napkin. The nurse very properly soaks every foul bit of linen in water, so as thoroughly to remove the urine and thus prevent a stink. Here we have a model baby; but perchance it has an attack of convulsions, or of diarrhœa, or of screaming, "What's the matter?" is the first question, the second is "What's to be done?" Why, examine the mother, and ten to one we shall find that she has been in a "tantrum" or profoundly agitated by anxiety, has been taking physic or been suffering from accidental diarrhœa. Exhaustion in the mother produces "yelling" in the suckling as certainly as a prolonged fast fills the stomach with "wind."

Perhaps nothing wrong can be found on the mother's side; we must then carefully examine the sleeping arrangements, &c., and if all be faultless, we may fairly conclude that it is the town air which is doing mischief, and recourse must be had at once to the air of the country. I have known children convulsed daily in the city, and immediately recover on removal to the country or the seaside. I have seen a child, in my own arms, change the fashion of its countenance from that of approaching death, to placid sleep, at the instant when the westerly breeze, fresh from the ocean, played upon its cheeks.

The importance of pure air is shown most conspicuously in those unfortunates who have to be brought up by hand from birth. It is a very rare thing for any one to succeed in rearing an infant by "dry nursing" in the town, it is very rarely that we fail to do so in the country, provided that due care is taken-and the infant's life is valuable; the food which seems to act as an irritant in the borough, is digested in the country, and the extra cost of a suburban villa is generally more than counterbalanced by the diminution in doctors' bills. This reminds me of what all must know, that circumstances occasionally compel us to bring up infants without anything from the maternal breast or that of a substitute. Whenever this is the case, a wonderful amount of care is necessary in every detail, however microscopic; the food, the dress, the residence, the bed, the cow or cook, the babies bottle, every single thing indeed has to be thought of.

The food should be very thin, sweet, warm, and free from any flavour, and it should be administered in small quantity and at regular intervals of three hours. Of the value of thin food, let the following anecdote speak. My eldest son could not take even asses' milk, poor though it is, until it was diluted with water,—if the mixture was in equal parts, it produced vomiting, whereas, five parts of water and four of milk formed a nourishing diet. It is difficult to induce mothers and nurses, nay, I have had even to persuade doctors to give *thin* food to young infants, but a very little practical experience soon convinces them of the value of the rule. If any one is sceptical, let him examine the milk which comes from one of the nurse's breasts while the baby is sucking at the other, he will certainly find that it is poor looking stuff, and learn that a human baby does not get any thing like such rich material, on which to live, as a calf, kid, lamb, or colt does.

Food may apparently be very thin and yet too rich for an infantile stomach, hence the physician watches with jealousy the use of pure milk instead of diluted cream. The curds in the first not unfrequently produce indigestion. The farmer's wife uses the stomach of a calf to "crack" milk and make cheese, yet too often the nurse forgets that the child's stomach may do the same, and that a diet of cheese is too strong for a baby. A medical friend once sent me some fragments of a very strange-looking substance which had been voided by an infant, informing me that their advent was always preceded by severe pain. On examination, I found that they were literally fragments of cheese, but the strictest inquiry showed that no "fromage" had been taken; consequently, it was inferred that the milk on which the infant was fed was converted into cheese in the stomach, and that when it changed had become as irritating to the bowels as if it had been a bit of Stilton from Leicestershire.

The best of all diets for an infant, who cannot have the breast, is one part of cream, two or three parts of water, according to the density of the cream, and enough sugar to make the mixture very sweet. Chemists who have analysed the milk produced by various animals tell us, that the fluid produced by the woman and the ass contains a smaller amount of curd than that found in the cow, mare, goat, sheep, &c., and that the milk of the two above mentioned is very saccharine, whilst experience tells us that the mixture of cream, sugar, and water before commended, forms the nearest approach to the maternal fluid. Here let me answer a question often asked by patients—viz., "Does the infant draw into itself, with the food which it gets from the breast, the corporeal or mental peculiarities of the nurse?" There is no doubt that at least one disease—the venereal—may be so transmitted, but it is doubtful whether any other can be. It is certain that the mind of man which can only be developed by the lapse of years is not in the very smallest degree influenced by the food given to him during his residence in his cradle. If any milk could give stupidity to its recipient, that of a donkey ought to be pre-eminently powerful in that way, and my son who, humanly speaking, owes his life to an "Egyptian pony," ought to be an ass, and *that* he certainly is not. It must, however, never be lost sight of, that the condition of the nurse does most materially affect the bodily health of her charge. A purge taken, a day's fatigue, a glass of whiskey toddy, a "poorly time" a common catarrh, and many other things of a like kind will affect the milk, even when a woman is young and strong. The influence of age in the nurse upon the quality of the infant's food is more remarkable than any other of common occurrence. The first infant and the second may drain their mother more completely than the seventh and eighth, but if her appetite is good and her digestion strong, the drain is more than compensated by food (and, as a digression, let me say that the use of slops by the mother enables her, as a rule, to make better milk than beer, porter, or gin, and that vegetable food does better for her babe than animal), but when, by lapse of time, by hard work, or other cause, the nurse becomes aged, the milk which she produces is no longer wholesome. The chemist can find no fault with the fluid, but the baby can, and every "nursing," after the evening one, sometimes every meal, without an exception, is followed by a fit of screaming in the infant. It cannot be too generally known, nor too often repeated, that an habitually screaming baby tells of an overworked or otherwise enfeebled nurse.

We must not, however, confine our attention to the nursling at the breast; we must pursue it through the stages of teething, and not leave it till it becomes boy or girl. There is a period when the infant must be weaned. When that occurrence takes

place, the mother and child must be separated, a milch woman smells of milk as does a cow, and with the scent in its nose, the baby is not contented with common pap, but is induced to wish for milk alone; without the scent of "cushy" the calf is content with what it can get.

When weaning is effected, the mother naturally considers what food is most appropriate to her offspring. There is no doubt that the best transition from human milk to other diet is to that of the cow, with the addition of any farinaceous material, *every thing allied to animal food must be carefully avoided.* I do not know any more important rule in the diet of young children than this. So strong is my opinion of this point that I shall run the risk of saying too much rather than too little upon it.

I will begin with an episode in my family history. At four o'clock one morning I was summoned to see my eldest boy, who was in convulsions. He was in the country, under my mother's and my wife's care, and I had seen him the day before in apparent health, his grandmother exulting that he was taking beef-tea with every meal. For twelve hours he hovered between life and death, and when I left him out of danger I mused on all the cases of convulsion which I had then seen. I recalled a frightful example in which a young man who had been fed highly upon a profuse animal diet, suffered severely from convulsions, lasting for nearly a whole day. I also remembered others of a similar class. As a result I forbade beef-tea, mutton broth, and every other form of animal food for my infant son. His grandmother, however, at whose house he was staying, pleaded very hard for permission to administer as much as the yolk of an egg at least once a day, and filial instinct prevailed over my medical judgment. I was young, my mother experienced, and when, instead of convulsions, I found I had to deal with false croup, it did not occur to me that the diet could be much at fault. But day by day the attacks increased in severity, and when I left home for a daily round of visits I feared to find the shutters of my own home closed on my return. This necessitated the closest watching; as a result the egg was countermanded, and for a week the croup was suspended. In the interest of others I then allowed the yolk of a single egg to be given; it was followed by the usual attack; a fortnight was then allowed to follow, without an egg being given, and no convulsion of any kind ensued. Another egg was then tried, and when the false croup returned as badly as before no farther evidence was necessary to convince me of the connexion between the animal diet and the laryngeal convulsion.

Since that period I have been an attentive observer of the effects of an *animal* diet in infancy, and am perfectly convinced that even so small a modicum of it as good meat gravy upon

potatoes is, in some instances, the cause of convulsions, or of symptoms which would by many be regarded as indicative of approaching hydrocephalus. I would lay it down as an authoritative rule that *no infant ought to take animal food until it has cut all its double teeth.*

The anxious parent, however, who sees its child apparently dying from inanition, will doubtless ask what is to be substituted in the place of beef tea, mutton, veal, or chicken, broth—I answer, unhesitatingly, some form of alcohol diluted, sweetened and mixed so as to be palatable.

At this point a crowd of memories inundate my mind, and from them I will select a few. I was accidentally called to see the infant of a medical acquaintance. On arriving I found a group consisting of the anxious parents, a medical practitioner, and a baby, the last being apparently at its last gasp. I had, anticipating that the case was one of ordinary convulsions, taken some chloroform with me, and I poured some upon my hand and let the child inhale it; in less than a minute the lad was sitting up and smiling; but it then was purged, and again it collapsed, again the chloroform was given and some sweet brandy and water. As soon as it could be prepared, "whey," from milk, was used instead of water, and the infant was kept alive till it could be transported to the country, where it was reared. Another child was attacked with convulsions and "water in the head;" and after a severe attack of purging, it for hours seemed dying; she also was brought round—in about eight hours—by chloroform, and wine with water. A friend has also told me of an instance in which a child with mesenteric disease had its life saved by a diet consisting of very sweet weak spirits and water and of another which was brought round by a fortnight's use of good Scotch ale.

In all cases now, my general plan, whenever a weak or puny infant has to be brought up, is to recommend:—(1). Pure country air. Wherever this can be managed, it is the most important point; but unfortunately, children born in the healthiest localities may require our care, as well as those necessarily confined to towns, and we have to prolong our list of directions. (2). Warmth is essential. (3). The diet must be vegetable, administered in definite quantities and at stated periods, and of these two items it is impossible to write particularly, as every case is a separate study. (4). Where all meals are loathed, or when each administration of food requires the exercise of authority, it is the best plan to precede it by the use of a small quantity of sweet brandy and water, rum-shrub, sherry, or other alcoholic fluid. In saying thus, I must be explicit first as to the strength required, secondly, as to its after effects. The first is best judged of by the father's palate, the mixture should be allowed to remain in

his mouth, about a minute, and then swallowed, if it makes the mouth or throat feel hot, the amount of spirit is too great; if the flavour left is "mawkish" the mixture is too weak. Three teaspoonfuls of old brandy in a large wine-glassful of warm water, with plenty of sugar is about the usual proportion, and about half of this may be given to a very young infant. A child of larger growth, say six months of age, may take the whole, and about from four to eight times a day. If the dose produces feverishness, it must be suspended for a day or two. Parents naturally imagine that a baby brought up to take brandy as a medicine, will ultimately require it as food, but nothing can be farther from the reality. I have known a child adore its bottle of toddy, which for a month was its only diet; yet at the end of that time, when a normal appetite was restored, the infant loathed the very sight of a flask, and cried at the smell of whiskey. Let me, however, appeal to the sense of others, rather than my own experience. Does anybody in adult life cry out for "tops and bottoms," because he ate them habitually during childhood? Does the nurse who mixes the baby's pap feel irresistibly drawn to rob him of his dues because she once lived upon it when she was a tiny nursling? Does the father when he sees his youngster eager for the maternal breast feel a longing to go back to his own once loved food? If custom irresistibly compels us to take for ever anything which we once enjoyed, there are many of us who would prefer "cowslip wine" to "claret," and "poor ale" to "Bass's beer." I have known many drunkards who have been teetotallers during infancy and youth. I have not yet known a single instance in which the medicinal use of alcohol during the first year or two of life has been followed by a love for liquor. (5). To return from this digression, we would recommend as the next in importance for the improvement of health in infancy, the profuse employment of oil. This may be either olive, almond, or cod-liver, cream or butter may do as well, and amongst the poor, lard is not a bad substitute. It may be beaten up with the white of egg, flavoured with almonds and given as custard; or if the stomach should loathe it under any form, and if from circumstances it is desirable to be unremitting in our endeavours to prevent death by inanition, the body should be well rubbed with the oil, and the child allowed to live in its greasy clothes. To the eye this does not look "pretty," and the cleanly mother may think that such a plan is next door to making her child an infidel, as it removes cleanliness, which is said to be akin to godliness; so far, however, is this from the truth, that I can assure any one who will try the plan, that he will be enamoured of it when he sees the delight with which the little one receives its oleaginous supply. (6). As a rule it is advisable to confine the delicate infant to the house, except during warm weather; however warmly a child is clothed, cold

air will reach its lungs and starve its blood, if it goes abroad on cold days.

I have as yet said nothing of the important period of teething. Whilst I was an embryo doctor, I was taught to believe that few babies could survive this process unless carefully tended by an accomplished physician, or some shrewd apothecary, who would serve out medicines, or lance the gums, according to the exigencies of the case. When I became a medical man I reflected that beasts cut their teeth without the aid of the "pharmacien," and that puppies had no convulsions when their "little toothy pegs" were "shooting." Then I thought that it was possible that human babies became convulsed from the too great attention of the doctor, and that if they were left alone, their teeth would come to them as easily as they did to a calf. Farther reflection taught me that convulsions were more common in the delicate than in the strong—in those who lived on animal than amongst those who took a vegetable diet—consequently, that purgatives were prejudicial, and broths dangerous, and yet these were the things which I had been taught to recommend! As a rule, then, I resolved that I would let my own young ones alone, and try to induce others to do the like to theirs, nor have I seen any reason to regret my decision. During the last twenty years I have never in my own practice had to interfere with the process of teething, except very occasionally by lancing the gums when they have been very swollen, red, and tender, and where a perpetual feverish cry has told of continuous suffering.

Ere I conclude the present essay, let me give an account of a case of by no means unfrequent occurrence. I was summoned to see a fine handsome-looking lad, about two years of age, who had a serious convulsive attack. If I remember rightly, the first attendant lanced the gums over some coming teeth, and ordered calomel and beef tea. The child got worse, a second "medico" was called in, who continued the treatment, adding some such sedative mixture as prussic acid and camphor mixture. When the convulsions were found to continue, the doctors were undecided whether to stop the mercury, or to push it on until it produced "characteristic green stools." I was called in at the juncture, as a sort of umpire. My decision was not unlike that of the monkey between the two cats, I held forth as genially as I could upon the terrors of calomel, and described beef-tea as a seductive siren which drew children on to perdition, and ended by giving a verdict against both the one and the other. A little management was necessary to enable the first attendants to appear to be the originators of the change of plan, but they were shrewd and hearty, carried out the suggestions, cured their patient and got a "wrinkle" which will, I doubt not, benefit many an infant yet unborn.

As an epilogue, let me issue an address to parents. My dear friends, do not be amateur doctors, nor try experiments on your children. Never physic them at all, shun, for them, potions and powders as you would a child with the measles. Rest assured that the more you physic young folks the worse they will be. Be ye also sure that growing children require a large proportion of food, and are pulled down by abstinence much sooner and more completely than yourselves. If a child can't eat, let him lie in bed till he can, and when he is starving himself, do not you pull him down still more by a dose of physic. In fine, treat your baby as the careful wife would her farm stock, coddle the calf, and you'll get a fine cow or bull, coddle the baby and you may hope for a handsome adult to follow; try to harden the calf by starving it with cold, and it will soon become veal, try to harden the infant and you will soon have to measure it for a long box.

CHAPTER XII.

THE CHILD BECOMING BOY OR GIRL.

The Registrar-General of births, marriages, &c., tells us that in round numbers, the moiety of all the deaths which he chronicles occurs in children, at or under five years of age. We need, therefore, no further evidence than this to show how important it is to pay attention to our young ones during this eventful period of their growth. Of the parts which compose the time alluded to, that covered by suckling, though important, does not attract our attention strongly. Infants at the breast, unless they inherit such diseases as syphilis, consumption, &c., or, unless their parents are miserably poor drunkards, &c., are not often the subject of serious illness; and when they are, the course of disease is rapid, and the danger to life imminent. But, as a rule, care in the nurse cannot do much to shield them from the consequences of the illness. At any rate our remarks upon the subject in hand apply to the *second* stage of childhood. We will suppose that teething, &c., has passed, the infant has begun to talk, perhaps to chatter freely, and run about merrily, yet it has entered upon the season for measles, hooping cough, scarlatina, mumps, and chicken pox, to say nothing of those thousand and one accidents to which all children of this kind are liable. It is at this time of life, that water in the head is most threatening, and consumption shows its first bud. The brain and bones, the lungs and skin are alike liable to the invasion of disease, which when once manifested, increases with a rapidity unknown in later years. Anxious parents, especially if either one or both are of a delicate stock, watch during these early years with most careful attention over their offspring, and are incessant in their observation, lest, by some inadvertence on their part, a fatal "cold" shall be taken, or other ill occur. The matron who has a flock of young ones to look after, is so very particular that she will not walk on the same side of the high road with one whom she knows to be the father of a tribe which is afflicted with

scarlet fever, nor will she come knowingly within a hundred yards of a house where there is measles.

Yet, although Materfamilias takes such care of her offspring, she often proceeds on a plan which is sure to bring about the very event that most she dreads. She has drawn the information on which she acts from some source that she considers to be quite unimpeachable, but which is nevertheless, faulty, and even dangerous in the extreme. She has perhaps trusted some medical work, highly spoken of in the weekly newspaper over which she occasionally pores; or that she may have seen accidentally, or heard of with eulogy, in the house of some old school friend, who has preceded her in matrimony. Such books almost invariably contain the crotchets of the writer, whatever those may be, and such a volume is too often like the celebrated razors, which would not cut, and were only "made to sell." They are certainly intended to magnify the author's fame, to enable him to advertise his name, and to let the world know to whom application should be made when a child is ill. Unfortunately, the majority of such books are calculated first to frighten those who read them, and that very greatly, and secondly, to induce them so to act, when they see cause for anxiety in their children, as to make matters worse. As an example of the style of book which I am describing, let me relate my recollection of the text book by which my mother guided her steps. One day I got hold of it myself, and found that if a child could not lie on its right side there was unquestionably some disease of the liver—that the right side was the proper one for lads to sleep upon, and that if a boy was seen habitually to lie upon the left side, a doctor should be sent for. Pain in the side was caused by pleurisy—a most insidious complaint, and one never to be neglected. On my first reading the magician's book I was appalled at what the demon conjured up, but when I began to think over what I had read, I saw the absurdity of the majority of the statements. Yet, on the authority of the volume, a doctor was sent for, because when I awoke one morning I said that my side ached. I was asked if it hurt me to breathe, and on my answering yes, the complaint was said to be pleurisy. I was bled by leeches, though I was positively quite well. Fortified by the authority of directions given in such a book it seems a very simple thing to give a powder for a foul breath, or a dose of rhubarb and magnesia to open bowels which the volume pronounces to be sluggish—yet it must be remembered by such parents that it was during the very days when physic flourished in the nursery, that the greatest amount of disease was found. One prescription paved the way for a second, and that again for an infinite series.

I well remember having to visit a child about four years old,

in the absence of its own doctor, one who was distinguished alike for intellectual attainments, suavity of manner, skill in gaining the confidence of his patients, and for the potency and versatility of his prescriptions. Like many a writer of books on infantile disease, he had a profound faith in medicaments, and was unsparing in their use, thus converting the stomach into a sort of chemical midden. I found the patient suffering, in my opinion, from the abuse of medicine alone, and urged as delicately as I could, that all drugs should be suspended till my friend's return—"that I felt sure he would so act were he in my place, for that every physician, when he saw no change for the better after the use of a medicine, would suspend its operation." &c., &c. Shortly after my return home, however, I received a polite note from the lady, informing me that I need not visit the child again, &c. Many years afterwards I was sent for to see another scion of the same family, the ordinary attendant being absent from the country. The day was bitterly cold, yet I found my patient, a girl of nine years, dressed, or rather undressed, very lightly with a frock very low in the neck, and very short in the skirt. The skin was livid where it was not wax like, and the complaint which I was called upon to treat, was faintness, debility, want of appetite, and excessive languor; I asked after the child whom I had visited before, and was not surprised to learn that it died shortly after my seeing it. The medicines which I had desired to banish, but which the mother and the doctor determined to patronize, were continued;—though changed in form, they were not modified in quality, and the poor thing died a victim to grey powder, rhubarb, magnesia, or other such like drugs, which alternately cleared it out, and blew it up with wind. It was, indeed, when I saw it like a big drum, having above it the skeleton of a head and neck covered with skin, and below it a pair of legs from which all flesh had departed. A result brought about by a determined attempt "to improve the secretions" by "alteratives."

When I had gained the maternal confidence, I found that she was still a confirmed believer in the use of medicine, and had been dosing her daughter, my present patient, with the favourite preparation of her trusted Esculapius, and I had the greatest difficulty in persuading her that management was better than mercury, and warmth of more importance than senna tea. When converted, a flood of memories dawned upon her, and told her how completely she had been a curse to her children, while she was fondly hoping to be a blessing; but its sting was partly removed by the determination to act again no more in the same fashion.

The reader will naturally say "but whom are we to trust if you take away our confidence in books, and shake our trust in

popular physicians?" How can any of us tell whether you, O writer! are any better than your neighbours, and whether the hand you offer to us as a friendly guide, may not itself lead us to the edge of some precipice and then shove us over?

Such questions are natural, and they are proper too. "Who shall decide where doctors disagree," has passed into a proverb, but it rarely receives an answer. Although each person may declare his inability to solve the problem, the majority do so after a fashion, when they select a particular medical man, or any one of homœopathic, aquatic, muscular, or drug-giving propensities in preference to all others. When once selected, tact, or as some would call it humbug, on the part of the doctor, usually suffices to bind the patient to his car, and his will becomes law, till another "medico" comes in the way, whose tact is superior to that of the first. The true solution of the question lies in an appeal to common sense, and in the results shown by any plan of treatment, rather than in conformity to the medical dogmas of any particular school.

But common sense cannot be exercised without observation and thought, and the results of one treatment can only be known by comparison with those of another, or with the natural order of events. These, therefore, we must use largely.

Now, let us see what common sense tells about the growth of the young. It tells us that lions and camels, elephants and buffaloes, rats and mice, cows and sheep, alike, grow up to maturity without swallowing a dose of physic. To them, rhubarb is a myth, and "brown powders" are unknown. We see that the lamb frisks about and plays, that the young puppy bites at leather while his teeth are springing, and the kitten amuses herself with her new claws without ever having a doctor's visit. The calf grows up to maturity without a yoke being placed on his neck, and the foal becomes a horse ere he is put into the shafts. It is true that some "two year olds," and those twelve months older are occasionally set to race, but so far as I can learn, the practice is objurgated by the sensible horseman who deplores to see the energy, which should make a good horse, frittered away ere he has fully left foaldom.

But man, whose growth is far slower than that of any animal, who does not arrive at apparent maturity until he is sixteen, and at real maturity until he is about six and twenty, is expected to be able to work with brains or body, and grow, as if he were born a carthorse or an admirable Crichton. No sooner can the child speak well, but he must learn to read, no sooner can he read but he must learn to think, and no sooner can he think but he must learn to talk another tongue and cogitate in a strange language. With all this his growing limbs must keep in motion, whether they like it or not; he must, as best he can, toddle over

the roads for some three or four hours daily to strengthen his joints—and though the bones bend under the weight, and the arch of the foot becomes flattened, he must still walk on, until it is evidently hopeless for him to perambulate any more. I know at the present time a lad aged about four, "the only son of his mother and she a widow"—who is becoming bowlegged and otherwise distorted from the energy with which he is compelled to walk with his mamma, herself as slim and active as a mountain goat.

I can still remember keenly the misery which I experienced in my childhood from the daily walk that I was compelled to undergo, and the weekly increase of suffering involved in two long pilgrimages to and from church. These again were usually supplemented by a peregrination with "the governor," who was as anxious to stretch his legs as we were desirous to rest our own. Even now, when a man, I can still recognize a repetition of the childish torture once endured by myself, and see, though its parents will not, in the distressful crying face of a young child, and his vigorous attachment to the nurse's gown how much he suffers from his peripatetic exertions.

It must be evident to every reflecting mind that a man has no power to hasten growth—the most impatient father cannot "force" his offspring like a gardener can "force" his vines or melons. He cannot compel his son's mind to develop itself any more than he can his body, yet he nevertheless makes the attempt, and hails the rapid dawning of his intelligence as a herald of his future glories instead of the harbinger of future stupidity.

Let us here for a moment linger on the question what would happen to a young horse if we were to work him in a cart as soon as he was one year old, or if we attempted to train a puppy as soon as it could see. The result would certainly be more likely to produce death than a vigorous adult age. In like manner the "forced" intellect soon dies out, and if the prodigy of the useful nursery survives to be a man, he is mostly the biggest fool of the family—while he, who, in consequence of being the greatest dunce, was let alone while young, develops into the sensible, thoughtful, and plodding man.

The nervous system in youth is growing like every part of the body, with the rapid increase there is less firmness of tissues than there is when time has allowed them to "set"—a growing child is always weaker than one at rest, like a rod which is elongated without addition to its bulk. "Spurts" of growth occur with the majority, and these are followed by periods of rest. During the former, the child is as weak as if it had been pulled down by fever, and is cross, fretful, feverish, headachy, full of pains, and more disposed for bed than to pedestrianise. When the

"spurt" has ceased, the appetite improves, perhaps becomes ravenous, play is spontaneously resumed, and there is the appearance of full health until another start is made and the old story comes over again.

Now, if in these periods of increase, the brain and body are taxed to the same extent as usual, if a child, when he is low in strength, is made to learn the same lessons which he was expected to prepare when at his best, he is sure, either to suffer mentally from disorder of the brain, or bodily from the application of the rod. Many a poor lad gets unmercifully punished from not being able to master a task of to-day, which he did with ease a month ago. The reason is obvious to the attentive observer, who can see that the will is present though the power is absent. In looking back upon my own childhood, I can recal many a time in which the cane was more deserved by the stupidity of the master than by the conduct of the boy, the last was dull from the necessities of his nature, the first was culpable in not studying the physical as well as the mental condition of those under his charge. Let me ask any of my brethren, or any man who has much work to do, if he cannot recal a time when, his daily toil being ended, he has taken up a book to study, and found the task impossible. The page is before him, he sees the words, he marks the stops, perhaps even he takes snuff to force a sneeze, or he reads aloud, so as to attack the brain through the ear, as well as through the eye, but all is useless, the overworked man cannot take in a single idea, he cannot think—or if he does succeed, it is at the expense of his night's rest; for an overtaxed brain is generally too tired to sleep. As it is with the adult, so it is with the child. He may be too weak to think, or learn his tasks, from sheer weakness arising from growth of body, or abundance of play. Lessons must, doubtless, be learned somehow or other, but parents, who value the condition of their children's young heads, should insist on none being prepared at night. The schoolboy, tired with his day's play, if he sit down at eight or nine o'clock to learn a "memoriter" translation, mathematic, or numerical task, has no power left in him to do it. The old pedagogues knew something of this when they insisted on lessons being learned in the morning after the night's rest.

Hard intellectual work prepares the man to succumb under comparatively trifling injuries. The late Sir Robert Peel died from an accident which would not have confined a "navvy" to bed, and typhus is fatal in proportion to the intellectual status of the victim. Who cannot recal the names of Count Cavour and Prince Albert, who were cut down by blows from which others would have readily rallied. It is so with children, the more highly their minds are cultivated, the more likely are they

to fall under measles and scarlet fever. The dunces it is who escape, it is the domestic prodigy which succumbs to disease.

A delicate child is usually sedentary, it has not the energy to play, so it very naturally delights in reading, its weak brain seems active, and it is irritable; if it is worked it becomes exhausted, at length diseased, and water in the head is a natural sequence of extreme mental culture.

If health is to be preserved during early youth the child must be treated on the same principle a foal would be. He or she, for the remark applies equally to both sexes, must be allowed to a great extent to "run wild," and "lessons" must be carefully graduated to the bodily powers. There is an old saying in Shakespeare which often comes to my memory :—

> "May-be he is not well,
> Infirmity doth still neglect all office,
> Whereto our health is bound; we are not ourselves,
> When Nature being oppressed commands the mind
> To suffer with the body."—*King Lear*. Act 2. Scene iii.

It is generally so with adults, it is constantly so with children. They are naughty because they are "below par," and refuse to work at books because they have not the power. Even the donkey, when taxed beyond its strength, will bear a load of blows rather than kill itself by labour, and a child who is worth anything, will prefer to bear punishment, rather than task itself to do what it feels is beyond its capacity.

In a previous essay, we have stated that a crying infant implies a weakly mother; in the present we enunciate the proposition that a boy or girl who, being usually good and proper, is unusually fractious, perverse, irritable, or lazy, is ill, and requires rest, repose, bed, food, and sleep, rather than the birch-rod, bread and water, or the dark closet. Still farther we aver, that the individual knows its condition, recognizes the tyranny which would enforce labour from the tired-out horse, and lays up in its young mind the first store of that painful debt, which it expects in future years to pay off, by nasty speeches to the mother, annoyance to the father, or disagreeable behaviour to the world in general.

If we wish to preserve our offspring in health and to retain their affection, if we desire to keep their health to the highest possible standard, and to land them at the quay of adolescence with the utmost possible amount of manly or feminine vigour, we must treat them during their early years as if they were favourite puppies. When good we must let them feel that we are the best friends they have, when naughty, our punishments must be sharp and momentary; when they are disposed to learn we must be careful to teach; when dull, we must let lessons alone; if they want an escapade, we must wink at it first, and

correct the lads afterwards, just as we scold a drunken workman when the beer had gone out of him, rather than when he was full of liquor and sauce. If induced to guzzle and to make the whole happiness of life depend upon gastronomic joys, we must limit the "portions" given, rather than allow "supplies" without end and supplement them by physic. In cold weather we must clothe our young ones as nature covers the Welsh pony or the patient ass; in the warmth of summer, we must alike imitate the universal mother and throw off superfluous wraps. In other words, we must treat our children with the same care that we bestow upon dumb creatures, and with the same abstinence from hard work and nasty physic.

If the mind is educated thus, there certainly can be little doubt as to the possibility of forming a judgment upon the directions of a physician, or the value of his drugs in the treatment of children. Surely any one can see that the symptoms arising from growth cannot be prevented by purgatives, nor ill-humour and pouting caused by debility be cured by powders and potions; and if the doctor profess to attempt it, we may fairly doubt his judgment. We may doubt it still farther, if, with the administration of remedies, the patient becomes worse. But there is this to be said in favour of those who practise our profession which must never be lost sight of, viz., that, if they wish to get their living by their knowledge, they must not only use it to do the right thing, but they must understand when it is not judicious to give effect to their science. If a doctor has to attend a family, the heads of which have a strong faith in drugs, he knows that to attempt to cure by hygiène alone will suffice to bring round his dismissal. As the majority of the people are in this category, it is very natural for the physician to use medicaments. This will, however, be altered, as soon as common sense reigns in the bosom of every family, and its dictates are followed rather than those of a "domestic medicine" book.

CHAPTER XII.

THE CHILD BECOMING MAN.

THERE are two "wise saws," one to the effect that "the boy's the father to the man," and the other that "as the twig is bent the tree's inclined." As it is with many other sayings attributed to the "wisdom of the ancients," there is only a limited amount of truth in them. Indeed, it does not require much learning to demonstrate that the two are antagonistic; for the first affirms that, in the main, education does little, if anything, to change the nature of the individual; whilst the latter is founded upon the belief that training is all-powerful. Not being content to take any fact as genuine, or any proverb as a bit of concentrated truth, simply because it has long been credited, I determined many years ago—when for the first time I had boys of my own to bring up—to test the second adage quoted above. For experiment, I chose a tall young sapling of a year's growth, and by means of pegs and wires bent it downwards until it became almost horizontal; the time selected was March, a month in which the leaf-buds show themselves, and in which a daily progress may be noticed so long as the weather is genial. Every morning as it passed witnessed my interest in the result; and I saw, I can scarcely say with surprise, that all the buds upon what was once the summit of the tree were almost entirely arrested in their growth, while those in the lower portion which were pointed upwards received a fresh impulse. Ere the year was out, the main stem of the past appeared as a horizontal branch, and a small one too, of the growing tree, and I could read easily the moral enclosed in the Latin line "*Naturam expellas, furcâ tamen usque recurret*;" *i.e.*, if you drive nature out with a pitchfork, it will nevertheless come back again. Where I now reside an illustration of a similar kind may be

seen before my door. There is growing, close beside one of its congeners, a birch tree, and from some cause its main stem has been bent at an obtuse angle from the trunk. Yet year by year, what was once a small twig arising at the angle assumes larger proportions, and it will ultimately become the most prominent limb of the tree. What is true of certain trees is true of human beings. As the gardener cannot make a creeper grow like an oak, nor a weeping willow shoot upwards like a larch; as he cannot make an alpine plant flourish in a "stove;" or a "conservatory" shrub thrive on the mountain—so neither the parent nor the doctor can transform a natural sneak into a magnanimous hero, nor convert the rough honesty of one of nature's gentlemen into the smooth-faced hypocrisy of the treacherous Hindoo. A wolf will still be savage and bloodthirsty, no matter what may have been its education, and the sheep will ever be timid, no matter what pains the shepherd takes to teach it courage.

But though education cannot eradicate natural propensities, it is often successful in enabling the individual to conquer them by the force of his will. It is, indeed, a well-known fact, that the coward by birth who masters his failing by the energy of his mental powers, is far more resolute in danger, and more cool in every emergency where instant action is required, than the individual who from his powerful configuration never felt fear, until, perhaps, the final one which felled him. The late Dr. Fergusson related to his class how, as a young man, and an officer at a "Lying-in" hospital, he had been sent for to a case of "placenta prævia," which is always attended with appalling flooding. The patient was very poor, and every other doctor who had arrived to aid her, when they saw how matters stood, had turned and fled. Dr. F—— followed suit, and only, as he said, recovered consciousness when he had almost reached the hospital from whence he came. With returning thought came a self-accusation of cowardice, and he determined to return; he met with difficulties in again finding out the street and house, even the name was forgotten, but he faced them all, sought out, met, and overcame the danger.

If education will do so much as to counteract the bad or feeble qualities in our nature, it is certain that it may do more to undermine our better propensities. All of us are more apt to be lazy than active. Improvement requires energy; whilst deterioration comes spontaneously. Example will teach a child to stammer or to pilfer, and fright may lay the foundation of incurable brain disease. The parent, teacher, or servant, who cultivates in a child that dread of the unseen which is common to us all, for the sake of gaining personal comfort by terrifying the young into quiescence, may deprive the future adult of all manliness, and make his every year a terror. But as we do not

profess to make any dissertation upon education in general, except in so far as it concerns the physical health of the individual, we will not pursue this train of thought any farther. We will consider rather the changes which take place from the period when the boy is first "breeched," as the old saying ran, until his whiskers began to flourish.

Throughout the whole of that time the child is growing in length and breadth; the first set of teeth, with few exceptions, are removed, and the permanent ones take their place; the appetite increases, and very frequently seems to the small-eating parents to be "ravenous." Nor can we wonder at this, for the father simply takes food to keep up a body full grown, whilst the child has not only to sustain his framework, but to increase its timbers. About this time of life, Nature has implanted in all animals a love of fun, sport, or frolic: the kitten amuses itself by running after its tail or clambering over and around the old cat; the canine whelp passes its time alternately in tearing at some old bit of leather or any other stray waif or bit of soft material it can find; racing in mad circles round its mother, sleeping and eating. The calf and the foal are no exceptions to the rule; even the ponderous young elephants and the mis-shapen buffaloes gambol, we are told, like kittens when young. What is natural for animals is natural for man, and one of the first requisites for health in our offspring is a playground.

But as the untrained puppy cannot be expected to become a valuable dog unless he be well trained, so it is necessary, if we wish our children to become valuable men, that we must train them too. Now, no master of hounds would think of teaching a young dog incessantly for six hours every day; and in like manner the schoolmaster ought to be moderate in his apportionment of work.

There are few things more important to health than the due adjustment of play and learning. The school at which a lad of ten is made to work at his lessons for the same time as a lad of sixteen, ought to be avoided by all parents, until their young ones have grown up.

A boy forced to get up at six o'clock, learn lessons until eight, and then go through a routine of schooling until seven o'clock at night with only an interval of two hours for his meals and recreation, and that, too often, curtailed by way of punishment, is pretty sure to go to the bad, or else to lose his health. The human mind develops slowly, and if it is forced beyond a certain limit it breaks down, just as does a colt when overdriven. It has long been a question, "What becomes of all the clever children?" and the only answer is, "They become humdrum gawks or gouks with nothing in them." "What, on the other

hand, becomes of the dunces, those who prefer, and who in spite of punishment continue to indulge in, all sorts of bodily exercise rather than pore over stupid Greek and musty Latin, who are great with horses, dogs, and game, and very small over Algebra and Euclid?" The reply is, that it is they, who, as a rule, become our great men; it is they or others like them who carry the enterprise of England to the uttermost parts of the earth, as soldiers, sailors, engineers, or emigrants. Their office is to bridle Nature, and make her subservient to intelligent man. Somebody has remarked that "a spice of the devil" is an element of success in life, and there is much truth in the saying. If, then, a master finds such a "bit" in any of the lads under his care, it is important that he should do his best to make the devil a *good* rather than a *bad* one. Judicious training will make a fiery spirit a valuable man, whilst a faulty management will convert him into a malignant creature, great only as a human beast.

In our last paper we pointed out that bodily weakness, such as that which is produced by rapid growth, deteriorates for a time the mental powers, and so prevents "lessons" being mastered with the usual facility, even if they can be learned at all. At such periods, we remarked, that it was advisable to give the lad a complete rest from intellectual study, and to allow him to run wild. If able to play, he will amuse himself with boyish sports, and thus strengthen his frame; if unable to take much exercise, he will rest and read, and thus gradually form and amply store a mental granary, which he may never afterwards be able to exhaust.

To this it may be objected, that such suspension of work *must* necessarily be prejudicial to the future knowledge of the child. Like many other "musts" the observation is musty, and founded on prejudice alone. Experience in many village schools, has taught those who were once red hot upon the education of the poor, that the best taught boys, those who stand highest in the village schools, are the worst labourers. Intelligent in figures and amongst books, they are "at sea" amongst sheep and cows, and in the garden, field or grove. To counteract this, a plan has been adopted in some localities, for allowing the boys to go for three days a week to learn some occupation, and for three other days to go to school. At first the auguries from this regular irregularity were unfavourable; yet time soon showed not only that lads thus brought up were better labourers, whether skilled or otherwise, than the old bookworms, but positively that they became better scholars than those who were muddled by the daily plodding. Alternate relaxation and work made their minds fresh to receive instruction, whilst the intermittent rest, from books, gave the knowledge which they had acquired, ample

time to take root. A boy or man who is constantly learning something new, has no opportunity and very rarely has the inclination to arrange his knowledge in his mind and draw inferences from it; whilst one who can pause between new facts discovered, may be able to see more in it than others can. Speaking personally I may say, that whilst I was simply a devourer of books I was quite content to know, or simply to *remember* what had been written; but when separated entirely from them during seven or eight months, I began to digest the huge quantity I had devoured, to think for myself, and to analyse everything which I had already perused. Then for the first time it was apparent to me how vast an amount of chaff and how very little sterling corn there was in the large mass which had to be winnowed.

I have already repeated more than once that the mind develops slowly, and that any attempt to force it prematurely is prejudicial to the general health; but though the general process of expansion is slow, there are two periods in which a great "start" is made; the one at what is called "puberty," and the other at or about the age of twenty-two. With the last we have nothing to do: we will rather concentrate our thoughts upon the first. This period is recognised in boys by a change in the voice from a feminine to a masculine tone; but the transition is slow, often lasting for one or two years, during which the voice is said to be "cracked." At this time certain desires to which the lad was formerly a stranger are always developed, and if the growing lad should indulge them when they arrive, or should, by the evil example of older boys endeavour to produce them, and this conduct should remain unchecked, he will do serious mischief to his health, and often entirely ruin his constitution. The duty both of parents and teachers in the early training of males under their charge is one of considerable difficulty as regards personal vice. The father fears to speak of such a matter to his son, lest by telling him of something of which he was before ignorant, he may bring about the mischief which he deprecates; and he equally fears to avoid speaking, lest his son should ultimately reproach him for his silence. Through this ordeal I have had to pass, and elected the first alternative; but though my son was barely eight years old, I found that he had already been told about the matter by his schoolfellows. But I was in time to instil into his mind a knowledge of the serious nature of the practice, and had the satisfaction of knowing afterwards, not only that he was himself convinced of its evil, but that he was a leaven amongst his schoolfellows, so prevented many from indulging in deeds whose danger they altogether ignored. It is impossible, in the compass of a short essay, to point out the various methods by which the mind of boys may be influenced

in such matters; but that the attempt ought to be made I feel certain. I do not believe that there is any one single thing which more materially influences the bodily and mental vigour of the man for good or evil than a close attention to, or a total disregard of, the dawnings of "masculinity." A retention of the natural secretion gives firmness to the muscles, breadth to the chest, power to the brain, and courage to the animal; whilst, on the other hand, a continual expenditure of the vital fluid produces softness of flesh, dulness of mind, hebetude in understanding, cowardice in action, effeminacy in manner, and contemptibleness in general. The pure chaste youth becomes a man respected amongst his fellows, and admired by the opposite sex; whilst the solitary impure or vicious lad becomes amongst men as woman without her charms, or like a wax doll amongst children.

There is, however, another point in the management of youth to which attention should be called, respecting which I have frequently been consulted—viz., the propriety of allowing them to drink beer or other fermented liquors, and the advisability of enforcing upon them a strict teetotalism. The current notion is founded upon the old "saw" which we have discussed, that if a lad drinks ale before he is ten years of age, and wine ere he attains twenty, he will, perforce, become a drunkard ere he arrives at three-score. The idea is not even founded in fact; it is true that some who are drunkards have begun to be so early in life, but it is certainly not a fact that those who do take beer or wine medicinally in youth, get a liking for it in old age.

As a general rule, children dislike fermented liquors; but when they are growing fast, are delicate in constitution, and have poor appetites, they relish it, as a horse revels in a feed of carrots, or a teetotaller in a savoury pudding. We have elsewhere stated that beer is to a certain extent equivalent to beef, and that the boy who cannot eat mutton will often dine upon a glass of ale. It is important that this fact should be fully known. There are many boarding-shools in which the food set before the boys is coarse in quality, and so badly dressed, that it produces loathing. The idea that all lads have a ravenous appetite and can put up with the same food as would suit a yard-dog is pre-eminently false, and yet it prevails so generally that there are few pedagogues who do not act upon it. If under such circumstances the youth is obliged to drink water as his sole beverage, he will almost starve; if, on the contrary, parental care allows him a daily modicum of beer, he will contrive to get along with the better or more palatable food which the breakfast and tea supply.

I am acquainted with one family whose father, a clergyman, and very sensible in most respects, entertained the belief that

the greatest bane to children was indulgence in food and drink. Many a time at his table have I pitied the poor lads who were obliged to be contented with less than half the supply which was given to me—for as a guest I was treated well. That family I have watched with the greatest interest to find whether the result would show that the parent's idea was correct. One died in childhood of pure exhaustion; another, whose talents were undoubted, took an ægrotat degree at Cambridge; another whose genius shortly would have been recognised by the world was, for many years, a frequent sufferer from myalgia, and died at the age of forty of pure debility without any organic disease; and the daughters are by no means strong. At the same time, I knew another family who were allowed to follow the dictates of Nature, to eat as much as they required, and to drink as much as they wished, provided they never outstripped the bounds of propriety, which on one or two occasions some of them unquestionably did. The scions of this tribe are as healthy a lot in adult age as can be required; they have not any propensity to exceed either in food or drink, with one exception; whilst the former are suffering from the false philosophy of their father, the latter are chuckling over the advantages which accrue to children whose parents adhere to the dictates of common sense rather than the caprices of *soi-disant* philosophers who mistake their own assumptions for undisputed facts.

To this we may add a few words about the use of tobacco. There is no doubt, so long as *men* smoke, that *boys* will imitate them; and it is equally certain that Paterfamilias who begins in his maturer years to find a plurality of cigars offend his stomach and interfere with his digestion, will believe that the same effect must happen to his youthful sons. Mamma, perchance, detects the smell resulting from meerschaums as much in her husband as in her offspring, and speaks strongly in accordance with her views. But, practically, the philosophic physician has no particular fault to find with tobacco when it is indulged in with moderation. A mother for whom during her lifetime I entertained a high respect, had an aphorism that no one ought to objurgate the *use* of anything simply because some folks *ab-used* it. I believe the dictum; and as there is no medical reason why our sons should not smoke as their fathers have done before them, I believe it to be better to *direct* the habit rather than to *resist* it strongly or forbid it wholly. The proper rule for the use of tobacco, and one which I would wish to inculcate on our adults as upon our youths, is, "Never smoke when by so doing you make yourself disagreeable to others." A young man reeking with cigar fumes and with his clothes nauseously horrible from saturation with stale smoke taints the air of a drawing-room, and he stinks like a drove of pigs, or an

American skunk. Yet there is many a gentleman who would cry "snob" to an individual allowing a "coachman" redolent with a *stable* odour to wait at table, who will himself mingle with fair women of delicate nurture and diffuse a fœtor equally disgusting.

As the fables which we were taught to read in infancy were always followed by a moral—one that we always "skipped" when boys, but which we always have read first, since we were men—so we feel disposed to add something of the same kind to our discourse now, in which may be contained the pith and marrow of the preceding paper—the text, indeed, which comes after the sermon instead of at its head; *le voici*:—If you wish to preserve the health of your sons, feed them fully, work them progressively, educate them judiciously, and instruct them as to their future carefully. Remember that the child will become a boy, the boy a lad, the lad a man, and act accordingly.

CHAPTER XIV.

THE YOUTH BECOMING WOMAN.

It is very difficult to discover what are the opinions held by the majority of parents respecting the education of women. It is indeed difficult to form an opinion of our own. The father wishes his daughter to have such accomplishments as shall conduce to the pleasure and happiness of the domestic circle. He hopes that in her may be seen once again, the charms which were admired in her mother in the happy days of courtship. He loves the anticipation of hearing many a thrilling note from the throat of his human bird, and of seeing some lovely picture or charming embroidery grow under her deft fingers. He little recks of French, Italian, or "the use of the globes;" nor unless he wants his daughter to be "the courier" of a continental party, does he care whether she knows a word of German. It is even probable that if he has any personal knowledge of the ordinary style of writing fiction in Paris, he may rejoice that his daughter cannot read the novels which are so popular in modern Gaul, and amongst the "fast" youth of London. The mother wishes her daughter to be sufficiently charming, to have a chance of attracting some one who may become a suitable partner for life. She has heard of some old saying that women are experienced in making traps to catch men, and according to her own amount of good sense, does she remember or forget that the true version of the "saw" is that "women are more clever at making nets than making cages." If she herself has the good fortune to possess a husband worthy of esteem—a piece of good luck that falls to many a good and sensible wife now-a-days—she will recognise that one of the aims of education in the young should be to fit her mind for all the various pleasures, duties, and troubles of life which surround the matron, and she hopes that the reasoning faculties of her child will be drawn out, as well as her head crammed with learning or her heart with romance. Some

mothers think when once their daughters have left school, apparently, of nothing more than procuring for them an eligible "parti," and to this end the accomplishment of music and dancing are flaunted constantly and cultivated closely, to the exclusion of more solid but less attractive matters.

Some again who have their daughter's welfare at heart, irrespective of any settlement in life, rejoice in having their child once again under their own tuition, when they may assist the mind to develop itself, and the judgment to assume a steady form; when they may sweep away many of the cobwebs of fiction formed amongst schoolfellows, and instruct their girl to look at the world around her from a common sense point of view. Such a mother will teach her daughter all the incidents of housekeeping, point out how much of humdrum there is in everyday life, and how necessary it is so to manage oneself, that the periods when the whole family unite round the social dinner and tea table should be cheerful—an occurrence scarcely likely if the mother and daughter are as fatigued with their daily duty, as papa and the boys are with their office or other work. But there are a vast number of parents who never think at all seriously about feminine education, and content themselves with sending their daughter to an "academy" highly recommended by some friend in whose judgment they have confidence. Knowing that ladies' boarding schools are expensive luxuries, they prepare themselves to pay annually a good round sum, that is to include everything which the Misses Bongout teach, for these ladies warrant themselves to turn out an accomplished young lady, who shall be everything that papa can expect.

When once at school the girl finds herself under tuition from early morning till the long-desired bedtime comes round. Her head has to be crammed with rhetoric, composition, the elements of astronomy, geology, geometry, geography, history, and chronology. She must learn to forget her own language and speak and think in French. She must plod over German, commit the Italian tongue to memory, and have at her finger ends the theory of music. For one or more hours daily she must sit on a stool and practice her "scales," &c., on the piano or harp, and as certain days come round she must sit at her drawing lesson, or undergo exercise at gymnastics, or as they are usually called, calisthenics, and once in the day she is led out to walk with her companions in stately parade. Throughout the livelong day keen eyes are upon her movements, romping is not allowed because it is unladylike, the tired back is always to be kept upright, lolling is not permitted, and should there be any deformity apparent, a backboard is ordered for use instead of an easy chair. Fun is mostly repressed, and a hearty laugh—that loud guffaw which both in men and boys relieves the tension of

an overtaxed brain, is punished with a bad mark or some other of those ingenious contrivances for punishment which ladies adopt amongst themselves.

There are few who have experienced the relief afforded by a hearty laugh when all the fibres of the mind are upon the extremest stretch, who do not feel the privation of not indulging in it. We have been in court during a heavy trial for murder, in which every tittle of evidence has been weighed with a caution amounting to a punishment. As man by man enters the witness box the interest of the drama becomes deeper, until those most concerned can scarcely draw their breath. At this period we have noticed some absurd remark made by a rustic convulse everyone with uproarious laughter, in which even the prisoner has joined. The prudish may censure such an occurrence, for they probably have never felt the depth of anxiety which is requisite before such an event can happen.

Well now, what is the result of all this education on the generality of young women? Why their health is broken, their minds are almost a blank, and may be appropriately compared to that hand which a fable tells us was passed through a narrow opening into a stove of nuts or plums. It could readily grasp a handful of the fruit, but the distended fist could not pass through the aperture. In like manner facts crammed into a brain are often quite unable to be drawn out through the mouth, and a school girl's conversation is as empty as her brains are supposed to be full. A woman of strong good sense told me as her own personal experience, that the period of her life from twelve to fourteen, was the most unhappy she had spent, she was always ailing yet obliged to go on with her school work, and of the whole of what she had learned, or was said to have been taught, during that time she was perfectly oblivious.

As a physician and lecturer on medicine, I know that there were special sets of maladies made up for the benefit of young ladies. All such were supposed by doctors who were silly and quite as illogical as school girls, to be romantically fond of sympathy, foolish in mind, to be silly in habits, and to have their heads always full of marriage, yet with all this to have a constitution which nothing could injure. If a girl had a pain in her side it was "hysteria," if the suffering was along the spine and the tenderness of the surface was so great that a touch was exquisitely painful, it was only "hysteria." If there was headache it was "hysterical," and if vomiting was common it was "hysterical" too. If the anxious parent cross-examined the doctor what "hysteria" was, his reply in ninety-nine cases out of a hundred would be, that it was a name given by doctors to imaginary ailments which are put on or taken off as easily as a glove, to symptoms, which were feigned purposely to excite

sympathy, that tender regard for such pretended pains always made matters worse, that the patients ought to be treated roughly like naughty children, and perhaps it was added that marriage would set them all right again. If the medico was cross-examined as to what he meant by saying pain was imaginary, his answer was that it was not altogether so, but it was "hysterical pain—a pain you know which becomes worse by being thought about, and which can be made to go away by paying no attention to it." In other words it was a fundamental belief amongst physicians—even the most learned—that no young unmarried lady who complained of certain pains, however correct her morals and her conduct might be in general was to be credited even upon oath whenever she described certain pains, sensation, cramps, spasms, flatulence, &c. This idea is still current amongst some who are in practice in great London, for I have positively been told by a hospital physician of good standing in that metropolis, that for me to believe the statements made to me by young women, was to neglect one of the first principles of diagnosis!!

Instead of having recourse to such a shameful means of accounting for the frequency of suffering amongst young females, let us take a matter of fact view of the case, and follow them through their daily routine. Up at six or seven, school girls have to leave their beds ere they have sufficiently rested from the fatigues of the preceding day; after sitting upright and studying for two hours they have for breakfast a cup or two of washy tea, and two, perhaps three, moderate slices of bread and butter, for to eat much is "so very boorish;" again they have to sit or stand with back erect till dinner time, when fat mutton and water or beer largely diluted from the fountain, and a bit of pudding is their lot, for "a large appetite is unladylike." Few country bumpkins or other men prefer fat mutton or beef, but "young ladies must not be saucy," and so they have Hobson's choice, that or none; and they often elect the last, and go to the afternoon's work on an ascetic repast of bread and water. At tea, they again have a meal of water bewitched, and two slices from the loaf thinly spread with butter, afterwards go off to lessons again, have a dance to warm their feet and then go to bed; but not perhaps to sleep, being unable from hunger and excitement to do so until it is time to get up again.

The picture is to my certain knowledge not overdrawn as respects some schools of high class; it is overdrawn for some others in which the dietary is everything which the most rigid doctor could require. But if a girl is growing and has both her body and mind overtaxed, she loses "heart," "spirit," and appetite, and being unable to replenish her wasted energies by food, gradually becomes weak and weaker, until the exertion of sitting upright is too much for her enfeebled muscles to bear, and they

become the seats of suffering severe as that of tic-doloureux, of pain which, as it comes on by exertion disproportionate to the strength, is relieved by rest. The old medico who found that a few days in bed cured intense agony, which came on again as soon as work was resumed, might naturally imagine that the pain was feigned, so that sympathy might be excited, and a holiday obtained. The modern physician, on the other hand, recognises the fact that the work done is too great for the power which the individual possesses to execute it, and he does his best to adjust the one to the other. School girls are generally "delicate" in health, simply because they are far more overworked for their strength than boys are. Let us sketch the difference as best we may,

A boy romps and laughs, plays at athletic games, whips tops, runs races, climbs trees, leaps, jumps, and exercises all his muscles in turn. He lolls at his ease in his chair, or on his form, and assumes any attitude he pleases at his desk. He has, from his games, a sufficient appetite to eat heartily, and out of school hours he feels no restraint. The girl, on the contrary, never romps, runs races, whips tops, &c. She only sits upright and walks, thus exercising, and sometimes all but withering one set of muscles only. She cannot shake off for a moment the feeling of restraint, and she naturally loses appetite, becomes languid, faint, and low. If "all work and no play makes Jack a dull boy," it makes Joan insipid, stupid, and narrow-minded, dreamy and perhaps pre-eminently silly. The boy comes into rude contact with those above, below, and around him. He has to endure "chaffing," to learn to "hold his own," to fight perhaps, if need be. Even in his games his mind has to be active. He has to think about the most judicious way of "fielding" when Tom is at "the wickets," or for "looking out" when Dick kicks the football. This developes his sharpness, observation, and intellect, and teaches him his place in the world as it is. The girl, on the contrary, is so hedged about with protection, that she has no independent power of her own, nor can she learn life, for the book is kept closed to her.

Let us at this moment pause awhile, for memory recals to mind the name and nature of many blooming women whom we have admired for their loveliness, their good sense, their genuine worth, and speaking professsionally, for their thorough healthfulness; and let us ask "How have they been brought up?" Why almost invariably in the country, living with brothers, and sharing their sports in a feminine way—riding or walking, irrespective of dirty lanes; boating, playing bowls, or croquet, swinging, lolling under the greenwood tree, eating as much as they liked, and only under restraint during the period when they were with Miss Tuteur or Professor Guitarro. They

have had, perhaps, a single year at a finishing school to enable them to break off, naturally, a few objectionable habits, and to part with a few undesirable acquaintances, and to pass with ease from the girl to the woman. When such an one leaves school she does not think of it as a place of punishment to be avoided. She has indeed most probably acquired a fondness for music or painting, or found sufficient interest in German or Italian to continue its study. Her mind with its healthy tone, unspoiled by the incessant worry of school, seeks for occupation rather than for inglorious repose. To such an one brothers will tell their little adventures, and whether she have beauty of face, or elegance of form, or be in reality somewhat plain, she is voted "a brick," and as such takes an honoured place in the domestic architecture.

The conclusion to be drawn from the foregoing remarks is inevitable, viz., that if we wish to preserve the health of our daughters we must not overwork them. The horseman does not put "a filly" to labour at a period when he would allow a "colt" of the same age to be idle in the field. If we insist on our daughters learning double the number of subjects that their brothers do, and in the same amount of time, we are certain to impair their health, and no amount of doctoring will prevent the catastrophe. It is all nonsense to imagine that beauty of face and elegance of figure depend upon "deportment" being taught at school. Those who believe such trash can never have read in Cook's voyages and those of other men of the graceful charms of the "savage" women of Owhyee—or have read the pretty couplet in which Scott describes his charming "Lady of the Lake"—

> And ne'er did Grecian chisel trace
> A nymph, a naiad, or a grace,
> Of finer form or lovelier face.
>
> What though no rule of courtly grace
> To measured mood had trained her pace;
> A foot more light, a step more true,
> Ne'er from the heath-flower dashed the dew, &c.

The real fact is that Nature makes far more women lovely than does Art—the latter indeed spoils far too often the intentions of the former. Increasing age and strength will do far more to make an ungainly figure comely, than attention to back-boards or a sickening course of dumb-bells. I presume that some men are supposed to be well-made and handsome, and as they never condescend to be trained in "carriage" of themselves, their natural grace is certainly not the result of instructions in calisthenics.

Amongst the preceding observations we have not made any reference to the physical changes which announce that the girl

has at length become a young woman. As in the decline of life many a symptom is attributed to the cessation of the catamenia, which have nothing whatever to do with them, so before the ordinary flow is established, there are a number of ailments attributed to its approach which are wholly unconnected therewith. The period of life at which the change occurs varies from eleven to fifteen, and under exceptional circumstances, is sometimes both earlier and later. Now this is the very period during which growth is always the most active, and education the most strongly pressed forward. To a girl in good health generally, there is no more necessity for provision at this time of life than there is for a boy—of course, I am not now speaking morally. The change is established both in the one and in the other as a matter of course, and mamma's advice or assistance to the female is required far more than than that of the physician.

But when once the change has occurred, it is important for the woman to know that it does affect her condition, whenever the amount is such as to diminish, seriously, the amount of blood in the body. If a school-girl has great difficulty to get through her daily toil when all her strength is unimpaired, she certainly will not get through it better when her powers are seriously reduced, once and sometimes even twice a month; and, as a rule, it is well to understand that debility of constitution increases the amount lost, both as regards the rapidity of the flow, its duration and the frequency of its recurrence. No one who wishes a horse to keep in good condition for work would bleed him every day for a se'nnight, with only an interval of two, three, or four weeks between each series of operations neither if the blood were lost spontaneously would his master work him so hard during that period as at other times. Nor should a girl be treated differently.

There is one matter, however, about the youthful period of life in women which requires much attention and particular care —viz., the condition of the bowels. So long as the school-girl lives a natural life, and only as it were attends to her education episodically—when she runs wild during her hours of idleness, eats and drinks naturally, all the functions of the body are carried on with regularity; but when the child is doomed to an eternal round of "lessons," to live on tea, and bread-and-butter, with a very moderate slice of beef or mutton, the constant sitting produces an amount of constipation which is, with difficulty, overcome. To administer medicines usually makes matters worse; to let things take their course, often eventuates in serious mischief, and there is great judgment required in balancing between too much and too little interference. When such a state of matters has to be met, it is always desirable to attempt to rectify it by diet, or by the use of such mild aperients as

Cheltenham water, or a weak solution of artificial salts. Upon matters of this kind, however, it is more desirable to have medical advice, than to endeavour to be one's own doctor. These essays do not profess in the smallest degree to make the sickly well, or to promote cure when any disease is present. They are simply intended to warn readers against those habits, customs, and mistaken ideas which directly tend to the impairment of health.

The moral of this essay can be readily deduced :—It is, that we should treat our daughters as if they were reasonable beings, or as if they were expected to become so. We should think of their health and happiness, rather than of the amount which we have to pay to masters when the bills come in ; and should educate them rather with the hope that they may gladden our own fireside, than flit away to another. Even in a worldly point of view, this plan is better than that which makes a young woman a man-trap. Those who seek for wives, prefer to choose amongst the good daughters, rather than from the "gad-abouts," every man believing that a good sister and a good daughter is certain to be a good wife. As Benedick selects a partner for his own comfort, rather than for the benefit of his friends, he will naturally prefer one who has the virtues which will adorn the home, to one whose flashiness sparkles in the ball-room. Let me add too, for the thoughtful consideration of mamma, that eligible young men examine into her character as closely as that of the daughter. Few marrying men care to unite themselves to a girl whose mother is vain, silly, and indifferent to her domestic duties. Home is regarded as a school, and the more perfect its teaching and example, the better are the prospects of those brought up therein.

CHAPTER XV.

THE USE OF BATHS.

THERE are few adages more frequently at the tongue's end of the lady visitor, when she finds herself amongst the squalid dens of poverty, than that "Cleanliness is next to Godliness." She sees that filth is ever the accompaniment of drunkenness and vice, and that a woman who can tolerate a dirty floor in her dwelling, and a filthy face on her shoulders, is generally a slattern in mind as much as in body, and quite unable to see any virtue in thrift, or any advantage in going to a place of worship. On the other hand, the same lady notices that the tidy housewife is generally a good specimen of her class—attentive to her religious duties, and anxious to be a loving wife and a tender mother—she recognises water as a valuable luxury, and agreeing with the visitor as to its powers of cleansing away physical filth, they naturally conclude that it must have some great influence in promoting spiritual virtues, hence the adage attains almost to the position of a sacred truth. But the generalisation, though it may be true to a certain extent, is practically of no value, as we shall see from a very short consideration. We turn our eyes, in the first place, to such islands as Hawaii, or certain others, in the warm regions of the vast Pacific Ocean, and find there an amount of cleanliness and bathing which few in smoky England can attain to, and yet there are under those pure brown skins, which are unsullied by the least bit of "grime," hearts as black, and sins, in our own estimation at least, as deadly, as are to be found in the darkest purlieus of London, the black country, or Birmingham. We look again to India, where the washing and bathing are almost incessant, and there we see equally a mass of vice, or that which is regarded as such in Great Britain, which is to the full as great as that which is common amongst ourselves. If we examine the history of the rat—an animal in whom cleanliness, amidst the most difficult circumstances, is a well-known virtue—we find that his love of this Christian habit does not pre-

vent him being fierce in fight and cannibal in propensity. Woe to his brother, sister, or friend, who becomes diseased! For him the shrift is short, and the funeral rapid, for he is eaten up at once, lest by the decomposition of his corpse the dwelling should be made unclean. Of all the ancient nations whose customs have come down to us in their writings, the Jews stand pre-eminent for their cleanliness, and yet none can say, that as a people, they were superior, in a Godly point of view, to all others which have existed.

The simple fact seems to be, that in England, where coal-smoke abounds everywhere—even at a distance from large towns, every individual receives a sooty covering, which offends the careful eye. The lovely complexion of the child cannot be seen to advantage when it is concealed by a thin film of dirt, nor can the beauty whose face and linen are alike grimy, reasonably hope to be admired. With us, then, a want of washing is equivalent to harbouring dirt, and encouraging filthiness of skin is as much an evidence of inattention to the exigencies of society as moral turpitude would be. The female who won't wash her face and take her hair out of curl ere she comes into contact with her fellows, is estimated by men to be as indolent in mind as she is slatternly in person; and since eligible young men prefer to have a tidy woman rather than a slut for a wife, her chances are small in the matrimonial market. In large towns, however, the difficulty of getting water for all purposes, is often considerable, and consequently, cleanliness cannot be attained without considerable sacrifices. When, therefore, in the worst localities, such neatness is met with the visitor admires it, as it argues great strength of individual character, and is generally associated with a powerful sense of duty.

But when an individual is living in a smokeless air, like that of France, Italy, and other countries, where wood fires (and not very many even of those) alone are burned, there is no smoke to taint the skin, and consequently, no necessity for a frequent wash. The denizens of Switzerland, and many another country, have been held up to ridicule by British tourists, on account of the small provision made in their hotels and houses for a thorough morning's wash. The sturdy Briton wonders how the simple folk can exist without a matutinal scrubbing, and some go so far as to estimate a nation's worth by the amount of soap which it consumes. The inhabitants of the pure-aired country, on the other hand, and quite as rationally, estimate a nation's filthiness by the amount of water which they require, and the quantity of soap which is wanted as an abstergent. Tested by this, the English have the character of being the dirtiest nation under the sun, and they richly deserve it. None do more to poison the air with the products of combustion and various manu-

factured smells. Even the lovely mountains of Cumberland are tainted with the smoke of Manchester and other northern towns, and on many occasions I have seen the water on some western bay in Lake Windermere coated with a compact layer of unmistakable soot, which had been borne on the wings of the wind from far distant factory, or other chimneys.

Where it is an exigency, for appearance sake, that cleanliness should be cultivated, it is very natural that those who are so prudishly disposed as the English, speaking nationally, unquestionably are, should try and find some other reason for cultivating a freedom from dirt, than personal vanity, and the desire to be as pleasing as possible. Hence, we have adopted the formula, that "Cleanliness is next to Godliness," and it is absolutely necessary to health. Hence, we have long tirades about the folly of allowing the pores of the skin to be choked up with dirt, or stopped up by their own secretions, which are pure nonsense, for dirt no more closes the highway of perspiration than common mud prevents traffic on a high road. We point triumphantly to the Greeks and Romans, and their constant use of baths; and look with complacency on the wondrous remains still extant in Rome, of the vast establishments of Domitian and Caracalla, and the great number of marble basins found in the remains of private villas, but we forget to examine whether the nations who used them, so prodigally, were a healthy lot, and whether their average age at death was superior, or even equal, to our own, and whether any remarkable amount of godliness characterised them.

It is almost impossible, while staying in the "Eternal city," for the mind not to be attracted to the difference between the past and the present, and to institute, as far as possible, an inquiry as to the results of the ancient prodigal lavation, and the modern non-bathing system. So far as I could detect, the advantage was wholly in favour of the latter. Whilst sojourning at Rome, I examined every ancient tombstone, to find out the average age at death, and the frequency or otherwise of death at an advanced age; but the oldest age that I could find recorded was fifty-six, and the majority of the people died ere they had reached thirty. In modern Rome, on the contrary, longevity is common, and the average duration of life little, if at all, less than in England. Again, there are certain monkish fraternities in Europe who, in the admiration of asceticism, abjure the use of water externally, and if dirtiness of person is prejudicial to health, these ought to be particularly delicate and short-lived, yet the reverse is generally the case. Nor is it to be wondered at, for the pig who seems to revel in filth, is to the full as healthy and vigorous as the fine lady who devotes an hour a day to her ablutions.

There can be no reasonable doubt that the external use of water as a healthful agent has been praised far beyond its deserts, and from this very cause it has been by some decried. The lad upon whom a stern parent inflicts a daily sponge bath of cold water—no matter what the suffering inflicted by the cold and subsequent "towelling" may be—under the impression that it is good for the health, is very apt, when accident relieves him from the matutinal punishment, to examine whether he is any worse for the omission. And when he finds that no bad result can be discovered, he will be pretty certain to give the morning misery "a wide berth,' as soon as he becomes his own master. The philosopher, however, is not contented with such pendulum-like reasoning, which is now high up on one side, and again on the other side of the perpendicular, and he wishes to ascertain what amount of good there really is to be met with in the use of water externally, or in baths and bathing generally.

He very soon recognises that bathing is a luxury. If he be a traveller, he probably knows what it is to stand on the brink of a mass of water—himself grimy with dust—and to plunge into the attractive fluid, and roll, dive, or otherwise disport himself in it. He knows how delicious is the sensation of freedom from the gritty sand, or the dirty powder of the high road—his limbs feel easy, and there is a sensation of lightness where none existed before. Sometimes he may see, on a hot day, a bevy of fair girls, attired only with some light chemise or other dress, sitting up to their necks in a shady pool, or again, a lot of active boys bathing on a summer's day, without a rag to restrain their movements, and seeming to enjoy their freedom from the restraint of civilised life, as well as the coolness of the water. He knows, too, the luxury of a hot bath after a day's incessant toil—the exquisite pleasure of gliding down beneath the surface, till every hair upon the head enjoys a separate existence, and can be felt in pleasing movement as the water surges round it. Bed is pleasant to the tired traveller, but if his limbs ache, and his skin is sore, the pressure of the clothes is painful. In the bath the body sustains itself—it has lost its weight; the arm can sway almost without an effort, and all movement becomes luxuriously easy. There are those, again, who know the life-giving sensation imparted by a shower-bath. After a sleep, heavy it may be, but which has scarcely served to efface the effects of yesterday's toil, the inexorable alarum, or the housemaid's knock, awakes us once again to the round of our daily labour. Mechanically we rise, stagger to our feet, and with a rolling gait, pass on moodily to the prison-looking chamber which encloses our bath. We then unrobe, step lightly, but valiantly, into the cold closet, and pull the string with desperation, and shiver involuntarily as the heavy shower patters on our head

and shoulders. Doggedly we wait till the end, for as Britons, we scorn to run away from the annoyance which we have created for ourselves—and when the drops begin to patter slowly, off we spring as nimbly as a young kitten—and with all the dullness of sleep washed from our eyes, we rub ourselves vivaciously, hurry into our clothes, and then, for the first time in the day, feel the proud sensation that we have done our duty nobly, and have reaped an adequate result.

As a luxury, we allow to bathing its full value, but the estimate does not help us to its curative powers unless we assume that whatever is delicious to the feelings must be good for the constitution—a postulate which few would grant.

To ascertain philosophically the sanitary importance of baths, it will be well for us to examine into the nature of the skin. This, as we all know, covers our bodies, and is liable to certain changes. In some it is habitually dry, in others it is continually moist. Some parts there are which perspire far more than others, and some which occasionally produce a secretion of peculiar smell. Naturally, the skin, like the hair and nails, is perpetually growing from below, and as the new material is formed, the old material passes away by friction with the clothes. Many are doubtless familiar with the scales which fall from the skin after scarlet fever, erysipelas, and other cutaneous inflammations, but fail to notice that a similar desquamation is constantly going on, though in a less degree. In the substance of the skin are an innumerable number of sweat-glands, whose secretion we can no more arrest than we can stop the growth of a seed by putting it into the ground and covering it up with soil. Amongst these there is also a vast number of hair follicles, every one of which is provided with two glands for the secretion of oil. Hence we deduce that Providence has so constructed our bodies, that they shall always be coated with a thin layer of oleaginous matter. This material is necessarily removed by washing, and consequently ablution is generally followed for a time by a sensation of dryness or want of suppleness of the skin which continues until perspiration ensues.

This dry sensation may be at once relieved by anointing the skin with oil; and no sooner is this fact ascertained, than we remember with interest that the use of oil in hot countries is always conjoined with that of baths. We recal with pleasure the touching scene of the Saviour's feet washed by tears, dried by the soft hair of a woman, and then anointed by a precious unguent. We see it mentioned almost as a reproach that the head of the Lord was not anointed by the host, and the busy memory depicts an instance in which the virtue of brotherly unity is compared to the precious oil which anointed Aaron's beard and went down to the skirts of his clothing, Psalm cxxx.

The traveller will readily remember one of the rooms that he has visited in the bathing establishment of old Pompeii, in which were recesses in the wall wherein the bathers used to deposit their pots of ointment, a portion of which was used by all ere they donned their clothes and revisited the outside world. It may be, that he will then think over the curious experience of life in Abyssinia given to English readers by Mansfield Parkyns, who relates that his most comfortable hunting and travelling suit in that hot climate was a simple girdle round his loins, and on his head a big pat of butter, which slowly melted and covered him with pleasant grease. The physiologist then recals the fact that the natives of hot countries generally, and certainly that negroes have a skin unusually abounding with oil glands, and which is always covered with a shining coat.

We then recal still further that during the various epidemics of plague which have afflicted the districts about the Mediterranean, and the information which we have gleaned from physicians and other observers of that terrible disease, that the only class of the community which almost uniformly escape infection are the workers in oil mills and others whose skins are habitually covered, and their clothes generally saturated with oil, and we may mention in passing that oiled garments from top to toe were used during the time of the plague in Malta by physicians, nurses, inspectors, corpse collecters, sextons, and all others who were necessarily exposed to the disease. Some of these who neglected the precaution were infected, but all those who constantly used it escaped from the plague.

Hence the philosopher draws the conclusion that the systematic abstergence of oily matter from the skin, which is inseparable from the prevalent habits of bathing, is a contravention of the laws of Nature. But the answer to this remark will be that the contravention must be unimportant, since no ill effects have ever arisen. This is, however, a mistake, for I have repeatedly known cutaneous eruptions produced, and, when present, aggravated, by the use of a bath when the weather has been hot, and the individual has been perspiring ; whilst, on the other hand, I have known sufferers from these grave maladies to be greatly relieved by the disuse of water, and the employment of some artificial greasy covering for the skin.

Having thus given some important information upon the subject of baths in general, we may proceed to speak of particular forms and their special uses, when they have any ; premising that we do not intend to enter upon their use as agents in the cure of disease. We may for convenience divide what we have to say into remarks upon the plunge bath, the hot bath, the shower bath, and the sponge bath.

The plunge bath may be cold or hot, consist of fresh water or salt, and be situated under the canopy of heaven, in a river, or in the sea. If indulged in beneath the roof of some town establisment, the plunge bath is little more than an arena for athletic development; in it the youth can develop muscles which he never thinks of using in the gymnasium. He learns endurance under difficult circumstances, and sometimes he may, for I have known it done in more cases than one even prolong his muscular exertions to such an extent as to bring on faintness or sickness. If, on the other hand, the plunge bath is the flowing river, or the briny ocean, the athlete rejoices in pure air and freedom from town influences, as well as in the exercise of his limbs; and often, it must be owned, it happens that the clear genial atmosphere gets no credit for the renovated health, which is wrongly attributed to dipping in the sea. As a prolonged city life has a tendency to deteriorate the health, so it is certain that country air has a tendency to restore the faded strength, and it will do so whether bathing and baths are resorted to or not.

In the preservation of health, the hot bath is a great luxury, and no more. It removes the aches and pains of excessive fatigue, relieves the sense of annoyance produced by clouds of dust on a windy day, or "kicked up" by the horses of a traveling carriage. It restores heat to the starved one who has perhaps been on volunteer or other duty during the inclement weather so common in our English climate. Where ladies, men, or children, are troubled with an excessive amount of "scurf" in the hair, there is no more effectual cure than a daily hot bath, in which the individual may sit with the hair wholly immersed, and can make it float about like seaweed in a tideway. For those whose circulation is languid, the hot bath is an especial luxury. If they stand before a roaring fire they often feel as if one half were being frozen while the other is roasting. But to lie in water heated to 104 deg., with all the body submerged except the eyes and nose and mouth, is to take in heat on all sides at once, and to enable the individual to defy cold for many an hour. Yet the luxury is too great an one for all to enjoy, and we have known it to produce such faintness as would have caused death, by drowning, had not assistance been at hand. This danger seem to threaten females more than men; it is therefore desirable that women should have a bath-attendant with them until they understand their own powers of endurance.

The shower bath is a rare expedient for sweeping those cobwebs or meshes from the eyes and the mind which Morpheus weaves around them whilst we sleep. The tired author leaves his pen perchance at an advanced hour of the night of morning, and after a period of restless languor, falls into a heavy slumber,

only to awake again half rested, at the inexorable alarum, and to find that he is not yet refreshed enough to feel in trim for another day's toil. One touch, however, to the magic cord, one wholesome shower on his muddled head, and he is himself again, fit for his work, and nerved for any task. What the shower bath does for him it will do for the overwrought woman. Toil, undue exertion of body or heavy trials of the mind, possibly all combined, lead a delicate woman—or indeed, any ordinary female to feel "unstrung" like a piano out of tune. She is conscious that she does not respond to the touch in the proper note—perhaps she fears that her weakness will constrain her to lose her self-control and become "hysterical." To her the daily shower bath will impart a sensible amount of strength, the jarring chords will be restrung, and the descending water will almost literally "bring spirits from the vasty deep."

A sponge bath seems to me an ingenious contrivance for making some people miserable. On one occasion being tired of reading that it was an essential to health, and having, too, some friends who assured me that it was a panacea for every ill, and who in their zeal to improve my constitution, which did not require such aid, endeavoured to "ding" its use into me, I determined to test the matter anew. During my youth I had endured much misery from it, the memory of which clings to me yet, for each day for many years was begun by the hateful infliction; but my energetic advisers informed me that now, when years of maturity had arrived, I should thoroughly enjoy a glorious sponge bath, or what the Oxford men call "doing tubs." Well, I began on the hottest day of summer, and was painfully starved until my avocations permitted me to walk briskly on the sunny side of a street, or bask in the sunshine indoors. This daily infliction I bore as manfully as I could until the winter, at which period I gave up the experiment, not desiring either to write myself down as fool or ass. The sole consolation received from my enthusiastic friends was the remark, "ah, it is clear that the sponge bath does not suit you," a conclusion which I soon expanded into the observation, that there were very few whom it did suit, and that those who enjoyed it derived no benefit from it, except as a means of awaking them thoroughly. In one patient, who consulted me, I feel satisfied that if his plan of cold "tubbing" had been persevered in he would have brought on paralysis, the earlier symptoms of which had begun to show themselves. His age is about fifty-five, and he has been accustomed to a sponge bath from his youth. Some there are whose temperaments are so fiery that they may require to blow off steam by evaporating daily some half pint of water from their naked skins. Such I can well imagine as rejoicing in a cold sponging, but those of ordinary mould will find more

comfort in heat than in iciness, and rejoice more in dressing in a cozy room before a comfortable fire, than going from a warm bed to a frigid bath in a chilly closet.

After years of as close observation as I have been enabled to make, the conclusion I have arrived at is, that baths and bathing are not essential to health, and that it is even doubtful whether they really conduce to it. To many, however, they are positive luxuries, whilst in one form or other they are pleasant to the majority. Of the two, warm or tepid bathing is more comfortable and less dangerous than cold bathing, and cold bathing is always injurious when it is not followed by a "glow." I have no doubt even when this last sensation occurs, the glow is rather the sign of an active circulation, and an evidence of a certain amount of health already existent, than an increment added to the future supply. In medical practice there is no doubt that baths have a decided influence in restoring health; but there is great difference between this and their influence in preventing disease. Whenever, therefore, my opinion is asked about the use of water to the skin, my almost invariable reply is, "if you enjoy baths, use them as luxuries; if you dislike them you cannot *indulge* yourself by adopting them, and it is certainly not advisable to make yourself more miserable than Nature intended that you should be." Few Englishmen would eat whale's blubber or walrus flesh because the Esquimaux consider it conducive to health and almost necessary to life. Nor can I see any reason why Tom should do something which is disagreeable to himself because Dick and Harry enjoy it.

CHAPTER XVI.

ON THE VALUE OF EXERCISE.

THERE probably is not an individual who tenders advice gratis to his or her friend, (and those who do so are innumerable) without having gone through the exercises necessary to obtain the qualification of giving sound or even valuable medical recommendations, who does not consider that it is "an absolute law" that exercise and plenty of it, is indispensable to health. There is, indeed, scarcely a single doctor who does not believe the same thing, and who does not make "exercise" a *sine quâ non* for the restoration of a disordered or for the conservation of a sound body. So completely has this axiom been adopted, that to many the attempt to shake the universal belief will seem as absurd as it was in the knight Don Quixote to tilt at the windmill. We shall, however, endeavour to modify, if not to upset, the dogma, and to demonstrate that the proposition that exercise is "essential" to health is not strictly true.

On the very threshold of our enquiry we find ourselves obliged to have recourse to definitions, and to lay down clearly what we mean by "exercise," or what is meant by others when they use the word. We must equally form to ourselves an idea what is meant by the word "health" in connection with exercise. It is very probable that not one of my readers has ever thought, up to the present moment, of the signification which he assigns to the words in question, and that one has just given a thought or two to the subject, he has only a hazy idea of what is signified by either. The energetic professor in a London hospital will think of "health" as signifying the power to work with his brain incessantly, and yet have capacity for the enjoyment of food, sleep, and the social amenities of life. He looks upon "exercise" as signifying an excursion to the summit of the Yung Frau, Matterhorn, or Mont Blanc. The university student considers that "health" is power to think as a man,

while he is yet little more than a boy, to cram his head with learning, and his stomach with an unlimited amount of bitter beer or heady port, to indulge in tobacco of the strongest kind, and to go through all the episodes of fast life, and yet retain a good appetite for "commons," and a clear intellect for mathematics. To him "exercise" means labour at the oar for hours, and toil equivalent to, if not greater, than that of the treadmill. The philosopher in his study would probably describe "health" as the condition of body in which the mind can flourish, without being called away to the state of the tenement which it inhabits, and his idea of "exercise" would probably be bounded by a contemplative saunter in the garden, or a ride on a quiet horse, during which the brain might digest the food which it had gorged.

Now we consider that the idea of the philosopher is much closer to the truth than any other. The dictionary defines "health" to signify "freedom from bodily pain or sickness," and this is practically what we mean by it. We use the word to signify that condition of the tenement of the soul which does not require repairs of any kind. To those who accept this definition it must be perfectly clear that the standard of health is individual, not generic. Just as some houses are so strongly built that they can bear even the shock of an earthquake, without falling down, whilst others are so frail that a heavy gale of wind will upset them; so the blow which is unfelt by one man may be fatal to another. I may be in a perfect state of health, yet unable to bear the mental strain which would be necessary, had I suddenly to guide the helm of the State, whilst another, who is able to wield the might of England, cannot survive a fractured bone which a navvy would laugh at.

When we next turn to the word "exercise" in the dictionary, we find that it is defined "labour of the body for health or amusement," Accepting the meaning, we recognise the fact that "exercise" is but another word for "labour." We then ask ourselves in what way "labour" can be necessary to "health." It can only be so when it increases the constitutional vigour, the muscular strength, the desire to eat, the power of digestion, and when it is compatible with natural longevity. On the other hand, it is clear that labour is prejudicial to health when it weakens the constitution, deteriorates the muscular power, withers the flesh, impairs the appetite, obstructs digestion, and renders the mind incapable of sustained or even of any thought,

That we may enable our readers to judge of what we mean by these remarks, let us give illustrations of the extremes, viz.: a total cessation of all bodily exercise, and of an absolute excess of labour. In Dr. Watson's "Lectures on the Practice of Medicine" there is a case reported on the authority of Dr. Munro, of

Edinburgh, which runs thus:—There was a young woman brought into the hospital, of which Dr. Munro was a physician, who had paralysis of all the body from the neck downwards. She was unable to move arm, hand, leg, or foot, and in that condition she remained for twenty years. She was daily drawn out of bed and placed in a chair with her hands before her, on an appropriate support. The only exercise it was possible for her to take was with her head and tongue. But the report is silent as to whether she was given to wagging the one, and talking much with the other, and taking the sole labour she was fit to perform. Yet during the whole of that time her health was perfect; and when she died, from some sudden cause, all the internal organs were found to be healthy.

After such a case as this let us touch lightly upon the case recorded in the story in "the Arabian Nights' Entertainment" of the "Fisherman and the Genie," of the unfortunate prince who was by enchantment converted into stone from the hips downwards, and was, by malice, flagellated every day by a woman, and yet who enjoyed such good health, that he sought for death in vain. We then pass on to such real men as Scarron, the first husband of Madame de Maintenon, who from paralysis of the lower limbs was unable to walk or take any bodily exercise. Not having lived in his time, I cannot tell his exact state; but as it has occurred to me to see others in a similar condition, I can testify that a quiescence so complete as is involved by palsy of the lower half of the body, is not incompatible with apparently perfect health, good appetite and digestion, a clear head and longevity.

Again, let us turn our attention to the health of those men whose occupations are essentially sedentary. Perhaps there are few if any who sit so closely, and so long during the day, as our great lawyers and Church dignitaries. For days, weeks, and months together, a judge has small opportunity for taking exercise, and a bishop is so tied to his study by his various duties that the day is often all too short for him to fulfil them. Men, also, who are at the head of the State, and have not only to originate investigations, and draw up schemes for the general good, but to defend their position through many hours of weary debate, have scant time for a galop in Rotten Row or a constitutional in the park. Yet, as a rule, none are so long-lived, and on the whole have better health than such men as we here describe.

On the other hand, we know that both men and horses succumb under excessive labour. A hunter too often used, a dog too often put on the scent, or a man kept in a sinking ship for too long "at the pump," will sometimes lie down and die. To be more particular, we know that excess of muscular exertion will

bring on a singular disease of which no cure is known, one which consists in a gradual wasting of all the fleshy part of muscles in the body, until the eye, indeed, is unable to give a glance of love to the dearest friend, and the tongue refuses to utter a sentiment of gratitude to a devoted nurse, until the throat cannot swallow, and the chest becomes unable to breathe. Such cases are, however, rare. Much more common is it to see a young man 'train' himself so as to be able to do feats of strength which are all but astounding; and when he has attained this end suddenly break down and die. Something like this occurred to the American pugilist Heenan, who after his fight with Mace became so enervated as barely to escape from death by "decline." I have had under my own charge somewhat similar cases. The first was a sturdy-looking Irishman, who seemed so ill that I augured badly for his life. His condition was such that it was doubtful whether he had acute inflammation of the lungs or typhus fever. Though the nature of the complaint was at first doubtful, yet it had clearly been induced by a race against "time," in which he had run some two miles along a crowded street in some such period as ten minutes. As the symptoms gradually developed themselves it was evident that the man had brought on a "galloping consumption."

Since then I have met with other instances of a precisely similar kind, one in which the winner of a foot race was immediately, (within two days) affected by "decline;" another in which a similar result followed from a pedestrian expedition, during which the patient had shown himself the most active and enduring of the party. A third occurred in the person of a fine young man, who was the stroke oar of his college, and apparently one of the most powerful athletes of his University, yet in the zenith of his fame, he broke down in a week from acute phthisis, and when I saw him he had a large cavity in one lung. All these cases survived for a time, but became wrecks; two died of consumption within three years, the last I am unable to trace. Whilst attending the patient last mentioned the family doctor told me that a brother of our patient had foundered in a similar fashion. Apparently of powerful frame he had worked at gymnastics until his father, proud of his son's muscular development, had taken him, as a show, to the leading surgeon of the town. His "biceps" was enormous, his "pectorals" wonderful, his "deltoids" immense, there were few feats of strength which he could not compass—yet in a fortnight from that proud visit the youth was dead of consumption. Again, I have seen in the "dead-house" the pericardium of a young man who was conspicuous for strength and endurance, one whose equal in rowing was scarcely to be found amongst all the amateurs of his city, yet not only did that muscular development not prevent

ill-health, but positively seemed to induce it. Being determined myself "to prove all things" I essayed for a time to adopt the exercise involved in hunting on foot the hare with beagles. Whilst doing so, I was struck with the remarkable activity of the huntsman, who, after a long chase, when all the amateurs were glad to rest, and take breath, continued to run, and shout as if it was as easy for him to run as for a swallow to fly. During two seasons only did I see him thus, at the third he was very sluggish, received leave of absence and means to consult a physician; his heart was found to be seriously diseased, and after his second visit to the distant physician, which was effected on foot, he reached home just in time to lie down and die. Now in all these cases, except two, there was no constitutional tendency to disease, nor was there any want of the necessaries or even luxuries of life. The effects were due solely to excessive bodily exertion and fatigue. This surely suffices to demonstrate that muscular power and constitutional vigour are not synonymous—and that gymnastic training may bring on "decline" rather than ensure health, strength, or longevity. If, then, an excess of exercise does occasionally induce fatal effects in the healthy, it is far more likely to do so in those whose constitution or stamina is somewhat impaired—and though these essays are chiefly intended to apply to the "preservation," rather than to the "restoration" of health, I will give a few illustrations of the effect of exertion, when the frame is from any cause enfeebled. I shall never forget the first—a decent-looking seaman applied, whilst I was house surgeon at the Liverpool Infirmary, for admission, telling me that he had walked from a certain dock, a distance of about a mile-and-a-half, the road being a continuous but not rapid ascent. He said that he had bronchitis and was obliged to knock off work. Seeing that the case was urgent I at once admitted him, and forthwith directed the porter to see him to his ward—up one flight of stairs—and no sooner did the poor fellow reach his bed than he lay down and died. During the same winter two such events occurred, and, in all, the occurrence was unforeseen and unexpected. Since then I have known a walk across a room to be fatal, the patient falling dead between his bed and the night chair, whilst another individual was only just able to reach the bed, to die there within three hours, in spite of the most energetic means for restoration. I have known such simple exercise as walking from room to room bring on the most distressing symptoms of heart disease, which have been again quelled by the most rigid enforcement of laziness, even with the tongue.

Between the extremes thus indicated there are many degrees. Some persons simply find that they have indigestion, which being attributed, as it too often is, to want of exercise, is combated

by still farther labour and exhaustion. Many is the instance which has come under my notice, in which a man or woman, not content with the toil which some daily business imposes, undertakes to supplement it daily by an hour's walk, and often by two, or even more; thus increasing sufferings already great till they force the patient to take a perfect rest.

Another, like many a schoolboy, simply finds that he cannot work with his head after exhausting his body. Well do I remember the summer months of my childhood, when I pleaded successfully with my parents for permission to play whilst daylight lasted, promising faithfully to learn my lessons for to-morrow's school when darkness came over the land. But my promises, though made in perfectly good faith, were always broken. When night came and the candles were lighted, my books were brought out, but "mind" I had none; I could see letters and read words, but they conveyed no meaning to me; thought was impossible, memory was gone, and I had to put off the task to the morning. But when that came, alas! a tired body had demanded sleep up to the last moment, and the lessons were necessarily postponed until during the walk to school, when the time was too short. What man is there who cannot remember a similar occurrence, and how he has sat down before a broad sheet, either to read or write, and found himself, from previous bodily fatigue, unable to understand a sentence, or to find an idea for his pen? So completely, indeed, am I imbued with this knowledge, that I never venture to write any one of these essays when in any way fatigued by previous mental or bodily exertion. Other offsprings from my pen have been written at night, but all required correction on the morning's inspection.

Some, again, simply feel a total repugnance for food from that excess of exercise, which they have taken with a view to gain an appetite. Many is the man of business who is ready for dinner when he leaves his office, but who feels sick and is all but unable to eat anything when he arrives at home, after a walk of two miles or more. One such case I remember well. A lady, overwhelmed with anxiety of mind, and harassed by having to pay close attention to a sick husband, and a large household, finding her own health fail, had recourse to the diligent use of her legs, and took daily a brisk walk for two hours. This made matters worse, and she applied to a physician, who gave her most strict directions to continue her peripatetical exercise, and ordered her in addition blue pills and alteratives, which pulled her down still more. At length her health failed completely. She changed her plan, and found a cure in rest which she had vainly sought in labour.

Let me take another instance: a gentleman who stammered badly, put himself, for some trivial ailment, under the care of a

homœopathic doctor, who prescribed for him, amongst other things, "plenty of exercise" in the open air. This was taken with daily diligence and regularity, and the individual rapidly got worse, until, indeed, he was obliged to give up business, and attend wholly to himself. After vain attempts to get well, he consulted another physician, to whom he brought an account of his symptoms in writing, as he stammered too painfully to speak comfortably. Now the exertion involved in stammering is enormous, and the doctor concluded that this, with some five hours' walking per day, was the chief cause of the individual's complaint; consequently, the patient was ordered to keep his tongue quiet and his body equally so—a list of amusing books to select from was written out for him—whilst bed and the sofa were ordained to be the sole habitations of the invalid's body for a week. At the end of that period, progress was to be reported. The orders were duly carried out, and when the individual came to tell of his condition, no writing was required; the pains and aches, the indigestion and sleeplessness, nay, even the stammering, had become so much better, that a continuance of the plan was agreed to for another week, after which there was no more excuse for a medical consultation.

From all these cases it will be seen that exercise may be, and very often is, prejudicial to health, and that so far from preventing the obligation of a visit to, or from, the doctor, it will positively bring the necessity about. But though we thus raise our voice against an indiscriminate application of the dogma, "that exercise is necessary or conducive to health," it must not be understood that we go into the contrary extreme, and allege that laziness is preferable to judicious exercise, and is more to be cultivated than activity. Against such pendulum-like reasonings we most strongly set our face. We hold that every individual must study what is the best in his or her own case, and follow that out, quite irrespective of the dicta, the practices, or, we might even say, the "twaddle" of other people.

Let us next for a moment examine *when* exercise is likely to do good. We will take the case of any hard-worked professional man who uses his brains the greater part of the day and night, and ask whether any amount of exertion in the streets, or the parks of his town will do him good, so long as his mental work pursues him at every stride? The philosopher, deep in a problem; the lawyer, buried in an intricate suit; the clergyman, interested in a close theological inquiry, or busied with his Sunday's discourses, carry with them all their thoughts, whether they are locomoting afoot or on horseback. Sometimes—and I plead guilty to indulging the habit in my own person, the walks of professional men are their "study," during which they "digest" the knowledge which they have acquired in the library by read-

ing and observation. To the novelist, or other author, the same experience is doubtless familiar. Now, if such an one begins to break down, it is quite preposterous for him to try to bolster himself up by extra exertion. No; if exercise is to do him good, it must be taken in the country, far away from books, sermons, lawsuits, magazines, newspapers, patients, and medical reviews. The man in search of renovated health must go yachting, or pedestrianizing in some lovely scenery, with a pleasant companion, and, if possible, with some such rational amusement as geologizing, botanizing, or sketching. He may hunt, he may fish, he may scale Mont Blanc—anything so long as he gets fresh air, and plenty of it, is never off his food, or unable to digest his dinner, and, in addition, throws for a time his business, and all his physic, to the dogs. Under such a plan he will be likely to recover his ordinary health, and then find, as we hinted in our first essay, that many a symptom which has been attributed to "liver," indigestion, &c., was due solely to overwork. When such an one comes home fresh for his work, it is natural that he shall laud the advantage of exercise, but the philosopher will say "pooh pooh," it was not the "exercise" alone which did the business; it was the surroundings which that exercise involved. If we have brought the reader to the same conclusion, we shall hope that he will profit by the lesson, and never adopt labour in addition to his daily toil, as a means of staving off disease; and that he will recognize the fact, that for exercise to be really beneficial, it must be attended with such concomitants as pure air, and a rest from mental work.

CHAPTER XVII.

ON CHANGE OF AIR.

I HAVE a very vivid recollection of my second visit to London on the opening of the usual October Medical Session. Fresh from the country, young, strong and vigorous, I had the appetite of a hunter and the digestion of an ostrich. Like medical students in general, I had a due appreciation of the value of money, and even when dining "had a frugal mind." Chance led me to a certain eating-house where the room was of the dingiest, and the table linen of the coarsest that I had ever seen; but the boiled beef was, to my fancy, more delicious than any other that had previously regaled my palate, and I revelled daily over a cheap and very appetising dinner. How many fellow students I induced to dine at the same shop, I dare not say—at any rate the room was usually full of "cronies" at the time we used to feed, and "the feast of reason and the flow of soul" was enjoyed as much as the odours of the kitchen and its products. But after a few months hard work in dissecting, hospital attendance, taking notes by the hour, of lectures by day, and reading, smoking tobacco, and indulgence in certain other mild dissipations by night, the appetite of "the young man from the country" was gone, and the beloved cook-shop was first shunned, then deserted. After a time the smell from its doors drove me to walk on the opposite side of the street, and finally banished me from the street altogether. So strong, indeed, was my horror of it that even now, when seven and twenty years have elapsed, I should avoid the locality if I could.

Notwithstanding this alteration of feeling, I was never aware of being ill. Never did I even feel that I required change of air. All that I can now remember is, that beer was more thought of than bread; and, that sometimes, when on Sundays we got a glimpse of the country, we sighed at our imprisonment, and longed for the time when our examinations would be over, and

we should return to our homes with the "honours" which we were eagerly striving for. When at last the happy day arrived which told the student his position, a glance at the "University List" was followed by an instant determination to go, by mail, to some spot which was to me unknown, and I was, on the next day sauntering, with a weighty knapsack on my back, in the romantic neighbourhood of Tintern and Monmouth. At first, the burden behind my shoulders felt a heavy load, and I found with regret, indeed, I may say, with a sensation of shame, that three miles per hour was the utmost extent of my powers. The breakfast that I coveted after a walk of six miles was not done justice to, an appetising dinner was almost disregarded, and I thought with a sigh of that time when exercise brought hunger in its train, and "good digestion waited on appetite, and health on both."

Nevetherless, as the days rolled on, and my shoe soles thinned, my knapsack began to feel lighter—my watch told me of a gradual advance from three to four miles an hour, and empty dishes at the end of meals told of increased hunger. After a week's tour I arrived, once more, at home with much of the same vigour as I had when I left it. As my pedestrian trip had been a solitary one there was ample time for thought during the early part of each stage; and I could not fail to ponder, from day to day, over the marvellous difference between the country and the town—between bodily labour and mental work, between exhaustion of the mind and fatigue of the body.

The germ of thought, thus implanted, continued to grow, and opportunities soon presented themselves of prosecuting the subject farther. There was a gentleman, whom I well knew, who was indefatigable in his business, regular in his habits, living in the debateable ground between town and country, eating well at breakfast, heartily at dinners, and duly taking "forty winks" after it, comfortable in his circumstances and sleeping soundly at night. Yet this very man, as soon as the heats of summer came round, began to be "fractious," everything in the house seemed to go wrong, at the dinner-table there always was a course of wrangling as well as of fish, the meat was always over or underdone—the potatoes ill boiled, the puddings too sweet, and the pies too sour. Instead of home being a nest to which the inmates flew with delight, it became a haunt to be avoided; and after a certain time of endurance a flitting followed, and the old and discontented bird left his mate and the young ones to their own devices.

When this man had fairly turned his back upon his business, the town, and his home, he soon regained appetite and equanimity; and a fortnight's tour brought him back again as pleasant as if he really thought himself returned to a bed of roses. He

who had been, unintentionally, captious, now recognized that his wife was so; and to give her the same measure as he had meted to himself, she was sent away with the children to the seaside. But the advantage reaped by the mother was not the same as that which the father had gained. There is an old adage, "*animum non mutant qui trans mare currunt;*" or "a sail in a steamboat does not make a person change her mind." And a woman who takes her family with her to a "marine villa" carries with her the same daily thought for dinner, the same trouble with servants, and the same domestic duties as she had at home. For a wife, or any other woman who has housekeeping duties to perform, the advantages to be derived from change of air are not fully experienced until there is a rest from these. To the majority of men who have only on rare occasions to select their dinner, beforehand, the duty is felt to be a bore; how much more then must it be for a woman who has, in ordinary life at least, to look after every meal and often to inspect, and even, if she have a judiciously frugal mind, to weigh the meat before it is cooked. I have heard more than one lady remark that the greatest pleasure of hotel life, and of a visit to one's friends, is to be able to sit down to dinner without any knowledge of what is coming in the various courses.

This, doubtless, will recal to many the pleasant story of La Fontaine, in which a prince, who was much addicted to gallantry, treated a domestic who rebuked him for inconstancy to his lovely wife, in the following remarkable fashion. He ascertained from him what dish of all others he enjoyed the most, then, finding that it was "partridge pie," he confined him to a dish of that delicacy entirely; but when the page, who had before so much relished the dainty, had nothing else to eat, he soon tired of it, and would have been glad to live on ordinary food, however homely.

So it is with man, a perpetual round of duties has a depressing effect on his senses and mind. It wearies us to see, day by day, the same faces, view the same things, hear the same voices, smell the same odours, and talk the same platitudes. After long experience at home, we know exactly how the tea will taste, how the sirloin of beef is likely to be cooked, what the probability is that the mutton will be burned and the beefsteak be too rare. We know, too, what our wife will say when we come back from business, and the tone in which she will say it—and we are aware that our own company must be as monotonous to others, as our family is to us. When men are unable to find subjects for profitable conversation, there arises a propensity to find fault; and one who in high health and good humour can revel in the boisterousness of childish pastimes, becomes embittered by a boyish laugh, and has his temper ruffled by the

sight of infantile pleasures. The man or woman who feels thus may not seem out of health, and they may be totally unconscious of anything having occurred to blight their happiness; yet, they are out of sorts—they have been feeding on "partridge pie" too long. It is quite possible for all of us to have too much of a good thing. The poets may talk of "eternal raptures," and "never-ending bliss;" but the most enthusiastic of mankind would tire of "embracing," if every time he clasped some loved one in his arms, the links were not to be unwound for an hour; and the most charming of kisses would be irksome, if the process were prolonged enough to interfere with respiration, or for each to ascertain what the other had for dinner on the previous day.

The monotony such as we have described can best be met by change of air; for with this comes change of scene; with that comes change of thought; and with that, again, come new trains of ideas, and expansion of mind. On the other hand, there is a cessation from the feeling of oppression which stagnation induces. There is no longer "the partridge pie" to affect the senses, the same platitudes to pall the spirit, the same compound of gas-ey, house-y, kitchen-ey and town-ey odours to offend the nostrils.

To go for change of air is, or ought to be, an expedition in quest of information, and a search for something new. From it a man should return with a fresh fund of anecdotes, a new collection of stories, a fuller repertory of experiences, and an addition to that store of illustrations by which he makes the dull realities of life seem brighter to his children or dependents.

If once we allow this, a good many results must follow, which will enable many a one to answer the knotty questions "whither shall I go?" "whither shall my family go?" and "shall I go with them?" Now, if the main advantage of change of air is to get over the results of monotony, it is not advisable for Paterfamilias to travel with his wife and children, unless there be at the place they visit, ample opportunities for his own individual recreation or amusement, dissimilar to those which he has at home; nor should he choose any spot with which he is acquainted almost as intimately as he is with his own town or street. If inclined to fish, he should select some river where the scenery is ever changing, or the seaside where he can find on the bosom of the varying ocean new sensations, new experiences, and a new style of angling. If of more active habits, he should visit the picturesque parts of Great Britain, and of neighbouring countries, never travelling "*en grand seigneur*," but as a simple gentleman, falling in with the humours of passing strangers, listening to the stories of guides or old women, and revelling in the *mélange* of the "*table d'hote*." If complete change is the thing mainly

sought after, it is clear that a tour in England is not the same as one on the Continent. In every village of England the British traveller recognizes the same names of persons and trades as he saw in his own town. He is familiar with the look of the houses, the dress of the people, the voice of the peasants, and every expression they use. In France, on the contrary, everything is strange—roads, houses, shops, the names of trades and persons, the style of dress, the trimming of trees, the manners of the people, and even their common oaths, all are strange. The Lancashire squire who hears a country lad say to another, "Sister Bob ise here" (seest thou, Bob, I am here), if he thinks of the sentence at all, will only mutter something about a vulgar dialect; but if he hears a French peasant bawl to another, "*Venez ici tout a l'heure Jean,*" he will try and find out the meaning of every word. Then, when after a time, France becomes familiar and *La Suisse* well known, some other country should be visited. The idea of change of scene and of idea should be ever uppermost, above that of simple change of air.

To carry out this idea, to the full, it is not advisable for a man to travel with any companion who is already very familiar with him, unless the individual be recognised as one whose mind is accustomed to independent observation, to the exercise of thought, and to the control of temper. As a rule, it is not advisable for husband and wife to travel together in search of health, or simply to preserve that which they have, unless both are equally desirous of acquiring knowledge, and both equally able to seek it. A delicate wife is a clog to her active spouse, and a dull consort is a daily plague to one who is vivacious and energetic. It is equally undesirable for a father to travel with his sons as companions, unless they are sufficiently grown up to understand what they see, and have been so treated in their childhood as not to stand in awe of "the governor." I have known a travelling party consisting of three brothers and a parent, in which the main idea of the boys was how to escape out of the father's presence, and in which all pleasure was taken from the parent, in consequence of his children's coldness when passing through scenic beauties of no common order.

For the mother of a family, a change similar to that recommended to the husband is desirable, although her position in society prevents it being cast in quite the same mould. To such we recommend a visit to a friend, or a small tour with a young son or daughter. If fond of gaiety and bustle the lady will naturally prefer such a locality as Scarborough, Cheltenham, Harrowgate, or other place where fashionable people most do congregate. If, on the contrary, she be fond of quiet repose, she may adopt some such quiet retreat as Chepstow, Monmouth, Ambleside, or any other spot where persons go rather to enjoy

themselves apart from their fellow beings, than to mix in a gay crowd, and to show off amongst rustics, or their own set the newest fashions, and the gayest patterns of Parisian modistes.

For a family of children who require change of air the case is somewhat different. Boys and girls have alike been kept to close stuffy schoolrooms, to dog's-eared primers, dictionaries, and grammars. They have lived in an atmosphere of Greek and Latin, Algebra and Arithmetic, parsing and spelling, composition and the use of the Globes, until "every air is heavy with the sighs" that breathe over geometric problems or musical scales. To such, the change that is required is one which brings with it pure air and new scenes, which exchanges sedentary pursuits for active employment. This want is best fulfilled by a visit to the seaside, where the activity of youth can find vent in building castles in the sand to keep out the flow, or dams across streams to keep in the water after the ebb of the tide. Cleanliness will be adopted involuntarily by the use of a daily bath, and the feet will be kept sweet and clean by constant wading. The love of adventure may, it is true, crop out sometimes in the indulgence of too long a swim or a bold climb up rugged cliffs. No matter. The child is the father to the man; and soft indeced must be the lad who never gets into danger, or who, being in, has not the nerve to try and escape from it. Many are the fathers who never told their parents of the danger which they themselves faced when boys lest they should be prohibited from enjoying the amusement during which it was met, and many are the sons who will only tell their elders of a romantic exploit when they believe that they will not be scolded for it. It is a firm belief rooted in the minds of many, that there is not an active-minded strong-bodied lad, who does not court danger for its own sake.

> "He often seeks to drive away
> The lazy hours of peaceful day,
> Slight cause will then suffice to guide
> A knight's free footsteps far and wide.
> A falcon flown, a greyhound strayed,
> The merry glance of mountain maid,
> Or if a path be dangerous known,
> The danger's self is lure alone."
>
> *Lady of the Lake*, Canto V., stanza 4.

In that belief I fully agree, and consequently, would rather give a son opportunities for gradually developing the faculties of thought and courage than keep him away from peril altogether. The man who has to battle with the world ought not to be brought up like a school-girl or a fine lady; nor should a father, proud of his own manliness attempt to stunt that of his boys. Hence, in the selection of a locality to which a family party may be consigned, a quiet spot will at first be chosen, where the

dangers to be encountered are small; but as the youths grow up, a mountainous or rocky place will be preferred to the humdrum sandy shore; and a locality where boats abound, and swimming in deep water can be indulged in, will be chosen before so fashionable a place as Worthing, Weston-super-mare, or any other spot suitable for dowagers and invalids. A boy, fresh from an adventurous "out," comes back to school as a hero. He who could climb a cliff to take a bird's nest, cannot bear to have his back crossed by the cane, if he have any spirit at all. But if, after all, his mind should not become developed by such exercise, the parent, at least, can feel sure that a learned profession will not suit his son, unless there is a "family living," and the youth will join the Church of England.

The main advantages, then to be derived, by the healthy, from change of air, may be likened to the effects of the housemaid's turk's-head brush,—viz., it sweeps away the cobwebs which time weaves around us all, brightens us up again and enables us for a time to renew our youth.

As yet, I have said nothing respecting the advantage of change of air for the restoration of health when once it has been injured, materially, from any cause whatever. Indeed, I have rather avoided the subject, as it forms no part of my present plan to trench upon the business of the physician. Whenever an individual has been sufficiently ill to require the services of a doctor, and that adviser has recommended him to go away from home for a certain time, the patient or his friends earnestly inquire to what locality he is to direct his steps. To be able to answer the question conscientiously, many a physician makes a summer tour, on purpose to visit the various spots which are known to be fashionable as resorts for invalids, and he thus becomes practically familiar with the comforts and climate of Spain and France, Germany and Switzerland, Scotland and Derbyshire, Penzance and the South of England, Muckross, Cork, and the South of Ireland. If such an one is travelling on the continent he is certain, (that is to say, if his manner is sufficiently that of a gentleman to insure his being spoken to freely) to hear from the guests who frequent the *table d'hote* at the watering-places in question, what are the drawbacks as well as the advantages of the locality, and he may, himself being *incognito*, hear remarks on members of his profession, over which he will do well to ponder. I remember well, for example, sitting at the public dinner-table at an hotel in Pau, and hearing an account of the woes of two poor Scotch ladies. One was seriously threatened with consumption, and her only sister, with whom she lived, was anxious to keep her alive. But their means were small, and great thrift was required, even in Scotland, "to make ends meet." Yet their doctor, knowing all this, had recommended

them to go to this popular sanatorium on the north slopes of the Pyrenees; assuring them that the journey would be serviceable to health, and cheap to the pocket, whilst the cost of lodging and living in a French town was absurdly small. In this faith they made their arrangements, and at last found themselves in Pau. But when they sought for lodgings they could find none, except at prices which, for them, were prohibitory. Their funds were inadequate to support them in Pau even in the humblest fashion; and, although the winter was beginning to become severe, the sisters had to return to a garret in England or Scotland, shorn of a large portion of their little means, indignant in mind and depressed in spirit. After we had heard from the eloquent lips of a lady, herself an invalid, the pathetic story above narrated, the ignorance of doctors in general was descanted upon in reference to their knowledge of the cost and discomfort of foreign travel, and the expense of living in localities of great reputation. One young gentleman then took up the strain and declared that he despaired of ever "dinging" any sense into his family doctor, who continued to send him, year after year, to the same spot, although he always got more harm from the journey itself, than he had subsequent good from his sojourn at the place. He was, he said, convinced that his last locomotion from England had "cooked his goose;" for, what with a storm when crossing the channel, the bitter draughts of cold air at railway stations whilst seeing his luggage duly labelled, and the fatigues of the diligence, his cough was worse, his strength was less and his emaciation greater than ever it had been before. He soon after disappeared from the table at the daily gathering, and when I left he was considered as incurable.

Anecdotes like the preceding tell us that we must consider not simply the locality which is the best suited for a valetudinarian, but the means of reaching the place. An architect in England may consider that cedar would be the best wood for a certain purpose; but if he had to send to Lebanon for it, he might think the cost of carriage would counterbalance the particular suitableness of the wood, and he would seek for another tree which would answer nearly as well. In like manner, Madeira may be the best place for one having tubercles or recovering from inflamed lungs; but the transit thither may so injure the health, that the sea-sickness attendant upon the voyage will take the life which the previous disease had spared. Again, the bread winner of a family may require change of air; and if a locality is adopted which is too expensive for his means, the mental distress arising from doubts about the future position of himself, and of those who are dear to him, will effectually counterbalance the benefits which the climate ought to bring. We conceive, that when change of air is required for the recruitment of health,

that the doctor, instead of shaking his head ponderously, and issuing, in a decided tone, the name of one locality, should go through a catechecism something like the following:—Have you any liking for one spot more than for another? No.—Well, what do you enjoy the most when you are well—do you prefer fishing, sketching, boating, yachting, mountaineering scenery, photography, or society? Still farther, how much can you afford to spend over yourself? According to the replies to these questions the physician would recommend a quiet valley with a good trout stream, or a spot like the Bettws-y-Coed, in Wales, where materials abound for the most ardent limner, or Beaumaris, where there are both rowing and yachting; or Bowness, where there are boats in plenty, fish in abundance, society galore, and scenery the most lovely. The main requirements for an invalid, who is recruiting health, are animal or mental enjoyment, warmth, air without much exercise, and a good *cuisine*. The influence of change under these circumstances is very marked. I well remember my recovery from an attack of fever—too languid to care much whither I should go, my father decided upon sending me to Llangollen, and I went there with my mother and brother. As the carriage bowled along the level plains I was only conscious of fatigue; but as we entered amongst the mountains the sight of them was like a moral draught of champagne, and I became as excited as if I had drained a bottle of that sparkling beverage. My brother had a kindred spirit, and we did not sleep until we had climbed to the summit of the nearest hill. Thence we saw another in the distance which was higher, and that, although it involved a very long walk of some six hours' duration, we scaled the day after; and my recovery was as absolute as it was sudden. As I feel morally certain that such a result would not have occurred if I had been condemned to visit Leamington, a place which to me would be as stupid as Bath, Harrogate, Cheltenham or Brighton, so I would not recommend anyone to visit a spot where there are not some means of gratifying his peculiar pleasures.

Here then we recognize, once again, the fact that common sense has more to do with the preservation and restoration of health than any empirical rule. In the previous essay we saw that exercise might prove prejudicial, rather than advantageous, if carried out in a senseless fashion. In the present we recognize that change of air may be valueless, and sometimes even fatal unless all the accessories surrounding it, or involved therein, are studied. Whilst I write thus an anecdote flashes across my memory which seems so appropriate that I may give it a place. Mrs. ——, after being very ill, was sent from Liverpool to Harrogate "for change of air." She seemed to bear the journey well, and went to bed quite comfortable, but she was awaked

about four o'clock in the morning with an agonizing pain in the back. The family physician was telegraphed for, who, on his arrival, administered a powerful opiate, and as soon as its effect was felt, he brought his patient back to her home. On her return the pain was tenfold more severe, and she was a dreadful sufferer for many months. Some years after this, during the absence of my friend from town, the same lady came under my care, and I too had to order a change of air. The journey was a short one, not exceeding four miles, and was made in an ordinary brougham. But the pain of Harrogate again returned, awaking the patient from a sound sleep. Mrs. ——, was so graphic in her description of her case, the severity of her sufferings, the locality of the pain, and of the only position which gave ease, that I at once recognized the nature of the complaint. It was simply intense cramp of the long muscles of the back, arising from the jolting of the carriage over the rough paving stones of our streets and lanes. Nothing more than rest in bed and good diet was ordered, and in three days the pain had ceased. Now a railway journey shakes us about far more than a jolting brougham, and a few hours of such commotion is worse than forty minutes, consequently the Harrogate agony was probably far worse than the Liverpool pain ; but it would have subsided by perfect quiet. The second journey from Harrogate, however, converted cramp into inflammation of the muscular tissues—than which there is scarcely any disease more painful.

Moral :—When severe pain follows immediately upon a journey, in a shaking vehicle, it is better to lie in bed till it is well than take a second journey and make it worse. An invalid may become so sore all over the body from the fatigues of travelling as to lead her to fear the presence of rheumatic fever. (I use the pronoun *her*, for ladies are more frequently thus affected than men.) Let her, however, take heart of courage, diligently lie in bed, drink "cock-a-doodle broth" (eggs beaten up with sherry, sugar and milk), calves'-feet jelly, hare soup, turtle, or any other good stuff, every two hours until she sleeps, and on waking go through a similar process for one, two, or three days, and she will soon find that her fears have been banished with the pains. She will then think of the old saw—every rose has its thorn—and say to herself, now that I have suffered from the thorn, I may hope that the roses for which I came hither will begin to expand.

CHAPTER XVIII.

ON THE EFFECT OF HEAT.*

WHILST writing in the "dog days," the author hears around him many a grumble at the excessive heat of summer, and, perhaps, he anathematizes on his own account that scorching sun which seems to dry up his brain, and paralyze his hand, whilst it brings moisture to his skin. If particularly disposed to murmur, he may throw a curse upon our English climate that resembles the "tropics" on one day, and the "polar regions" on the next. If, whilst thus objurgating the heat of a day in July or August, a doctor should step in, and bestow an eulogy upon the beneficent Creator who gladdens us with such a sun as is now shining above me, he is almost certain to be met by some sneer about the arid regions of Sahara, the baked plains of India, the deliciousness of the Sirocco, or of the "brick-fielders" of Australia. Perchance, the physician may be sarcastically recommended to try a residence at Aden, where he will find a roast butterfly enough for dinner, and a salmi of blue bottles a feast fit for an Arab alderman. The doctor, however, can well afford to turn a deaf ear to such pleasantry, if he has the well-being of his clients at heart; but if, on the contrary, he considers his own pockets rather than the health of the community, he may chime in "*con amore*" with all the curses which his acquaintance bestows upon the heats of summer. "Ah," such an one might say, "I detest the warmth of midsummer and autumn, it takes nearly every patient off my books; confound it, everybody gets well, or else leaves me and my physic to go off to the seaside or to rusticate in the country. Why, Sir, I give it to you on my word of honour, I have not at the present moment a single patient ill with rheumatism, all my bronchitic clients have

* This essay was penned during the very hottest day of the hot summer of 1867.

ceased to cough, even the consumptives intimate that they feel so much better that I need not call on them so often, those nasty cases of tic-dolourcux and myalgia which were a little fortune to me are now blithe and gay, and even the *bon vivants* who were always wanting my advice and medicine to stave off the gout now tipple with impunity. Bah! I hate hot weather." If once the world at large were to hear such a conversation or soliloquy of a physician they would readily recognise the value of heat in the preservation of health. Warm weather does more to empty our hospitals than any other single cause. With bright skies, long days, and brilliant sunshine, patients cannot endure the wards of an infirmary; nor is there reason that they should, for the majority get well simply from their altered circumstances. Again, let the reader take notice of the proceedings of his own medical attendant, or those of his other professional acquaintances; he will then find that almost all take their holiday during or shortly after the hottest weather, and thereby hangs a tale.

A doctor who lives by his fees is not likely to undergo the expense of a journey in search of health or pleasure, so long as a multitude of clients throng his consulting room. The knowledge that he is losing some one, two, or three dozen guineas per day is not likely to enhance his gratification in the disbursement of four or five whilst toiling up Mont Blanc or treading the snows of the Col de Géant. Consequently, he sticks to business during all the cold season of the year, when illness is rife and his carriage horses run almost off their legs, and takes his ease in yachting, fishing, pedestrianising, mountaineering, or sketching scenery when he has very little left to do at home.

Can anything demonstrate more fully the value of heat? But inasmuch as there are very hazy notions upon this subject, and a strong inclination amongst many to associate together the idea of cold and healthiness, rather than to ally heat with salubriousness, let us examine a little more closely into the real influence of warmth upon the human frame.

We turn our eyes, in the first place, to those localities in which the heat of the sun is tempered by sea breezes, and occasional genial rains, such as the West Indian Islands and those in the Pacific Ocean within the tropical region. In them the earth brings forth abundantly many a vegetable luxury without any care from man, and a diet of fruits, alternated occasionally with fish, suffices therein for the nourishment of the inhabitants. The atmosphere being warm, no clothes are required to avert cold. The sole use of any covering being to show off wealth, to provide a receptacle for a pipe, tobacco, knife, &c., or to conceal a small portion of the body, there is nothing to prevent the influence of light acting upon the whole frame. Where the

vestments are scanty, bathing is resorted to frequently as a luxury, and where houses are only required to keep out noxious creatures, rather than to secure warmth and shelter, abundance of pure air is inhaled both by night and day. With all these creature comforts, the manly animal attains his most graceful proportions. No one, who is an admirer of loveliness, can read the graphic description given by Captain Cook of the inhabitants of Otaheite and their innocent pleasures without a thrill of delight, and a half-formed wish that he could himself witness human nature in its most favoured condition. Surely, as the Christian religion teaches us that we ought to be content with food and raiment (see I Timothy, vi., 8), savages like those of the Friendly Isles must be considered by the orthodox the most fortunate of beings, for they enjoy both the one and the other without any exertion or toil, and they are perfectly contented with them without seeking anything more.

It is not until we contemplate man in such a state as this, that we have any idea of the highly artificial condition in which we live ourselves. For us a house is necessary to shelter us from the bitter frost and cutting winds of winter and spring. The dwelling must be substantial enough to keep out the cold, and sufficiently incombustible to allow of fires being used inside of it. Both when at home and abroad, our climate requires the use of clothes, and usually these are always thick, bulky, and heavy, so as to enable us to retain the natural heat of our bodies which would otherwise be dissipated by the winds; whilst, to keep up the natural heat of our frame, we have to eat largely. Now all this involves toil—one man is by himself unable to build a house, shear a sheep, spin its wool, weave cloth, cut out and stitch a coat, butcher an ox, skin it and cut it up. Consequently, there is a division of labour, and one set of men toil at building dwellings, another at making material for clothes, another in framing vestments, and another in preparing food for all. Wealth is shown by the nature of the dwelling, and of the garments, and by the amount of food and heating power in the individual being in excess of his actual wants. As wealth implies comfort, so does comfort imply warmth. The wealthiest peer or commoner in England would be miserable if our climate was habitually similar to that of Spitzbergen, and if it was impossible to kindle and sustain fires in our residences as it is amongst the Esquimaux.

With the exertion required for earning the wherewithal to attain the power of having a house, raiment, food, and heat, we find that there is a certain amount of gratification—the labourer becomes warmed by his work and pleased with the result. Hence we have drawn the conclusion that toil is a luxury, and that exercise is the equivalent of heat—an axiom that may

be true for Englishmen though not for the denizens of the Marquesas.

But with all our artificial life, we are not, physically, one whit more happy, nor in a better condition than the Negro or Polynesian, for whom Nature works unasked, and who is warmed by the sun's rays alone. It is true that there are intellectual pleasures in civilized life of which the savage knows little; but these are the appanage of few even amongst ourselves, and are only attained by years of severe mental toil.

We submit, then, that an adequate amount of heat in and around the dwelling is one of the greatest luxuries which mankind can enjoy.

To this it may be objected that the great men of India consider that too much of the sun is a curse rather than a blessing, and that they do their best to diminish the effects of its rays. We grant the truth of the statement at once, just as we should assent to the proposition that a bath of boiling water would scald us; but neither the one nor the other observation has anything to do with the question before us.

This, naturally, however, leads us to consider what we mean by "an adequate amount of heat." This may readily be explained to anyone who will take the trouble to examine an ordinary thermometer, where he will find opposite to 98 deg. Fahrenheit, the words "blood heat," which may be taken as the natural temperature of the body.

Now, it is clear that, if the temperature of the surrounding atmosphere is 32 deg., the freezing point of water, or about 54 deg., the mean temperature of our English climate, it will be necessary for the human furnace to consume a sufficient amount of fuel to make up the difference, which amounts to 68 or 46 deg. If the cold be more intense than 32 deg.—say, for example, if the temperature be at zero, as it occasionally is in our own and other countries, it follows that a larger proportion of fuel will then be necessary to keep up the animal heat to its normal standard.

That food is fuel to a human fire, can readily be demonstrated during our winters by a single day's fast; the invariable effect of prolonged hunger being a reduction of the natural heat of the body. Hence it is that our poor population suffer so much during hard winters when work is scarce and victuals dear.

I shall perhaps best illustrate the effect of food in preserving our animal heat by reporting an account of Esquimaux life, which has found a place in a remarkably interesting book, recently published by Sir John Lubbock, and entitled "Prehistoric Times." The passage will not only serve to show the necessity for food in promoting warmth, but will corroborate a statement which I have elsewhere made, that it is quite possible

for individuals to get drunk on solids—totally irrespective of fermented liquors. "The Esquimaux have no idea of the use of fire except to melt the snow into water, and to give them light during the long nights—nor indeed could they do with fire in the winter, for their huts are built of frozen snow or ice, and would melt rapidly if much heat was used within them. Yet the temperature of their bodies is the same as that of an Englishman, and can only be kept up by the food which they consume. It is remarkable that the victuals they take into their stomachs is the same as that which they burn in their lamps, both being whale, walrus, seal, or other fat, oil, or blubber. The amount which is eaten whenever they have enough for a feast is enormous. On those occasions one may see men, attended by their wives, sitting up in a sort of drunken sleep, and masticating the food which their spouses place in their mouths. The women as soon as they see the full mouth diminishing, cut off a fresh lump of blubber, and stuff it between the teeth until the oral cavity will hold no more. They then cut off the morsel on a level with the lips, and the man goes slowly chewing on until he falls over in a drunken sleep. Verily the writer adds, a man who is drunk with food is a far more disgusting sight than any one who is drunk with liquor."—Pp. 393-400.

Hear and digest this, ye teetotallers!!

Amongst ourselves we find that heat and cold influence the appetite; for all of us are familiar with the comparative relish with which we eat our dinners in winter—our fondness for hot soup and flesh meat in January, and our disinclination for beef and mutton in July. It is, therefore, apparent that cold weather tries our digestive power to a far greater extent than it is taxed in more temperate climates. To those who are in rude health this result is a pleasant one, for it prolongs and intensifies the animal enjoyment of eating and drinking; but for those whose stomachs are enfeebled, whose digestion is bad or weak, or whose purse is insufficient to pay for ample supplies, winter is a period of comparative misery.

It is curious to notice, from time to time, that anecdotes "crop up" to show us how great a punishment the sensation of cold becomes, amongst those who are unable to procure adequate food and clothing. I have, for example, lately heard a story about a Scotch divine who, whilst preaching to his flock, in the extreme north of our island, painted the Infernal regions as desolated by perpetual ice; and who when remonstrated with by a Southerner for his heresy, declared that he did it all for the best, inasmuch as, if he painted Hell as a hot place, every one of his parishioners would have tried to get there, so great was their horror of a Caledonian winter—*si non é vero é ben trovato.*

Until we begin to philosophise rigidly, we can scarcely discri-

minate between the positive advantages accruing from warmth and the negative results which arise from the absence of cold. The man who has never experienced frost-bite, and rheumatism, can scarcely understand the joys of summer, as experienced by a Highlander, or an inhabitant of a cold climate; but he who has for many a weary month had to endure the miseries of tic-douloureux, or lumbago, can appreciate with gratefulnesss the return of Midsummer. The value of heat, therefore, is differently understood by separate individuals—some understanding its power of diminishing or annihilating pain, whilst others, not having had the suffering, cannot tell anything about the power of warmth to relieve it. To a man who was never "hungered," the swallowing of food is simply a daily routine, to a starved mariner a full meal is almost a god.

The influence of heat in reducing, absorbing, or annihilating pain is a great fact, and one which it is impossible to deny. One example is as good as a dozen. I know an individual who accidentally cut the tip of one of his fingers with a sharp razor. The pain arising therefrom was so great that he fainted, and on recovery was unable to bear the member to be touched. The hand was then placed in hot water, and the suffering ceased immediately. This effect having been attained there was an attempt made to dress the wound, but the agony returned almost immediately after the wounded part was removed from the water and the heat was dissipated. The pain was so severe that the individual fainted a second time. The part was then dressed under the surface of hot water, and in such a manner that when it emerged from the fluid the heat was not readily dissipated—a dry warm application was then added and the patient was able to go about.

With this anecdote we may contrast the experience of gentlemen who, thinking much of the value of fresh air, prefer driving in an open vehicle, to travelling in the interior of a brougham. During the summer all goes well, but when the cold of winter sets in and the man has to drive for an hour, or more, over bleak downs, or dreary roads, along which perchance a cold north-easter is blowing heavily, he finds that his scalp is so cooled by the transit that a rheumatic headache is his portion for the day or night—or both. To such an one, winter is a perpetual discomfort, and nothing puts a stop to his miseries but a return of summer heat or a change of vehicle.

I will conclude this essay with the case of a gentleman who was good enough to communicate the particulars of his case to me. As I have no personal knowledge of the individual, I cannot give an account of his "physique." He told me that he had been fighting with consumption for thirteen or fourteen years; that he had been slowly succumbing to his enemy yet

was still making a good fight; that he stood in constant necessity for abundance of pure air, but that he could not endure it cold. This had driven him to contrive a plan, by which, even in the depth of winter, he could have fresh air delivered close to his face, whilst he was lying in bed; and of sufficient warmth not to produce distress of breathing or cough.* The plan adopted is ingenious. A tin tube was brought from an aperture over the window to the fire-place, around which it passed, then was carried along the ceiling, and finally terminated with a circular fan at the bed's head. The draught required by the fire brought a constant atmospheric current into the room through the tube, and as this was passed around the fire-place, the air introduced was heated ere it was delivered. When telling me of this contrivance, the gentleman further informed me of the value he set upon warmth. Having, he said, often been more seriously threatened by his disease than usual, and almost giving up the contest in despair, he had as yet recovered the lost ground. What had saved him in each case was additional heat in the dwelling-rooms. Everything under 74° he considered to be cold. Now, what is so valuable in restoring health, must, *cæteris paribus* be considered as equally important in preserving it, and we may sum up our views by enumerating the advantages of warmth. It enables the sedentary man to get most fresh air both by the lungs and by the skin. It reduces the necessity for exercise, and diminishes the call for a large amount of food. It promotes the circulation of blood through all parts of the body; curtails the propensity to rheumatism, tic-douloureux, catarrhs, consumption, and lastly, though not least, it counteracts the effects of cold.

Those then who are somewhat delicate, prone to "rheumatics," headaches, tic-douloureux, and other kindred affections, should have their houses warmed, if their purse will allow them, and with hot moist air if possible, so that a sitting-room fire can be enjoyed without starving the atmosphere. The bed rooms should always be warm; and the body linen, when changed, should also be warmed before it is "donned." I once at a dinner party in England sat by a lady who was describing to her circle of old acquaintances the nature of the winter at the Red River settlement, from which she had recently returned.

* Cold air is almost certain to produce this, as I know from my hospital experience, during winter, of open windows—which ventilate the wards—starve the patients, increase the severity of pulmonary attacks, and make the doctor savage. So strongly I feel this that I once proposed to warm my wards at the Liverpool Royal Infirmary at my own expense; yet the committee refused the permission, and coughs go on through the winter as usual. The managers, perhaps, have reason on their side, for my plan would have made patients too comfortable, and thus induced practical cheating to prevent the physician discharging them as cured.

After descanting upon the intense cold without, she spoke of the great heat within the house, procured by stoves. The effect of this heat was such as to dry all wood work, and warp it to such an extent that drawers and desks would not fit together so as to be locked. On asking her "how it had suited her health?" she told me that she had never been better in her whole life than while at her American dwelling. In England, before she left that which she had always regarded as a comfortable home, she had been accounted very delicate, had been a martyr to headaches, and was always miserable in winter, inasmuch as she had pertinaciously and senselessly—yet as she thought judiciously followed our custom of sleeping in a cold bedroom, using icy water to wash in, and a starved bed to sleep in. It had required a long journey to teach her the value of warmth, but now that she had learned it she had been living in England in comfort.

CHAPTER XIX.

THE EFFECT OF COLD.

THERE is a pleasant story told about an alderman and his eccentric doctor to the effect that the latter contrived to sit besides the former at a banquet, and having previously provided himself with an appropriate bag, managed to place therein a duplicate share of everything which the former placed in his stomach. We will not stop to inquire how he could do this without attracting attention, for in a manufactured tale the moral is everything, and this runs that when the gourmand came to his doctor the morning after the feast to complain of indigestion, the physician emptied the bag before the astonished alderman, and asking him how he could expect any man to digest such a heap of stuff. Well, now, to many a doctor "the public mind" seems very like the aldermanic stomach, for it heaps within itself an enormous amount of pabulum without being able to digest it duly. A physician who has a tenacious memory sometimes feels himself sorely tried by the comical remarks which he hears about some particular agent, and sometimes he can, with difficulty, escape from a burst of laughter when he finds that ten different people give ten different and incompatible characters to the same thing.

In nothing is this vagueness so conspicuous as in the sentiments expressed about the influence of "cold." Let us for a moment imagine ourselves going "a round" with our medico and visiting the clients who have newly placed themselves on his list. The first patient complains of headache, and the doctor wishing to discriminate whether it arises from too much whiskey-punch, or from incipient fever, asks the cause. The patient replies that he attributes it to "cold." The next client has an inflamed eye, but he "cannot account for it unless he has taken cold." The third sufferer has a sore-throat, which he attributes with certainty to having sat "in a draught of cold

air." A fourth is a victim to a cough, "a stuffling in the chest," and wheezing, and swears that he knew the identical blast of wind, through an open door, which gave his troubles to him. A dyspeptic comes next, who has vomited his yesterday's dinner, and he is sure "he took cold" whilst coming home in a car with a friend, as the latter would have the window open that he might smoke a cigar. That friend himself has a touch of diarrhœa, which he likewise attributes "to cold," for his dinner having been an appetizing one, and his trousers rather tight, he unbuttoned the top buttons as soon as he reached the car, and thus "the cold struck his bowels." We have heard still stranger things than these attributed "to cold," but we suppress them here.

When his rounds are ended the physician becomes an ordinary man, and mingles with society in the usual manner. The first thing, perhaps, which strikes his ear may be, "Bad times these for you, doctor; I suppose this sharp, bracing air makes all your patients well, eh?" "You know the old proverb—'A green winter makes a fat churchyard,'—ha ha." After a while, a hale old fellow, justly proud of his health comes to him and says, "Now, doctor, I'm sure I could take all your bread away, if I could only persuade everybody to do as I do. I have always slept in a cold bed-room, sponged myself all over the body with chill water, and have never yet worn a great-coat in the wettest or most arctic weather." Another then comes up to the physician and says, "Feel that arm, doctor, it's as hard as nails, and I'm about as hard myself. I sleep on a mattress with only one sheet and blanket in the depth of winter, I wash in water off which I have stripped the ice, and I never change my dress for summer heat, or winter frosts. There, now, can you show me amongst your patients such thews and sinews? Ah, doctor, if you would only give up your infernal physic, and teach everybody to copy my example, you would be much better entitled than you are to wield the rod of Esculapius."

We will now imagine that the medico retires to his smoking-room and lights his evening pipe—for no gentleman-like doctors indulge in cigars, tobacco, or any other thing likely to taint their breath or to make themselves or their clothes too odorous when they are likely to visit an invalid. As the curling smoke arises from the bowl, he sees therein a curious sight, viz., a nondescript which pertinaciously smites the heads, eyes, ears, throats, lungs, stomach, bowels, &c., of some human beings, whilst it hedges others round, and keeps them from every harm. He then recals an ancient fable about a man visiting a satyr, who, observing that he blew upon his fingers to warm them, and upon his porridge to cool it, turned the fellow out for blowing hot and cold with the self-same breath. Ere his pipe is out the

philosopher understands that breath of a temperature of 96 deg. will impart heat to anything which is only 32 deg., and that it will reduce the heat of anything at 212 deg., and then he asks himself whether the "cold" of which he has heard so much is like the "breath" in the story. We may then imagine him lighting another pipe and trying to define the features of the nondescript which he saw in the eddies of the smoke of the first. He says to himself, What is "cold?" What does it do? Let us examine into it closely? It surely is not like that mysterious thing which makes a patient, cures a patient, and pays the doctor—a draught and a draft?

Let us now follow the course which the thoughts of the physician whom we have described would probably take. We cast our eyes about the globes and find that there are two regions in which terrific cold has almost perpetual sway. We go with Arctic voyagers to the land of the Esquimaux, and find that as a people they are small in stature, as much subject to disease as their neighbours, and a prey to consumption. The only animals that thrive in their country are walrus, seals, bears, and whales. We then wing our flight to the Straights of Magellan and the land of Terra del Fuego. There we see natives who can find no clothing with which to cover their bodies, and shelter them and their infants—whom we cannot call tender—from the fierce blasts of an Antarctic winter, and we find them still more miserable than the denizens of the Arctic circle. They are neither healthy nor happy.

Discontented with native tribes, we then turn to the accounts of voyagers to the north or the southern pole. We peer into the reports of men like Parry, Franklin, MacClintock, and others, and find that the sole diseases arising in Polar voyages are rheumatism and scurvy. The latter is clearly independent of the temperature, for it is quite, or at least it once was more common in tropical than in polar circles—has cold more influence over the former? The answer runs thus:—So long as the temperature of the air suffices to dissolve the moisture, evolved from the lungs, and skin of the men, there is no complaint to the doctor, but when the thermometer falls so low that the same fluid remains undissolved, the beds and bedding become damp, and all the men have rheumatism. When, however, the thermometer falls still farther the perspiration and breath become frozen, and the rheumatism disappears until the returning spring, when the icy blankets once more become damp beds. In other words, a frigorific blanket frozen dry is less harmful than the same "witney" chilled to moistness or "damp." We then inquire whether there are no "colds" on Arctic ship-board in winter time, no attacks of bronchitis, ophthalmia, dyspepsia, purging, &c.? "No, no, no," is the reply of the doctor, "our chief affection

is frost-bite, and the only appreciable alteration in the 'public health' which we find is an augmentation of appetite; an extra amount of food being requisite to keep up the human fires to their normal height." "Now, doctor," we may be inclined to add, "let us ask you one farther question,—Do your men keep themselves warm in these Arctic voyages, and do you find that cold does them any mischief?" To this the answer will certainly be, judging from surgical ship reports, given already to the public—"So long as the cold is dry or free from unfrozen water and there is no wind, the men get along comfortably, and their bodies are warm, like those of Britons all over the world and of other people too, but a moist cold, or a sharp wind withers the men and produces frost-bite, stupor, and ultimately death."

Being now fortified by some Arctic experiences, we turn our attention to the phenomena of an English winter. One man drives in an open vehicle or rides on horseback to his business every day across a bleak country—perhaps an exposed hill, and suffers habitually from rheumatic headache. The pain he experiences is a gauge of the temperature, and he can recognise the presence of a summer temperature in January as if his scalp were a good thermometer. Another's business occasionally calls him to expose himself amongst the docks of a busy town, or on the top of a coach or omnibus, and as a result he experiences a fierce attack of tic-douloureux. Another has to stand on the bridge of a steamer piloting her through the intricacies of a channel encumbered by shoals whilst a biting wind plays upon one side of his face; and he finds as a result that one half of his visage is paralysed—he can indeed only "laugh on one side of the mouth." Another individual battles for a lengthened period with a cold wind, right between his teeth; his nose, the natural respirator which warms the imbibed air, gets cooled, little by little the blood gets chilled, and what with the exertion of walking and the starving produced by the cold wind, he often sits down to rest, to sleep, and die; or, if he escapes this extreme fate, he becomes a victim to catarrh, croup, or bronchitis. Another—and all my illustrations are drawn from my professional experience—may, perchance be young: it is his ill-fate to live at a time when work is scarce, and provisions are dear; he has, moreover, a father who has been unable, or unwilling to lay up a store for "a rainy day." The lad, being fit for employment, goes on tramp with his parent to seek for it; and whilst journeying fruitlessly, they live on the scantiest fare. The time is in the month of March, the way lies over some bleak moors, and a keen wind, presaging snow, careers around the travellers during the whole day. Weary, foot-sore, and miserable, they reach home at last; where some kind Dorcas, knowing their poverty, assists them with food and extra clothing,

but her cares are in one instance vain for a time, inasmuch as the next morning she sees the lad, whose age is about fourteen, paralysed from the neck downwards.

There is indeed something almost appalling in the sudden palsy which proceeds from cold. Not many months ago I had under my care, at our Liverpool Royal Infirmary, a young man of tall build, burly frame, large bones, broad shoulders, and having about him every appearance of sterling strength. His family were all healthy, and he had not before his present attack, known a day's illness. When about twenty-two or three years old, his labour took him to a tunnel, where he had to work with other men—there was much drip from the roof, and he became thoroughly starved by close contact with the cold rock and the chill damp air. Feeling ill, and fancying that he had a "cold," for all his limbs ached, "he knocked off work" and took to bed. But finding, however, that he rapidly became worse, he sought admission into the hospital, and died within a few days– a week after his coming in, and ten days from his taking to bed. Weak at first, all the muscles of the body gradually lost their power, and he died at last from inability to distend his chest to the extent requisite for breathing. I have seen many instances of palsy from the starving effect of cold, but none so bad as this.

Another effect, which is traceable to cold, is sciatica. Throughout the months of March, April, and May the applications for admission into our hospitals for the cure of this painful affection are very considerable, and in all there is the history of hard work and prolonged exposure to cold or wet, or both. The best marked case of sciatica which I have seen produced by exposure and fatigue, was in a relative of my own, who persisted in standing, walking, digging, and helping his gardener to plant trees, for many an hour, during a cold north-easterly gale. He could do such things with impunity in warm weather, and even in winter, whilst he was young, and did not see why cold should deter him now. The next day he had the fiercest attack of sciatica which it has been my lot to witness, the pain, indeed was almost maddening—and when it left him he slowly sank and died from exhaustion.

Now, as we have seen that cold will influence both the muscles, and the nerves, it is likely that it will affect the brain and spinal cord. Practically, we find that it does so, and many an attack of apoplexy is due to prolonged exposure. To the intelligent reader of travels this will not appear surprising, when he recals the propensity to sleep which comes over all those who suffer from intense cold, and the rapidity with which this "sleep" becomes converted into deadly coma. The most conspicuous example of the effect of cold upon the spinal cord, I

now see frequently in the person of a master mariner. A man of healthy family, of most correct habits, and who had never had a day's illness, was exposed, whilst navigating a powerful screw steamer, to one of the heaviest gales of a winter on the Atlantic. Its severity may be judged by the fact that one of his officers was carried away from his side. For two whole days did this captain pace the bridge without other food than hot tea or such soup as could be cooked. At last the gale abated, and he went below. Assistants enabled him to take off his sea boots, which came well nigh to his hips, and when his limbs emerged they were cold as stones, and the boots were charged with snow and hail which had not melted. From that day the limbs gradually lost their power, but the disease did not attain its height until after a visit to Buxton, where he was advised to bathe in water at first at 92°, and at last at 82°. This starved him thoroughly, and to palsy of the lower limbs was added paralysis of the bladder. An instructive story on this subject has recently appeared in *London Society* for June 1867, in which a gentleman gives his experience of the so-called water-cure. He was only in want of a holiday—but was persuaded to try the effects of hydropathy, and put himself through a prescribed course, but the result of the curative measures which were prescribed only had the effect of starving him, and withering his powers, nor did he recover until after many months of generous living and warmth.

We may next touch upon the effect of cold on children, who are particularly sensitive to its influence. This may best be studied amongst the offspring of the poor who cannot afford to clothe them, and amongst the young ones of the wealthy who like to view the elegant chubby limbs of their descendants, and to see in them prospective angels, such as Rubens loved to paint. With such, cold produces diarrhœa, hebetude of understanding, and arrest of growth. There is, to my mind, something painful in the way in which reasonable beings treat their children under a strange idea of hardening them. Often have I been through a lunatic asylum and seen poor wretches, who, by cerebral disease, have been reduced almost to the condition of brutes, clustered round the aperture in the floor through which hot air comes into the wards. Often too have I noticed a dog basking in the sun, or stretching himself out beside his master's fire. I have also noticed pussy lying snug in a chimney corner, or nestling herself on a stone, under which a fire flue passes; and when remarking how much animals like heat have been disgusted to find that man, the highest of them all, deprives his young of that very warmth which the bird and beast alike covet personally, and endeavour to procure for their little ones. To the egg warmth brings life, from the chick cold abstracts vitality

—children are like half hardy plants, let them germinate in appropriate heat and they will flourish, put them at once into the chill soil of the world and they soon die.

I have not yet said anything of the influence of cold upon the lungs and air passages. The following anecdotes will perhaps suffice to express my views. Not very long ago there appeared a question in one of our medical periodicals as to the prejudicial influence of "night air." I answered it privately, to the effect, that there was nothing bad in the thing itself, except the fact that it was colder than the atmosphere when warmed by the sun, and I added that impure warm air was more advantageous to people in general than cold pure air. In reply to my note the inquirer told me that he had been trying during the last dozen years to stave off consumption, that the battle had been a close one, but that he had hitherto been successful, and that all his success was due to the avoidance of cold. This example illustrates the value of warmth, the following tells of the dangers of a chill. A certain family had their youngest members ill with measles. The time was winter, and amongst his other prescriptions the doctor ordered that the room, in which the patients were, should be kept free from draughts of cold air; everything went on comfortably, and all were convalescent but the two youngest, one about three years of age, the other some fifteen months younger. To them their father came one day in January; the temperature was higher than usual—he wore a great coat, and had walked fast for about a mile up hill at noon under a winter sun. He was warm, and when he entered the sick chamber he found it stifling. Being a bustling sort of man, and very opiniated "to boot," he superseded the doctor, and ordered the patients and their nurses to "quit their warm chamber, where none but salamanders could live, and go into another room where the air was pure and sweet, and cool." Remonstrances were vain, and the poor patients were packed off to a miserable bedroom which had never seen a fire, and which did not witness one until the room was converted into a hospital. Within one hour the youngest child was affected with croup, and in a few more the second became equally ill. Both died within three days, clearly and undoubtedly victims to the idea that the sensations of a healthy man can dictate, better than the experience of a doctor, what temperature is best for an invalid. But without dwelling upon individual cases we desire to recal to the minds of our readers their experience of "church" in summer and winter. As a rule, few who feel themselves indisposed, care to go to a place of worship when the weather is bad. Yet during December and January it is a very common occurrence that the preacher's voice is drowned in a roar of coughing, whilst during the months of July and August scarcely

a single attempt at expectoration is perceptible. This of itself suffices to show the influence of cold.

But, although the cause of the prevalence of catarrh in winter seems plain, there is a great fallacy contained in the general idea of its causation. Let us shortly state what it is. The current opinion runs that it is very prejudicial to health to pass from a heated atmosphere into the cold air of winter. Many an attack of consumption is attributed to a cause like this. We do not say that the conclusion is wholly wrong. We can well conceive that an energetic young man or woman in ball-room costume may have danced in a warm room until their undergarments are moist with perspiration, and themselves are languid from prolonged exertion. Under such circumstances it is very likely that a cold blast of air, laden it may be with snow, will produce a chill which seems to starve them to the bones. Yet, as a rule, the transition from great heat to cold is not prejudicial. In many countries such a change is considered as productive of the most luxuriant glow. The bathers in Russia constantly pass from a stifling heat to a cold room, where they have cold water poured over their reeking bodies, a similar change is part of a "Turkish bath." The chief cause of catarrh, and even consumption, is not to be found in such a transition. It is rather to be sought in the sudden change from cold to heat.

On this point we have personal experience. During many successive winters the present writer had to turn out about five o'clock in the evening, and lecture upon "medicine" until six. His day's work then being generally over, he retired to his "study," which was as warm and comfortable as a doctor could desire. Yet, over and over again, the return home was attended by the uncomfortable sensation of "having caught a cold." In vain the mind was cudgelled to determine how the catarrh had been produced. The bare fact remained, and as the winter advanced the attacks became so severe and constant, that it became a question how far they were dependent upon some serious constitutional change. At length, whilst preparing a lecture upon "common colds," the author found it stated by Dr. Copland that their most frequent cause was coming into a hot and dry atmosphere after being exposed to a moist cold air. Now this was the very thing that "poor Pilgarlick" had habitually done. He had flown to his warm sitting-room as soon as the front door enabled him to escape the moist cold air of an English winter, and, as a result, he had taken "hot" instead of catching "cold." He changed his plan forthwith, and gradually accustomed himself to the chillier rooms of his house, before he went into the warm one, and since then he has escaped the severe catarrhs, coryzas, or influenzas which once tormented him. A fact like this led

him to philosophise. He thought of chilblains, and recollected that the most common cause of them is a rapid transition from the cold of ice and snow to the warmth of a fire and hot water. The schoolboy cares little for itching toes so long as he is skating or snow-balling, but he suffers from them as soon as he has washed his hands or placed his feet on the fender before the fire. It is clear, then, that the cold has injured the parts by weakening the blood-vessels, and depriving the solid tissues of their blood; but so long as the cold continues, and the flesh is not "frost-bitten," the injury is not recognised. When, on the other hand, the heat is restored, it is at once apparent that the blood vessels having had their natural vitality impaired are abnormally dilated, and the circulation of blood arrested, not because none is there, but because its channels are unusually distended, resembling lakes rather than rivers. In medical language, the parts are "congested." So it is in catarrh—the chilled nose, throat, and chest are starved by a moist and cold air whenever a person is, for a long time, exposed to its influence; and, if the individual suddenly comes to a hot and dry atmosphere, a similar change occurs to that which takes place in the hands and feet. Thus, sore-throat and catarrh may frequently be considered as a sort of chilblain of the fauces and the air passages.

From these considerations we advance to another, and aver that the mortality of a town is, as a general rule, more influenced by temperature than any other known cause. During the winter months and those of spring, a careful officer of health can tell the range of the thermometer by the number of deaths which he records. In a large town like Liverpool there are about ten deaths above the average for every degree of cold registered. The doctor, indeed, well knows that a "hard winter" cuts off the aged, the infirm, and the delicate lives as certainly as it destroys soft-wooded plants. He laughs at the absurdity of the dictum that "cold promotes health," and if he be disposed to be mercenary, he rejoices at the advent of that cold season which his hearty friends tell him is to curtail his profits. If given to be sarcastic, he sometimes gives utterance to the idea that none but the thoughtless could entertain the belief that a cause which kills plants and animals must be beneficial to man; but so long as the absurdity of the notion brings "grist to his mill" he does not care to disturb the idea.

We have already adverted to the effects of moist cold as being far more severe than the dry cold of frost. Let us now record, in passing, one of the most remarkable results of sanitary improvements. Recent investigations have positively shown that the occurrence of consumption in towns has been remarkably diminished by deep-draining. Wherever a system of deep and

extensive sewerage has prevailed in a district, there consumption has diminished, and a perfect system has been marked by a falling off in the mortality from phthisis of twenty-five per cent, thus indicating the superior advantage of a dry soil, and consequently a dry air over one kept damp by a retentive clay.

There is yet another phase of the effects of cold which it is desirable to mention. One of the earliest effects of famine is to diminish the vital heat—in other words, starvation chills the body. It is clear, then, that food helps to keep us warm, and that the keener the atmosphere, the greater is the amount of victuals necessary for us to keep ourselves comfortable. The occurrence of cold, therefore, necessitates larger supplies than ordinary of "provend." But if the digestion is habitually bad, these supplies cannot be taken, consequently the occurrence of winter aggravates dyspepsia in all who already suffer from it. For the same reason a chilly atmosphere weighs heavily upon the health of all those who are unable to provide themselves with the extra supplies of food which the season demands.

As this Essay has already run much beyond the bounds which the author has prescribed for himself, he will not pursue the subject farther than to say, that cold is in no way whatever conducive to the preservation of health—on the contrary, that it is directly provocative of disease. Its sole value is to enable those who can afford to do so the more fully to enjoy warmth. It is quite possible that this assertion will be challenged, but it can only be shaken by its opponents taking a different standard of heat and cold than does the present writer. To be precise, we may thus enunciate our views—anything which reduces the warmth of the body, on the surface, to a temperature of 40 deg. Fahrenheit, perhaps we might even say 50 deg., is directly prejudicial to health, and may eventuate in very serious mischief.

In this, as in all other matters wherein health is in question, we hold that it is more judicious to study comfort than to follow theory—to examine into, and where judicious, to imitate the habits of animals, than to pursue the dictates of a rigid asceticism, which sees in luxury a snare of the devil, and regards a fire in one's bed-room as a prelude to a conflagration in the nethermost hell.

NOTE.—Whilst these remarks were passing through the press I have had an opportunity of seeing the MSS. of a forthcoming work written by my friend Dr. Oldham, who has passed many years in India, and has studied closely the effect of cold in that climate. It would be unfair to Dr. Oldham if the results of his investigations were given by any other but himself; consequently I will not do more than recommend my readers to look out for his book when it appears. In my estimation it will be found to be singularly valuable, and it will show more forcibly than I could possibly do with only British experience, the influence of heat, and the effect of cold.

CHAPTER XX.

ON THE INFLUENCE OF APERIENTS.

An Essay upon the influence of aperients appears at first sight much more fitted for a medical treatise on the restoration of health than for a book which professes mainly to treat upon its conservation. A few minutes' thought, however, will show that the subject of the present chapter is strictly germane to our purpose, as may be seen by reference to an epitaph which some individual caused to be placed over his grave. It ran thus:—"I was well; I would be better; here I am." In this brief line we see the history of some one who, like "Le Malade Imaginaire," of Molière, thought so much about himself that he magnified the importance of every little occurrence or ailment and recognised in a head or finger-ache the accession of some serious disease. To ward this off he has had recourse to one of those individuals whose profession is to cure, but whose practice, in days gone by was, too generally, to kill; and he, notwithstanding all the learning that he was fortified with, administered potion, pill, and clyster. We have often admired the happy knack with which Molière hit off the characteristics of the old school of medicine, in the most delicious dog Latin, such as was used by those of the faculty who knew more of their mother tongue than of the language of the ancient Romans. See, for example, *Le Malade Imaginaire, troisième intermède*, which for the benefit of those readers who have not a smattering of French, Latin, and Italian, we will translate thus, mentioning that the scene represents the examination of a young man by some old doctors, who wish to ascertain whether he is fit to enter the medical profession:—

Quartus Doctor.
Dès hiero maladus unus,
Tombavit in meas manus,
Habet grandum fievram,

Fourth Doctor.
Yesterday one sick man tumbled into my hands. He had large fever with redoublings, large pain of the

Cum redoublamentis,
Grandum dolorem capitis,
Et grandum malum au coté,
Cum granda difficultate,
Et pena à respirare,
Veillas mihi dire,
Docte Bacheliere,
Quid illi facere ?

head, and large pain at the side, with large difficulty and exertion to breathe. Will you tell me, learned Bachelor, what to do to him ?

BACHELARIUS.

Clysterium donare.
Postea seignare,
Ensuita purgare.

BACHELOR.

To give him a clyster, then to bleed him, and then to purge him.

QUINTUS DOCTOR.

Mais si maladia,
Opiniatria,
Non vult se garire,
Quid illi facere.

FIFTH DOCTOR.

But if the malady, very obstinate, does not wish to cure itself, what to do to him ?

BACHELARIUS.

Clysterium donare,
Postea seignare,
Ensuita purgare,
Reseignare repurgare et reclysterisare

BACHELOR.

To give him a clyster, then to bleed him, then to purge him ; to bleed him again, to purge him again, and to give him another clyster.

CHORUS OF DOCTORS.

Bene, Bene, Bene respondere,
Dignus, Dignus, est intrare,
In nostro docto corpore.

CHORUS OF DOCTORS.

Very well, very well, very well, to answer. Worthy, worthy is he to enter into our learned body.

The concluding oath administered to the novice is too good to be passed by. "You swear to keep the statutes prescribed by the Faculty with sense and judgment, and to be in all consultations of the same opinion as your senior whether you think him right or wrong?" "I swear."

Now it is clear that the subject of our epitaph must have been under such hands, and ordered the warning placed on his tombstone to prevent others falling into the same condition ; just like melo-dramatic victims of the gallows, in days gone by, used to make speeches warning their auditors against drinking, sabbath-breaking, pilfering, or whatever other sin the chaplain who had morally tortured them in gaol held most in horror, as the root of all bad things.

It does not require extensive knowledge of the world to recognise the fact that the vast majority of individuals consider that a day without a visit to Cloacina is a nail knocked into their coffin. Many have heard of the parody by a celebrated doctor of Cromwell's dictum, "Fear God, my boys, but keep your powder dry;" the medical leader adapting it to his hearers, put

the whole duty of man thus; "Worship the Lord, that will do for the next world, and keep your bowels open, that will do for this." As a result of such a saying there are many who think it a duty never to allow themselves to be "bound," and if by any chance the daily séance is omitted, they have recourse to medicine; they are not ill, but they fear to be so; they are well, they would be better. The practice of having recourse to artificial means soon shows itself, and repeatedly brings the individual who indulges in pills or any other cathartic to a state of chronic suffering.

Whilst I thus write, the face of a valued patient of mine, who though long an acquaintance has only become a client recently, arises before my memory, and the case is so instructive that I may record it here. On one occasion, long after my medical attendance had ceased, when I saw him about some ordinary business, I could not help making the remark that he never looked so well since I had known him than he did then. He seemed to have more life, animation, and vigour,—more "go" in him than I had ever seen before. "Yes, I feel all that," was the reply, "and to what do you think that I attribute the change?" "I can't tell," was my answer; "but if you'll give me the secret I should be much obliged." "Well," said he, "it's all your own doing; until you attended me I had been taught to think and I believed that I ought to have my bowels moved every day, but as they were not, I used to take aperient medicine twice a week, and did so regularly almost all my life; but I never was well. Since, however, I have adopted the more rational plan of leaving my natural habit of body to itself, I have been a different man. I do sometimes still take medicine, but at rare intervals and of very mild nature."

Closely allied to this case is another in which a lady who was getting into years was haunted by the fear of apoplexy and of disease of the liver. Her health was good, but she wanted to be better, and consulted some doctor or other at every town she visited, all of whom entertained similar views to herself, and prescribed blue pill and colocynth with black draught to follow, with singular unanimity. At length my turn came round for giving advice, and my recommendation was to "throw physic to the dogs." To this, however, she greatly objected. Her precious potions were too good for them, though not quite good enough for her. Besides, she was perfectly convinced of the value of her aperients, for she was "invariably better the day after she had taken her night and morning dose." I had then to demonstrate to her that persons were more likely to purge themselves into an apoplexy than to drive it away by means of physic; that she had not one single symptom of diseased liver, and that nothing was more likely to disorder that viscus than cutting off

its due supply of blood. I was at last able to persuade her that all her symptoms arose from debility and indigestion, both of which she fostered by her frequent use of "opening medicine." Lastly, I convinced her that she only felt better on the day after her doses because she was then so weak as to be obliged to lie on the sofa from morning till night, or else to keep her bed. After some coquetting with "the old love," it was discarded, the reign of pills was over, and the rest of the old lady's days were spent in comparative health and comfort.

It is probable that I never should have had anything like an intimate knowledge of the effects of aperient medicine had I not travelled for months in intimate relationship with a gentleman of feeble health, who was wedded indissolubly to the use of pills. I use the adverb indissolubly, because he persisted in the use of his physic pellets until the day of his death, whose final stroke indeed, the pills brought about. Being with this friend at all hours of the day, and often during the night, I was familiar with his voice, his manner, his cheerfulness, or the reverse, and many other little mattters. I was aware of his strong feeling in favour of medicine, and did not attempt to shake it until I had studied my acquaintance's case very closely. The invariable result of the opening medicine was to give relief from flatulence for about twenty-four hours after the pill was taken, and very materially to increase the "windiness" for the three subsequent days. If lured by the idea that a dose gave one day's relief, my friend took another on the second or third day, no advantage whatever was apparent, and the flatulence was more severe than usual both in duration and amount.

Let us now consider how an aperient acts, &c.

If anybody takes the trouble to look into the body of a hare, cow, sheep, &c., he will see that there is a long tract between the stomach and "the vent," to which the name of "bowels" is given. If he will extend his curiosity farther, and slit this tube open from end to end an hour or two after the creature has been fed, he will see that in the portion nearest the stomach the material contained is a whitish matter like thick milk; if he uses his eyes closely he will see small vessels which have been absorbing some of the material; and if he peer very narrowly he will find that these vessels convey this "chyle," as it is called, to the blood. In pursuing the bowel downward he will then come upon a curious valve, which only admits the whitish fluid to pass towards "the anus," and after passing this he will notice that the colour of the material and its nature become greatly changed. The first part of the bowel seems to be a sort of ingress for new pabulum into the blood; the second part is for the egress of old material. In all parts of this intestinal tube he will also see, if he opens a healthy animal immediately after death, that the

bowel is contracted upon its contents, and has a worm-like movement by which the contained matter is propelled in the direction of the rectum—*i.e.*, the cavity above "the vent." This chamber is capable of considerable extension, and is closed by a muscle which may be compared to a strong india-rubber ring. When the material has accumulated it is discharged by the contraction of the muscular wall of the rectum, which for the time overcomes "the sphincter" or closing muscle.

Turning now to the point at which we started, we observe that the ducts from the liver open themselves very closely upon the stomach, and that when the bile becomes mingled with the digested food, the colour of the mixture is that of rich yellow cream. This bile, with some fluid prepared by the "pancreas," seems then to be necessary for the formation of the chyle, for these materials gradually pass away from the bowels into the blood, or become so changed as not be recognised by the chemist, for they are not to be detected except in the most minute quantity after the stuff has gone through the valve of which we spoke. In other words, the bile which is formed by the liver passes again into the blood, and does not emerge from the bowels. The brown colour of the human "motions" is not produced by the bile as many think, but by the mucous membrane of the lower bowel.

This matter is a subject of such importance and there is so much general ignorance upon the subject, even amongst medical men, that we may devote a few words to it in passing, although it does not fairly come strictly into our subject. We may state roundly that all our domesticated and even wild animals secrete the same proportional amount of bile, which mingles with the chyle in their bowels as it does in man. Yet every creature has not the same coloured fæces. The pig, an omnivorous, the dog a carnivorous, and the cow a graminivorous beast—all have motions of a colour peculiar to themselves. Even in man the colour of the dejecta depends upon the food taken. A milk diet produces white stools, whilst the use of port wine or claret gives them a deep purple tinge. If the colour were dependent upon the bile it is clear that the greatest depth of green or yellow would be close to the liver, whereas on the contrary, the darkest tint is close to the anus. Moreover, I have seen richly brown dejecta passed by a patient whose liver was so atrophied, or contracted, that no good bile was secreted. To all these facts the only one which seems to oppose itself is the assertion that in jaundice, when there is evidence of a superabundance of bile in the blood, the ejecta from the bowels are clayey looking—whence the total absence of bile in them is inferred. We allow the statement to be correct, but with the inference we do not agree. Of the real cause of the peculiar stools in jaundice

we are ignorant. All that I know is, that dejecta of a precisely similar kind are sometimes passed when no jaundice is present, as, for example, in the dog and in the boa-constrictor—certainly the brown colour of the fæces is not proof of the presence of bile in them.

Again we must return upwards and investigate whence the liver receives its main supply of blood. We find that all the blood which circulates round the bowels in myriads of tiny canals unites again, within one large tube or vein that betakes itself to the organ in question. From the fluid brought by this vessel the bile is formed. Now it is a well-known fact in physiology that an organ secretes a larger or a smaller quantity of its own peculiar fluid according to the amount of blood which it receives, just as a field will yield a large or small crop according to the prodigality of the supply of manure which is given to it. It is equally clear that the formation of a large secretion diminishes the amount of available blood in an organ, just as a large crop taken from a field exhausts the soil which it comes from.

Those who have followed me thus far will now be able to understand that if any individual takes a medicine which increases the secretion from the bowel, this must be followed by a diminution in the blood reaching the veins and a reduction in the supply passing forwards to the liver. This, again, will be attended with a deteriorated condition of the chyle—the material whence the blood is formed—for it does not receive the proper quantity of bile. Thus we find by a necessary chain of reasoning, that the effect of an aperient is to increase the natural secretion from the surface of the bowels, to diminish the amount of blood going to the liver, to lessen the quantity of bile formed in consequence of the failure of the blood-supply from which that secretion comes, and to impoverish the blood formed from the chyle, and with these results there come flatulence, foul breath, &c. There is yet another effect following the use of aperients, which we must shortly notice. Under ordinary circumstances there is a layer of mucus in the rectum, more dense than any coughed up during bronchitis. This acts as a sort of guard to prevent the fæcal matter coming in contact with the soft bowel, and we may liken it to a worsted glove on the hand of a man who has to carry a very hot piece of iron. When an irritant, however, provokes the membrane throughout the whole intestinal tract, to produce a watery mucus, there is no such preservation for the soft membrane, for the thick glove is washed away and replaced by a thin one, and thus the bowel becomes as much irritated by the contact of the "stools" as the eye is by the invasion of soap and water. Consequently, the motions after a dose of physic usually give much pain in pass-

ing, and sometimes bring about spasm or inflammation of the gut, just as the hand would become pained, and perhaps burned, by the hot iron, when a glove no longer intervenes between the two. It is this sensation of heat or pain in the anus that leads persons to the belief that bile is passing.

There is still another consideration respecting aperients that we must not pass by, and which we may introduce thus:—When any organ of the body has been unusually hard worked, it is for the time enfeebled; the arm which can fell a giant in the morning, if it continues such work throughout a whole day, can scarcely fell a baby the next morning, and, in like manner, a stomach which has just digested an enormous dinner, can scarcely digest another immediately afterwards. When the mucous membrane of the bowels has been called upon in like manner to work doubly hard, it becomes weakened, and when weakened it secretes "wind." The air thus formed distends the bowel, and then the intestine, not being able to close upon its contents, cannot propel them as it does in health; its worm-like movement is all but inoperative on air, consequently the bowels always seem to be more sluggish after a good purging than they were before; that they are so, is the experience of all observers. We have thus, by a chain of tolerably close reasoning, demonstrated the effect of an aperient to be a diminution of blood in the bowel, in the body a curtailment of *matériel*; in the liver, a smaller supply of bile for digestion, an impoverishment of the blood, and a "windy" condition of the bowels. These conclusions are amply borne out by experience. Observations most carefully conducted have demonstrated *that the secretion of bile is very materially diminished by the use of all aperients, and that the preparations of mercury, calomel, blue-pill, and the like, instead of augmenting the secretion of bile, reduce it sometimes to the extent of one-third of the usual supply.* They still farther demonstrate that the influence of mercurials and of aperients in general, is expended, as "*à priori*" reasoning would lead us to infer, upon the internal surface of the bowels and chiefly of the larger gut. In fine, the effect of a dose of opening medicine upon the intestinal tract resembles that of onion juice upon the eye—*i.e.*, it produces an increased secretion, and as the organ of sight is no better for the application of the one, so the organs for the absorption of food are no better for the other.

An assertion such as this will by many be supposed to strike at the root of all hygiene, and the question will be asked us, whether we mean to assert that purgatives are absolutely useless, and positively prejudicial under all circumstances? To this we would reply in the first case, that an inquiry is not an argument, and in the second we would answer by a farther interrogation. Let us ask our objector whether he ever knew a

cow, sheep, horse, dog, cat, mouse, whale, or elephant, that ever went to a chemist's shop to buy a dose of physic, and still farther, whether these creatures do not get along as well as do men and women, who ransack both hemispheres for a new drug wherewith to unload unnaturally that which, if left alone, would almost invariably unload itself?

Now, we do not affirm that under all circumstances purgatives are useless; to make such a statement would be to write ourselves as theorists of the wildest stamp. We know that from the exigencies of life persons are obliged to live a life so artificial that the natural functions can scarcely be carried on. A man who has to travel much, or to sit for the greatest part of the day at his desk, or in an easy chair, cannot be expected to be as regular in his bodily habits as one who is in constant exercise, and rarely sits down, except to eat. A woman, too, whose avocations chain her to her chair, or prevent her from visiting Cloacina, except at occasional intervals, is equally liable with man to become irregular as regards the ordinary discharge. We fully allow, moreover, that the gormandizer who habitually eats and drinks twice as much as is necessary for his constitution, is often the better for making "a clean sweep" occasionally. All this we willingly concede.

On the other hand, we aver that any one who under these circumstances trusts to aperients alone to improve his condition will find himself worse than he would be without them.

In every populous town where there is a centre of business, there is certain to be one druggist who gets more custom than his fellows from the men who frequent the haunts of commerce, and if, by nature, the chemist is an observing man, he will classify his customers, and keep a mental memorandum of the drugs they mostly favour, and of the results which attend their predilections. Now, I have heard of such an one declaring that those who were most pertinacious in coming to him for materials wherewith to purge away the remains of aldermanic feasts, were specially subject to sudden death from apoplexy, fainting, or some other similar cause, whilst those who were content with a simple stomachic, like gentian, or other bitters, generally got along tolerably well. We do not vouch for the truth of the story, but we are not above the belief that the experience of every body is worth listening to, and we declare, that after giving to a client advice similar to that which is embodied in this Essay, he informed us that such was the account he received from a druggist who is now dead, but who in his time was as well known as any medical man in his town.

From what we have said, we think that it will be evident to our readers that an Essay on the influence of aperients is very necessary in a volume which treats upon the Preservation of

Health, and we shall be perfectly satisfied if we persuade our readers that pills are not panaceas, and that it is very often the case that indulgence in opening medicine is a very common origin of indigestion, low spirits, flatulence and general debility. In thus writing, we are, to a certain extent, "cutting our own throats," for the habit of reckless drugging amongst the community at large does more to bring patients to the doctor than any other cause. But as our present business is to warn fishes from the net, we sink our individual interest for the general benefit.

Let me conclude by recording a remarkable case in which purging to ensure health was carried to an extreme degree. A man, burly as a Hercules, came to consult me in the absence of his own physician; his eyes were bloodshot, he staggered in his gait, tottered rather than walked to a chair, and told his complaints in a feeble voice. They arose from two sets of causes: the muscles were too weak to do their daily work, and the heart and blood were both in a poor condition. He had pain in the right side, rushing of blood to the head if he stooped, and sometimes on these occasions fell forwards insensible. He had been ill for months and was steadily becoming worse. His doctor and physician both told him that he was threatened by apoplexy and disease of the liver and ordered low diet and purgatives. The last were given to such an extent that the man told me—after consultation with his wife so that he might not exaggerate—that his "motions" averaged fifteen per day. "They made him," he said, "so weak that he often crawled upstairs on his hands and knees when he went to bed."

Now this man instead of improving his health had—by the best advice—been ruining it; the blood vessels that had twice burst on the surface of the eye-ball might be followed by a rupture of other vessels in the brain, whilst the liver deprived of two-thirds of its blood might at any period become atrophied or decay.

The reader will easily divine the plan of treatment which I suggested—viz., cessation from physic, rest or idleness, and abundance of food. The result was that when his own physician, at a fortnight's end, came back from his holiday the quondam patient could do perfectly well without any doctor, for he had regained health and strength. He had learned, moreover, what so few who think much of their health have discovered, that he who wants a good "head" of water in a reservoir should not be opening the flood-gates habitually.

CHAPTER XXI.

THE USE OF A DOCTOR.

THERE is scarcely one of my readers who does not think that he knows the use of a doctor as well as he knows that of a lawyer, a carpenter, or a blacksmith, and he is probably quite right in his estimate, for he is very likely to regard these men as individuals whose business is to carry out the behests of those who employ them; and when certain things are required to be done, Paterfamilias being unable to do them with his own hands, calls the artisans in to perform the job, to be indeed a sort of supplementary hand or arm. There are some of us who are disposed not only to tell a carpenter what we want him to do, but also the plan which he ought to pursue in every detail of his work; and there are many who consider the chief business of the doctor is to adopt and carry out the wishes of his patient, or of him who summons the physician. We have, indeed, abundant proof that such is the case in certain matters. For example, it is now well known that in America, women, whose position entitles them to rank as ladies, prefer the pleasures and freedom of matrimonial life to its sufferings, and have recourse to doctors to relieve themselves from the pains of maternity and the motherly responsibilities of a family. An American union in the highest circles of society is thus rarely prolific, and native Americans die out from the selfishness of the feminine element. At first, when members of the medical profession were required to perform an operation that was to produce a premature fall of the fruit from the parent stock, all respectable doctors refused to participate in the guilt of such matters. But when ladies did not scruple to tell their ordinary medical attendant, that what he declined to do had been done by another, it became a matter of consideration with him whether he would retain his conscience, lose his patients and starve, or whether he would become an accomplice in a legal wrong which

by tacit consent has come to be regarded as a venial sin or a pardonable weakness.

Again, I remember to have read amongst a mass of statistics about the mortality attending amputations in France, that one individual had his leg removed "from complaisance." The account ran that an enthusiastic young man was deeply enamoured of a young lady whom he was very anxious to marry. She, on her part, was as romantic as he was earnest, and refused to unite herself to him, inasmuch as from some accident or other she had been obliged to suffer the loss of a leg. The lady obstinately adhering to her own resolution, her lover felt obliged either to give up entirely the idea of matrimonial or other union, or to become mutilated like she was. He selected the latter alternative, and in no sensational novel have we ever read anything so remarkable as the dry account by the surgeon of the interview between himself and the enthusiastic youth. The former, as in duty bound, declined the job, pointed out in proper terms the pain of the operation, the danger which attended it, its absolute irrevocability, and the chance that after all the lady might prove false, unkind, or too delicate to live long, and that it would be misery for the rest of his life to feel how, in the hot blood of youth, he had so injured himself as to be imperfect, and unable to walk, run, or dance like his fellow men. It was all in vain. The young man persisted in his desire, declared his stern determination to have the operation performed by somebody, and pleaded so hard to him whom he thought would do it better than any other man in France, that the surgeon consented. The leg was cut off, and the ardent lover died from one of the many dangers of which he had been told. The doctor simply drew the moral that amputations of the leg were dangerous even in the midst of health. I read this anecdote some five and twenty years ago, and was much amused to see, within a few days of the above appearing in the pages of the *Medical Mirror*, another version of the story, in which the gentleman recovered, found the fair one "false, unkind, and found too late" that all his comfort was "to sigh at fate, and cry woe's me." We commend the tale to the novelists, assuring them that our version is the true one.

Now it is clear in both the cases to which we have referred that the medical men were used simply as tools, and we may fairly contrast them with another instance in which the tool proved rebellious.

A physician, with whom I am very well acquainted, was summoned to see a young lady who lived at some distance from town. The message was urgent, and his haste was great. He found that his patient was suffering from intense pain, which was

borne with quiet Spartan firmness. But, as the lady was naturally reticent, and there was neither mother nor nurse to instruct the doctor, he was unable to understand the nature or the locality of the suffering. For more than an hour he was foiled in his efforts, and all he could ascertain, with certainty, was that he had been sent for only to prescribe an opiate dose sufficiently strong to lull the intense pain with which the patient was suffering, the lady herself having previously sent to a druggist for a quantity of laudanum which he had refused to dispense without a medical authority. After mature consideration the physician complied, but gave also certain directions; made a second visit after a week's interval, and again essayed to find out the nature and locality of the pain. After a visit of an hour and a quarter he returned foiled once again, the reticence of the lady preventing any direct information being given. On the next visit the doctor began by telling his patient, whose suffering was now considerably mitigated, as he would have done to a class of anatomical students, the Latin or technical names of certain parts of the body, and continued by expressing his belief that the pain was seated in the rectum, that there was a condition existing there to which the name of "fissure," "crack," or "chap" is given,—that this is the most painful and agonising disease known to doctors, that it aggravates the pain of the monthly visitor very materially, that when there is diarrhœa, or constipation at the periodical flow, the suffering is all but deadly, and that he believed this was the case when he was first asked to prescribe an overwhelming opiate. The deduction which the physician drew was correct, and he then learned that the young lady had suffered from this frightful complaint for nine years, that her ordinary doctor, a homœopathist, had disbelieved the existence of any real illness, and that her father and all her friends had regarded her as a silly hysterical woman. It would almost sound romantic if we were to detail the proofs of heroism given by this unfortunate patient during the long period of her sufferings, which were never once relieved by sympathy, and were repeatedly aggravated by reproach and contumely. The physician in question has often also descanted upon the touching tone of thankfulness with which his patient uttered the words, "Then you really believe that my sufferings have been and are real?" which resembled the cry of the storm-bound mariner who sees his goal at last. He was equally touched with the stoic firmness of her proposition, that she would rather bear all her miseries for the rest of her life, and feel confidence in his judgment, than undergo the examination and operation, indispensibly necessary for the cure, with the bare possibility that the doctor's opinion might be wrong. The physician, however, had no doubts, the

lady's resolution carried her onwards, and chloroform and a skilful surgeon put an end to a painful affection.*

* Since the above account was published, my friend informs me that it fell into his former client's hands, that she recognised the description of her case, and made comments to him upon it. He knows the interest which I have taken in the lady's history, and with her consent has permitted me to copy the following epistolary observations. I do this the more readily as the remarks afford to us an opportunity of seeing the use of a doctor from a patient's point of view. "One great good that you have done me—and I think that if I could know that I had done that for anyone I could be thankful to have lived such a suffering life as mine has been, *only for that*—I mean that you first sowed in my mind the seeds of that strength which has been my preservative against insanity. For when a lonely invalid sees that those who belong to her most nearly, consider her facts as fiction, the first effect is to produce a physical sensation of giddiness, like a person trying to walk upon a cloud might feel, and afterwards what but insanity can happen to one who is told to disbelieve the natural laws of evidence." Then follows an expression of regret that full confidence was not given to her doctor, and that she did not inform him that in addition to the affection of the rectum there was another in the uterus—adding, "but I am sure that if I had been your patient six months instead of six weeks, you would have got it out of me." When, after the operation had cured the bowel, she complained to her surgeon of severe pains, she was then told "that they were hysterical;" but the recollection of your belief in me helped me to answer back, "I don't care what name you give my pain, nor whether you say it is real or imaginary, only *cure* it, and if it is in my imagination, invent some means of getting it out; for as long as it hurts me, it is a real evil." Disgusted with the surgeons whom she saw at her then residence, because they persisted in regarding the pains which remained after the rectum had been cured as hysterical fancies, she went abroad and told her sufferings to an intelligent Swiss practitioner, who found that her symptoms proceeded from anteversion of the uterus—the womb being actually bent double—an affection which from the great lapse of time which had ensued proved to be incurable, and the source of a perpetual burning pain which makes both day and night all but intolerable, and death to be regarded as a long delaying friend. To this affection others have been added, and the only relief to be found is in large doses of opiates. The next paragraph of the letter is so very illustrative of what is called *trance* that it deserves to be quoted literally. "Naturally I am and always have been excitable, and have high spirits, and as the morphia slightly *sobers* these, I have always the same motive for *not* taking morphia that other people have for taking champagne, since the omission of a dose of morphia *exhilarates* in spite of pain. But if I indulge too long, an old ailment which I suffered much from in youth and to a fearful extent these last nineteen years, returns, *i.e.*, stupor. This comes on with convulsive twitchings after the exhilaration. If I do not take care I fall into a state in which my consciousness is perfect, but my powers of motion nil. In vain I know that help is close to my hand, that I have but to take medicine to be cured. I can neither raise my hand to ring my bell nor open my eyes. At last I suppose nature somewhat recovers through the enforced stillness, and a time comes when I can, with intense effort, break the spell and ring for help. I don't think any one has a greater horror than myself of an agent for curing pain; but which influences the mind or weakens the will. But when I tell you that in the old days when I took no opium, no stimulants, nor even meat I used to pass weeks subject to these attacks for the greater part of every day; besides being always in a state which, though caused by

To this we will add another example of similar import. A surgeon, whose sagacity may be judged by the sequel, was con-

abstinence was as true and *degrading an intoxication* as any wine or opium could cause. I think I am right to look upon anything which leaves me to be my natural self not as medicine but meat" (We may well pause here to notice how completely this poor lady's words afford us an explanation of those "extacies," "absorption for a time into the bosom of the virgin," which are so commonly recorded in the lives of abstemious women whom the Roman Church have elevated to the position of Saints.) The writer then goes on to say after remarking upon the duty of the doctor, duly to apportion the dose, &c., of an opiate. "If Doctor Inman is going to write again about the 'Restoration of Health,' I wish he would fight the battle of many a chronic invalid, who, feeling a doctor necessary as a preventive to evil has to submit to his being an *active evil* in himself. A doctor once told me that he had a patient so fond of chloroform she was always inventing ailments to get it, and he laughed at the idea because it "answered." If I thought that chloroform needful, I should ask for it direct without inventing a reason. Now I have tried to carry this into practice with my doctors, and have lost one in consequence, and the one I have is, I see, often troubled with a morbid conscience because he does not always write a prescription when he comes. What I said was, "I am too ill to be left unwatched, and somebody ought always to know how much opium I take to be there to prevent me by his *influence* from taking anything else. You tell me, do not take anything for sickness, it is not really bilious, that is well, I *believe*, and take no aperient, but the *next* attack *seems* to me—alone and suffering—*different*, and yet I know you will say, it is the same, and that you will ask (if I call you in) "why have you sent for me?" and if I don't call you in, it is nearly certain that my enfeebled nerves will get the better of my brain, and that I shall *try* to gain some modicum of relief, however small, from the terrible suffering which I am undergoing, by taking some form of aperient. Do you not see that by *preventing* me from doing any injury to myself, you are acting far more nobly than you do when you determine to let me alone to physic myself in any way I may fancy, and thus make myself ill, and *then* attend upon me to cure me, by giving me a drug, which, to effect a certain amount of good, must do some harm also. But in vain I used to urge this, for the doctor used to say I am too busy to make visits where there is nothing for me to *do*, *preventing* evil being, in his opinion, *nothing*, and yet how many, both male and female patients have I known, who have seriously injured themselves with some preparation of mercury, who might have been kept from the practice of taking that drug, by regular visits from a doctor, who would come to influence me instead of to prescribe doubtful medicines. My present doctor has far too much good sense, and his visits, in which he tries to interest me in books, politics, and medical reviews, &c., are too like your visits for him to take this erroneous and morbid view were he a rich man. But where too many doctors *are* what you describe them, it is harder even (for a doctor depending on his practice) to pay what his enemies might call needless visits to one class of patients, than to tell the truth and so be dismissed by another class of patients. I hope then that Dr. I. will write a chapter in his next book on the use of a doctor to a chronic invalid —though my doctor being Swiss won't be able to read it,—and make it clear that whatever else that use may be, it is not to give drugs, or *propose little operations* (which are the worst of all, being morally as well as physically harmful). If a doctor comes across some poor sufferer whose need for sympathy and support is as great and real as another's need of his daily bread; and if, being weak in intellect and mind (and, therefore doubly an

sulted by a lady for some disease of the womb, for which she had consulted a great number of doctors without any relief

object of sympathy) she yields to the pressure of things as they are, and to secure help asks for operations, &c., let a doctor, instead of harshly, as too often is the case, showing such an one that she is *found out*, show her that he can give her in other ways, by books, &c., *true* help and more *real* sympathy than the momentary relief which a *kind surgeon* gives when he must cut or burn; and the same instictive desire of sympathy which led her *downwards*, will lead her to a higher state and better frame of mind, one far more likely to lead to self-conquest of nerves, than the bitter despairing humiliation of the shammer who is found out. I cannot remember the deep debt I owe to those who have given such real help to me, without grieving over the many who *deeply need such help and have it not.* I have often thought that if I am truthful it is because, as a child, no one doubted my word, and have often to my doctors quoted some words of yours which struck me. One visit, when you had been talking, not of illness, but entirely of various higher interests, you observed, 'I do you more good by this than I should by any medicine,' and I needed no reflection to give a hearty assent . . . . and when my doctor comes to see me now I need sometimes to quote your words, and tell him that when he administers relief in the way of conversation, he has no need to precribe a drug in addition.'"

At the risk of being egotistical, the author may add fairly here an experience of his own. Whilst only a clinical clerk at King's College Hospital, "the Sister" of a female ward said to me, "I declare, Mr. Inman, that your conversation does more good to my patients than any medicine they get." Being desirous of ascertaining the reason why, the reply was, that the interest taken in each case, as shown by sitting down on the bed-side and talking kindly, made everyone feel there was a living power exerted in doing good, and not simply an influence from a dead drug store. A similar observation has been repeated sufficiently often to convince the author that the estimate formed of her doctor made by the lady whose epistolary remarks are herewith recorded, is not far wrong. To resume,—"But I think more of the numbers who are what I was—constant sufferers without any internal or visible ailments, and who more than any other need constant regular visits from a man whose mind can *influence* theirs, so as to prevent them making their state worse still with self-administered blue-pill, or other pet remedies; and in cases where an opinion is taken, or where a medical amount of any stimulant is required, I think that the docter ought to be often present to watch and control." The lady ends her letter with the statement that the morphia which she takes to relieve her sufferings, acts better in procuring sleep at night, by being taken in repeated doses during the day, than in one large dose at bed-time.

We make no apology for borrowing so largely from the letter addressed to our friend, for it is evidently the desire of his former patient that her experience shall benefit others. We entirely sympathise with her in her wish to do good. A typical case like hers ought to act as a beacon to warn others from being wrecked on the same shoal. We sometimes meet with individuals, who, having curious symptoms, desire to be dissected after death for the benefit of medical science. Here is one, who, though racked by pain, and prostrate by sickness, lays bare her feelings and her thoughts respecting patients and doctors ere she has ceased to live, and the power of imparting personal knowledge has ceased. Should these pages ever meet her eye, I trust that she will see that her desire has been respected. Their author will have a life-long sympathy for one who has suffered so long and so deeply, and it will ever be his desire that she, even when dead, shall speak in favour of her sex, and in a tone which shall banish all the hysterical jargon still in existence from the medical world.

being obtained. For two years her sufferings had lasted, and she was travelling from place to place, and to consulting-surgeon after surgeon, hoping to find some one who would understand her case and cure her. Of course an examination of the parts was necessary, which was readily effected under the influence of chloroform. To my friend's surprise he found that everything connected with the uterus was perfectly healthy, and for a time he doubted whether there was some "sham" in the matter. Before deciding, however, he put together all the circumstances of the case, and determined to explore the lower bowel. His judicious reticence was then repaid; for he found a fish-bone lying across the rectum, and firmly impacted in it just above the sphincter ani. With a little contrivance this was removed, and when she had recovered her consciousness the lady learned the result of the examination. She then told the sagacious surgeon that she had been to very many in the hope that one would of himself make the discovery which he had done. It was clear that maiden modesty had induced the lady to refer her sufferings to the uterine apparatus rather than to the anus, but she paid very dearly both in purse and person for its indulgence. Had she been more sensible she might have remained equally "proper," and a hint respecting the real locality of the pain would have saved her two years of misery.

Now in both these instances it is evident that the doctors who succeeded in finding out the real nature of the diseases in existance were infinitely superior to those who were only used as tools to carry out the directions of their patients. We may illustrate our meaning still farther by another example. A medical friend informed me that on one occasion he was sent for to see an elderly man who imagined that he was threatened with apoplexy, or had some other serious disease impending, to obviate which he required to be bled. On examining his symptoms the surgeon came to the conclusion that the man wanted more blood in his veins rather than less, and prescribed tonic medicine and generous diet, under which treatment he felt sure that the man would soon be well. But he was followed by a note informing him that he need not call again, and so heard nothing more of the case for a time. The patient next sent for a physician whose plausibility had won for him an immense reputation, and to this doctor he told not only his symptoms, but his determination to be bled. The two "medicos" being very intimate, soon learned the particulars from each other, and on the first asking the second what he had done, the reply was, "I knew as well as you did that bleeding was the wrong thing to be done, but the old fool was so opiniated, that if I had not humoured him he would have gone to somebody else who would perhaps have bled him from the arm and killed him. I there-

fore told him that it was bleeding by leeches which was suitable to his case. So he got his own way, and I got far more fees than I should have done had I combatted his determination."

After the same fashion many a patient comes to a physician saying, "I want you to prescribe something for my liver, for I am very bilious," or "something for my bowels, for they are very costive." In both cases the patient firmly believes that he knows fully the nature of the complaint, although he is not able to discover the exact remedy or the proper dose of the drug which he believes to be appropriate. In the same way a doctor when he attends a family, is expected to treat the ailments of his patients in some way which Paterfamilias or mamma believes to be the correct thing. Mr. A. has from some cause been selected by Mr. B. for the ordinary doctor, but is soon dismissed because he simply comes to see his patients, gives some simple directions, and leaves them without ordering a single dose of physic. Anybody, it is supposed, can look learned at the bedside—papa himself, perhaps, as well as anybody else. What then is the use of paying a physician who seems to do no more. Mr. C. then supplants Mr. A., and finding that the former was dismissed because he seemed to do too little, the latter does too much, drenches his patients with physic, and thrives himself, whether his victims do so or not. Mr. A. and Mr. C. are sure to meet in a friendly fashion after this event, for all neighbouring doctors are on amicable terms with each other if they are sensible men; and they have a chat over Mr. B's family affairs, Mr. C. holding out that it pays better to let the fools have their own way; and Mr. A. that a doctor ought to be conscientious. Both will agree in the main as to theory, and if the case be one in which bread and butter is concerned, they will in the end unite in their method of practice and act or prescribe as they are expected to do by their employers. I have known, for example, a "medico" who was partly a convert to the doctrines of Hahnemann, inquiring if his clients preferred the old or the new system, and act accordingly, inasmuch as he felt that a doctor cannot afford to oppose the prejudices of his patients, unless he has money, independent of them, and sufficient for his wants.

When once a professional man finds that it is for his interest to humour his patients' foibles rather than instruct their ignorance, it is clear that the doctor who is most complaisant will be the most successful practitioner as regards emoluments, and the really conscientious and able physician will be the one who has the least practice. The one is paid for not curing his patients, and the other starves because he cures them right off. As an illustration of my meaning I will narrate briefly two or three cases of which I am sufficiently cognizant. An elderly lady

suffered dreadfully from pains in all parts of the body, for the relief of which she had almost constant medical attendance, and underwent the applications of dozens of blisters and hundreds of leeches. For years she was a "stock" patient, and paid what was equivalent to a small annuity to her doctor and druggist. Yet though she spent nearly all her living upon physicians, she only got worse. At length a new man arose who attended to her in the temporary absence of her own doctor. From a careful observation of the circumstances, the new comer considered that all the symptoms were due to fatigue. He ordered her to use habitually an arm chair or sofa, his advice was taken and the annuity ceased. For curing the case he put into the hands of his friend some three guineas, whilst for not curing it the annual charge had been between fifty and sixty. Again, a gentleman in a fit of epilepsy got a set of false teeth into his throat, unconsciously to himself, and then suffered from constant vomiting. He came then under the care of a distinguished physician, who duly prescribed, but effected nothing towards relief of the symptoms. A distinguished surgeon was then associated with the physician, but no good resulted. The patient was then sent down to his native air and a local doctor, but he returned to town as bad as ever. Again the distinguished physician and surgeon attended upon him, but without any further result than the lightening of his purse. They got well paid for not curing. At last the individual sought another surgeon, who on learning the symptoms put his finger down the throat, and removed therefrom the set of teeth which had disappeared during the fit. He probably may have received two guineas for the cure, whilst those who only tried to do so, "bagged" some thirty amongst them. In another instance a physician attended a lady for many months without doing her any good whatever, and his fees amounted to about sixty or seventy guineas. Another subsequently took the case in hand, and the patient got well in less than two months, yielding fees to the amount of five guineas only.

The medical profession generally, are quite alive to the fact that ignorance, or the perversion of real knowledge if combined with plausibility of manner, a good "presence" and *savoir faire* "pays" better than a well-stored mind. They know that an attendance during a long illness, is not only a lucrative thing in itself but a good advertisement, Every body who calls upon poor Mr. D. or the delicate Mrs. E., hears of the attentiveness of Mr. F., his unwearied kindness, and his consummate skill, and each remember him when they are disposed to change their doctor. Now, had Mr. F. treated either patient as he would himself, and cured him or her in a week, he would have lost both many fees and much advertisement.

All old stagers in the medical art make a great distinction between one who knows his "profession" and one who knows his "business," and the last is always preferred before the first, whenever an old doctor is selecting an assistant or a young partner. It is the existence of these two elements which causes so great a diversity in the various medical books with which the press teems. Some are written to show that the authors know their business, others demonstrate that the authors are anxious to improve their profession. The first are lauded by the Medical Reviews, all of which have an eye to money, the latter receive the cold shoulder, are snubbed and shelved.

There is, however, another aspect in which this subject may be viewed: it is evident to every close observer that each Briton considers that he knows the only way to Heaven, for each assumes the power of becoming Jew, Turk, Infidel, Roman Catholic, Protestant, Baptist, Wesleyan, Unitarian and the like. Surely then it is argued that we who know so much about futurity, as to say which set of men are the best fitted to prepare us for it, can tell whether Homœopathy, Hydropathy, Kinesipathy, or Allopathy is the best medical system. Of the power of selection none can doubt, about the judgment which dictates the choice there is much question. Where there are no definite means of solving a difficult problem, a very small matter will turn us in one direction or another, and the toss of a halfpenny may be the means of settling to which church or chapel an individual will go and which doctor shall be consulted. I can give no more valid directions to enable a man to select a physician, than to decide which form of religion is the soundest.

What then after all is the use of a doctor, when even a physician alleges his inability to select one for his own family, when his wife and young ones go to a strange place, away from himself? Much. The real use of a doctor, is to ascertain the nature of any ailment, to examine whether it may have been brought about by some bad habit unconsciously contracted; to dissuade his patient from the senseless use of physic, to propound an intelligible plan of treatment, and give a definite opinion as to the duration of the illness. A physician who breaks down under cross-examination, or shelters himself behind hard words, may always be considered as one who knows less of his "profession" than of his "business," and any one who desires to preserve his health, will do better to avoid the advice of the latter than to follow it. This suggestion involves the proposition that it is an injudicious thing to give a doctor an indication of one's own idea of the nature of the ailment complained of. If, for example, a man goes to his medical adviser and says, "I have an affection of the liver for which I want you to prescribe," it is very natural for the surgeon to ask a few routine

questions, and prescribe blue pill which is supposed to be, *par excellence*, the policeman to whom the charge of regulating the liver is entrusted, and colocynth which is believed to be the constable's assistant. But if the individual simply states his case without enunciating any theory as to the nature of it, the *medico* must investigate the matter for himself and give an explanation which shall satisfy both himself and his client.

Again, if beyond mere "indisposition" there is such a serious disease as fever, it is better to watch the doctor's treatment, and cross-examine him as to the reason why he orders this or that, than to indicate to him the plan which he is expected to follow. In the one case the physician must draw upon his knowledge, with the full belief that his practice is closely watched—in the other his drafts are upon the ignorance of his clients. To illustrate my meaning, let me imagine that I tell a carpenter to make me a box, using such and such tools for dovetailing, planing, polishing, &c., and to repair another in the best way he can, it is certain that by watching him I shall get a far clearer notion of his ability than if I direct him how to do it and find he is foiled in carrying out my directions. There is no doubt that the general desire of those who apply to a doctor, is that they shall be cured of such ailments as they have, or if a cure is impossible that they shall be relieved, as far as is compatible with the nature of things. Hence, it is far better to leave the opinion of the *medico* unshackled, than to endeavour by reading to ascertain what the books—which may be, and too often are the reverse of trustworthy—say that he ought to do, and then to see whether he does it.

This leads me forward to another phase of the question. In modern days when books are abundant and reading is fashionable, there is nothing more common than for a physician to be asked the name of the disease for which he is prescribing, and for the patient's friends to consult some approved volume whereby to test the express opinion of the doctor. Well indeed do I remember, when House Surgeon of the Liverpool Infirmary, being questioned by a lay visitor as to the correct treatment of a certain patient who had a "ticket" over his bed, describing the case as "congestion of the liver," whilst the doctor was giving him nothing but quinine—my explanation was that the complaint was nominated on the first blush—that the name thus given was oftener found to be incorrect upon further examination, and that it was inconvenient to change the "tickets" which contained, for the doctor, a real history of the treatment. The same sort of thing exists in private practice—every body wants to know the name of the complaint which they suffer from, and that name very frequently it is impossible to give.

To explain the importance of giving or abstaining from giving

a name, let me tell a personal anecdote. Long ago, the year in fact in which I "passed the Hall and College" I asked a friend somewhat older than myself the following question, "I say old fellow, what do you say when you are consulted by somebody who wants to know the name and nature of the affection for which they ask advice—and when, as must very often happen, you really don't know either the one or the other?" "Oh" was the reply, "it does not do to proclaim our ignorance, so I always say under the circumstances, that it is the liver which is out of order, "Its your liver, Sir, your liver that is at the bottom of it all," and as every body knows that they have a liver and believes that it is apt to become disordered, so I am always safe." I have never followed the advice, however, preferring to allow that I am unable to find a name, and determining to discover one rather than give a false notion and shelve an inquiry.

My own notion about the belief of doctors in general resembles that which Molière puts into the mouth of one of the paternity in *La Malade Imaginaire*, act ii. scene vi. "To tell the truth, our business has never appeared to me to be a pleasant one amongst great folks, and I have always found it to be much more agreeable to practise amongst the common people. The latter are very accommodating, and you have not to answer to any body for your actions. Provided only that you follow the current rules laid down in medical works, nobody seems to care very much for the result. But that which is the provoking thing amongst the better class is, that when thay happen to be ill they positively expect that their physicians shall cure them!!" "Oh," says the clever *soubrette* in reply, "what a joke that is, and how very impertinent the great folks are to wish to be relieved, you doctors do not visit them for that, your business is solely to receive fees and to write prescriptions—it is their business to get well if they can." "Quite true" is the response—"we ought only to be expected to treat our patients according to the established rules of art." In conclusion, let us give the moral of our discourse in these words: the use of a doctor is to cure his patient, not to name his disease, and if he professes to give the correct appellation to the complaint, which he alleges that he is able to cure and does not, inasmuch as it is palpable to the dullest observer that the patient is becoming worse under his care, it is very doubtful whether his practice is not on a par with his profession, and that both are alike worthless.

CHAPTER XXII.

ON THE COURSE OF DISEASE.

To most persons it would appear self-evident that the course of disease can have very little to do with the "Preservation of Health," yet when I proposed to myself the headings of the essays which I am writing, there was an idea in my mind that many individuals ruin their health, or allow other persons to do it for them, in consequence of their having no definite knowledge respecting the usual course of the most ordinary complaints. If, for example, a person "catches a cold," to use a common phrase, he almost immediately has resort to some contrivance to enable him to get rid of it. One man considers that a cold had best be starved, and reads an old adage, "stuff a cold and starve a fever," as if it was intended to signify, that if you do stuff the first you will have to starve the other as a consequence, Another man takes the saying literally, and does "stuff" the cold to the best of his powers. A third, bearing in mind the amount of "running" from the eyes and nose, which acompanies the complaint, thinks the most judicious plan which he can follow is to abstain from drink of all kinds, so that there may be less fluid in the human reservoir, and consequently less liquid to filter through its walls. A fourth person, equally heroic, has recourse to the pill box, and endeavours to obviate a "running" from the nostrils by establishing "a run" upon their antipodes; whilst a fifth goes to some homœopathic medicine chest (the receptacle of innumerable globules of sugar of milk, which are supposed to have various powers, according to the label pasted on the outside) and selects therefrom some pillules from one or other of the bottles, which are taken as valiantly as a glass of water is swallowed by a "toper." Now all these people run to physic and attribute all the occurrences which follow to the remedy or to the disease. If, for example, they get better, they hug themselves with the idea that their own sagacity has brought the result about, and if they

get worse, they fancy that the disease has been too much for them, and that they would have been better off if they had medicated themselves more freely. It is this dabbling in medicine which strikes so heavy a blow at the preservation of health. As an illustration of this, I may refer to a case, already alluded to, in which a person perfectly sound was persuaded to put himself under a course of water treatment to avoid disease, and thus became seriously ill for many months.—See *London Society*, June, 1867.

It is clear to every thoughtful mind that no one can judge fairly of the effect of disease, or of the influence of a remedy, unless he has a definite notion of the course which the complaint, under his consideration, would take if it were let alone. Yet, notwithstanding this common sense maxim, it is all but impossible to find in any medical or other book a single chapter on the natural course of disease. In every age the desire to cure all complaints is such, that it is impossible for anyone to separate in the systematic medicine books the symptoms due to the disease itself, and those dependent upon the treatment which has been adopted by the doctor. When I began to investigate this subject for myself, the task seemed almost an insuperable one. I could not hope to induce patients to be content with letting me see them, as the sole remedy of their disorder, or to pay me for attending them, that I might gain my experience by their sufferings. All the medical men whom I was then acquainted with were in the same condition. It is doubtful whether the desired information would ever have been secured had I not determined to examine into the system of Homœopathy, and to inquire into its results. In the practice of its professors, I was soon convinced that there was an ample opportunity for studying the natural history of disease, uninfluenced by drugs. For, in spite of anything which may be alleged to the contrary, any man of observation, with a competent knowledge of chemistry and physics, must believe that the decillionth of a grain of any material, however potent, is practically equivalent to nothing, and can no more be called a "medicine" than the fine black stain which remains in our purse, the result of the loss of an infinitesimal portion from every sovereign which we place there can be called "money." Well, on investigating the homœopathic system, I could recognise a plan by which doctors could "humbug the public, and pocket the fee," and get information besides. Not that the followers of the system were really impostors, on the contrary, they not only had faith in their practice, but the results of their treatment fairly seemed to justify them in their belief. Honest in their convictions, they gave to the world the results of their experience, and thus the philosophic doctor who attempts to prove all things, and hold fast that which is good, has gained

an insight into disease far greater than he ever could have before.

After a strict examination of the statistics given by the disciples of Hahnemann, it became clear to the present author that the old system of medicine had done positive harm to everyone who had indulged in it. And, on striking a sort of debtor and creditor balance in favour of, and against doctoring, it appeared that the world would, in the main, have done better without physicians than with them. Antimony has probably killed its thousands, and mercury its tens of thousands. All this has happened because neither doctor nor patient knew what was likely to occur if sick people were just let alone—with nothing more than intelligent nursing and ordinary care.

For example, who could tell whether bleeding, mercury, low diet, purging, and antimony were useful in rheumatic fever until they knew what would be the phenomena and duration of the complaint if left to Nature? And if any patient were to be ill for months, how could he, his friends, or the doctor, judge whether the length of the disease resulted from the illness itself, or the plan upon which it had been treated, unless the natural history of the disease was first familiar to them all?

To illustrate the importance of this subject upon the preservation of health, let me give a short sketch of the past and present method of treating acute rheumatism and the results. When I was a student in London thirty years ago, men with rheumatic fever were bled once, twice, or three times, kept upon low diet, occasionally purged, and when the heart became affected—which it did in about five cases out of six—mercury was employed, and the patients were salivated, whilst more blood was taken from the chest by cupping. The disease so treated rarely ever ran a course of less than six weeks, and so uncommon was a shorter duration, that our Professor of Medicine told us that he did not believe any case to be one of true rheumatic fever that got well in a less period. The ordinary duration of the illness was three months. The patients generally left the hospital with some affection of the heart, and were, as the same Professor assured us, very likely, in two years, to come again into the institution with cardiac disease to die of dropsy. As a natural result, this disease was dreaded as one of the worst which could happen. After a period, however, Dr. Owen Rees was induced to treat this formidable complaint with lime juice, whose medicinal properties were then recognised mainly as a preventive of scurvy. The medicine neither purged nor produced vomiting, indeed, it had no appreciable effect upon any organ, yet those who took it got well rapidly, and without those serious affections of the heart which were so common under the old régime.

After being myself a devoted admirer of the use of lemon juice, I had an opportunity, through the sagacity of our then junior house-surgeon, Mr. Henry Rawdon, at the Liverpool Royal Infirmary, to contrast its influence with that of simple water, and to find the difference very small. But it is very possible that locality has something to do with this result, for during the seven years that I was physician to the Liverpool Northern Hospital I invariably administered lime juice to my rheumatic patients, and found they usually got well in about ten days. One case I particularly remember; I ordered the girl the usual remedy, but she did not improve as others did. I increased the dose, but there was no apparent progress towards health. I then inspected the bottle, and found that the lime juice was spurious. The pure stuff was then obtained, and the cure was as rapid as it had been in other cases. When I became attached to the Royal Infirmary in the same town, although I continued the practice with which I had become familiar, I never once could find the results that were witnessed at the Northern Hospital. Nevertheless, I still continue to use lime juice, feeling sure that it does no harm. The result of my personal experience is that the average duration of acute rheumatism is about three weeks, the extremes being about one week and three months. Its ordinary course is that the ankles are first affected, then the knees and other joints in succession, and sometimes the heart, and more rarely the lungs; and I may add, in passing, that the only cases of acute rheumatism that I have known to be fatal have been so from the disease attacking the pulmonary tissue. The patient is always very weak, and generally sweats profusely.

The affection has in every joint a period of invasion, increment, persistency, and decay—and thereby hangs a tale. True to the practice which I had learned in London, I used to leech the hands of those who had the inflammation in those parts, but I never leeched the ankles. After going through this practice for a time, it occurred to me that it would be just as judicious to let the hands alone as to leave the legs to Nature. The leeches were therefore omitted in my next case, and I have never used them since, for I find that the hands get well of themselves just as soon when let alone, as when meddled with. The same may be said of blisters. Shortly after gaining this experience, the house-surgeon announced to me that one of my rheumatic patients had his heart affected, and on examination I found evidence of inflammation, both of the outside and of the interior of that organ. Under these circumstances, every doctor had been taught to bleed, "cup," and salivate the patient, but I was dissatisfied with the plan. There then flashed across my mind a case of pericarditis successfully treated by globules of sugar, and it occurred to me, yet more strongly, that as the ankles,

hands, &c., get well in this disease if they are let alone, it could not be an injudicious plan to leave the heart alone too. It cost an effort to me to do so, for had the man become seriously worse, or died, I felt sure that every one in my profession would consider that I was guilty of culpable neglect and constructive homicide. Yet feeling sure that my arguments and inferences were sound, I ran the risk, and never before saw a case get well so rapidly. Since that period I have never ordered mercury, cupping, bleeding, nor even a blister for this complication, and am unable to recall one single instance in which the heart has become permanently damaged.

During my period of hospital practice (about sixteen years), I have lost three patients from rheumatic fever, and all died very suddenly from acute inflammation of both lungs. Thus we see that when the natural course of a disease is known, we can judge not only of the effect of the treatment, but of the condition which the patient should be in, after complaints are over. We now see that the system in vogue under the old régime repeatedly prolonged illness, and permanently impaired the framework of the body; and we conclude that all those who value the preservation of their health will naturally shun drugging.

After this let us turn our attention once again to a common cold—how many of those who suffer from it know its natural course?—we may sketch it thus. We are aware of its advent by an unpleasant dryness of the nostrils, next day we have a sore throat, a stuffed nostril, &c.; the next day we may have an inflamed eye or ear, and an extension of the complaint to the windpipe; the next day are given up to hard coughing, sneezing, &c.; whilst in some the complaint passes down the gullet as well as the windpipe, and reaches the stomach, producing the sensation of something being there which the patient would like to get quit of, but cannot. This arises from the coats of the stomach being thickened, and perhaps inflamed, like the membrane which lines the nostrils, and this state of things is naturally attended with indigestion. After three days or so, the "cold" has advanced to the bowels and "rectum," producing diarrhœa, which lasts a day or two, and then, there being no other place to go to, the complaint disappears, its ordinary course lasting from ten days to a fortnight, according to circumstances.

When once an individual knows that the ordinary course of catarrh is run out in about a fortnight, he is not likely to talk of a cough hanging about him for six weeks; and if he knows that a "cold" has a definite course he is not likely to mistake the invasion of consumption for a simple catarrh,

Still further when any one once becomes imbued with the notion that a cold runs, like measles, a definite course, he will

not feel disposed to make himself more miserable than he need be. If the complaint makes him weak and good for nothing, he will not make himself more uncomfortable by taking pills or potions. If "a cold" produces purging, he will not feel disposed to augment its effect by aperients, any more than he would use soap and water to cure the inflammation which the catarrh has caused in the white of his eye. By acting thus rationally the individual only suffers from the disease, and not from his own doctoring in addition.

When once the idea arises in the mind that certain complaints are like annuals, and others like perennial plants, the desire arises to know whether the two can be distinguished, and we ask ourselves, which those are that have as definite a life as a larkspur or poppy, and what in persistency resemble the oak. Of course the answer to this question can only be given by experience. But experience has sufficed to inform us that such diseases as measles, whooping-cough, scarlet fever, small-pox, chicken-pox, fever, plague, pneumonia, acute rheumatism, catarrh, diarrhœa, and a number of other ailments, have a transitory duration. The seed is sown, the plant springs up, fructifies, seminates, and dies, never to rise again in the same body. As a rule it is well to treat these complaints as we would some tender plant, whose flowers and fruits we prize. To attempt to coerce the progress of such complaints, to cut them short, or to stunt their growth, is to endanger the life of the individual who forms for the time the soil in which the annual grows.

When once both patient and doctor understand that a certain disease has to be watched rather than to be combatted, it will be all the better for the field wherein the battle is to be fought. I have heard of a woman who, when she saw the corpse of her son with a hole through his forehead, thanked God that "his eye was saved," and I have heard of a physician who congratulated himself, when his patient died, that his remedies had "cleaned the tongue." To most people it would seem a very preposterous idea that it was better to die from drugs than from the disease, yet we have seen something very like it asserted. There is indeed scarcely one physician of cultivated intellect and tenacious memory, who could not write an interesting, nay, even a fascinating book respecting popular medical errors, and the fallacies of the faculty; but all forbear, because of the proverb that "it is an ill bird which fouls its own nest."

But although there are many diseases whose course is definite, and their duration tolerably certain, there are others which will continue for an indefinite period unless they are successfully combatted. Thus, for example, tape-worm is a complaint which is never known to cure itself, and "scalled" head in like manner is equally inveterate. These, and sundry others of a like cha-

racter, are of parasitic animal or vegetable origin, and resemble the green fly or red spider upon a plant, rather than the plant itself. And it is as hopeless to attempt to cure these affections by doses of sugar of milk, as it would be to cleanse a green-house of vermin by kissing our hands to the plants infested with them.

Whenever, therefore, the physician recognises the presence of what he terms "parasitic" growths, he knows that they must be judiciously attacked and their life destroyed.

But there is a great difference between one parasitic growth and another, and this introduces into medicine a great amount of uncertainty. Every variety of cancer is as much a parasitic growth as is the mistletoe bough on the oak or apple tree, or the lichen on an ancient birch. But there is this distinction between the one and the other, that whereas the misletoe and the lichen come from seeds or spores, irrespective of the tree on which they grow, cancer comes from some change in the stock itself. The distinction is important, for we cannot cut a cancer away from the body with the same impunity as we can separate moss from the bark or wood of a veteran of the forest. We are justified in using whiskey and gunpowder to kill and expel a tape-worm, but it is a question whether we are justified in using a knife to extirpate a cancer, Yet, as this is a moot point among surgeons, and one which requires an extensive acquaintance with statistics, we will not enter into the subject here.

It now becomes necessary for us to draw a moral from the preceding considerations, and we may best do so by enunciating the following recommendations to our readers :—

1. Never take physic to shorten a disease until you know how long that complaint would remain with you if it were let alone.

2. When you do take physic never adopt a drug which will inflict more misery than the complaint would do if it followed its own course.

3. Whenever you have a disease, disorder, or complaint which has a tendency to run a definite career, make yourself as comfortable as you possibly can under the circumstances.

4. Never patronise doctors who have not any, or who having some, refuse to communicate definite notions to you as to the probable march, or duration of the affection you suffer from and the accidents likely to occur in the course of the disease for which they treat you.

5. Whenever a doctor, whom you can trust, tells you that the probable duration of your disease is a fortnight, do not endeavour to force him to try and cure you in a week.

6. It is better to let such diseases as have a tolerably definite course take their own way, than to endeavour to cut them short. Those who are gouty well know this, and prefer to bear a

week or more of fearful pain, than to pass months of suffering without any goal of health being apparent.

7, and lastly. If you want to preserve your health, and attain to a good old age, bear with illness rather than attack it furiously—in the one case you have a good chance of recovering with a constitution practically unimpaired—in the other there is a strong probability that your frame will be injured both by the disease and by the drugs taken with a view to cure it.

CHAPTER XXIII.

ON OLD AGE.

SOME old author, but whom I cannot remember, has made the remark that man never seems to enjoy life more keenly than when he is about to leave it. Sir Walter Scott had some such idea in his mind when he describes how the champions Fitz-James and Roderick Dhu—

> Each looked to sun and stream and plain,
> As what they ne'er might see again.
> Then foot and point and eye opposed,
> In dubious strife they darkly closed.
> *Canto* v., *Stanza* 14.

In truth the feeling is too common not to be noticed by all. The sculptor who gives the last polish to the statue which he has called into life from a shapeless block of stone; the artist who gives the finishing touch to a picture which from an unsightly array of canvas, oils, and brushes has become the brilliant representation of some gorgeous scene; the author who from a mass of memories has woven a web which posterity may wear,—all feel some tinge of mournfulness when they part with the work which has cheered many an hour, even when the toil has been heavy. No wonder, then, that man when about to part with life for ever, feels that he never enjoyed it half so much before. By a stretch of imagination, I can fancy that a man who has been tossed about on the angry billows of life, from his earliest years, might in a tempest such as wrecked the ill-fated steamship *London* raise his hands above his head and sink into the sea as the only place of rest he had ever known; but for one who would act thus there are many who would cling to the least plank, and refuse to die until the Fates compel.

It is thus in old age. There are some who, having fought a good fight in the battle of life, cheerfully lie down and die, or

woo Death to come to them, and when they see him coming hail him joyously. Two such individuals I have personally known, and in both instances a hint that death was not surely coming was regarded almost as an insult. But for one who thinks thus there are many who cleave to life and watch over their latest days with a carefulness which of itself produces pleasure. Nor can we blame them, for to those who have cultivated their intellect during youth, old age is fraught with pleasure. To the man who has struck out a new business or a new line of thought, or who has inaugurated a new style of engineering, architecture, or poetry, nothing is more delicious than to be able to help the nursling on, and to see it gradually assume maturity; and if during his early days he had to battle for his new ideas, he rejoices in his old age to see the victory won, and to repose upon his well-earned laurels. Such an one is always respected, and his opinions sought; and he who could scarcely induce even his wife or his friend to believe him at the opening of his career, finds himself at its close the oracle before whom all bow down implicity.

For such an one the doctor gladly schemes, for him he gladly pours forth all that his experience tells him; for him the philosopher would try to discover the elixir of life, or to contrive a mill which should grind old people young. But the physician knows perfectly well that his power is limited; he can no more indefinitely prolong the life of man than he can create an elephant. He knows full well that every creature has a career allotted to it beyond which it cannot go. His experience tells him that every individual man may be compared to a vessel containing a certain quantity of water, which must evaporate eventually; or he may compare him to a locomotive in constant use, which infallibly breaks down in time; or he may compare man to the watches in the shop of an horologist, which if wound up all at the same time do not cease to beat all at the same moment, but continue a longer or shorter period according to the strength of the mainspring.

We may adopt any one of these illustrations as the basis for what we have to say. It is clear that evaporation of water varies in activity according to definite causes. A hot day and a brisk wind will increase the rate, whilst a cold night and a still air will reduce it to a minimum; but even frost will not restrain it utterly. Again, the locomotive is worn out at a slow or fast rate, in direct proportion to the speed with which it is driven. Again, we know that a watch in which the balance wheel is disjointed will run down in a few minutes, and that by moving the regulator so as to make its movements fast or slow, we can make it go during twenty-four or thirty hours from

the time of winding it up. We may, however, carry our simile still farther, by considering the career of a locomotive made especially strong for driving express railway trains. For weeks and months it does its work with few slight repairs; with the strength of youth it eats enormously of fuel, and converts it into movements of amazing rapidity; it faces steep gradients, and tears away at an even speed whether it is weighted by a train of ten or one of twenty carriages. It resembles a man in his prime, when nothing seems too hard for him to attain. But after a time the inspector reports that the iron constitution shows signs of decay; it is no longer safe to trust the boiler with a pressure of some eighty or one hundred pounds to the square inch; and so the fiery steed is put to do less arduous duty,—as its life advances and its decay becomes more apparent, its work is still further curtailed, and it is treated gently until it is wholly useless—dead—as a locomotive. In a similar fashion the mariner treats his ship and the jobmaster his horses.

The application of the foregoing considerations to man is comparatively easy, and we readily recognise the fact that if any one should continue to be as "fast" in his old age as he was in his youth he will certainly run down the sooner.

Let us now take a mental glance around us and inquire who are they that "age" and die the soonest. They are, as a rule, the sons of toil,—the labourer, the hard-worked artisan, the indefatigable curate, lawyer, or doctor, the soldier, the mariner, and the like; and although we may find in all these classes many who reach to a good old age, yet on an average they die comparatively early. It is doubtful whether in any portion of the world its inhabitants live a faster life than in America, and it is certain that the average duration of their lives is less by about ten years than that of the British. Their women fade soon, and the belle of this year may be almost a fright in the next. Amongst the Swiss there is abundance of pure air, hard toil, frugal fare,—yet in spite of these the men soon age, and die off in comparatively early life; whilst it is all but impossible to find amongst the peasantry a pretty woman who is twenty years of age. If we now turn our eyes in another direction, we see that those who, as a rule, enjoy the greatest longevity are the members of the high nobility, the dignitaries of the law and of the Church, and those physicians who have a sufficiently good practice or private purse to enable them to keep and use a carriage. The country squire whose means are ample, and whose life is steady, sees the career of most of his labourers, who started with him in life, closed by death; or he knows that one by one, worn out by toil, they go into the workhouse and there prolong a precarious and flickering existence.

Let us, however, approach the subject from yet another point of view, and inquire what are the changes in the human framework which attend upon increasing years. We find in the first place that appetite and digestion fail, that the muscles of the body become diminished in size, whilst there is a tendency for the fat to increase. This alteration is very apparent and very common in the heart, which thus becomes unable to exert itself as it did while young in keeping up a vigorous circulation of the blood: hence it is more subject to spasm and palpitation, and the individual to faintness, &c. The arteries also undergo a change and become thickened, or so studded by atheroma as to lose all their natural elasticity, consequently they are apt to give way and produce aneurism on any unusual exertion of body. The capillary vessels also undergo a change and become thickened, thus preventing the normal amount of the nutrient portion of the blood to exude through them, and making every part of the frame less endowed than it ought to be with full vitality. Hence proceeds apoplexy, or softening of the brain, which is akin to mortification, or that peculiar affection of the feet which goes by the name of senile gangrene, wherein every portion of the toes, feet, or ancles, becomes dry, black, and dead. Hence, too, arises that dryness of hand so common in old age, and that coldness that is so often complained of. Shakespeare has well described some of the things to which we have alluded:—

> Do you set down your name in the scroll of youth that are written down with all the characters of age? Have you not a moist eye? a dry hand? a yellow cheek? a white beard? a decreasing leg? an increasing belly? Is not your voice broken? your wind short? your chin double? &c.—*Second Part Henry IV.*, Act i., Scene 2.

Now all these things indicate that in old age every organ of the body is in a deteriorated condition compared with what it was in youth, consequently if a person wishes to nurse the last embers of life he must prevent them burning too fast. In everything the man must act as if he was older than he used to be. He must walk instead of run, he must drive instead of ride, he must lie instead of sit, he must eat "stews" instead of steaks, and feast sparingly rather than aldermanically. With small power of making heat, he must avoid cold baths, cold winds, cold rooms, cold meat, and cold comfort. His bed-room must be well warmed in winter, and his house must never be chilly. His brougham must be heated by some contrivance, and if he drives a gig he must have a warm hat for his head and a hot bottle for his feet. He must walk little and rest much. He may think deeply, but he must fight little in favour of his views. He may please himself whether he takes wine or

water, beer or spirits, but he must always give himself a sufficient amount of sleep. He must avoid thinking of apoplexy, liver, and bowels ; he must eschew physic as he would an open enemy, and must do his best to avoid speculation in business, ill-temper amongst his domestics, and testiness in his family circle. In short, every one who wants to enjoy and prolong his old age must live in this world as he hopes to do in the next.

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LONDON: H. K. LEWIS, 136 GOWER STREET.

LIVERPOOL: ADAM HOLDEN, CHURCH STREET.

The following works have also been published by the same author :—

A Treatise on Myalgia:

Second Edition, 8vo., pp. 307, with six Lithographed Plates. London, Churchill, 1860. Price 9s.

The intention of this work is to show that a vast number of pains which have been considered as due to inflammation of internal organs, or to neuralgia, to hysteria, to malingering, &c., are in reality due to an altered condition of certain muscles, fasciæ, or tendons, arising from direct injury or from overwork. It enters into a detailed account of the physiology of the muscular system and its pathological states, and gives directions whereby the nature of myalgia may be recognised, and the sufferings arising therefrom may be modified, relieved, or cured.

Foundation for a New Theory of Medicine:

Second Edition, post 8vo., pp. 528. London, Churchill, 1861. Price 10s.

Of which the following review that appeared in the *Medical Mirror*, January, 1867, gives an account.

There has been of late years certainly, perhaps always, a dangerous tendency to let the theory and practice of healing separate ; so that, instead of mutually aiding one another, they occupy apparently antagonistic positions. Our systematic lectures administer to their class now a bit of one, now a bit of the other, and feel themselves under no constraint to exhibit their connection. We find even such teachers as the President of the College of Physicians, about a quarter of a century ago, giving to his pupils (and who is not his pupil still ?) the lessons in theory which he had received from his precursors, and confessing at the same time that his practice was completely at variance with those lessons. (See Letter of Sir Thomas Watson in "Markham's Gulstonian Lectures on Bleeding, &c.") During that quarter of a century our schools have been becoming more and more empirical year by year ; we shorten the systematic lectures, as if ashamed of them, and multiply and magnify clinical, that is, empirical instruction.

There are those who do not object to this. They say theories have of old led us wrong—down with them then ! let them not lead us any more. Ah, my friends, you are aiming at an impossibility ! They will lead you, and cannot but do so. Only, like link-boys in a London fog, unless you tell them how to guide you right, they will probably guide you wrong. For instance, who can say that he has never been influenced by the fallacious ideas involved in the abstract term "inflammation," with its derivation from "*flamma?*" Have we not all seen the unhappy Latinizing of "frenzy" by "phrenitis," and the mental association between the termination of "itis" and depletion, prove most fatal to the patient? Do not the theories implied by the words "stimulant" and "derivative" often incline at all events, if not lead, each one of us to faulty practice ?

Among thoughtful men there has been growing up a feeling of shame at the degradation of medicine to a technic art by the want of any general views of disease at all in accord with the mode of treating it adopted by our acknowledged leaders. There has been going on a fermentation of thought, not dissimilar to that which preceded the great religious Reformation. It has not, indeed, lasted for so long a period, and perhaps some may think us not yet ripe for a Luther to crystallize into dogma the truths seething within us. It is a bold stroke for Dr. Inman, and it always will be a bold stroke for anyone, to

come forward and propose to defend against all comers a principle which he considers will be the foundation-stone of the medicine of the future.

He does not indeed, imitate the great Reformer by nailing his theses on the doors of the College of Physicians ; but if he did so, the poster would probably exhibit as a heading in red capitals—

ALL DISEASE IS A DEFICIENCY OF VITAL FORCE.

We believe this formula is a just expression of the idea animating the whole volume now under review, enunciated from time to time in phrases of varied form and length.

The author may fairly claim the merit of being the first of this generation who has put the notion in a tangible shape, and the first of any generation who has been enabled to bring science to its support. Stahl and Brown and Darwin came very near, but physiology was not in their days sufficiently advanced to enable them to defend and perfect their system ; and the unfortunate false deduction respecting alcohol, which poor Brown drew, discredited the influence they exerted. It is different now ; her scientific handmaids—Chemistry, Physiology, Histology, are in a condition to give as well as receive aid from Medicine ; and, above all, we are less than our fathers under the dominion of words in estimating the qualities of re-agent and their effects. So that, whatever truth there may be in the generalisation, thus badly and rawly set forth, has a fair chance of standing its ground.

But it is true ? And if true, is it true absolutely, as we have put it above ? Aye, there's the rub. Some will accept it with certain exceptions, some with a grain of salt, some with a grain of cayenne pepper ; a considerable party will qualify it with an epithet very important in a practical point of view, "All *curable* disease ;" some will put their own definition to vital force, and then say it is not applicable to that ; some will deny the existence of vital force, and to them the expression is meaningless ; some will find it a platitude, and so on. But few, we are sure, of those who think while they practise, and practise while they think, will fail to acknowledge that they have of late been yearly more and more illustrating by their acts some principle which may be wrongly, may be imperfectly expressed, yet somehow underlies the formula we have used.

The exact meaning of the term "vital force" does not seriously affect the argument ; whether we take it to be as even Mr. Lewes allows is unobjectionable, "the dynamical condition of the organism ;"* or whether, with Dr. Inman and Dr. Beale, we view it as the δύναμις which works through that condition, is of no consequence. In the former case, disease will be "an adynamic condition of the organism ;" in the latter, it may be called, in our own expressive tongue, "sham life."

The first five chapters are occupied in discussing this vital force in various aspects, the existence of it, the modifications of it by matter, the influence of the individual nature it is associated with, the action of destructive agents, its definite duration, and its absence from the still organic body, or "death." The sixth chapter enters upon the subject of disease :—

"In health, every part of the body is undergoing change ; but new material takes the place of the old with such steady regularity, that no alteration whatever is apparent in the shape, colour, consistency, or composition of any part beyond such as is proper to growth and decay, such as the development of the testes in birds during spring, and their diminution during autumn and winter, and the same in a man at puberty, and the development of the uterus and mammæ during pregnancy, &c.

"In other words, every organ is perpetually renovated during health, and a certain definite standard condition is habitually sustained.

"But when an individual is out of health, and the vital power is impaired, we cannot expect that the functions will be performed normally, nor the renovation keep up to the standard. The departure from the healthy standard may be so small as to be inappreciable, or so great as to be incompatible with life. Between these extremes we have an infinity of degrees.

"Shortly, then, we say, deficient vital power manifests itself by disorder of function and altered nutrition in all our organs."

* Lewes's Physiology of Common Life, pp. 415.

That the phenomena of disease are the phenomena of a deficiency of vital force, of which death is the absence, is illustrated by what the author calls "a digression," but which seems to us a very essential part of the argument, "upon the phenomena of dying." These are shown to be extreme degrees of the familiar phenomena of disease. If then,

"We can point out the close connection existing between certain signs during life, and certain appearances after death, and show that whenever there is reason to believe that the body is in a dying or very enfeebled condition, symptoms occur precisely similar to those which occur prior to mortification elsewhere, and if we can show that these symptoms occur, *chiefly* when the vitality of a part is very low, there is at least fair ground for the interference, that wherever they are present, they indicate a great want of power, locally or generally, or both.

"What these signs and symptoms are, it will now be our business to show."

And accordingly, in the next ten chapters, he goes through the principal tissues and organs, showing how their various morbid states are essentially manifestations of deficient vital power.

We will take from the first of these chapters—"On Deficiency of Vital Force in the Nervous System"—a specimen of our author's style of argument, and his forcible, trenchant manner.

"When we see in mania, proofs of great mental excitement, surely, it is argued, *that* must involve increased action—the proposition seems self-evident. But, in reply, we ask—What is excitement? What is increased action? Is it not a more than usually rapid expenditure of tissue and of power! Is it not expending in *one* day the material which would otherwise last *two*? and with this excess of expenditure over supply, can there be anything else than impairment of vitality and loss of power?"

The importance of this consideration in the management of lunatics has now been recognised in practice for some years—why should we allow the theory, which looks upon augmented mental excitements as augmented vitality, to hold its ground in our systematic works unsupplanted and unopposed?

The comparison drawn by the author between *post-mortem* solution of the brain and morbid softening during life, both local and general, is very graphic and striking. Microscopic observation strongly confirms his views of the true pathology of degeneration of the cerebral vessels. This is a vital matter in the treatment of apoplexy, which Dr. Inman rightly considers of so much importance, that he devotes a great part of a chapter to the citation of cases in support of his opinion that the "clot" in the brain which occupied so much the thoughts of our forefathers, is really, in very many cases, the result of venesection; and that it is found less frequently now and of less size, simply because we bleed our apoplectics less.

It may be observed that the cerebral pathology here indicated applies equally well to hydrocephalus, both chronic and acute. In the succeeding subject—deficiency of vital power in the lung—striking use is made of the addition to our powers of observation, made by Mr. Hutchinson's invention of the Spirometer. It is remarked how *any* morbid state, not only those which limit the area of the pulmonary expansion, but anything that debilitates, diminishes the vital capacity, or the number of cubic inches of air capable of being retained in and expelled from the chest. This is very important, and strictly true, not only of diseases, but also of habits which lower muscular force without obviously affecting the health. For example, we have found, in examining for insurance, persons apparently robust, that none of those who habitually drink spirits between meals, even in such moderation as to be considered strictly temperate, can blow up the Spirometer to their due figure. And in several instances of really intemperate persons, this mode of observation has led to the detection of their secret.

In the succeeding chapters—"on Deficiency of Vital Power in the Heart" and "in Blood-vessels"—we are made to feel what the accurate modes in use for measuring the respiratory organs have done for us, by the comparative want of force in the author's argument when the circulating system is in question. The deficiency is not in the facts or in the impression they leave, but in the reduction of them to weights and figures. We look forward with interest to great use being made of the observations arising out of Mr. Marey's invention of the sphygmograph in the next edition of this volume.

In the chapter on the stomach, the importance of Rest in the treatment of affections of this organ, is shown by many pointed cases, shortly and clearly given, without that twaddling off into irrelevant matter, which is so common a failing with the citers of clinical experience. The application of Dr. Inman's principles to these diseases is especially valuable, because no class have suffered more from the still clinging adherence to mediæval asceticism which afflicts our judgment. The fashionable theology of the Middle Ages taught that whatever the body desired was bad for the soul; fashionable medicine went further, and said it was bad for the body too. The notion still survives, and thus is lost the aid to selection of treatment which "the voice of the flesh" (ἡ σάρκος φωνὴ—*Epictetus*) might give us. The author's remarks on the appetite as a condition of digestion are striking.

The 13th chapter is a bold one, for the author ventures to question the supposed frequency of disorder of the liver as a co-efficient in ill-health. This is a serious blow to the routine practitioner; for at least nine-tenths of his chronic patients, who have got a pain they cannot otherwise account for, together with all their amateur advisers and consolers, are convinced that their livers are out of order, and want to be treated for "biliousness."

"Now, on analyzing cases in which ocular or manual examination shows the liver to be really diseased, such as malignant fever, abscess, cancer, atrophy, cirrhosis, &c., of the organ, it will be found not only that no *hepatic* symptoms, but as a rule, very few symptoms at all, and those vague ones, can be considered the rule. It is not likely, therefore, that when slightly disordered, it should declare itself by such frequent signs."

"This being then the conclusion to which our investigations have led us, it is advisable to review the principle upon which presumed diseases of the liver are generally treated, and the value of those special medicines, which are most in vogue." A review which the author undertakes, lance in hand, attacking in a most trenchant manner, all cant, calomel, and cholagogues. This chapter is all the bolder, in that it is purely destructive, as Dr. Inman is driven to confess his inability to supply a true therapeusis of the liver in the place of the false which he so ruthlessly destroys. He says, "The current physiology of the hepatic function is so limited that no reliable knowledge of its behaviour during debility can be gained."

The specimens which we have quoted will enable our readers to guess at the line of argument adopted in the succeeding chapters on the skin, muscular system, and blood. In the last there are some very shrewd and suggestive remarks on what may be called *post-mortem* changes in secretions; that is to say, chemical changes which take place in various times after the separation of the secretions from the body. The author considers rapidity of chemical action succeeding to vital as a direct proof of deficient vitality. This is a very important practical point; for if the "foulness" of stools kept for our inspection is an evidence of debility, the conventional purging and grey powder, which they generally suggest to the medical attendant, should be replaced by nutrition and tonics.

To acid fermentation he also attributes the sourness of the sweat in rheumatic fever, and suggests a prognosis to be derived from the rapidity of the alkaline decomposition of the urine.

The next chapter takes up the argument which naturally comes out of these various illustrations, and is apparently a justification of our author's assumption of the title "New," as applied to his theory of therapeutics.

He points out that from the earliest time to the present, the means employed by orthodox physicians to restore health have been designedly such as will make a sound man ill. Drugs have been respected and valued in proportion as they derange the vital force. Let an herb or a mineral cause a mighty physiological disturbance in the human body, and they have taken for granted there must be a therapeutical use for it.* We have seen somewhere a quotation from Van Swieten, in which that philosophical physician expresses the result

* The leading idea of the savage mind is to reverence destructive power. Sir Samuel Baker found no medicine so popular in Central Africa as tartar emetic, by reason of the quickness and vigour of its consequences. His patients said there never was such a doctor. "He said I should be sick," they exclaimed, "and sick I was! There was no mistake about it! Wonderful!"

of his wide-spread review of medical practice in the aphorism, "All that Art can do is to weaken life;" and truly that seems a fair description of the agents which have been handed down to us in the Materia Medica; so that to conduct a cure on exactly opposite principles, that is to say, by strengthening the vital forces which remain sound, instead of weakening those which are acting abnormally, may be fairly called a *new* theory of therapeutics. But we think Dr. Inman is not quite just to his predecessors, when he represents them as using *destructive* remedies, that is, remedies which lower the vital powers by destructive assimilation, or which remove, in a mass, a component of the body, solely with a view of destroying disease. The intention often is to give freer play to the remaining functions by curbing or removing that which in the existing condition of the body is a temporary impediment to it, and thus to allow those functions to recover force, and act themselves as remedies. Thus we may draw blood in congestion of the lung; not with the design, or even the effect of diminishing the semi-vital "inflammation" which is going on in the pulmonary tissue; but in order to mechanically set free the obstructed circulation, and enable the blood to restore normal nutrition. Or we may purge, even drastically, a patient with dropsy, acknowledging freely that the induced weakness is a risk, while reckoning that the chance of a removal of the absorption compensates the risk. To sacrifice capital for the sake of increasing income, may be a very prudent transaction. We are sure that Dr. Inman often acts in such a manner in his own practice, and he ought not to pass over the fact that much of the treatment registered destructive, had such an intention. In this chapter the advocate rather overshadows the philosopher.

Of means for restoring the vital power, it might be expected that the list would be shorter than that grim catalogue of perturbative re-agents, which our forefathers delighted to lengthen, and we, in shortening, have still tried to strengthen. Foremost stand hygienic measures, on which Dr. Inman has many sensible remarks to make, illustrated by anecdotes from his own experience, pointed and purpose-like, but still so much in accordance with the experience of every one of us, that we assent at once, and only wonder we never drew the inference ourselves—they are so good, we think they must be our own. Perhaps the only novelty is the stress laid by the author on the proper regulation of exercise, so as to avoid excess; which, in virtue of being a novelty, is treated of at considerable length. There is no question but what here also mediæval asceticism is at work in the public mind, and leads them to look upon weariness as productive of more health than can be gained by simple relaxation. Dr. Inman's views on the subject ought to be put into the hands of the general public, not only as giving them a piece of useful advice, but as an illustration of sound physiological reasoning. We cannot advise the same treatment of his observations on the use of alcohol. There would be a great danger of their being misunderstood and misused. They would conduce to that great mistake often made in self-management—the substitution of alcohol for a sufficiency of food; indeed, we should like much to see a complete revision of this chapter in the next edition, and a transfer of alcohol from the company of "Foods" into the succeeding category, "Medicines."

Among these latter, we are obliged to Dr. Inman for the attention he draws to two of exceeding value, as direct analepties, viz., Glycerine and Almonds. Of the former he gives from nine to twelve drachms daily, as a substitute for cod-liver oil. Of the latter he quotes an instance in which a quarter of a pound of blanched almonds and a pint and a half of milk daily, took the place of all other food for eight months, and enabled the patient, a man of thirty, to walk twelve miles every morning. We would commend this portable food to Alpine and other pedestrian travellers, also to the military commissariat.

Among tonics, alcohol occupies the first place, and the remarks upon it in this collocation cannot but meet with the approval of all practical and unprejudiced men. The value of more strictly pharmaceutical tonics taken from the vegetable kingdom is here attributed, in a great measure, to their direct astringent effects on the mucous membrane of the stomach, and, led by this idea, Dr. Inman has habitually substituted for them pure tannin, as a strengthening remedy, and has found it very useful. Upon the use of opium as a tonic, there are some exceedingly suggestive remarks, founded on experimental observa-

tions which every one can make for himself, and most probably will be able to cap from memory. This is an excellent feature, by the way, in Dr. Inman's illustrations; they are, as a rule, drawn from common experience, not from exceptional instances. True, we have now and then "a strange story" in a note, but it is always quoted on the authority of a named witness, and is never used to establish a principle.

The tonic effect of opium is not explained by the author; might we suggest that it seems to us to depend on a temporary restraint of the destructive assimilation caused by nervous action; and that it would consequently be found beneficial in those cases only where nervous action is excessive? If we are right, an indication of the proper cases in which to use it would be established.

The sketch we have given will serve to introduce this very suggestive volume to our reader, and lead him to a pretty just anticipation of the solid food for thought which it affords. It only remains to us to say that this nutritive diet is rendered palatable by an agreeable dressing; the pages are ornamented by anecdote and allusion, sweetened from time to time by touches of human feeling, and occasionally made piquant by what the author must allow us to call a little "sauce."

A Treatise upon Certain Ancient Faiths which have been Embodied in Ancient Names:

Complete in 2 vols., demy 8vo., pp. 800 and 1000, largely illustrated. Price £1 10s. each. To be had through Trübner and Co., 60 Paternoster row, London, and Adam Holden, Liverpool.

These books are founded on the fact that in ancient times names were given by priestly authority, and usually contained the title and an attribute of the deity worshipped—or expressed the acknowledgment of dependence of man upon a creator. As examples, we may give Theodorus, Apollodorus, Epaphroditus, amongst the Greeks—which signify respectively the gift of God, the gift of Apollo, and—from Aphrodite.

The cognomens in the bible and other ancient places are then examined, with the desire to extract from them all the information they contain. This elicits the fact that there was no essential distinction between the faith of the Hebrews, generally, and that entertained by other Shemitic races. It also elicits the fact, that although a short contact between other nations and the Jews sufficed to introduce into Hebrew nomenclature a new set of names, and new theological ideas, the alleged sojourn in Egypt left no evidence of having modified the Israelitish language, nomenclature or faith. In the second volume this point is discussed at considerable length, and the author expresses his belief that the bible's own testimony disproves the story of Israel in Egypt.

After having examined all the Hebraic cognomens, more than half of which are given in the first volume, the author prefaces his account of them with a description, drawn from many sources, of the faith held by ancient Phœnicians, Syrians, Babylonians, Assyrians, Persians, and Hindoos; points out how veneration for an unseen and unknown power has been associated with the use of certain visible emblems. The sun, the moon, and fire, being the symbols usually selected by the most exalted religionists, whilst the parts concerned in the creation of new beings have been given for veneration to the vulgar. Whether the celestial or terrestrial organs have been regarded with respect, worshippers have been divided, much as they are now, into moral and immoral classes. The latter always being the most numerous, impurity in religious rites, &c., has been more prevalent than strict propriety. In moral behaviour and in their written law the Jews were not better than their neighbours.

The veneration in which the symbols of generation have been held dates from the remotest antiquity, and is the key with which the majority of ancient

and modern myths are to be explained. There was as much mystery in the triple godhead, *plus* the goddess, amongst the ancient Assyrians, as amongst the modern Romanists. The doctrine of the Trinity and of the Virgin current to-day, is based upon the Pagan idea that the mundane emblem of creation being triple, the Creator whom it symbolises must be so too; whilst "The Virgin Mary" is a copy of Isis, Ishtar, Venus, Parvati, Juno, or woman generally.

These ideas and these emblems were never generally explained to the common people. They were taught to reverence the organs, or such signs as typified them, in the first place; but as civilisation extended, coarseness in religious thought and practice gave way to decency, and the grossness of the original emblems of the Creator was veiled. But the veil was thin, and it is still easy, by a study of religious symbols, to ascertain whether the triune father, the single mother, or the fourfold godhead was the object of adoration, in those nations whose history, sculpture, &c., have come down to us.

There is reason to believe that the worship of the Phœnicians, Syrians, Assyrians, and Babylonians, resembled greatly that of the Romanists in the middle ages; that of the Persians was comparatively pure, like that of the modern Parsees; and this influenced to a great degree the religion of the Jews. About the Christian era the Jewish faith was a compound, developed, like modern Romanism, from many sources. There is reason to believe that amongst the Hebrews at that period there was a sect, the Essenes, of Buddhist origin. Christianity comprised a belief in the Hindoo notion of Avatars, or incarnations of the Almighty, in the absolute truth of certain writings called prophetic, in the idea that man was punished for transgressions committed in former times, and that he should seek salvation by escaping punishment in a future life. The doctrines then current about Hell and Heaven, Angels and Devils, came to the Jews from heathen sources.

Buddhism and Christianity were both antagonistic to priestly pretensions, and were successful whilst the latter were outrageous. But when the new faith prevailed, a want began to be felt of some symbol for adoration, some ceremony to be gone through, &c. Both Buddhists and Christians adopted these from their predecessors—merely introducing them with new stories, statements, &c.

Modern Christianity does not very materially differ from Buddhism, Hellenism, and certain other forms of faith. What the moderns call angels, the Greeks call gods; the former laugh at Jupiter for being in love, the latter may equally deride those who talk of Jehovah being a jealous God. It is not right to test others by a plan to which we will not ourselves adhere.

Such being the line of thought followed, the author endeavours to test its value in a series of essays—some upon the character of such typical individuals as Abraham, David, Samuel, and Solomon; others upon the peculiarities of individual prophets, the nature of their utterances, and the value of "propheey" in general. There are others upon such subjects as "inspiration," "infidelity," "miracles," "propheey," "revelation," "salvation," "theology," "time," &c. In addition to the above, there are others whose object is to throw light upon the real history of the Jews, and to ascertain the probable chronology of various parts of their sacred writings.

Throughout both volumes the author endeavours to establish his own views, rather than ridicule those of persons who think differently. He does not attack real religion, but only seeks to strip from it the unsightly rags with which he thinks that it has been disfigured.

The work is illustrated by many plates and woodcuts—each of which receives a full description in the second volume.

In giving these, the author's intention is to enable persons to understand a large part of the subject much better than they could without pictorial assistance; and they serve to demonstrate that the burden of proof must be laid upon his opponents. When we see that a virgin and child has been adored in ancient Assyria, Hindostan, Phœnicia, Egypt and Greece, under the same emblem as she is venerated by Romanists now; when we find, moreover, that this virgin is associated with Friday, with the fish, and with certain emblems whose signification is undoubted; it seems preposterous to say that the adoration of the virgin, current in Papal countries, is anything more than the restoration of a pagan cult. In like manner, when the emblem of the male creator

can be traced through many nations, and many centuries before the Christian era, and we find its counterpart still venerated in Christian churches, we cannot doubt that the dogma of the Trinity is based upon a heathen, and, according to our ideas, an impure basis.

Ancient Pagan and Modern Christian Symbolism Exposed and Explained:

8vo. Pp. 68. Sixteen Plates and 172 Additional Figures. Price 5s.
London: Trübner. Liverpool: Adam Holden.

Ancient Pillar-Stones and Cairns:

8vo. Stitched, pp. 34. Holden, Liverpool, 1867. Price 2s. 6d.

In this dissertation the author shows that these are due to the ancient plan of representing the Creator as or by the organ which determines Creation on earth.

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The Results of Microscopic Experience:

Being an account of the information gained by the Microscope, and its bearings on Pathology and Treatment.

Of the five last very few copies remain in the Author's hands.

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